



Environmental Noise and Vibration Study

12489 and 12861 Dixie Road, Caledon, ON

QuadReal Property Group

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Revision Record

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0	December 13, 2023	Final report, 12489 Dixie Rd Site assessed alone
0	December 13, 2023	Final report, 12861 Dixie Rd Site assessed alone
1	December 12, 2024	Final Report, 12489 and 12861 Dixie Rd sites assessed together
2	December 14, 2024	Updated Final Report, 12489 and 12861 Dixie Rd sites assessed together, includes Cold Storage at 12489 Dixie Rd



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- Appendix A Development Drawings**
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1.0 Introduction

SLR Consulting (Canada) Ltd. was retained by QuadReal Property Group (QuadReal) to conduct an environmental noise and vibration assessment for the proposed 12489 and 12861 Dixie Road industrial/employment projects (the Project) in Caledon, Ontario.

The proposed development is to include the following:

- two (2) separate buildings, located on the northern 12861 Dixie Road property; and
- three (2) separate buildings, located on the southern 12489 Dixie Road property.

The buildings are intended to be used for industrial and commercial operations including but not limited to distribution warehouse, dry storage, general commercial, etc. Cold storage uses are not anticipated.

The potential noise impacts from both properties were previously assessed in the following reports:

- SLR Report “Environmental Noise and Vibration Study, 12489 Dixie Road, Caledon, ON”, dated December 13, 2023; and
- SLR Report “Environmental Noise and Vibration Study, 12861 Dixie Road, Caledon, ON”, dated December 13, 2023

This report evaluates the combined noise impacts on the surrounding residential noise-sensitive spaces from operations on both of the properties.

1.1 Nature of the Subject Lands

The official address of the proposed development is 12489 and 12861 Dixie Road in Caledon, Ontario. The lands are located at the southeast corner of Dixie Road and Old School Road. The current lands are mainly used for agricultural purposes. The majority of the existing surrounding noise sensitive receptors of interest correspond to one and two storey houses.

The proposed buildings involved with the development are to include the following:

- 12861 Dixie Road
 - Building 1, approximately 14.5 m tall building, 100,758 m² footprint;
 - Building 2, approximately 14.5 m tall building, 87,960 m² footprint;
- 12489 Dixie Road
 - Building 1, approximately 13.7 m tall building, 42,918 m² footprint;
 - Building 1, approximately 14.5 m tall building, 49,269 m² footprint; and
 - Building 1, approximately 14.5 m tall building, 42,384 m² footprint;

Excerpts from the development drawings are included in **Appendix A**. Excerpts from the site plans are included in **Figures 1a to 1c**.

1.2 Nature of the Surroundings

The lands surrounding the development are dominated by agricultural lands, industrial lands, commercial spaces and golf courses. One and two storey single family homes are located around the proposed site on Dixie Road and Old School Road.



The surrounding topography is mainly flat with no significant variations. The proposed grading for the Project lands was used in the analysis.

A context plan is shown in **Figure 2**.

2.0 Assessment Framework

The intent of this report is to identify any existing and potential land use compatibility issues and to identify and evaluate options to achieve appropriate design, buffering and/or separation distances between the proposed industrial land uses, including residential uses, and nearby industrial areas and/or major facilities. Recommended measures intended to eliminate or mitigate negative impacts and adverse effects are provided.

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

- 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.

2.1 MECP 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 those related to 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 Guidelines D-6 - Compatibility between Industrial Facilities and Sensitive Land Uses. Guideline D-6 specifically addresses issues of air quality, odour, dust, noise and litter from industrial facilities.

"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.



2.1.1 Guideline D-6 Requirements

To minimize the potential to cause an adverse effect from industrial operations, areas of influence and recommended minimum setback distances are included within Guideline D-6. The areas of influence and recommended separation distances from the guideline are summarized 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 (m)
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** on the following page.

Table 2: Guideline D-6 – Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operations/ Intensity	Possible Examples
Class I Light Industry	<ul style="list-style-type: none"> • Noise: Sound not audible off-property • Dust: Infrequent and not intense • Odour: Infrequent and not intense • Vibration: No ground-borne vibration on plant property 	<ul style="list-style-type: none"> • No outside storage • Small-scale plant or scale is irrelevant in relation to all other criteria for this Class 	<ul style="list-style-type: none"> • Self-contained plant or building which produces/stores a packaged product • Low probability of fugitive emissions 	<ul style="list-style-type: none"> • Daytime operations only • Infrequent movement of products and/or heavy trucks 	<ul style="list-style-type: none"> • Electronics manufacturing and repair • Furniture repair and refinishing • Beverage bottling • Auto parts supply • Packaging and crafting services • Distribution of dairy products • Laundry and linen supply

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Category	Outputs	Scale	Process	Operations/ Intensity	Possible Examples
Class II Medium Industry	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Outside storage permitted • Medium level of production allowed 	<ul style="list-style-type: none"> • Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions 	<ul style="list-style-type: none"> • Shift operations permitted • Frequent movements of products and/or heavy trucks with the majority of movements during daytime hours 	<ul style="list-style-type: none"> • Magazine printing • Paint spray booths • Metal command • Electrical production • Manufacturing of dairy products • Dry cleaning services • Feed packing plants
Class III Heavy Industry	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Outside storage of raw and finished products • Large production levels 	<ul style="list-style-type: none"> • Open process • Frequent outputs of major annoyances • High probability of fugitive emissions 	<ul style="list-style-type: none"> • Continuous movement of products and employees • Daily shift operations permitted 	<ul style="list-style-type: none"> • Paint and varnish manufacturing • Organic chemical manufacturing • Breweries • Solvent recovery plants • Soaps and detergent manufacturing • Metal refining and manufacturing

2.1.2 Requirements for Assessments

The D-Series of Guidelines require that studies be conducted to assess impacts where sensitive land uses are proposed within the potential area of influence of an industry. This report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the MECP noise guidelines (i.e., Publications NPC-205 and LU-131). However, the D-Series of guidelines are still in force, still 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).



2.1.3 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 noise guidelines are met.

3.0 Industry Classification

3.1 Proposed Development Classification

Based on the proposed development description, the potential for noise impacts on the surrounding sensitive land uses exists. Potential sources of noise include rooftop mechanical equipment and truck traffic movements throughout the Project site. According to the D-6 Guidelines, the Project operations would be classified as Class II Industry.

3.2 Minimum Separation Distance and Potential Area of Influence

Based on the D-6 Guidelines, the Project site has a 70 m recommended minimum separation and potential area of influence up to 300 m.

These separation distances are illustrated in **Figure 3**.

The proposed industrial development is surrounded by existing noise sensitive land uses. As a result, a detailed noise study was completed for the proposed development.

The local area surrounding the project (north of Mayfield Road) is being changed more towards industrial/commercial uses. The existing noise sensitive land uses along Dixie Road may change to become industrial commercial in the near future. This study should be updated, if any of the surrounding land uses are converted to be non-noise sensitive.

4.0 Applicable Environmental Noise Guidelines

4.1 Industrial (Stationary) Sources

4.1.1 Guidelines

4.1.1.1 Ministry of Environment Publication NPC-300

The applicable MECP noise guidelines for new industrial land uses adjacent to residential/noise sensitive uses are provided in MECP Publication NPC-300. The guidelines set out sound level limits for two main types of noise sources:

- Non-impulsive, “continuous” noise source such as from ventilation fans, mechanical equipment, and vehicles moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound levels (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 dBAL.

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



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

The applicable sound level limits at a point of reception (POR) 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 1 area. Exclusion limits for impulsive sounds in a Class 1 area are summarized in **Table 4**.

Table 3: NPC-300 Minimum Exclusionary Limits for Non-Impulsive Sound ($L_{eq}(1\text{-hr})$, dBA)

Time of Day	Hourly Sound Level Limit – Class 1 Area	
	Plane of Window of Noise-Sensitive Space	Outdoor Point of Reception
Daytime (0700-1900h)	50	50
Evening (1900-2300h)	50	50
Nighttime (2300-0700h)	45	n/a ^[1]

Notes: [1] Sound level limits are not applicable during nighttime hours at outdoor points of reception.

The applicable guideline limits for infrequent events such as emergency generator set testing are +5 dB higher than the values in **Table 3**, and are evaluated separately from other noise sources.

Table 4: NPC-300 Minimum Exclusionary Limits for Impulsive Sound ($L_{LM}(1\text{-hr})$, dBA)

Time of Day	No. of Impulses in a 1-hour Period	Hourly Sound Level Limit – Class 1 Area	
		Plane of Window of Noise-Sensitive Space	Outdoor Point of Reception
Daytime/Evening (0700-1900h)	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

Continued...



Time of Day	No. of Impulses in a 1-hour Period	Hourly Sound Level Limit – Class 1 Area	
		Plane of Window of Noise-Sensitive Space	Outdoor Point of Reception
Nighttime (2300-0700h)	9 or more	45	n/a ^[1]
	7 to 8	50	n/a ^[1]
	5 to 6	55	n/a ^[1]
	4	60	n/a ^[1]
	3	65	n/a ^[1]
	2	70	n/a ^[1]
	1	75	n/a ^[1]

Notes: [1] Sound level limits are not applicable during nighttime hours at outdoor points of reception.

4.1.2 Application of NPC-300 Guidelines

The stationary source 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 areas surrounding the Project site, the stationary noise guidelines apply to:

- Individual residences; and
- Outdoor amenity area associated with the residences.

All of the above have been considered as noise-sensitive PORs in the analysis.

The acoustic environment surrounding the proposed development is considered a Class 1 area, as roadway noise and existing commercial activities are expected to be audible during all times of the day and night.

5.0 Points of Reception

Noise-sensitive receptors with the potential to be impacted by the proposed development are the residential residences located along Dixie Road and Old School Road.

Modelled receptor locations include windows along all building façades. As a conservative assessment of noise impacts, all windows were assumed to be located in a noise-sensitive space (i.e. a living/dining room or bedroom). Unless otherwise noted, the upper floor window locations are considered the “worst-case” for noise impacts.

Table 5 summarizes the points of reception (PORs) included in this assessment. The context plan in **Figure 4** also shows the location of each POR with respect to the development.



Table 5: Worst-Case Point of Reception Summary

ID	Receptor	Description	Modelled Receptor Height (m)
POR1	4811 Old School Rd	2-Storey House	4.5
POR2	4755 Old School Rd	2-Storey House	4.5
POR3	4727 Old School Rd	2-Storey House	4.5
POR4	4713 Old School Rd	2-Storey House	4.5
POR5	13035 Dixie Road	1-Storey House	1.5
POR6	13014 Dixie Road	2-Storey House	4.5
POR7	4483 Old School Rd	2-Storey House	4.5
POR8	12891 Dixie Road	1-Storey House	1.5
POR9	12862 Dixie Road	2-Storey House	4.5
POR10	12786 Dixie Road	2-Storey House	4.5
POR11	12731 Dixie Road	1-Storey House	1.5
POR12	12708 Dixie Road	1-Storey House	1.5
POR13	12707 Dixie Road	1-Storey House	1.5
POR14	12678 Dixie Road	2-Storey House	4.5
POR15	12669 Dixie Road	1-Storey House	1.5
POR16	12587 Dixie Road	1-Storey House	1.5
POR17	12586 Dixie Road	1-Storey House	1.5
POR18	12520 Dixie Road	2-Storey House	4.5
POR19	12510 Dixie Road	2-Storey House	4.5
POR20	12496 Dixie Road (Church)	2-Storey Place of Worship (Mayfield United Church)	4.5
POR21	12439 Dixie Road	1-Storey House	1.5
POR22	12423 Dixie Road	1-Storey House	1.5
POR23	12393 Dixie Road	1-Storey House	1.5
POR24	12211 Bramalea Rd	2-Storey House	4.5
POR25	12229 Bramalea Rd	2-Storey House	4.5
POR26	12239 Bramalea Rd	1-Storey House	1.5
POR27	12282 Bramalea Rd	2-Storey House	4.5
POR28	12356 Bramalea Rd (Gurudwara)	1-Storey Place of Worship (Guru Nanak Nishkam Sewa Center)	1.5
POR29	12380 Bramalea Rd	1-Storey House	1.5
POR30	12390 Bramalea Rd	2-Storey House	4.5
POR31	12400 Bramalea Rd	2-Storey House	4.5
POR32	12420 Bramalea Rd	2-Storey House	4.5
POR33	12440 Bramalea Rd	2-Storey House	4.5
POR34	12501 Bramalea	2-Storey House	4.5
POR35	12636 Bramalea Rd	2-Storey House	4.5
POR36	12691 Bramalea Rd	2-Storey House	4.5
POR37	12798 Bramalea Rd	2-Storey House	4.5

The local area surrounding the project (north of Mayfield Road) is being changed more towards industrial/commercial uses. Some of the surrounding existing noise sensitive land uses along Dixie Road may change to become industrial commercial in the near future. This study should be updated, if any of the surrounding land uses are converted to be non-noise sensitive.



6.0 Stationary Source Assessment

6.1 Development Stationary Noise Sources

Noise sources associated to daily operations in the proposed buildings are included below. The mechanical systems (HVAC, emergency generator, etc.) of each building has not been developed sufficiently to be addressed at this time.

An investigation of both “dry storage” facilities, where refrigeration “reefer” trucks are not required, and “cold storage” facilities, which could incorporate refrigeration trucks has been completed.

Locations of the modelled stationary sources are shown in **Figure 5**. A summary of the sound power levels, modelling adjustments and operating conditions used in the analysis are included in **Appendix B**. Sound emission data used in the assessment were based on generic data from SLR’s in-house database or manufacturer’s specifications wherever possible.

6.1.1.1 Non-Impulsive “Continuous” Noise Sources – Dry Storage

The following non-impulsive “continuous” noise sources have been modelled:

- **12861 Dixie Road Property**
 - Building 1:
 - Sixty-two (62), sixteen (16) and thirty-one (31) idling trucks at loading bays during the daytime, evening and nighttime hour period, respectively;
 - Sixteen (16), zero (0) and one (1) moving trucks at 15 km/hour during the daytime, evening and night-time hour periods, respectively;
 - 4 x 10 ton cc Office HVAC units; and
 - 20 x 20 ton CC Rooftop HVAC units (RTUs) for the main building area.
 - Building 2:
 - Fifty-four (54), fourteen (14) and twenty-seven (27) idling trucks at loading bays during the daytime, evening and nighttime hour period, respectively;
 - Sixteen (16), zero (0) and one (1) moving trucks at 15 km/hour during the daytime, evening and night-time hour periods, respectively;
 - 4 x 10 ton cc Office HVAC units; and
 - 16 x 20 ton CC Rooftop HVAC units (RTUs) for the main building area.
- **12489 Dixie Road Property**
 - Building 1:
 - Twenty-five (25), Six (6) and twelve (12) idling trucks at loading bays during the daytime, evening and nighttime hour period, respectively;
 - Twenty-seven (27), one (1) and four (4) moving trucks at 15 km/hour during the daytime, evening and night-time hour periods, respectively;
 - 2 x 10 ton cc Office HVAC units; and
 - 14 x 20 ton CC Rooftop HVAC units (RTUs) for the main building area.
 - Building 2:
 - Twenty-five (25), Six (6) and thirteen (13) idling trucks at loading bays during the daytime, evening and nighttime hour period, respectively;



- Twenty-seven (27), two (2) and four (4) moving trucks at 15 km/hour during the daytime, evening and night-time hour periods, respectively.
- 2 x 10 ton cc Office HVAC units; and
- 16 x 20 ton CC Rooftop HVAC units (RTUs) for the main building area.
- Building 3:
 - Twenty-two (22), Six (6) and eleven (11) idling trucks at loading bays during the daytime, evening and nighttime hour period, respectively;
 - Twenty-six (67), one (1) and four (4) moving trucks at 15 km/hour during the daytime, evening and night-time hour periods, respectively;
 - 2 x 10 ton cc Office HVAC units; and
 - 14 x 20 ton CC Rooftop HVAC units (RTUs) for the main building area.

6.1.1.2 Non-Impulsive “Continuous” Noise Sources – Cold Storage

Cold storage scenarios were investigated. Cold storage cannot be used at either of the two buildings on the 12861 Dixie Road property (no feasible mitigation measures exist).

Cold storage can be used at Building 1 and Building 3 (but not Building 2) of the 12489 Dixie Road property, with the use of noise mitigation. In modelling cold storage scenarios, the following sources have been considered:

- **12489 Dixie Road Property**
 - Building 1:
 - All sources and required mitigation measures in the “dry storage” scenario; and
 - 83 refrigeration trailers located at the loading docks; and
 - 4 cooling towers.
 - Building 3:
 - All sources and required mitigation measures in the “dry storage” scenario; and
 - 75 refrigeration trailers located at the loading docks; and
 - 4 cooling towers.

6.1.1.3 Impulsive Noise Sources

Impulsive noise can occur from truck tractor trailers coupling and uncoupling at loading docks, and from forklifts loading the parked trucks, while travelling over the loading dock plates. Under the Publication NPC-300 noise guidelines the log-average of both of these types of impulses are assessed together versus the applicable noise guideline (a “logarithmic mean impulsive level”, or L_{LM} measured in dBAI). For modelling purposes, the multiple types of impulses were combined to obtain an overall impulsive noise sound power level of 108 dBAI, presenting two coupling/uncoupling impulses, and 20 forklift impulses for loading and unloading trailers. The impulse noise were modelled as line sources, distributing the sound emission along the loading dock areas.

6.2 Stationary Source Modelling

Noise impacts from stationary sources were modelled using Cadna/A, a software implementation of the internationally recognized ISO-9613-2 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.).

One (1) order of reflection were considered to account for effects from the proposed development and surrounding buildings. As described in ISO 9613-2, ground factor values that represent the effects of ground absorption on sound levels range between 0 and 1. A global ground absorption factor of $G = 1.0$ (reflective), with the site being modelled with a local ground absorption factor of 0.2 to account for the mostly hard surfaces. The surrounding topography is mainly flat with no significant variations.

Sound levels were predicted at residential building facades (at a worst-case first-floor or second floor window) and at the worst-case outdoor point of reception (located on the property, within 30 m of the house, at the location with the greatest noise level from facility operations, and at a height of 1.5 m above grade).

6.3 Required Noise Mitigation Measures

Impacts from noise were predicted for each the three scenarios outlined above at the surrounding noise sensitive receptors outlined in **Table 5**. Noise mitigation measures were investigated to ensure that the applicable Publication NPC-300 Class 1 Area noise guideline limits are met.

The following noise mitigation measures are required:

- 1) Cold storage activities must be restricted to Buildings 1 and 3 on the 12489 Dixie Road property.
- 2) A 4.5 m high, 170 m long “L”-shaped noise barrier is required at the northeast corner of the 129861 Dixie Road property, to shield receptors POR3 and POR4, as shown in **Figure 6**.
- 3) A 3.0 m high, 49 m long noise barrier is required between Buildings 1 and 2 on the 12861 Dixie Road, to shield receptor POR8, as shown in **Figure 6**.
- 4) If and only if Cold Storage activities are to take place in Building 3 on the 12489 Dixie Road property, then a 4.5 m high, 410 m long noise barrier located at the southeast corner of the property is required, to shield receptors POR 24, POR27, and POR 29 through POR35. The noise barrier location is shown in **Figure 7**. Cold Storage activities can occur at Building 1 without the barrier in place.

Noise barriers can be constructed using noise walls, earthen berms, or a combination of the two. Where noise walls are used, the walls should have a minimum face density (mass per unit area) of 20 kg/m^2 , and should be free of gaps and cracks. Any openings at the bottom of the barrier which may be required for drainage should be small (less than 25 m high) and localized (not continuous along the bottom of the wall). The wall should be designed to withstand any wind loads. There are a number of commercial products and design available which meet these requirements, including walls made of wood.



6.4 Predicted Mitiigated Stationary Noise Levels

6.4.1 Dry Storage

Mitigated sound levels from Dry Storage operations at all buildings are presented in **Table 6** below.

Table 6: Predicted Sound Levels – Non-Impulsive Sources, Dry Storage – Mitigated

Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 1 - 4811 Old School Rd	45	40	39	43	38	Yes
POR 2 - 4755 Old School Rd	48	43	41	49	40	Yes
POR 3 - 4727 Old School Rd	46	42	40	46	42	Yes
POR 4 - 4713 Old School Rd	48	43	42	45	34	Yes
POR 5 - 13035 Dixie Road	46	42	41	46	40	Yes
POR 6 - 13014 Dixie Road	45	40	39	45	40	Yes
POR 7 - 4483 Old School Rd	47	41	41	46	41	Yes
POR 8 - 12891 Dixie Road	45	42	40	43	37	Yes
POR 9 - 12862 Dixie Road	46	42	41	45	42	Yes
POR 10 - 12786 Dixie Road	44	41	40	43	41	Yes
POR 11 - 12731 Dixie Road	44	41	39	45	42	Yes
POR 12 - 12708 Dixie Road	46	42	40	44	40	Yes
POR 13 - 12707 Dixie Road	45	41	40	46	41	Yes
POR 14 - 12678 Dixie Road	49	44	43	47	41	Yes
POR 15 - 12669 Dixie Road	50	42	42	49	42	Yes
POR 16 - 12587 Dixie Road	48	44	42	49	44	Yes
POR 17 - 12586 Dixie Road	45	42	40	45	43	Yes
POR 18 - 12520 Dixie Road	47	45	42	47	43	Yes
POR 19 - 12510 Dixie Road	47	46	43	0	0	Yes
POR 20 - 12496 Dixie Road (Church)	46	44	42	n/a	n/a	Yes
POR 21 - 12439 Dixie Road	44	41	39	44	42	Yes
POR 22 - 12423 Dixie Road	43	41	39	44	41	Yes
POR 23 - 12393 Dixie Road	42	40	38	43	40	Yes
POR 24 - 12211 Bramalea Rd	35	34	31	32	31	Yes
POR 25 - 12229 Bramalea Rd	34	32	30	32	30	Yes
POR 26 - 12239 Bramalea Rd	33	31	29	33	31	Yes
POR 27 - 12282 Bramalea Rd	36	34	32	34	32	Yes
POR 28 - 12356 Bramalea Rd (Gurudwara)	36	33	31	n/a	n/a	Yes
POR 29 - 12380 Bramalea Rd	38	36	34	37	34	Yes
POR 30 - 12390 Bramalea Rd	38	36	34	37	35	Yes
POR 31 - 12400 Bramalea Rd	39	37	35	39	36	Yes
POR 32 - 12420 Bramalea Rd	39	37	35	38	36	Yes
POR 33 - 12440 Bramalea Rd	39	37	35	37	35	Yes
POR 34 - 12501 Bramalea	39	36	34	37	35	Yes
POR 35 - 12636 Bramalea Rd	40	37	35	39	37	Yes



Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 36 - 12691 Bramalea Rd	36	33	31	36	34	Yes
POR 37 - 12798 Bramalea Rd	0	0	0	39	36	Yes
<u>Notes:</u>						
<ul style="list-style-type: none"> - All sound levels are L_{eq} (1hr) values in dBA - n/a = not applicable. No outdoor amenity area associated with the places of worship. 						

6.4.2 Impulsive Noise

Mitigated impacts from impulsive noise from tractor-trailer coupling and uncoupling and from loading/ unloading activities are presented in **Table 7** below.

Table 7: Predicted Sound Levels –Impulsive Sources – Mitigated

Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 1 - 4811 Old School Rd	39	39	39	37	37	Yes
POR 2 - 4755 Old School Rd	39	39	39	40	40	Yes
POR 3 - 4727 Old School Rd	41	41	41	40	40	Yes
POR 4 - 4713 Old School Rd	44	44	44	40	40	Yes
POR 5 - 13035 Dixie Road	42	42	42	42	42	Yes
POR 6 - 13014 Dixie Road	41	41	41	40	40	Yes
POR 7 - 4483 Old School Rd	43	43	43	41	41	Yes
POR 8 - 12891 Dixie Road	42	42	42	38	38	Yes
POR 9 - 12862 Dixie Road	43	43	43	41	41	Yes
POR 10 - 12786 Dixie Road	41	41	41	40	40	Yes
POR 11 - 12731 Dixie Road	41	41	41	41	41	Yes
POR 12 - 12708 Dixie Road	39	39	39	37	37	Yes
POR 13 - 12707 Dixie Road	39	39	39	39	39	Yes
POR 14 - 12678 Dixie Road	37	37	37	35	35	Yes
POR 15 - 12669 Dixie Road	37	37	37	37	37	Yes
POR 16 - 12587 Dixie Road	34	34	34	33	33	Yes
POR 17 - 12586 Dixie Road	32	32	32	33	33	Yes
POR 18 - 12520 Dixie Road	33	33	33	31	31	Yes
POR 19 - 12510 Dixie Road	34	34	34	0	0	Yes
POR 20 - 12496 Dixie Road (Church)	35	35	35	n/a	n/a	Yes
POR 21 - 12439 Dixie Road	37	37	37	38	38	Yes
POR 22 - 12423 Dixie Road	37	37	37	38	38	Yes
POR 23 - 12393 Dixie Road	37	37	37	38	38	Yes
POR 24 - 12211 Bramalea Rd	33	33	33	29	29	Yes
POR 25 - 12229 Bramalea Rd	32	32	32	29	29	Yes
POR 26 - 12239 Bramalea Rd	30	30	30	30	30	Yes
POR 27 - 12282 Bramalea Rd	34	34	34	32	32	Yes
POR 28 - 12356 Bramalea Rd (Gurudwara)	33	33	33	n/a	n/a	Yes



Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 29 - 12380 Bramalea Rd	35	35	35	34	34	Yes
POR 30 - 12390 Bramalea Rd	36	36	36	34	34	Yes
POR 31 - 12400 Bramalea Rd	36	36	36	35	35	Yes
POR 32 - 12420 Bramalea Rd	36	36	36	35	35	Yes
POR 33 - 12440 Bramalea Rd	36	36	36	34	34	Yes
POR 34 - 12501 Bramalea	35	35	35	33	33	Yes
POR 35 - 12636 Bramalea Rd	36	36	36	35	35	Yes
POR 36 - 12691 Bramalea Rd	32	32	32	32	32	Yes
POR 37 - 12798 Bramalea Rd	0	0	0	34	34	Yes

Notes:

- All sound levels are L_{LM} values in dBAI
- Frequent impulses assumed
- n/a = not applicable. No outdoor amenity area associated with the places of worship.

6.4.3 Cold Storage at 12489 Dixie Road Building 1

Mitigated sound levels from Cold Storage operations at Building 1 and Dry storage operations at all other facilities are presented in **Table 8** below. Note the 410 m long noise wall at the southeast corner of the property is not included in these predictions.

Table 8: Predicted Sound Levels – Cold Storage at 2489 Dixie Road Building 1

Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 1 - 4811 Old School Rd	45	42	39	43	40	Yes
POR 2 - 4755 Old School Rd	49	44	42	49	42	Yes
POR 3 - 4727 Old School Rd	47	43	41	46	43	Yes
POR 4 - 4713 Old School Rd	48	44	42	45	35	Yes
POR 5 - 13035 Dixie Road	46	42	40	45	41	Yes
POR 6 - 13014 Dixie Road	44	40	38	44	40	Yes
POR 7 - 4483 Old School Rd	47	42	40	46	41	Yes
POR 8 - 12891 Dixie Road	45	43	40	43	38	Yes
POR 9 - 12862 Dixie Road	46	43	41	45	43	Yes
POR 10 - 12786 Dixie Road	45	43	41	44	42	Yes
POR 11 - 12731 Dixie Road	46	44	42	46	44	Yes
POR 12 - 12708 Dixie Road	47	44	42	46	43	Yes
POR 13 - 12707 Dixie Road	47	44	42	47	45	Yes
POR 14 - 12678 Dixie Road	50	46	44	48	43	Yes
POR 15 - 12669 Dixie Road	50	44	44	50	45	Yes
POR 16 - 12587 Dixie Road	48	46	43	49	45	Yes
POR 17 - 12586 Dixie Road	46	45	42	47	45	Yes
POR 18 - 12520 Dixie Road	48	47	44	48	46	Yes
POR 19 - 12510 Dixie Road	49	48	45	47	45	Yes
POR 20 - 12496 Dixie Road (Church)	48	46	44	n/a	n/a	Yes



Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 21 - 12439 Dixie Road	47	46	44	48	47	Yes
POR 22 - 12423 Dixie Road	47	46	43	48	47	Yes
POR 23 - 12393 Dixie Road	46	46	43	47	46	Yes
POR 24 - 12211 Bramalea Rd	41	40	37	39	38	Yes
POR 25 - 12229 Bramalea Rd	39	39	36	39	39	Yes
POR 26 - 12239 Bramalea Rd	39	39	36	40	39	Yes
POR 27 - 12282 Bramalea Rd	41	40	38	40	40	Yes
POR 28 - 12356 Bramalea Rd (Gurudwara)	41	40	37	n/a	n/a	Yes
POR 29 - 12380 Bramalea Rd	43	42	39	41	40	Yes
POR 30 - 12390 Bramalea Rd	42	41	38	41	41	Yes
POR 31 - 12400 Bramalea Rd	42	42	39	42	42	Yes
POR 32 - 12420 Bramalea Rd	42	42	39	42	41	Yes
POR 33 - 12440 Bramalea Rd	42	41	39	41	41	Yes
POR 34 - 12501 Bramalea	43	42	40	42	41	Yes
POR 35 - 12636 Bramalea Rd	45	44	42	44	44	Yes
POR 36 - 12691 Bramalea Rd	42	41	38	42	41	Yes
POR 37 - 12798 Bramalea Rd	44	43	40	42	41	Yes

Notes:

- All sound levels are L_{eq} (1hr) values in dBA.
- n/a = not applicable. No outdoor amenity area associated with places of worship.

6.4.4 Cold Storage at 12489 Dixie Road Building 3

Mitigated sound levels from Cold Storage operations at Building 3 and Dry storage operations at all other facilities are presented in **Table 9** below. The 410 m long noise wall at the southeast corner of the property is included in these predictions.

Table 9: Predicted Sound Levels – Cold Storage at 2489 Dixie Road Building 1

Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 1 - 4811 Old School Rd	45	42	40	43	40	Yes
POR 2 - 4755 Old School Rd	49	45	43	49	42	Yes
POR 3 - 4727 Old School Rd	46	42	41	46	42	Yes
POR 4 - 4713 Old School Rd	48	43	42	44	34	Yes
POR 5 - 13035 Dixie Road	46	42	40	45	40	Yes
POR 6 - 13014 Dixie Road	44	40	38	44	40	Yes
POR 7 - 4483 Old School Rd	47	41	40	46	41	Yes
POR 8 - 12891 Dixie Road	45	42	40	43	37	Yes
POR 9 - 12862 Dixie Road	45	42	40	45	42	Yes
POR 10 - 12786 Dixie Road	44	42	40	43	41	Yes
POR 11 - 12731 Dixie Road	44	41	40	45	42	Yes
POR 12 - 12708 Dixie Road	46	42	40	44	40	Yes
POR 13 - 12707 Dixie Road	45	41	40	46	42	Yes



Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 14 - 12678 Dixie Road	49	44	43	47	41	Yes
POR 15 - 12669 Dixie Road	50	42	43	49	43	Yes
POR 16 - 12587 Dixie Road	48	44	42	49	44	Yes
POR 17 - 12586 Dixie Road	45	42	40	46	43	Yes
POR 18 - 12520 Dixie Road	47	45	43	47	44	Yes
POR 19 - 12510 Dixie Road	48	46	44	46	43	Yes
POR 20 - 12496 Dixie Road (Church)	46	44	42	n/a	n/a	Yes
POR 21 - 12439 Dixie Road	44	42	40	44	42	Yes
POR 22 - 12423 Dixie Road	43	42	39	44	42	Yes
POR 23 - 12393 Dixie Road	43	41	39	43	41	Yes
POR 24 - 12211 Bramalea Rd	44	44	41	42	42	Yes
POR 25 - 12229 Bramalea Rd	43	43	40	42	42	Yes
POR 26 - 12239 Bramalea Rd	42	42	39	42	42	Yes
POR 27 - 12282 Bramalea Rd	45	45	42	44	44	Yes
POR 28 - 12356 Bramalea Rd (Gurudwara)	45	45	42	n/a	n/a	Yes
POR 29 - 12380 Bramalea Rd	47	47	44	46	46	Yes
POR 30 - 12390 Bramalea Rd	47	46	43	47	47	Yes
POR 31 - 12400 Bramalea Rd	47	47	44	48	48	Yes
POR 32 - 12420 Bramalea Rd	47	47	44	47	47	Yes
POR 33 - 12440 Bramalea Rd	47	47	44	46	46	Yes
POR 34 - 12501 Bramalea	46	45	42	45	45	Yes
POR 35 - 12636 Bramalea Rd	45	45	42	45	45	Yes
POR 36 - 12691 Bramalea Rd	41	41	38	42	41	Yes
POR 37 - 12798 Bramalea Rd	43	42	39	42	41	Yes

Notes:

- All sound levels are L_{eq} (1hr) values in dBA.
- n/a = not applicable. No outdoor amenity area associated with places of worship.

6.4.5 Cold Storage at 12489 Dixie Road Buildings 1 and 3

Mitigated sound levels from Cold Storage operations at both Building 1 and Building 3 and Dry storage operations art all other facilities are presented in **Table 10** below. The 410 m long noise wall at the southeast corner of the property is included in these predictions.

Table 10: Predicted Sound Levels – Cold Storage at 2489 Dixie Road Building 1

Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 1 - 4811 Old School Rd	46	43	41	44	41	Yes
POR 2 - 4755 Old School Rd	49	46	44	49	43	Yes
POR 3 - 4727 Old School Rd	47	44	41	46	43	Yes
POR 4 - 4713 Old School Rd	48	44	42	45	36	Yes
POR 5 - 13035 Dixie Road	46	42	40	45	41	Yes



Receptor	Facade Windows			Outdoor Amenity		Meets Class 1 Limits?
	Daytime	Evening	Night-time	Daytime	Evening	
POR 6 - 13014 Dixie Road	44	40	38	44	40	Yes
POR 7 - 4483 Old School Rd	47	42	40	46	41	Yes
POR 8 - 12891 Dixie Road	45	43	40	43	38	Yes
POR 9 - 12862 Dixie Road	46	43	41	45	43	Yes
POR 10 - 12786 Dixie Road	45	43	41	44	43	Yes
POR 11 - 12731 Dixie Road	46	44	42	46	44	Yes
POR 12 - 12708 Dixie Road	47	44	42	46	44	Yes
POR 13 - 12707 Dixie Road	47	44	42	47	45	Yes
POR 14 - 12678 Dixie Road	50	46	44	48	43	Yes
POR 15 - 12669 Dixie Road	50	45	44	50	45	Yes
POR 16 - 12587 Dixie Road	48	46	44	49	45	Yes
POR 17 - 12586 Dixie Road	46	45	42	47	45	Yes
POR 18 - 12520 Dixie Road	48	47	45	48	46	Yes
POR 19 - 12510 Dixie Road	49	48	45	47	46	Yes
POR 20 - 12496 Dixie Road (Church)	48	47	44	n/a	n/a	Yes
POR 21 - 12439 Dixie Road	47	47	44	48	47	Yes
POR 22 - 12423 Dixie Road	47	47	44	48	47	Yes
POR 23 - 12393 Dixie Road	47	46	43	47	47	Yes
POR 24 - 12211 Bramalea Rd	45	45	42	43	43	Yes
POR 25 - 12229 Bramalea Rd	44	44	41	43	43	Yes
POR 26 - 12239 Bramalea Rd	44	44	41	44	44	Yes
POR 27 - 12282 Bramalea Rd	46	46	43	45	45	Yes
POR 28 - 12356 Bramalea Rd (Gurudwara)	46	46	43	n/a	n/a	Yes
POR 29 - 12380 Bramalea Rd	48	48	45	47	47	Yes
POR 30 - 12390 Bramalea Rd	47	47	44	47	47	Yes
POR 31 - 12400 Bramalea Rd	48	48	45	49	48	Yes
POR 32 - 12420 Bramalea Rd	48	47	44	48	48	Yes
POR 33 - 12440 Bramalea Rd	48	47	44	47	47	Yes
POR 34 - 12501 Bramalea	47	47	44	46	46	Yes
POR 35 - 12636 Bramalea Rd	47	47	44	47	47	Yes
POR 36 - 12691 Bramalea Rd	44	44	41	44	44	Yes
POR 37 - 12798 Bramalea Rd	45	45	42	44	44	Yes

Notes:

- All sound levels are L_{eq} (1hr) values in dBA.
- n/a = not applicable. No outdoor amenity area associated with places of worship.

7.0 Vibration Assessment

The proposed development is not anticipated to contain any significant industrial vibration sources, such as large stamping presses or forges. Under applicable MECP guidelines, a detailed vibration assessment is not required. Adverse impacts from industrial vibration from the proposed warehouse operations is not anticipated.



8.0 Conclusions and Recommendations

A compatibility assessment has been completed, examining the potential for noise and vibration impacts from the proposed development project and the effect on its surroundings. Based on the results of our studies:

- With the inclusion of the following noise mitigation measures, adverse noise impacts from the proposed development (stationary sources) are not anticipated from the proposed industrial development.
 - Cold storage activities must be restricted to Buildings 1 and 3 on the 12489 Dixie Road property.
 - A 4.5 m high, 170 m long “L”-shaped noise barrier is required at the northeast corner of the 129861 Dixie Road property, to shield receptors POR3 and POR4, as shown in **Figure 6**.
 - A 3.0 m high, 49 m long noise barrier is required between Buildings 1 and 2 on the 12861 Dixie Road, to shield receptor POR8, as shown in **Figure 6**.
 - If and only if Cold Storage activities are to take place in Building 3 on the 12489 Dixie Road property, then a 4.5 m high, 410 m long noise barrier located at the southeast corner of the property is required, to shield receptors POR 24, POR27, and POR 29 through POR35. The noise barrier location is shown in **Figure 7**. Cold Storage activities can occur at Building 1 without the barrier in place.
- Adverse vibration impacts from the proposed development (stationary sources) are not anticipated from the proposed residential development.
- The requirements of MECP Guideline D-6 and Publication NPC-300 are met.

9.0 Closure

Sincerely,

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10.0 References

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

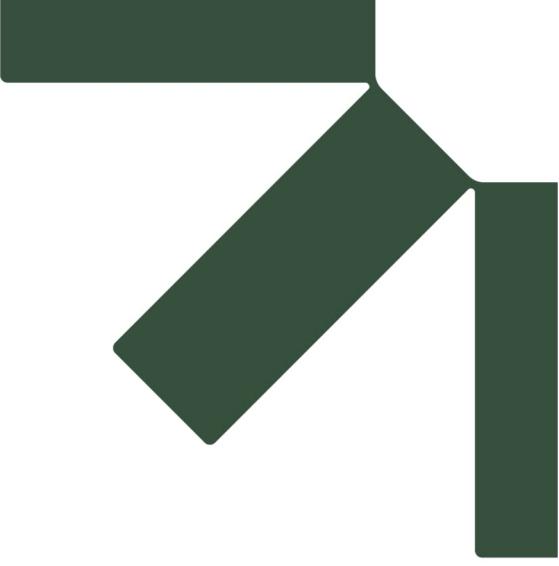
Ontario Ministry of the Environment, Conservation and Parks (MECP), *Publication NPC-300: Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning*.

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-6: Compatibility Between Industrial Facilities and Sensitive Land Uses.

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

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





Figures

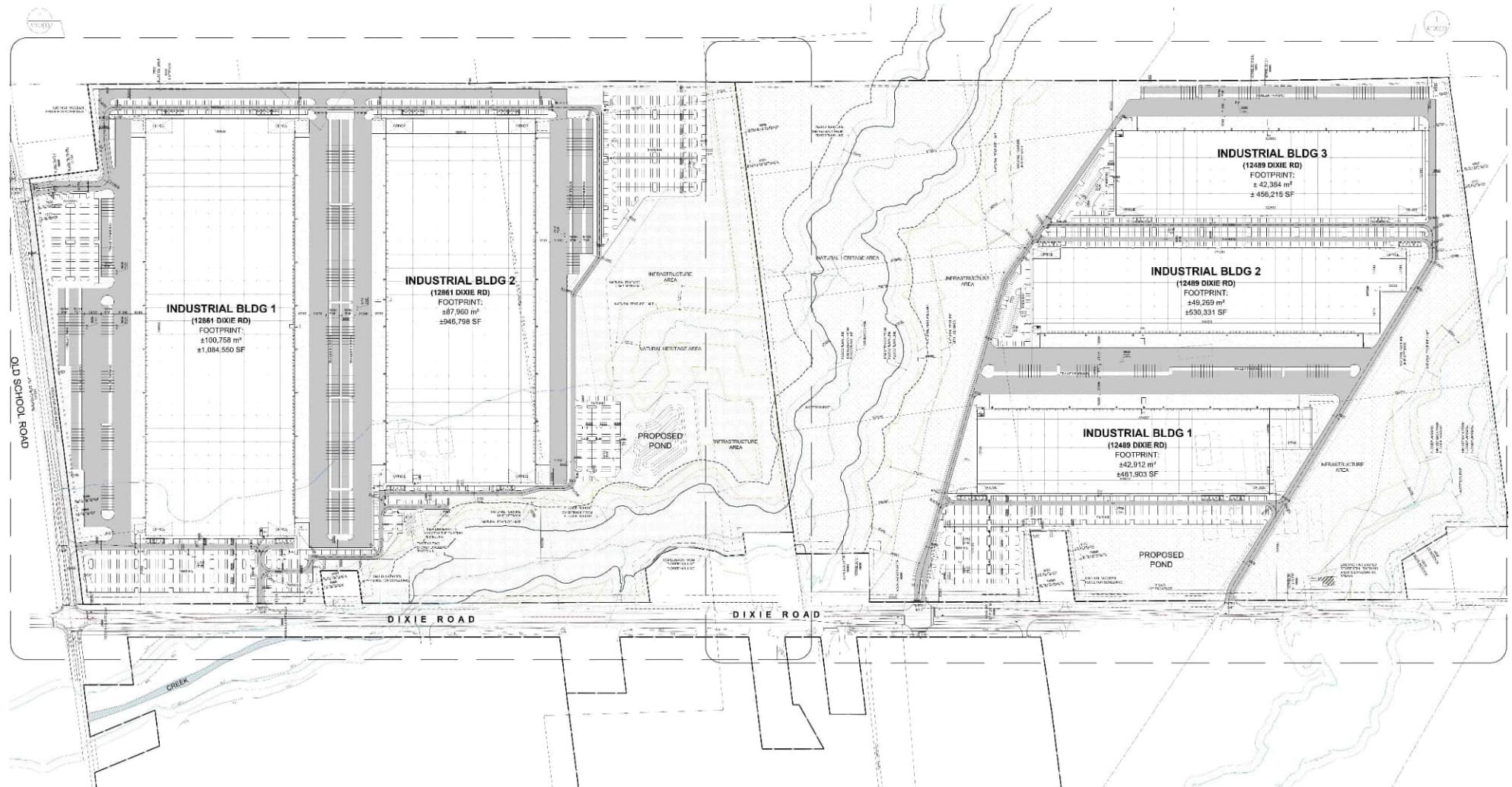
Environmental Noise and Vibration Study

12489 and 12861 Dixie Road, Caledon, ON

QuadReal Property Group

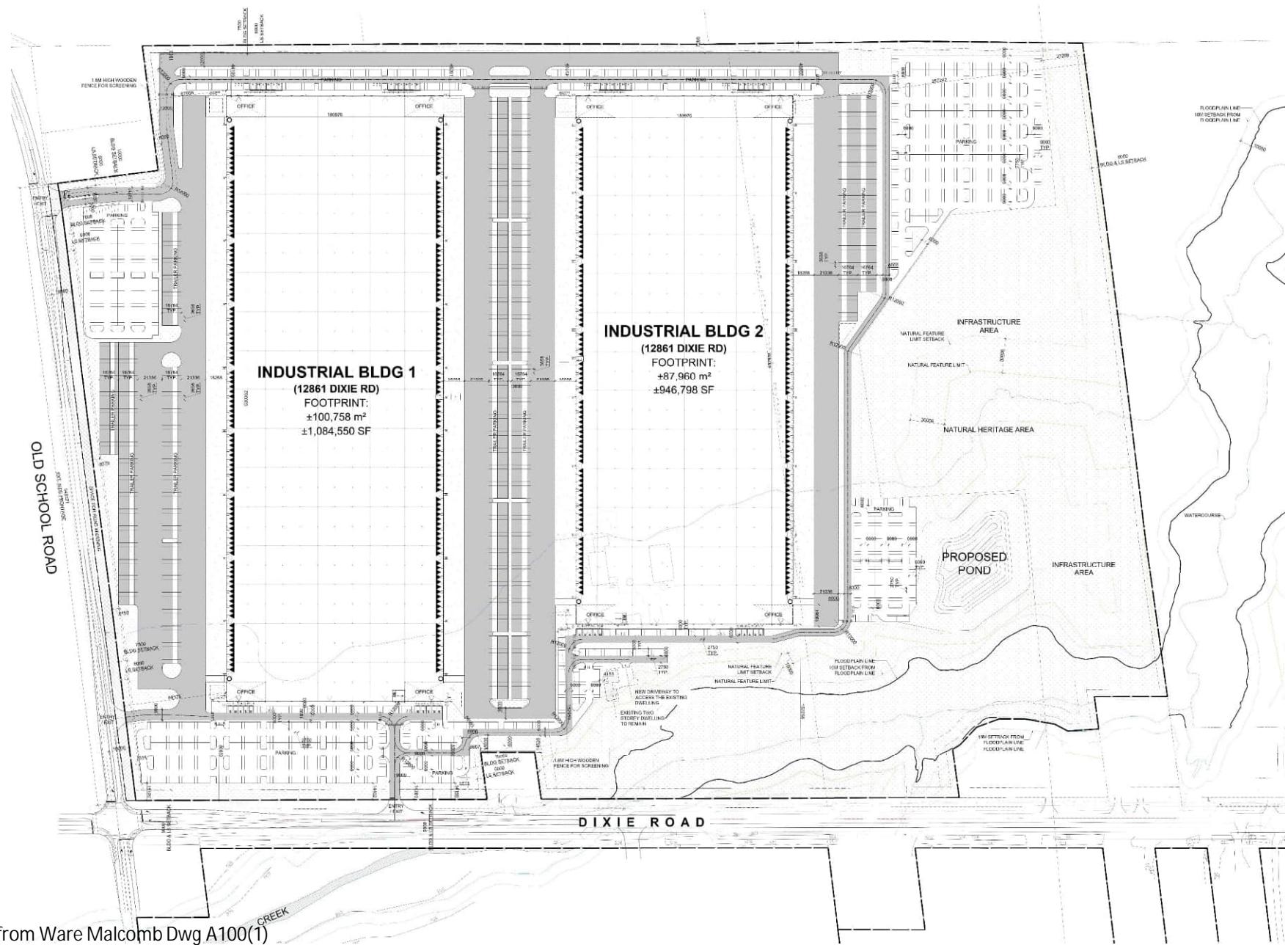
SLR Project No.: 241.030011.00001

December 14, 2024

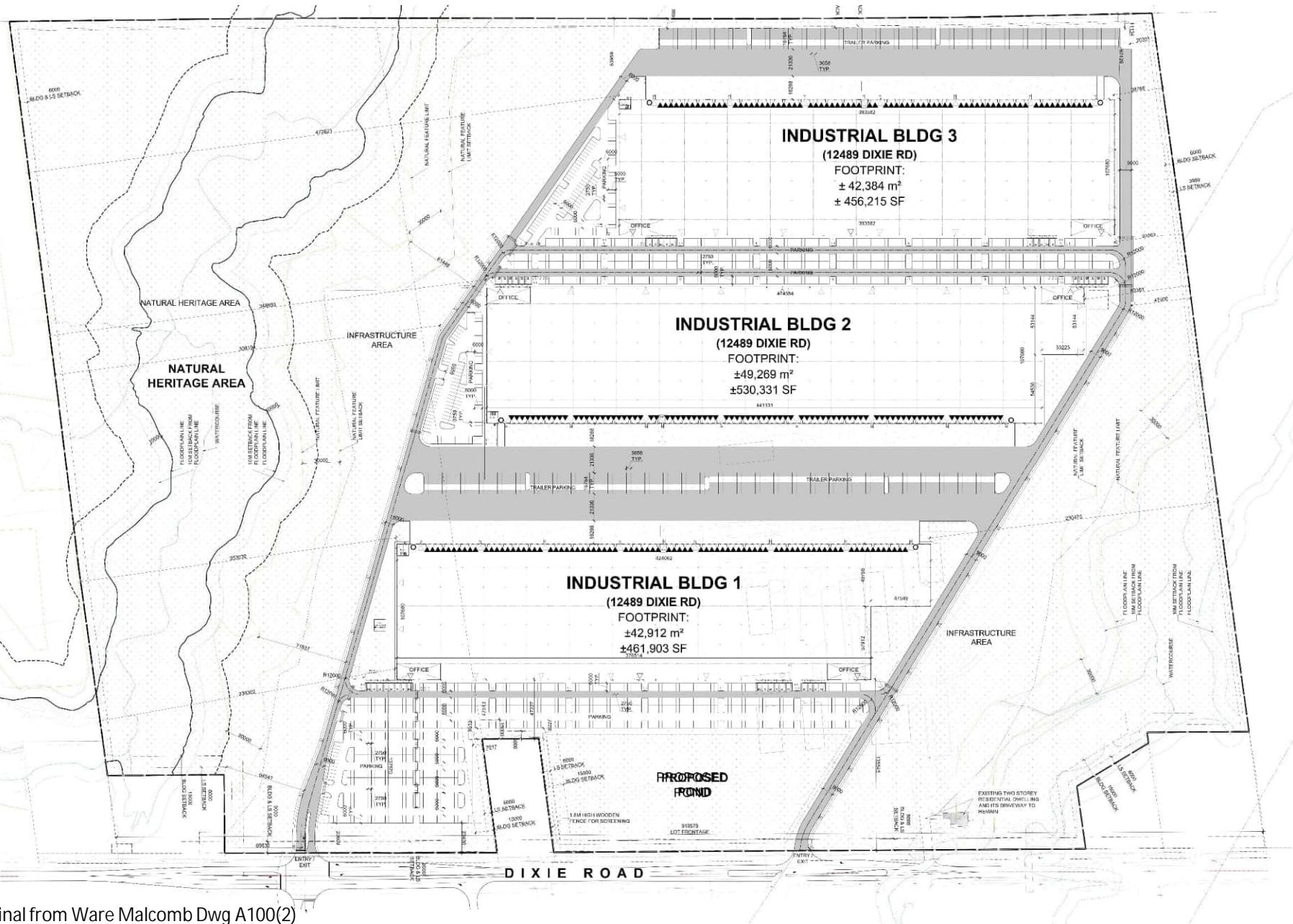


Original from Ware Malcomb Dwg A100

QUADREAL PROPERTY GROUP 12489 AND 12861 DIXIE ROAD EXCERPTS FROM THE SITE PLAN - OVERALL		Scale:		n/a	METRES	
		Date: Dec. 2024		Rev 2	Figure No.	
				1a		
		Project No. 241.30494.00001				

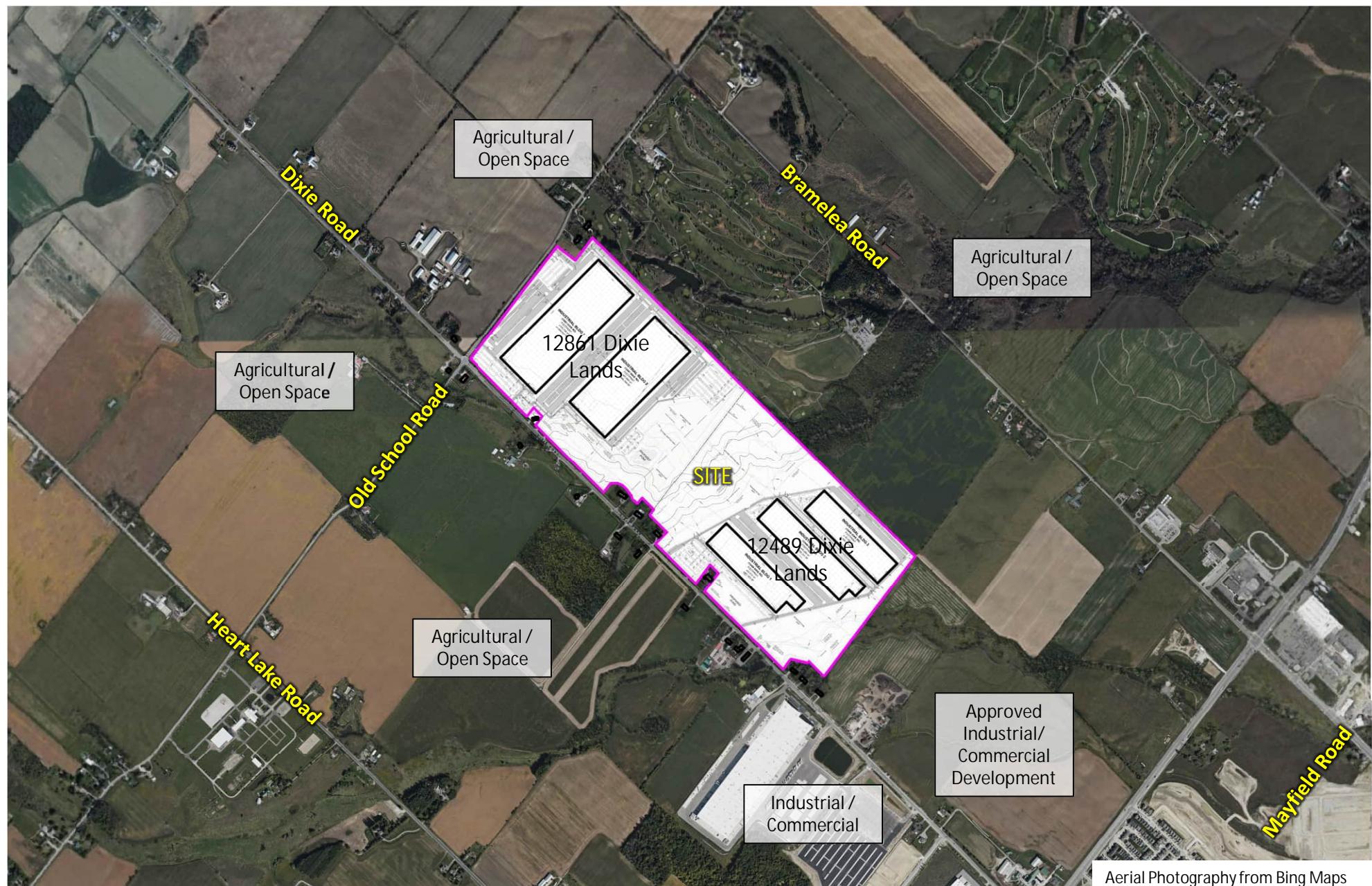


QUADREAL PROPERTY GROUP		Scale:	n/a	METRES	
12489 AND 12861 DIXIE ROAD		Date: Dec. 2024	Rev 2	Figure No.	
EXCERPTS FROM THE SITE PLAN – 12861 DIXIE ROAD (NORTH PARCEL)		Project No. 241.30494.00001		1b	



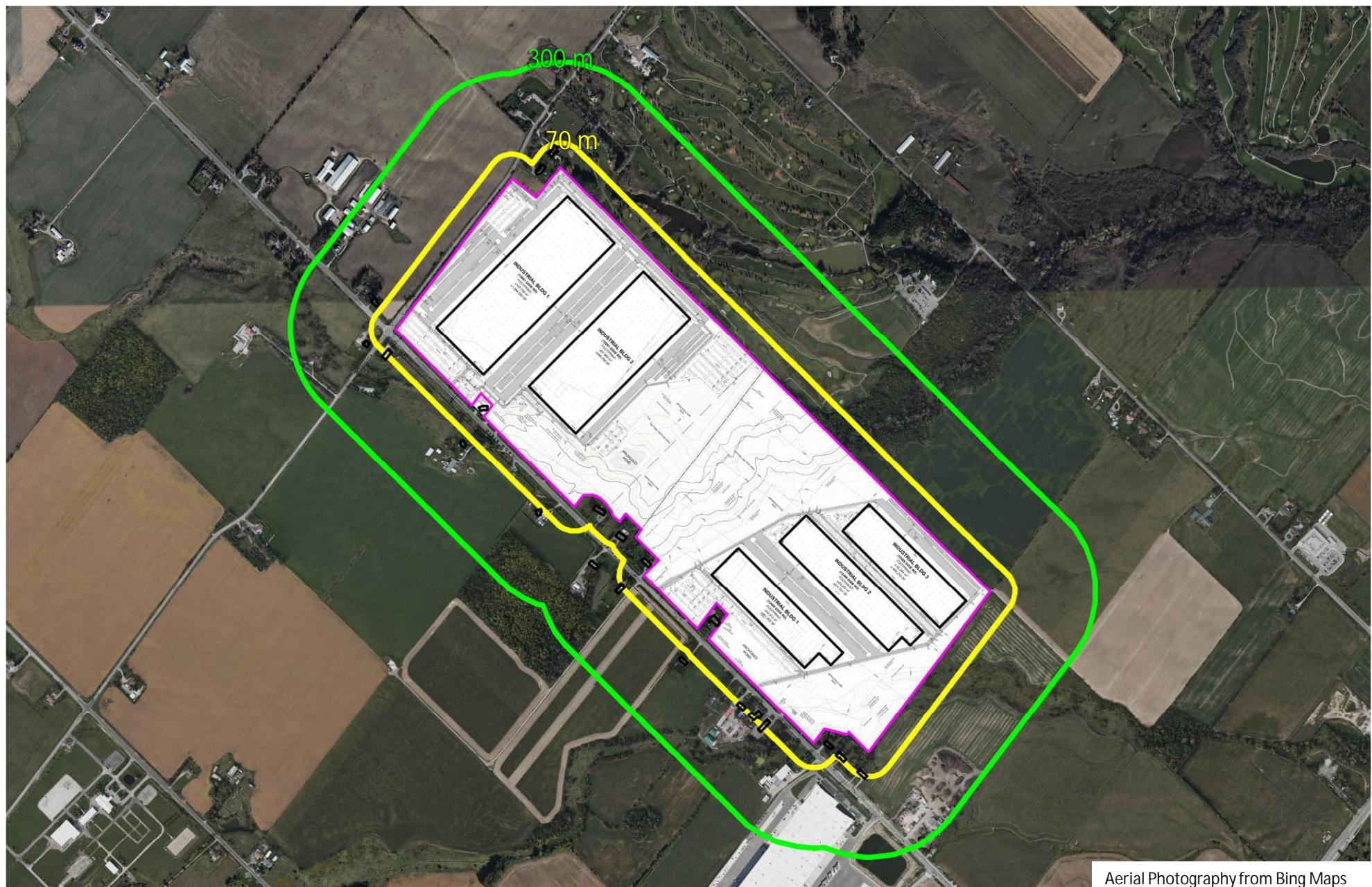
Original from Ware Malcomb Dwg A100(2)

QUADREAL PROPERTY GROUP	 True North	Scale: n/a		METRES
12489 AND 12861 DIXIE ROAD		Date: Dec. 2024		Figure No.
EXCERPTS FROM THE SITE PLAN – 12489 DIXIE ROAD (SOUTH PARCEL)		Rev 2		1c
Project No. 241.30494.00001				SLR



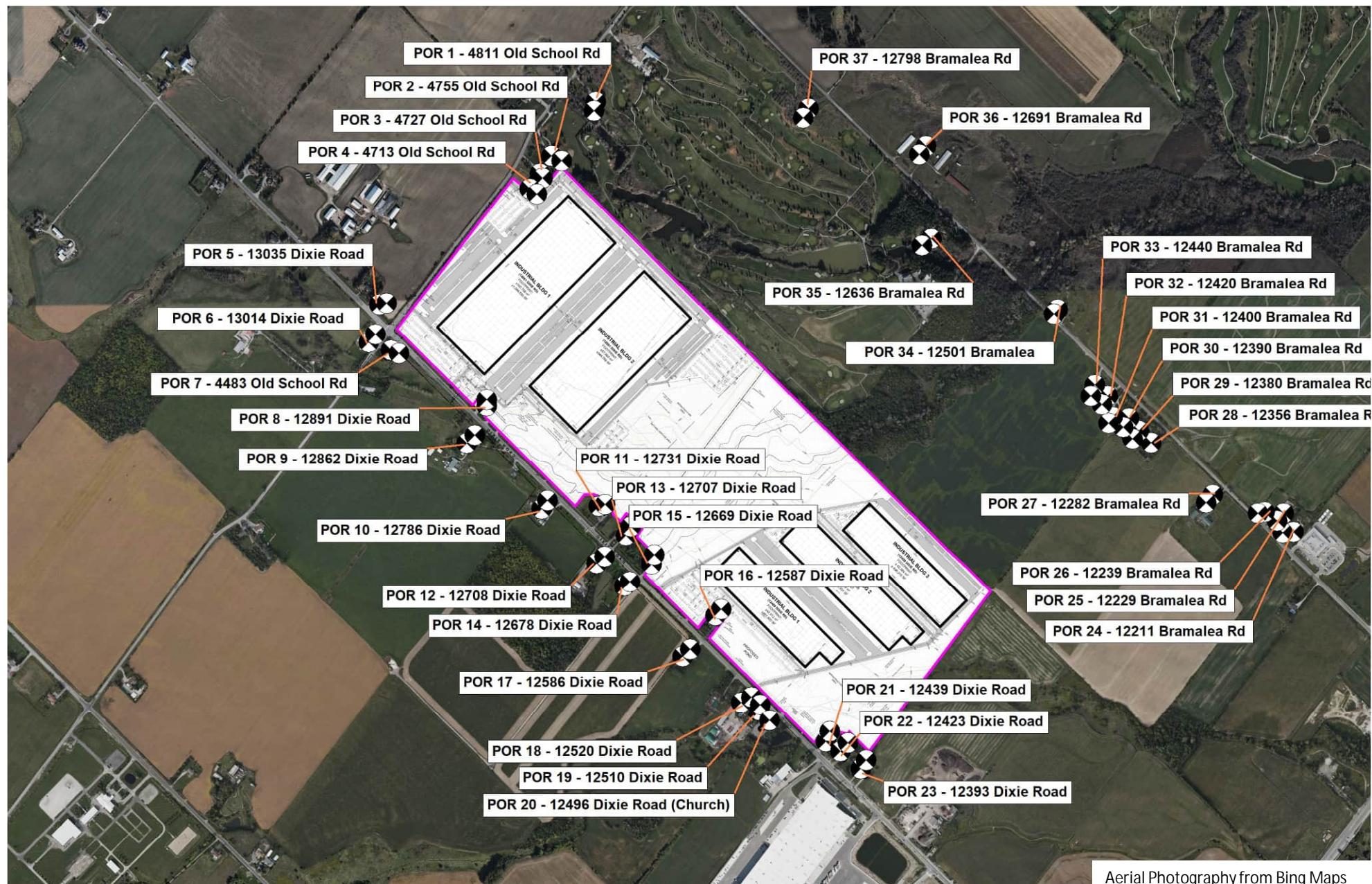
Aerial Photography from Bing Maps

QUADREAL PROPERTY GROUP		Scale: 1:20,000		METRES	 SLR	
12489 AND 12861 DIXIE ROAD		Date: Dec. 2024	Rev 2	Figure No. 2		
CONTEXT PLAN		Project No. 241.30494.00001				



QUADREAL PROPERTY GROUP	True North 	Scale:	1:15,000	METRES	Figure No. 3
12489 AND 12861 DIXIE ROAD		Date:	Dec. 2024	Rev 2	
GUIDELINE D-6 SEPARATION DISTANCES		Project No.	241.30494.00001		





QUADREAL PROPERTY GROUP	True North 	Scale:	1:15,000	METRES	Figure No. 4
12489 AND 12861 DIXIE ROAD		Date:	Dec. 2024	Rev 2	
POINTS OF RECEPTION		Project No.	241.30494.00001		



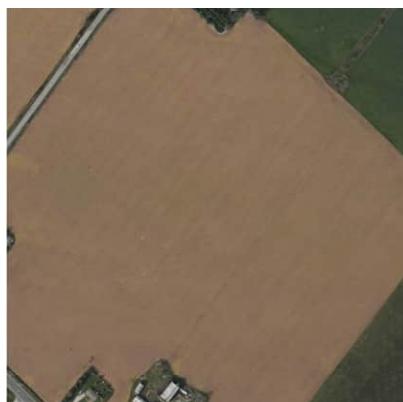
12861 Dixie Road Site

Building 1

- Idling Trucks at Loading Bays (Day: 62 trucks; Evening: 16 Trucks; Night: 31 Trucks)
- Moving Trucks (Day: 16 trucks; Evening: 0 Trucks; Night: 1 Truck)
- 4 x 10 ton CC Office HVAC units
- 20 x 20 ton CC RTUs
- Impulsive Noise

Building 2

- Idling Trucks at Loading Bays (Day: 54 trucks; Evening: 14 Trucks; Night: 27 Trucks)
- Moving Trucks (Day: 16 trucks; Evening: 0 Trucks; Night: 1 Truck)
- 4 x 10 ton CC Office HVAC units
- 16 x 20 ton CC RTUs
- Impulsive Noise



Aerial Photography from Bing Maps



12489 Dixie Road Site

Building 1

- Idling Trucks at Loading Bays (Day: 25 trucks; Evening: 6 Trucks; Night: 12 Trucks)
- Moving Trucks (Day: 27 trucks; Evening: 1 Trucks; Night: 4 Trucks)
- 2 x 10 ton CC Office HVAC units
- 14 x 20 ton CC RTUs
- 83 Refrigeration Trailers
- 4 Cooling Towers
- Impulsive Noise

Building 2

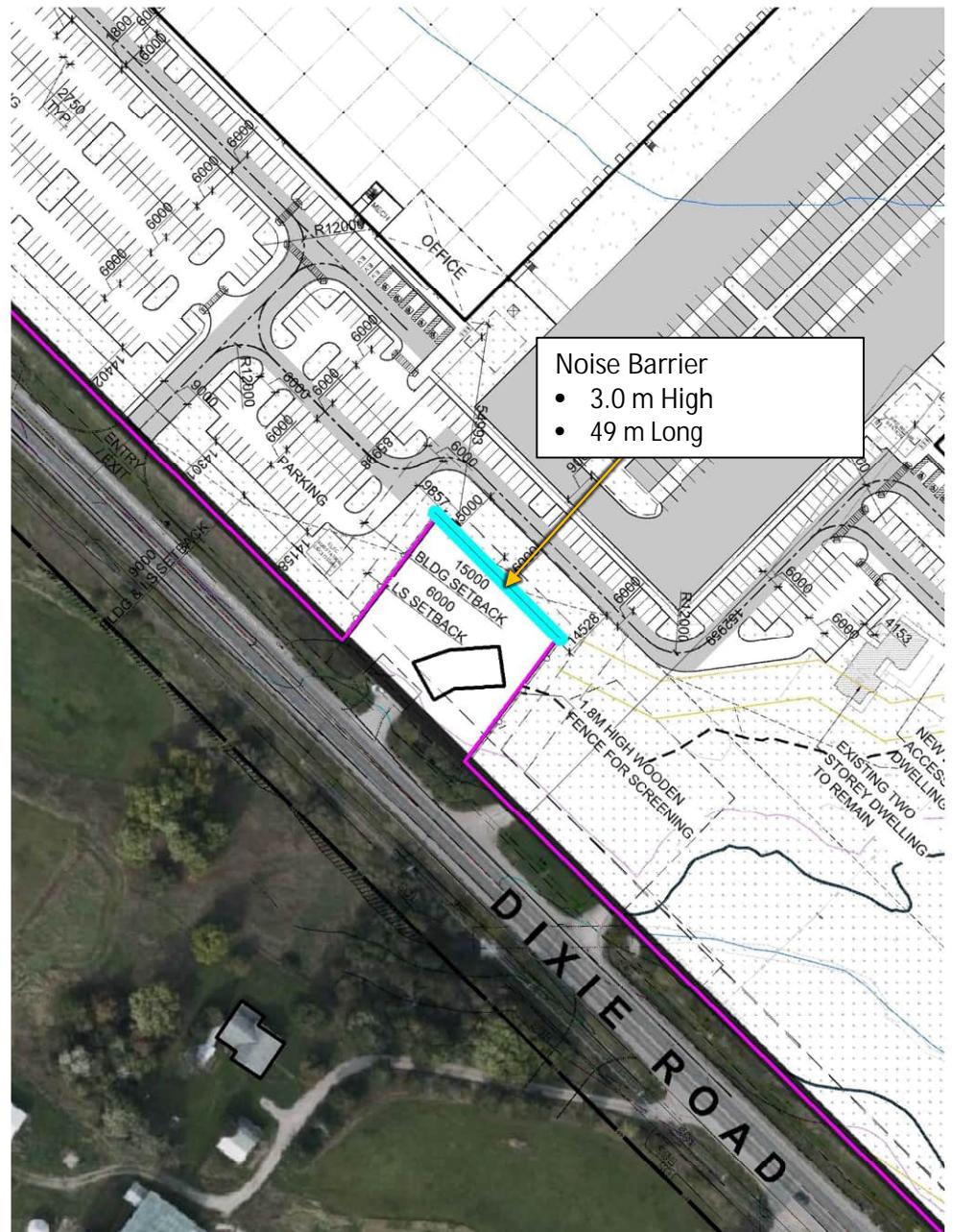
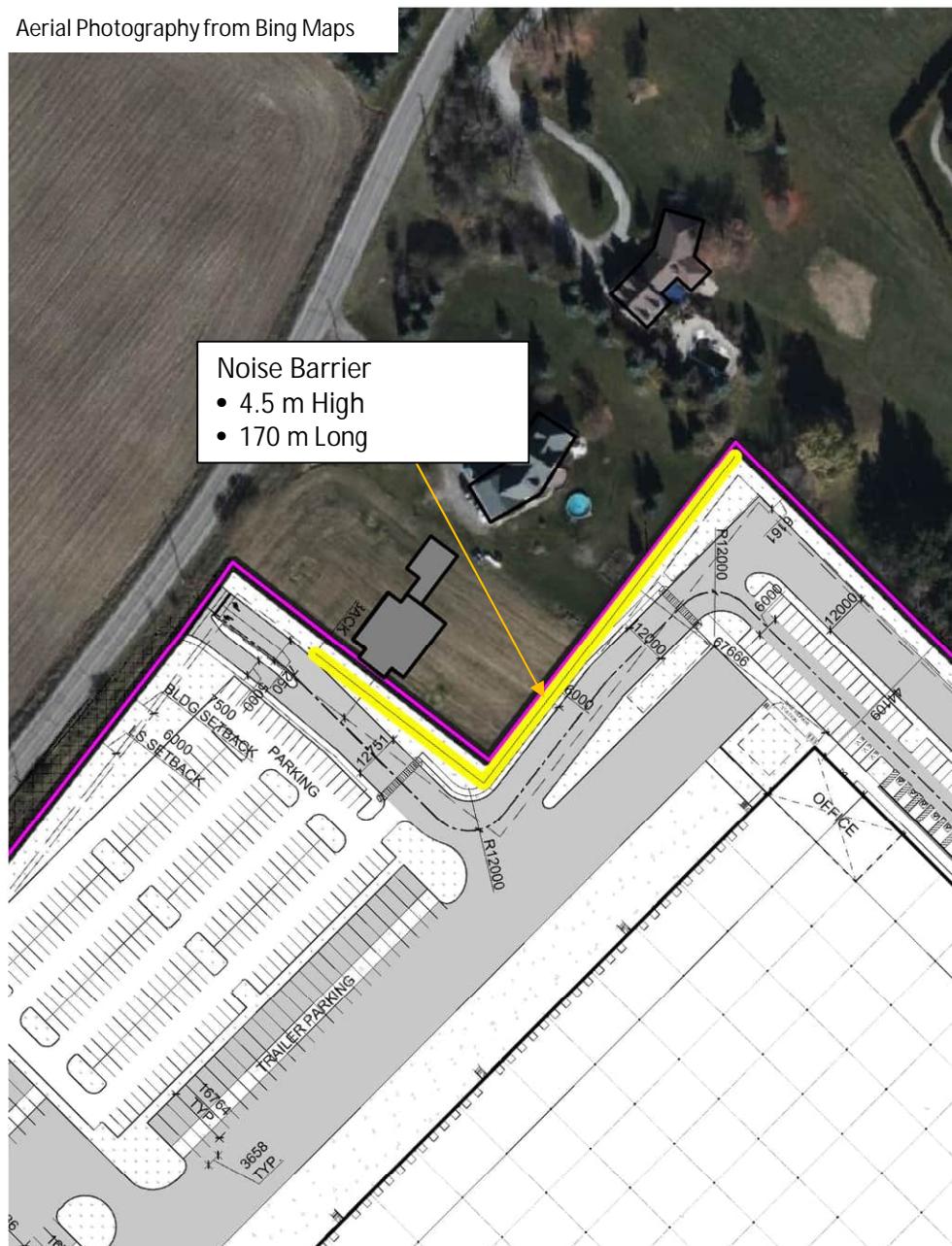
- Idling Trucks at Loading Bays (Day: 25 trucks; Evening: 6 Trucks; Night: 13 Trucks)
- Moving Trucks (Day: 27 trucks; Evening: 2 Trucks; Night: 4 Trucks)
- 2 x 10 ton CC Office HVAC units
- 16 x 20 ton CC RTUs
- Impulsive Noise

Building 3

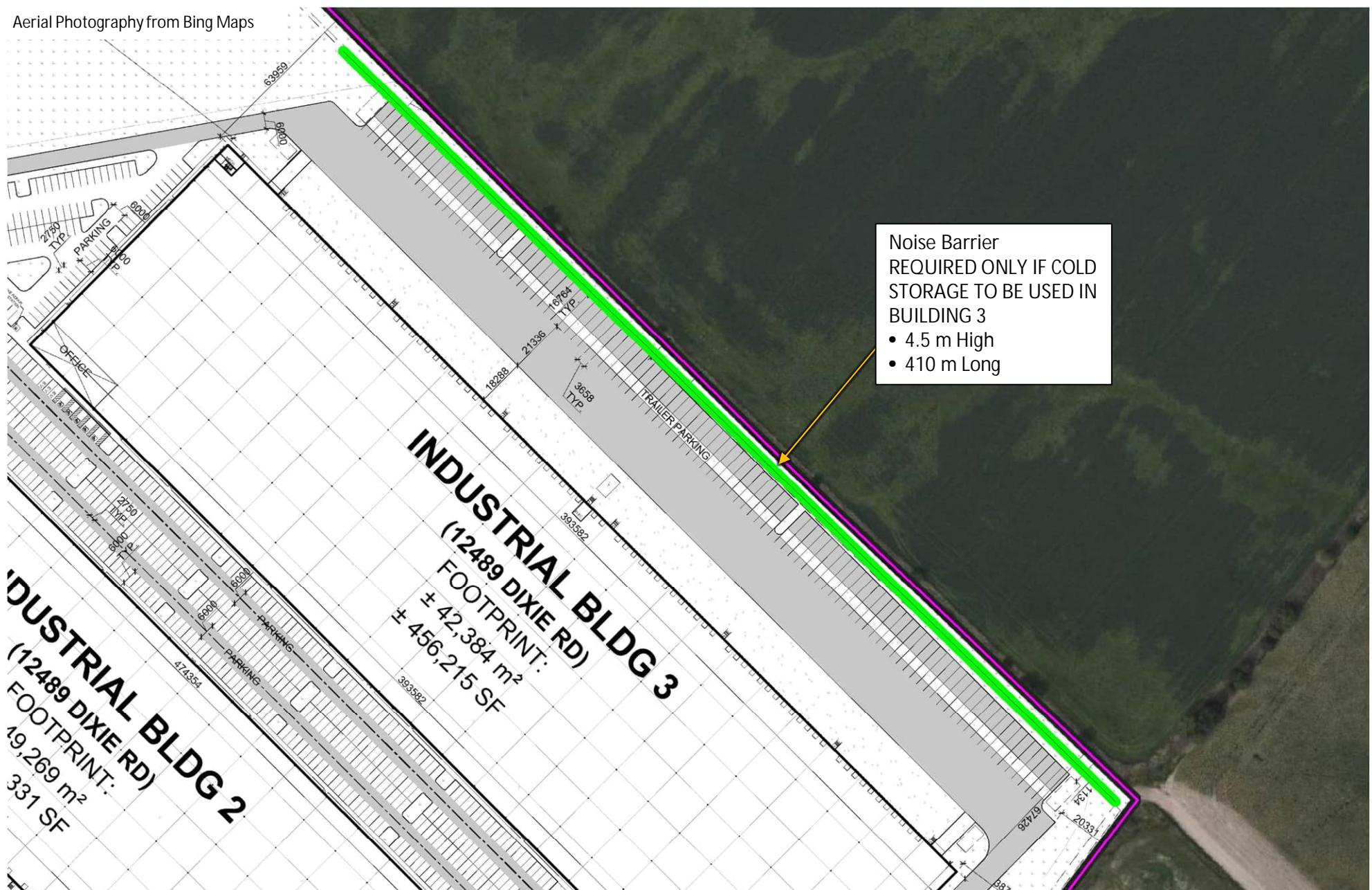
- Idling Trucks at Loading Bays (Day: 22 trucks; Evening: 6 Trucks; Night: 11 Trucks)
- Moving Trucks (Day: 26 trucks; Evening: 1 Trucks; Night: 4 Trucks)
- 2 x 10 ton CC Office HVAC units
- 14 x 20 ton CC RTUs
- 75 Refrigeration Trailers
- 4 Cooling Towers
- Impulsive Noise

QUADREAL PROPERTY GROUP		 True North	Scale: 1:12,000		METRES	 SLR	
12489 AND 12861 DIXIE ROAD			Date: Dec. 2024		Rev 2		
NOISE SOURCE LOCATIONS			Figure No.		5		
Project No. 241.30494.00001							

Aerial Photography from Bing Maps



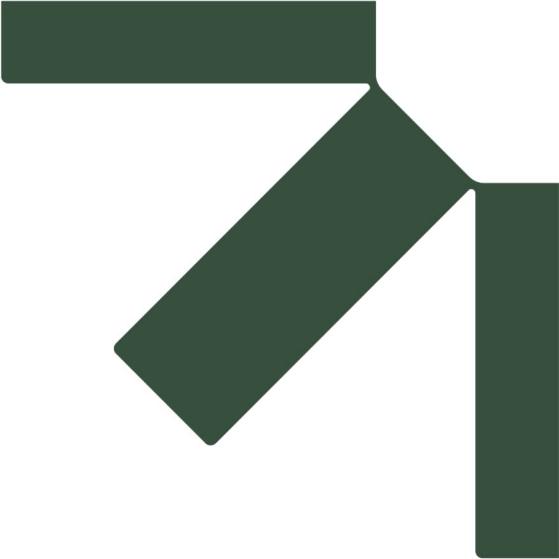
QUADREAL PROPERTY GROUP	True North 	Scale: 1:2,000		METRES	Figure No. 6	
12489 AND 12861 DIXIE ROAD		Date: Dec. 2024	Rev 2			
REQUIRED NOISE MITIGATION MEASURES - 12861 DIXIE ROAD PROPERTY		Project No. 241.30494.00001				



QUADREAL PROPERTY GROUP	True North	Scale: 1:8,000		METRES	Figure No. 7
12489 AND 12861 DIXIE ROAD		Date: Dec. 2024	Rev 2	Project No. 241.30494.00001	
REQUIRED NOISE MITIGATION MEASURES - 12489 DIXIE ROAD PROPERTY					



SLR



Appendix A Development Drawings

Environmental Noise and Vibration Study

12489 and 12861 Dixie Road, Caledon, ON

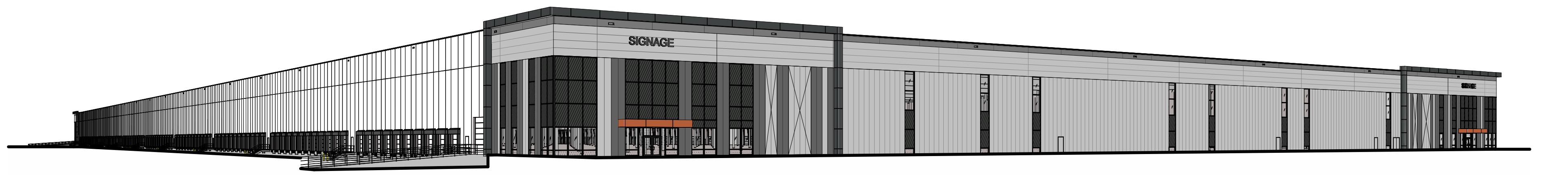
QuadReal Property Group

SLR Project No.: 241.030011.00001

December 14, 2024

QUADREAL DIXIE NEN & NES - 12489 & 12861 DIXIE RD, CALEDON

12489 & 12861 DIXIE RD, CALEDON
ONTARIO, CANADA, L7C 2K5



VICINITY MAP	OWNER	OWNER'S CONSULTANTS	SHEET INDEX
	OWNER QUADREAL PROPERTY GROUP CONTACT: JOHN MAROTTA 199 BAY ST SUITE 4900 TORONTO, ONTARIO M5L 1G2 PH: (416) 673-7401 / M: (416) 712-7686 EMAIL: john.marotta@quadreal.com	CIVIL ENGINEER STANTEC 2100 DERRY ROAD WEST MISSISSAUGA, ONTARIO, L5N 0B3 PRIMARY CONTACT: RIZ AKHTAR PH: (416) 418-3642 EMAIL: riz.akhtar@stantec.com	HAMMERSCHLAG & JOFFE 43 LESMILL ROAD TORONTO, ONTARIO, M3B 2T8 PRIMARY CONTACT: BRAD BELL PH: (416) 844-5024 EMAIL: brad.bell@hamjof.com
	ARCHITECT WARE MALCOMB 6220 HWY 7, SUITE 300 VAUGHAN, ONTARIO L4H 0R1 CANADA P 905.850.4696 PRIMARY CONTACT: AMANDA SANABRIA PH: (905) 760-1221 x2142 EMAIL: asanabria@waremalcomb.com	TRANSPORTATION CONSULTANT BA CONSULTING GROUP LTD. 95 ST. CLAIR AVENUE WEST, SUITE 1000 TORONTO PRIMARY CONTACT: THOMAS WOODHALL PH: (416) 981-7110 EMAIL: woodhall@bagroup.com	HERITAGE CONSULTANT IRVIN HERITAGE P.O. BOX 93163 NEWMARKET, ONTARIO L3Y 8K3 PRIMARY CONTACT: THOMAS IRVIN PH: (647) 799-4418 EMAIL: tirvin@invinheritage.com
		SUSTAINABILITY CONSULTANT PURPOSE BUILDING 393 UNIVERSITY AVENUE, SUITE 1702 TORONTO, ONTARIO, M5G 1E6 PRIMARY CONTACT: MATTHEW HIRSCH PH: (416) 419-4824 EMAIL: matthew@purposebuilding.ca	LANDSCAPE CONSULTANT MHBC 7050 WESTON ROAD SUITE 230 WOODBRIDGE, ONTARIO L4L 8G7 PRIMARY CONTACT: GREG COSTA PH: (416) 671-7602 EMAIL: gcosta@mhbcpplan.com
		LEED CONSULTANT DESIGN MANAGEMENT SERVICES PRIMARY CONTACT: MICHELLE GALVIS PH: (786) 681-5214 EMAIL: mgalvis@dms.eco	PLANNER ARMSTRONG CONSULTING 1600 STEELES AVENUE WEST SUITE 318 VAUGHAN, ONTARIO, L4K 4M2 PRIMARY CONTACT: CESARE PITTELLI PH: (416) 444-3300 X3004 EMAIL: cesare@armstrongplan.ca
		ACOUSTICS SLR CONSULTING (CANADA) LTD. 100 STONE ROAD WEST SUITE 201 GUELPH, ONTARIO N1G 5L3 PRIMARY CONTACT: AARON HANIFF PH: (519) 362-5587 EMAIL: ahaniff@sircnslting.com	ARCHITECTURAL G010 TITLE SHEET G020 MATRIX SCHEDULE - 12861 DIXIE RD G041 SITE PLAN - 12489 DIXIE RD A100 OVERALL SITE PLAN A100(1) SITE PLAN - 12861 DIXIE RD A100(2) SITE PLAN - 12489 DIXIE RD A120 BUILDING 1 FLOOR PLAN - 12861 DIXIE RD A121 BUILDING 2 FLOOR PLAN - 12861 DIXIE RD A122 BUILDING 1 FLOOR PLAN - 12489 DIXIE RD A123 BUILDING 2 FLOOR PLAN - 12489 DIXIE RD A124 BUILDING 3 FLOOR PLAN - 12489 DIXIE RD A190 BUILDING 1 ROOF PLAN - 12861 DIXIE RD A191 BUILDING 2 ROOF PLAN - 12861 DIXIE RD A192 BUILDING 1 ROOF PLAN - 12489 DIXIE RD A193 BUILDING 2 ROOF PLAN - 12489 DIXIE RD A194 BUILDING 3 ROOF PLAN - 12489 DIXIE RD A210 BUILDING 1 EXTERIOR ELEVATIONS - 12861 DIXIE RD A211 BUILDING 2 EXTERIOR ELEVATIONS - 12861 DIXIE RD A212 BUILDING 1 EXTERIOR ELEVATIONS - 12489 DIXIE RD A213 BUILDING 2 EXTERIOR ELEVATIONS - 12489 DIXIE RD A214 BUILDING 3 EXTERIOR ELEVATIONS - 12489 DIXIE RD A310 BUILDING 1 SECTIONS - 12861 DIXIE RD A311 BUILDING 2 SECTIONS - 12861 DIXIE RD A312 BUILDING 1 SECTIONS - 12489 DIXIE RD A313 BUILDING 2 SECTIONS - 12489 DIXIE RD A314 BUILDING 3 SECTIONS - 12489 DIXIE RD ARCHITECTURAL SHEET COUNT: 26
			TITLE SHEET DATE: 2023-12-12 ISSUED FOR OPABZA 1 DRAWN BY: A. SANABRIA JOB NO.: TOR22-0060-01 SHEET: G010 DATE: 2024-10-16 REISSUED FOR OPABZA 2 DRAWN BY: T.M. / O.T. JOB NO.: TOR22-0060-01 SHEET: G010 DATE: 2024-10-05 REISSUED FOR OPABZA 3 DRAWN BY: JOB NO.: SHEET:

QUADREAL DIXIE
NEN & NES -
12489 & 12861 DIXIE RD,
CALEDON, ONTARIO,
CANADA, L7C 2K5

WARE MALCOMB
 6220 Highway 7, Suite 300
 Vaughan, Ontario L4H 0R1
 Canada
 P 905.850.4696

CIVIL ENGINEERING
 PLANNING
 INTERIORS
 BUILDING MEASUREMENT



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WARE MALCOMB


CIVIL ENGINEERING
BUILDING MEASUREMENT

QUADREAL PROPERTY GROUP

TOWN OF CALEDON DIXIE ROAD
12489 & 12861 DIXIE ROAD
CALEDON, ONTARIO CANADA

6220 Highway 7, Suite 100
Vaughan, ON L4H 1R7 Canada
P 905/61221

SITE STATISTICS - 12861 DIXIE ROAD	
Existing Zoning Category	A1 MP
Proposed Zoning Category	Group F2 (O.C.C. A-3.1.2.1(i))
Building Classification	4,699,363 SF / 455,160.62m ²
NET DEVELOPABLE AREA	4,699,363 SF / 455,160.62m ²
GROSS SITE AREA	6,271,978 SF / 582,686.42m ²
Zone Permitted Use (Town of Caledon Zoning By-Law 2006-50)	Industrial Section 8.3 - Zoning Standards - MP Zone
Requirements	Proposed Required
Lot Coverage	58% / 100% 188,512.63m ²
Gross Floor Area	188,512.63m ² / -
Building Footprint	-
Lot Frontage (m)	9.17m / 30.00 Min. Front Yard Building Setback (m) 8.60m / 9.00 Min. Int. Side Yard Building Setback (m) 2.37m / 6.00 Min. Int. Side Yard Building Setback (m) - Abutting Residential 54.99m / 15.00 Min. Rear Yard Building Setback (m) 1.11m / 1.50 Lot Coverage 32.39% / 50.00%
Maximum Building Height (m)	16.01 / 18.00 Min. Landscape Area (% of Lot Area) 30.99% / 10.00% Min. Landscape Area (% of Lot Area) 178,257.76m ² / 58,268.64m ²
Total no. of Parking Spaces	1,052 / 607 (Including Accessible Parking Spaces) @20% to 7000 parking spaces is plus 2% of total spaces @More than 1000 parking spaces is 11 plus 1% of total spaces BUILDING 1 (12861 DIXIE RD)
Parking Calculations	Proposed Required
BUILDING 1 (12861 DIXIE RD)	1,052 / 607 @59 + 1/170m ² of Net Floor Area over 10,000 m ² 910 / 672 BUILDING 2 (12861 DIXIE RD)
Total no. of Accessible Parking Spaces	1,052 / 607 @20% to 7000 parking spaces is plus 2% of total spaces @More than 1000 parking spaces is 11 plus 1% of total spaces BUILDING 1 (12861 DIXIE RD)
EV Parking Spots	22 / 15 Parking Stall Dimensions Asking ACCESSIBLE - TYPE A - 3.4m X 5.4m TYPE B - 2.75m X 5.4m w/ 1.5m access aisle on either side
Proposed Trailer Parking	Proposed Required
BUILDING 1 (12861 DIXIE RD)	241 / - BUILDING 2 (12861 DIXIE RD)
Total no. of trailer Parking Spots	541 / - Loading Space Calculations
BUILDING 1 (12861 DIXIE RD)	Proposed Required 211 / 13 @3 + 1 per 330m ² in excess of 7441 m ² of Net Floor Area 183 / 12
BUILDING 2 (12861 DIXIE RD)	394 / 25 Min. Loading Space Dimensions 3.5m(W) X 14.0m(L) X 3.35m(H)
SITE STATISTICS - 12489 DIXIE ROAD	
Existing Zoning Category	A1
Proposed Zoning Category	Group F2 (O.C.C. A-3.1.2.1(i))
Building Classification	3,445,017 SF / 320,052.83m ²
NET DEVELOPABLE AREA	3,445,017 SF / 320,052.83m ²
GROSS SITE AREA	6,257,235 SF / 581,316.71m ²
Zone Permitted Use (Town of Caledon Zoning By-Law 2006-50)	Industrial Section 8.3 - Zoning Standards - MP Zone
Requirements	Proposed Required
Lot Coverage	58% / 100% 188,512.63m ²
Gross Floor Area	188,512.63m ² / -
Building Footprint	-
Lot Frontage (m)	9.17m / 30.00 Min. Front Yard Building Setback (m) 8.60m / 9.00 Min. Int. Side Yard Building Setback (m) 2.37m / 6.00 Min. Int. Side Yard Building Setback (m) - Abutting Residential 54.99m / 15.00 Min. Rear Yard Building Setback (m) 1.11m / 1.50 Lot Coverage 32.39% / 50.00%
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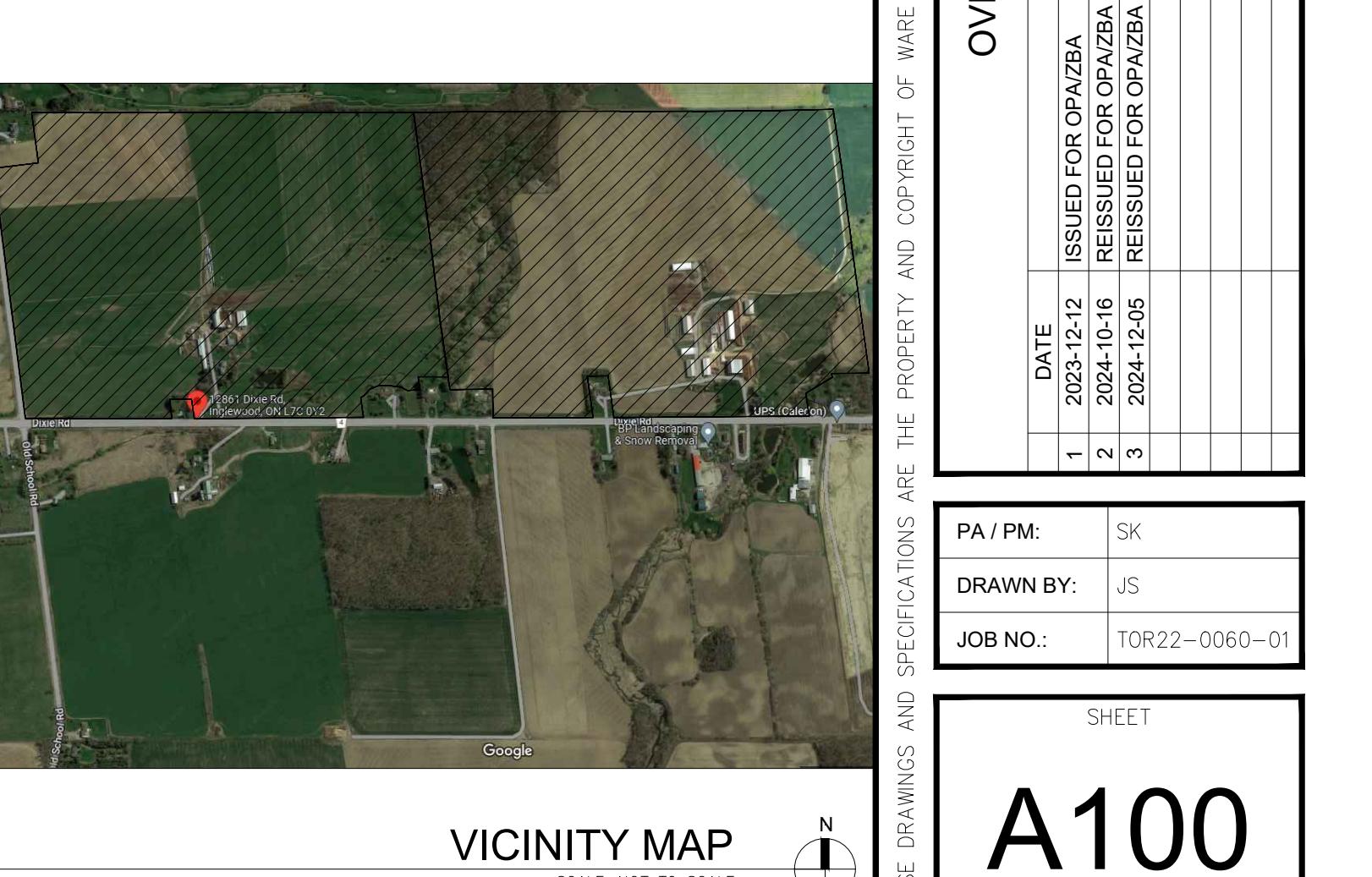
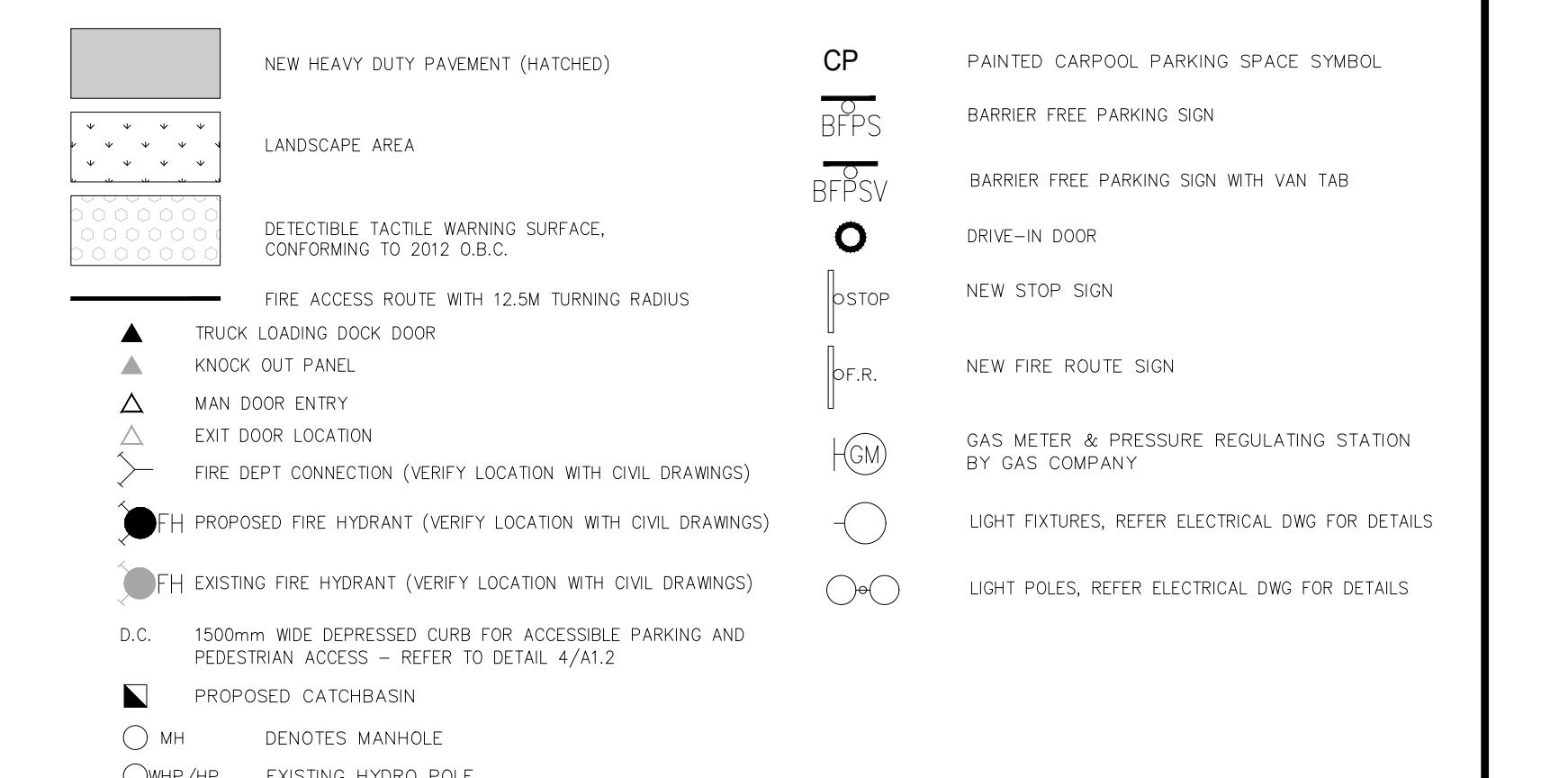
OVERALL SITE PLAN

SCALE: 1:2000 N
0 50m North South East West

GENERAL NOTES

- 1 PROPERTY LINE
2 2750x6000 STALL, PAINTED PARKING STRIPING PER CITY STANDARDS WITH 8M WIDE DOUBLE LOADED AISLE.
3 TO CONFORM TO OPSD 30000. SEE CIVL DWGS.
4 ALTERATION PERMIT
TYPICAL SHARED ACCESSIBLE PARKING SPACES. PAINTED PARKING SPACES ARE TYPICALLY 10' WIDE. TO HAVE (O) TYPE
(2750x6000)(O) TYPE A STALLS (3400x6000) OR ONE OF EACH
WITH 1500mm PATH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
5 MIN. 1.5M WIDE SIDEWALK TYPICAL UNO
6 MIN. 1500mm WIDE SIDEWALK TYPICAL UNO
7 TRAILER PARKING STALL - 12'-0" x 55'-0"
8 ACCESSIBLE CURB RAMP AS PER DETAIL
9 FIRE DEPARTMENT CONNECTION / SIAMESE
10 PROPOSED LOCATION OF TRANSFORMER C/W CONCRETE PAD
11 PROPOSED LOCATION OF VINYL CHAIN LINK FENCING OR APPROVED EQUAL ALONG DEVELOPMENT LIMIT BOUNDARY
12 CONCRETE APRON
13 PEDESTRIAN RAIL (1070mm high) SET INTO RETAINING WALL WHERE GRADE CHANGE GREATER THAN 500mm. PROVIDE CONCRETE-FILLED STEEL BOLLARD AT END OF RETAINING WALL - SEE CIVL DWGS.
14 EXTERIOR STEEL STANCHION/TUBE STEEL GUARDRAIL, TYP.
15 EXTERIOR LOAD BEARING DOOR (TYPICAL)
16 LOADING DOOR (TYPICAL)
17 LOADING SPACE, L.S. MIN. 1.5m x 4.0m (L x W)
18 FIRE ACCESS ROUTE / TURNING RADIUS (—)
19 PROPOSED ELECTRICAL ROOM
- 20 PROPOSED MECHANICAL ROOM
21 CURB RADS AT ENTRANCES WITHIN MUNICIPAL SIDEWALK
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23 INVERTED U-SHAPE GALVANIZED CYCLIC RACKS
MIN. 1.8Mx0.6M PIPE SPACE
24 KNOCK OUT PANEL
25 PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
26 INVERTED U-SHAPE GALVANIZED CYCLIC RACKS
MIN. 1.8Mx0.6M PIPE SPACE
27 PRESSURE RELEASING SIGN LOCATION
SEE CIVL DWGS FOR SLOPE %
28 PRERESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
29 LIGHT PAINTED LINES
30 RETAINING WALL
31 PRECAST SCREEN WALL TO BE INSTALLED ON TOP OF
RETAINING WALL - REFER TO STRUC. DWGS
32 PROPOSED FIRE ROUTE SIGN LOCATION
33 RESERVED
34 PROPOSED AMENITY AREA
35 SNOW STORAGE ON SITE AT 2% TOTAL SITE AREA
36 PROPOSED CHAIN-LINK FENCE
37 CONCRETE/STEEL SAFETY BOLLARD
38 SCREEN WALL
39 PROPOSED PYLON SIGNAGE
40 DRIVE-IN RAMP WITH GALVANIZED GUARDRAIL ON EACH SIDE,
SEE CIVL DWGS FOR SLOPE %
41 RESERVED
42 DETECTABLE TACTILE WARNING SURFACE, CONFORMING TO 2012 O.B.C.
43 MIN. 3m WIDE CONCRETE DOLLY PAD AT TRAILER STALLS
44 ACCESSIBLE PARKING GRADE SLOPING UP TO MEET
PROPOSED CURB LEVEL

SITE LEGEND



OVERALL SITE PLAN

REMARKS

DATE ISSUED FOR OWNER
2022/01/12
REISSUED FOR OPERATOR
2022/01/16
REISSUED BY OWNER
2022/01/16

PA / PM: SK
DRAWN BY: JS
JOB NO.: TOR22-0060-01

WARE MALCOMB

6220 Highway 7, Suite 300

Vaughan, ON L4L 1R7, Canada


P 905/761/221

QUADREAL PROPERTY GROUP

TOWN OF CALEDON DIXIE ROAD

12489 & 12861 DIXIE ROAD

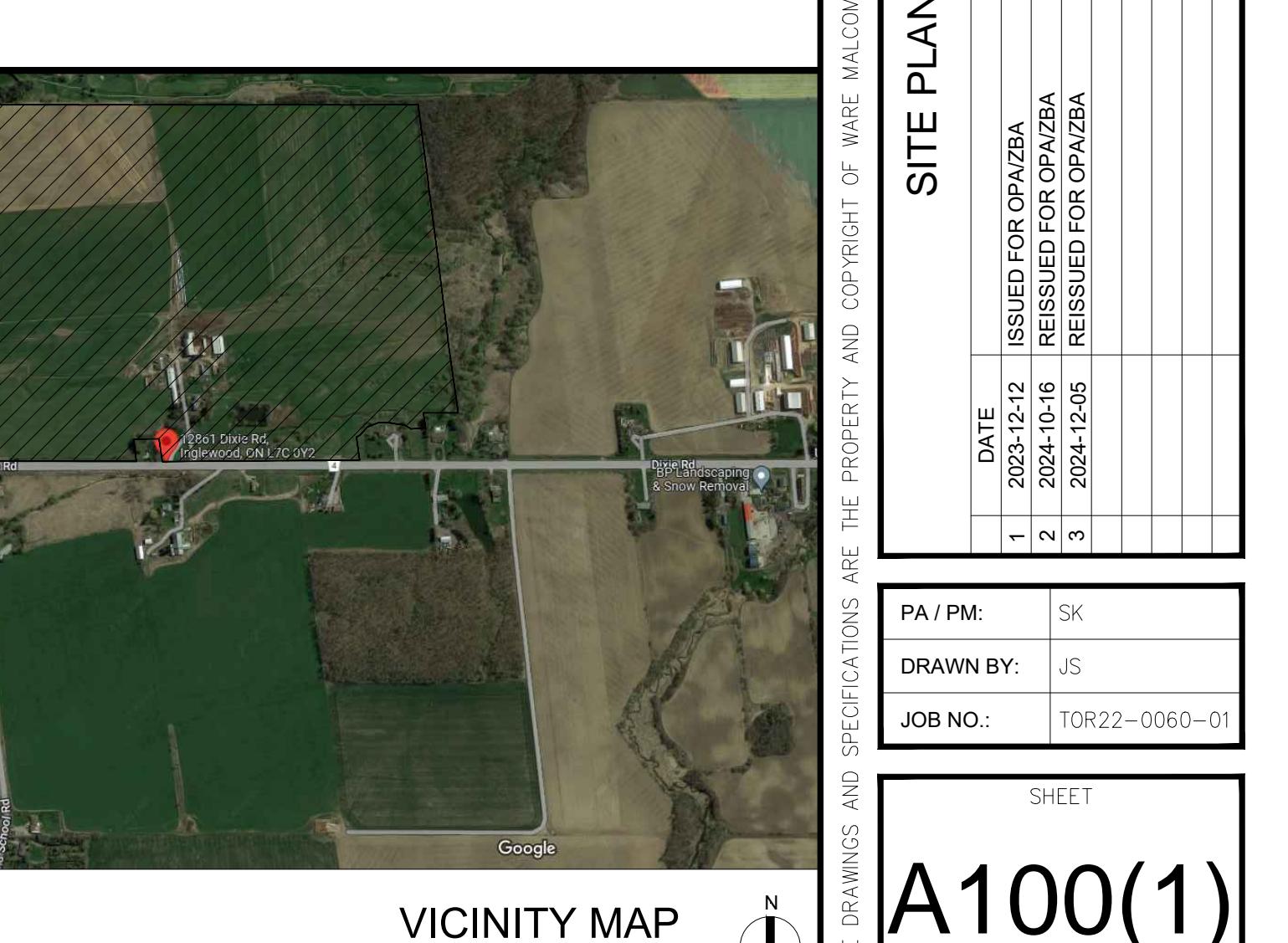
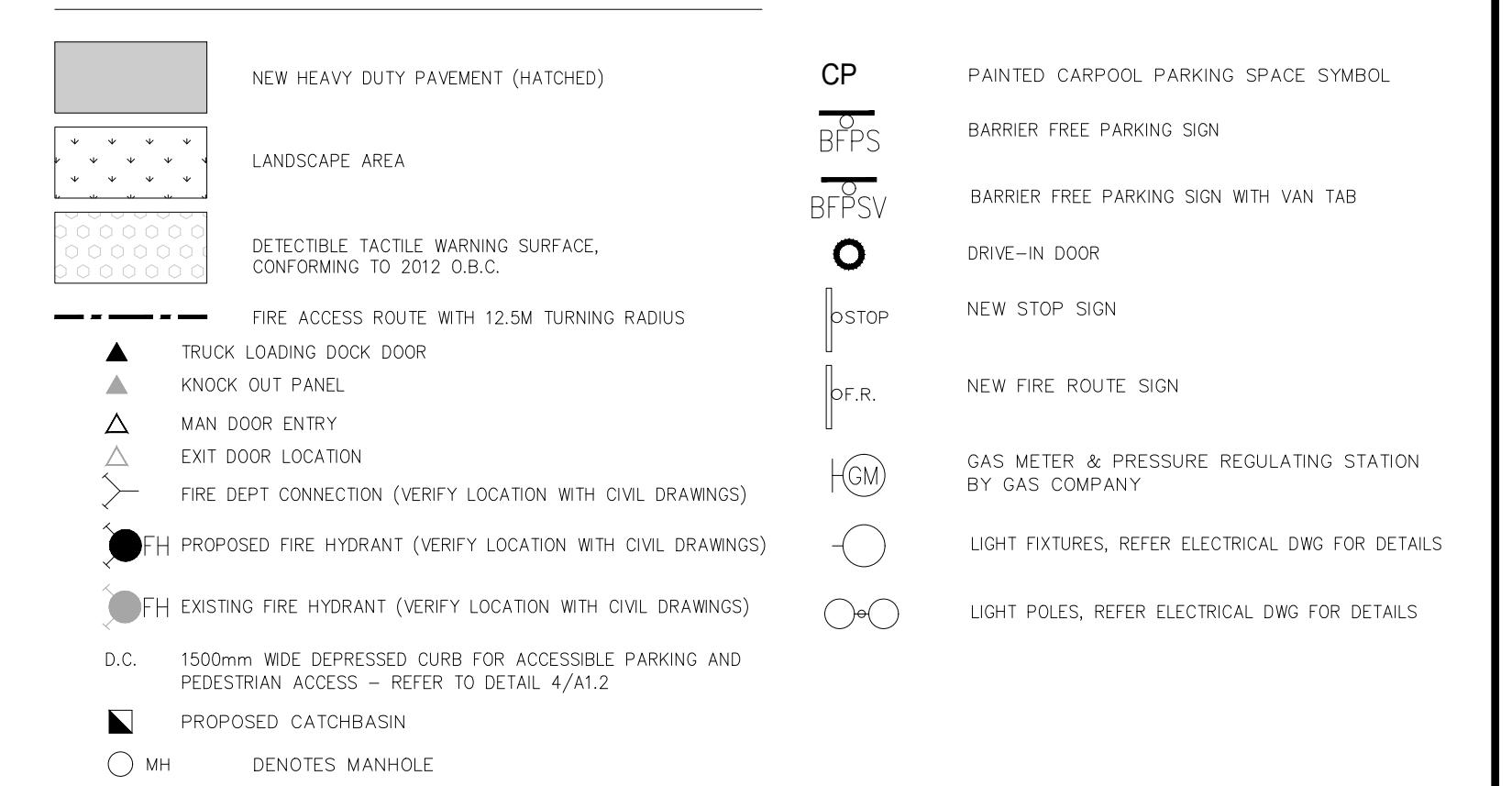
CALEDON, ONTARIO CANADA




GENERAL NOTES

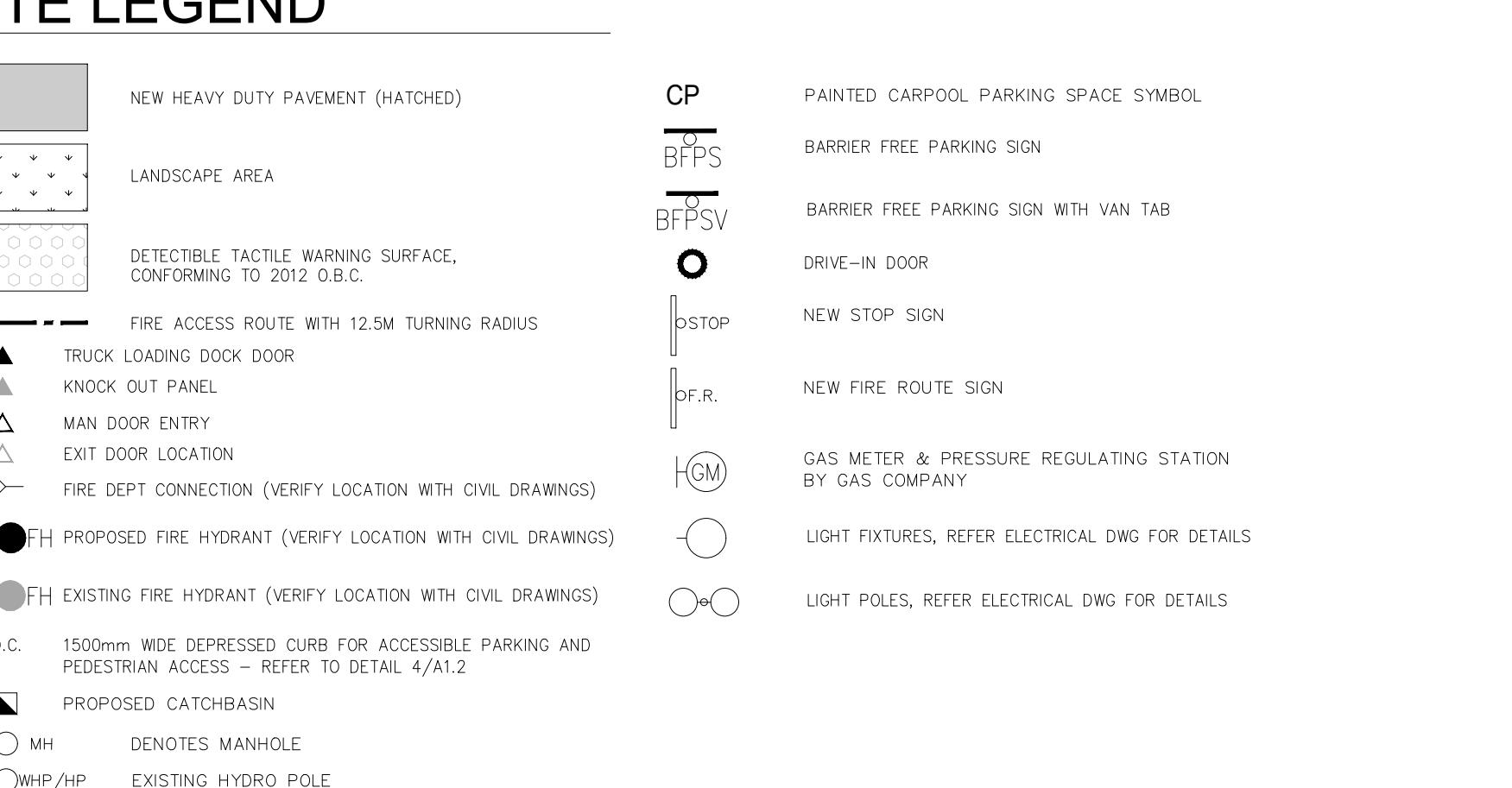
- 1 PROPERTY LINE
- 2 2750x6000 PARKING STALL, PAINTED PARKING STRIPING PER CITY STANDARDS WITH 8m WIDTH DOUBLE LOADED AISLE.
- 3 SEE CIVIL DWGS FOR TENANT FIT UP SUBJECT TO INTERIOR ALTERATION PERMIT
- 4 TYPICAL SHARED ACCESSIBLE PARKING STALLS - PAINTED PARKING STRIPES ARE REQUIRED TO HAVE (2) THREE 1500mm PATH STRIPS BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
- 5 15.0m CENTERLINE RADIUS DISTANCE TO FIRE ACCESS ROAD
- 6 MIN. 1500mm WIDE SIDEWALK TYPICAL UNO
- 7 TRAILER PARKING STALL - 12'-0" x 55'-0"
- 8 ACCESSIBLE CURB RAMP AS PER DETAIL
- 9 FIRE DEPARTMENT CONNECTION / SIAMESE
- 10 PROPOSED LOCATION OF TRANSFORMER C/W CONCRETE PAD
- 11 EXTERIOR CONCRETE VINYL CHAIN LINK FENCING OR APPROVED EQUAL ALONG DEVELOPMENT LIMIT BOUNDARY
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- 14 EXTERIOR STEEL STANCHION / TUBE STEEL GUARDRAIL, TYP.
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- 16 LOADING SPACE, L.S. MIN. 1.5m x 4.0m
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- 18 PROPOSED ELECTRICAL ROOM
- 19 PROPOSED MECHANICAL ROOM
- 20 PROPOSED MECHANICAL ROOM
- 21 CURB RADI AT ENTRANCES WITHIN MUNICIPAL SIDEWALK, REFER TO CONFORM TO OPS 3010.010. SEE CIVIL DWGS.
- 22 1.8M WIDE SIDEWALK AND PEDESTRIAN PATHWAY
- 23 HATCHED AREA DENOTES HEAVY DUTY ASPHALT, TYPICAL FOR ALL AREAS REQUIRING FIRE TRUCK OR TRACTOR TRUCK ACCESS.
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- 25 1500mm PATH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
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- 43 MIN. 3m WIDE CONCRETE DOLLY PAD AT TRAILER STALLS
- 44 ACCESSIBLE PARKING GRADE SLOPING UP TO MEET PROPOSED CURB LEVEL

SITE LEGEND



**GENERAL NOTES**

- 1 PROPERTY LINE
- 2 2750x6000 PARKING STALL, PAINTED PARKING STRIPING PER CITY STANDARDS WITH 8M WIDE DOUBLE LOADED AISLE.
- 3 10M WIDE ASPHALT PAVED PATHWAY
- 4 TYPICAL SHARED ACCESSIBLE PARKING SPACES. PAINTED PARKING SPACES ARE STANDARDED TO HAVE (2) TYPE A STALLS (2750x6000) OR ONE OF EACH WITH 1500mm PATH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
- 5 1500mm WIDE SIDEWALK TYPICAL U.N.O.
- 6 MIN. 1500mm WIDE SIDEWALK TYPICAL U.N.O.
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- 8 ACCESSIBLE CURB RAMP AS PER DETAIL
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- 14 INVERTED U-SHAPE GALVANIZED BICYCLE RACKS
- 15 PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
- 16 PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
- 17 LOADING SPACE, L.S. MIN. 12'0" x 14'0"
- 18 FIRE ACCESS ROUTE W/ 12M TURNING RADIUS (-----)
- 19 PROPOSED ELECTRICAL ROOM
- 20 PROPOSED MECHANICAL ROOM
- 21 CURB RADII AT ENTRANCES WITHIN MUNICIPAL SIDEWALK. REFER TO CONFORM TO OPSD 2010. SEE CIVL DWGS.
- 22 1.8M WIDE ASPHALT PAVED PATHWAY
- 23 HATCHED AREA DENOTES HEAVY DUTY ASPHALT. TYPICAL FOR ALL AREAS REQUIRING FIRE TRUCK OR TRACTOR TRUCK ACCESS.
- 24 15.0m CENTERLINE RADIUS DISTANCE TO FIRE ACCESS ROAD (2750x6000)(2) TYPE A STALLS (3400x6000) OR ONE OF EACH WITH 1500mm PATH STRIP BETWEEN - REFER TO TOWN OF CALEDON'S ACCESSIBLE PARKING STANDARDS.
- 25 DRIVEWAY GRADE TO BE COMPATIBLE WITH EXIST. DRIVEWAY. DRIVEWAY GRADE TO MEET EXIST. DRIVEWAY AND A CURB DERESTION WILL BE PROVIDED FOR AT EACH ENTRANCE.
- 26 MIN. 1.8Mx0.6M PIPE SPACE
- 27 KNOCK OUT PANEL SIGN LOCATION
- 28 PRESSED PATTERNED ASPHALT PEDESTRIAN PATHWAY
- 29 YELLOW PAINTED LINES
- 30 RETAINING WALL
- 31 PRECAST SCREEN WALL TO BE INSTALLED ON TOP OF RETAINING WALL - REFER TO STRUC. DWGS
- 32 INVERTED U-SHAPE GALVANIZED BICYCLE RACKS
- 33 RETAINING FIRE ROUTE SIGN LOCATION
- 34 RETAINING FIRE ROUTE SIGN
- 35 SNOW STORAGE ON SITE AT 2% TOTAL SITE AREA
- 36 PROPOSED AMENITY AREA
- 37 CONCRETE/STEEL SAFETY BOLLARD
- 38 SCREEN WALL
- 39 PROPOSED PYLON SIGNAGE
- 40 DRIVE-IN RAMP WITH GALVANIZED GUARDRAIL ON EACH SIDE. SEE CIVL DWGS FOR SLOPE %
- 41 RESERVED
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SITE LEGEND

SITE PLAN - 12489 DIXIE RD

REMARKS

DATE: 2022/01/12 ISSUED FOR OFFICE USE
2 2022/01/16 ISSUED FOR OPERATIONS
3 2022/01/16 ISSUED ON SPECIFICATIONPA / PM: SK
DRAWN BY: JS
JOB NO.: TOR22-0111-00

SHEET

A100(2)

QUADREAL PROPERTY GROUP

TOWN OF CALEDON DIXIE ROAD

12489 DIXIE ROAD

CALEDON, ONTARIO CANADA

WARE MALCOMB

CIVIL ENGINEERING

BUILDING MEASUREMENT
PLANNING
INTERIORS6220 Highway 7, Suite 300
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Zone of Reference (Town of Caledon Zoning By-law 2006-50)	
Proposed Use	Industrial
Section 8.3 - Zoning Standards - MP Zone	
BUILDING AREA:	
BUILDING 1	461,902 SF 42,912.18 m ²
Warehouse Area	452,438 SF 42,928.24 m ²
Office Area	9,464 SF 879.24 m ²
BUILDING 2	520,992 SF 48,401.76 m ²
Warehouse Area	520,992 SF 48,401.76 m ²
Office Area	9,339 SF 867.64 m ²
BUILDING 3	456,214 SF 42,383.70 m ²
Warehouse Area	449,750 SF 42,383.70 m ²
Office Area	9,464 SF 879.24 m ²
TOTAL BUILDING AREA	1,448,447.82 m ² 134,565.32 m ²
NET FLOOR AREA:	
BUILDING 1	460,852 SF 42,914.83 m ²
Floor Area	461,902 SF 42,912.18 m ²
Building Area under services, M&E rooms etc.	1,050 SF 97.55 m ²
BUILDING 2	520,992 SF 48,401.76 m ²
Floor Area	520,992 SF 48,401.76 m ²
Building Area under services, M&E rooms etc.	1,050 SF 97.55 m ²
BUILDING 3	456,214 SF 42,383.70 m ²
Floor Area	456,214 SF 42,383.70 m ²
Building Area under services, M&E rooms etc.	1,050 SF 97.55 m ²
TOTAL NET AREA	1,448,297.82 m ² 134,572.67 m ²
Requirements	
Min. Lot Area	681,316.71m ² 923,000m ²
Net Floor Area	134,272.67m ² 134,565.32m ²
Gross Floor Area	134,565.32m ²
Building Area	23.15% 50.00%
Min. Lot Building Coverage (m)	93.53 20.00
Min. Front Yard Building Setback (m)	135.55 9.00
Min. Rear Yard Building Setback (m)	238.30 6.00
Min. Side Building Setback (m)	117.00 3.00
Min. In (N) Side Building Setback (m) - Abutting Residential	47.23 15.00
Min. In (S) Side Building Setback (m)	63.96 7.50
Min. Rear Yard Building Setback (m)	63.96 7.50
Lot Coverage	23.15% 50.00%
Maximum Building Height (m) - Building 1	17.00 17.00
Maximum Building Height (m) - Building 2	14.50 18.00
Min. Landscape Area (% of Lot Area)	54.57% 10.00%
Min. Front Landscape Buffer (m)	317.24 45m ² 58.17m ²
Min. In (N) Side Landscape Buffer (m)	64.55 6.00
Min. In (S) Side Landscape Buffer (m)	20.33 3.00
Min. Rear Landscape Buffer (m) - Abutting EPA + 6m width	7.40 6.00
Accessible Parking Spaces	
@2011 per 1000m ² of Net Floor Area is 2 plus 2% of total spaces	
@More than 1000m ² of Net Floor Area is 1 plus 1% of total spaces	
BUILDING 1	18 9
BUILDING 2	12 9
BUILDING 3	10 9
Total no. of Accessible Parking Spaces	40 37
EV Parking Spaces	
Parking Stall Dimensions	
Area	ACCESSIBLE: TYPE A - 3.6m X 5.4m TYPE B - 2.75m X 5.4m W/ 5cm access aisle on either side
Proposed Trailer Parking	1 Proposed Required
BUILDING 1	60 -
BUILDING 2	61 -
BUILDING 3	98 -
Total no. of Trailer Parking Spaces	219 -
Loading Space Calculations	
Proposed	85 7
BUILDING 1	67 7
BUILDING 2	77 7
BUILDING 3	77 7
@3+ 1 per 9300 m ² in excess of 7441 m ² of Net Floor Area	
Total no. of Loading Spaces	249 21
Min. Loading Space Dimensions	3.5m(W) X 14.0m(L) X 3.35m(H)

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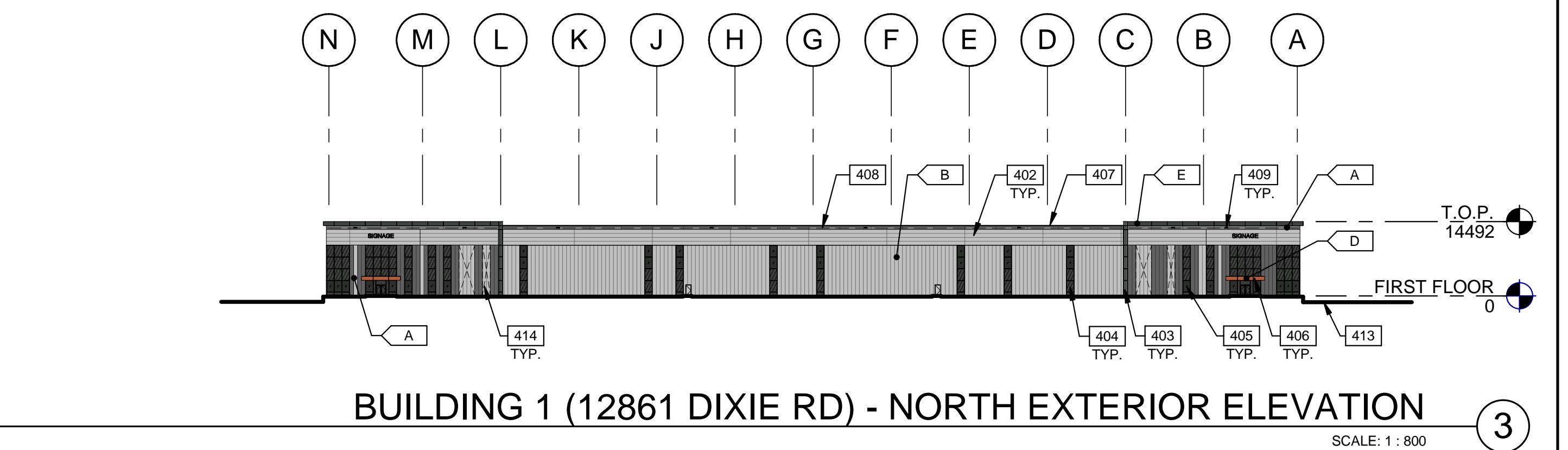
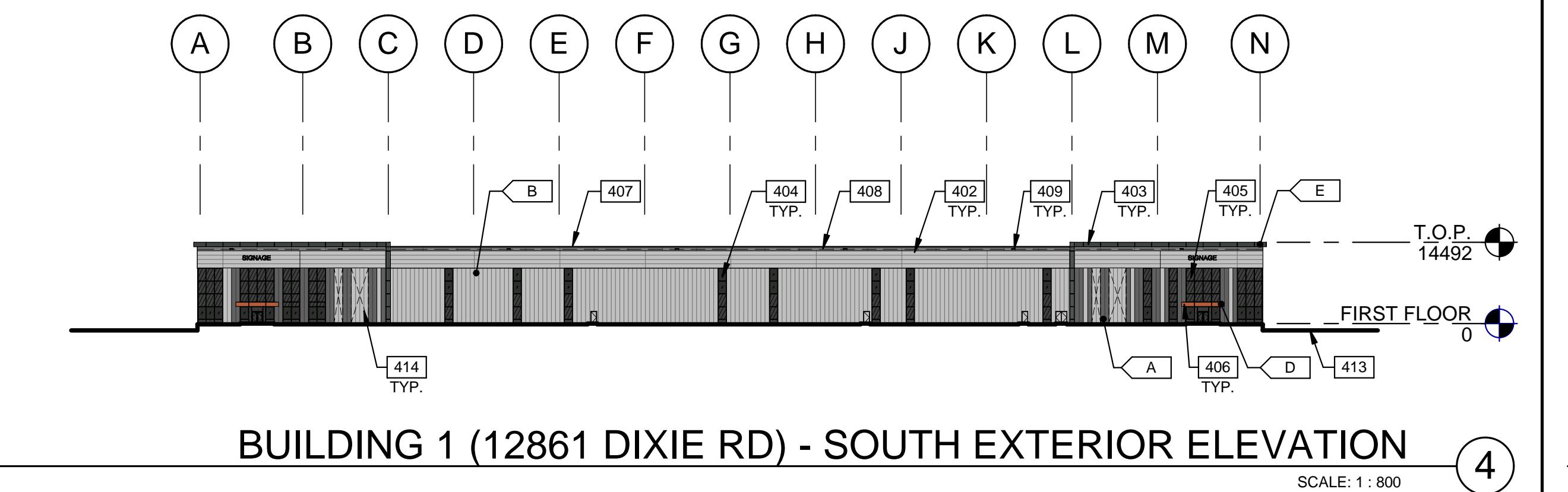
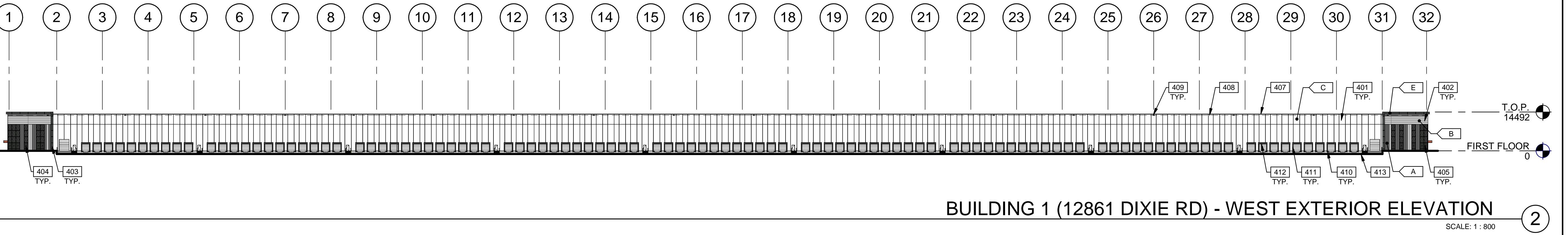
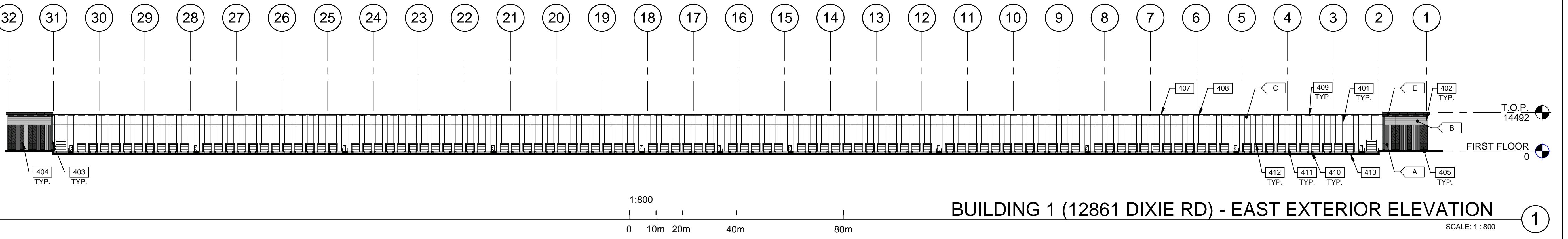
6220 Highway 7, Suite 300
Vaughan, Ontario L4L 0R1 Canada
P: 905.350.4096

CIVIL ENGINEERING
BRANDING
BUILDING MEASUREMENT
INTERIORS



QUADREAL DIXIE NEN & NES - 12489 & 12861 DIXIE RD, CALEDON, ONTARIO, CANADA, L7C 2K5

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LEGENDS

GLASS:	VISION GLASS - VITRO ARCHITECTURAL GLASS - SOLARGRAY
	SPANDREL GLASS - OPACI-COAT-300 - #1-0016 CHARCOAL
	TEMPERED TINTED GLASS

COLOURS:

PROVIDE 1,828 mm WIDE PAINT COLOUR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW.

A	INSULATED METAL PANEL - DARK GREY KINGSPAN KS SERIES - OPTIMA - WEATHERED ZINC
B	INSULATED METAL PANEL - SILVER KINGSPAN KS SERIES - OPTIMA - BRIGHT SILVER
C	TEXTURED FLAT INSULATED PRECAST PANEL - WHITE
D	ALUMINUM COMPOSITE METAL PANEL - COPPER ALPOLIC - DCX - METALLIC COPPER
E	ALUMINUM COMPOSITE METAL PANEL - CHARCOAL ALPOLIC - CNC CHARCOAL

KEYNOTES

401	INSULATED PRECAST CONCRETE PANEL.
402	INSULATED METAL PANEL.
403	ALUMINUM COMPOSITE METAL PANEL.
404	CLERESTORY WINDOW.
405	CURTAIN WALL GLAZING SYSTEM.
406	CANOPY WITH ALUMINUM COMPOSITE PANEL FASCIA AND METAL SOFFIT.
407	CONTINUOUS METAL CAP FLASHING, PAINTED TO MATCH ADJACENT WALL.
408	ROOF LINE BEYOND.
409	OVERFLOW SCUPPER.
410	DOCK BUMPER.
411	DOCK SEAL, PAINTED TO MATCH ADJACENT WALL.
412	DOCK SHELTER.
413	FINISH GRADE VARIES.
414	KNOCK-OUT PANELS FOR FUTURE WINDOWS OR DOORS.

BUILDING 1 - EXTERIOR ELEVATIONS 12861 DIXIE RD

DATE	REMARKS
1 2023-12-12	ISSUED FOR OPAZBA
2 2024-10-16	REVISED FOR OPAZBA
3 2024-12-05	REVISED FOR OPAZBA

PA/PM:	A. SANABRIA
DRAWN BY.:	T.M. / O.T.
JOB NO.:	TOR22-0060-01

SHEET

A210

WARE MALCOMB

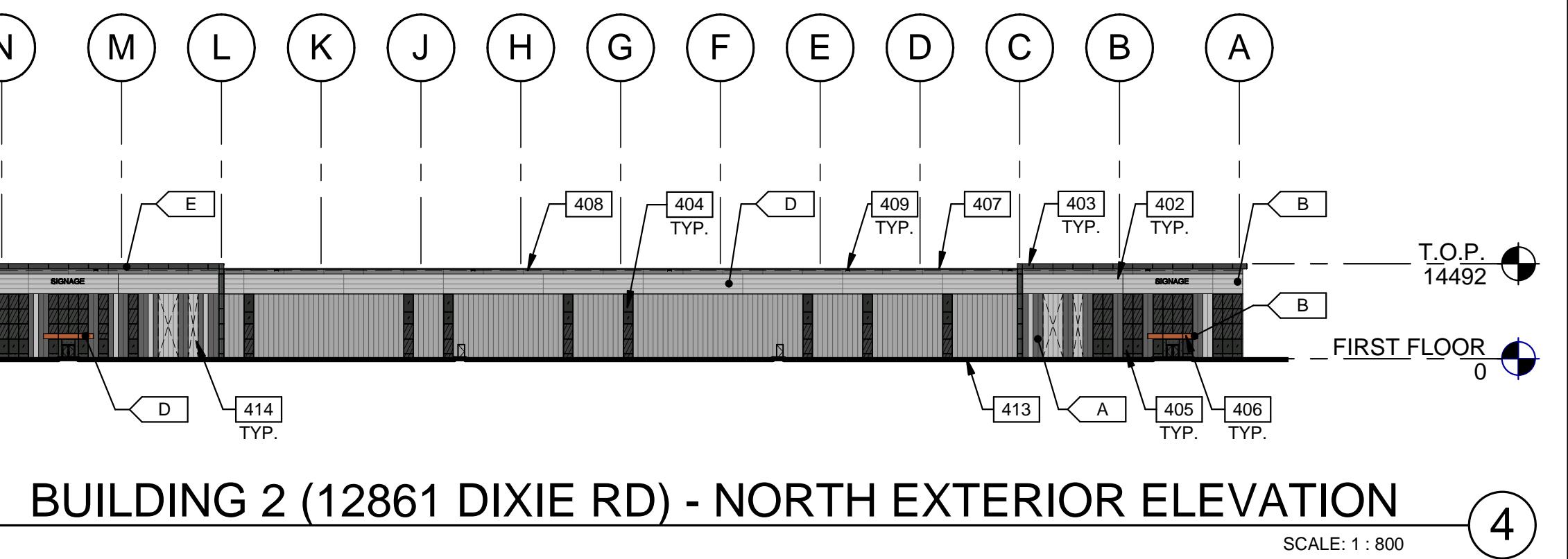
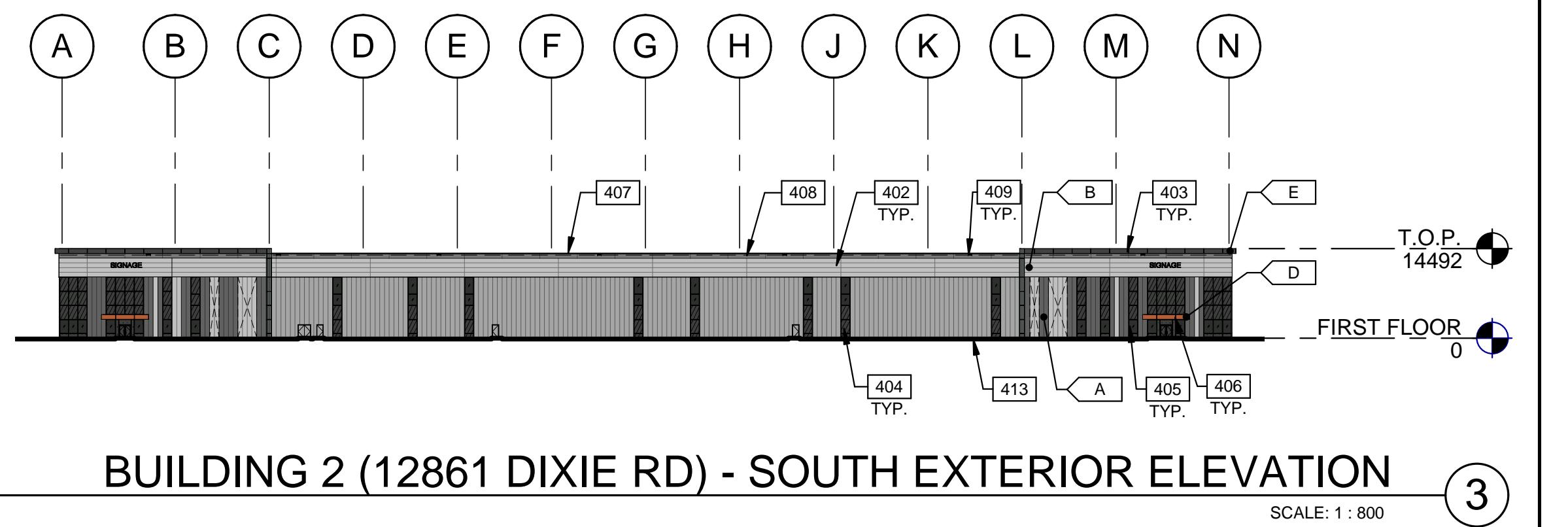
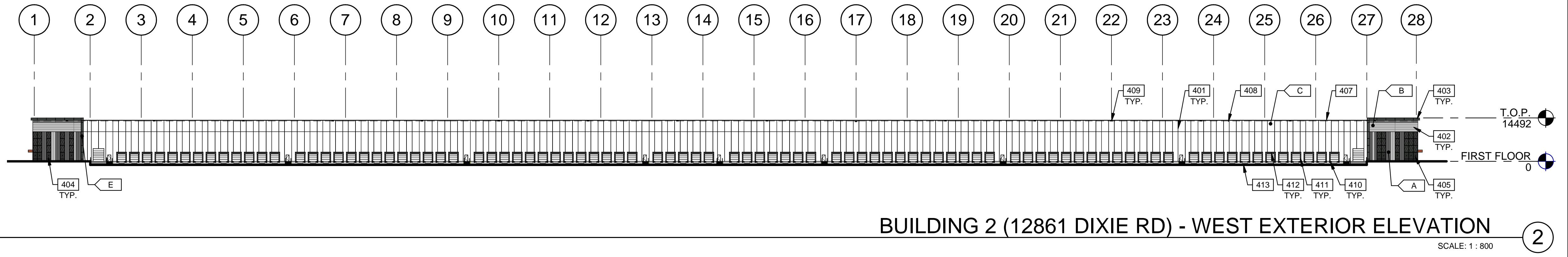
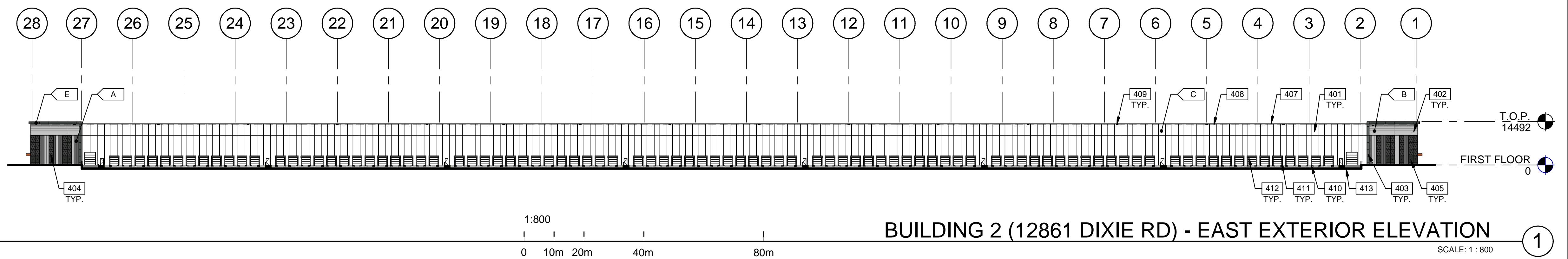
6220 Highway 7, Suite 300
Vaughan, Ontario L4L 0R1 Canada
P 905.350.4696

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BRANDING
BUILDING MEASUREMENT
INTERIORS

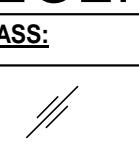


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12489 & 12861 DIXIE RD,
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CANADA, L7C 2K5**

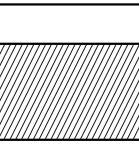
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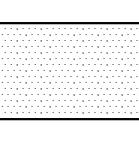
LEGENDS



VISION TINTED GLASS - VITRO ARCHITECTURAL GLASS - SOLARGRAY

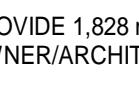


SPANDREL GLASS - OPACI-COAT-300 - #1-0016 CHARCOAL



TEMPERED TINTED GLASS

COLOURS:



INSULATED METAL PANEL - DARK GREY
KINGSPAN KS SERIES - OPTIMA - WEATHERED ZINC



INSULATED METAL PANEL - SILVER
KINGSPAN KS SERIES - OPTIMA - BRIGHT SILVER



TEXTURED FLAT INSULATED PRECAST PANEL - WHITE



ALUMINUM COMPOSITE METAL PANEL - COPPER
ALPOLIC - DCX - METALLIC COPPER



ALUMINUM COMPOSITE METAL PANEL - CHARCOAL
ALPOLIC - CNC CHARCOAL

KEYNOTES

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- 409 OVERFLOW SCUPPER
- 410 DOCK BUMPER
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- 412 DOCK SHELTER
- 413 FINISH GRADE VARIES
- 414 KNOCK-OUT PANELS FOR FUTURE WINDOWS OR DOORS

BUILDING 2 - EXTERIOR ELEVATIONS 12861 DIXIE RD

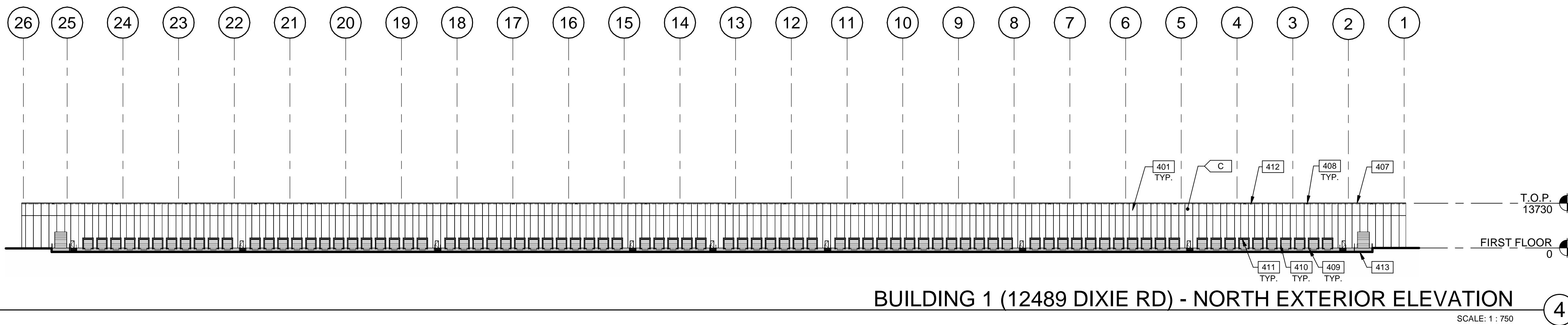
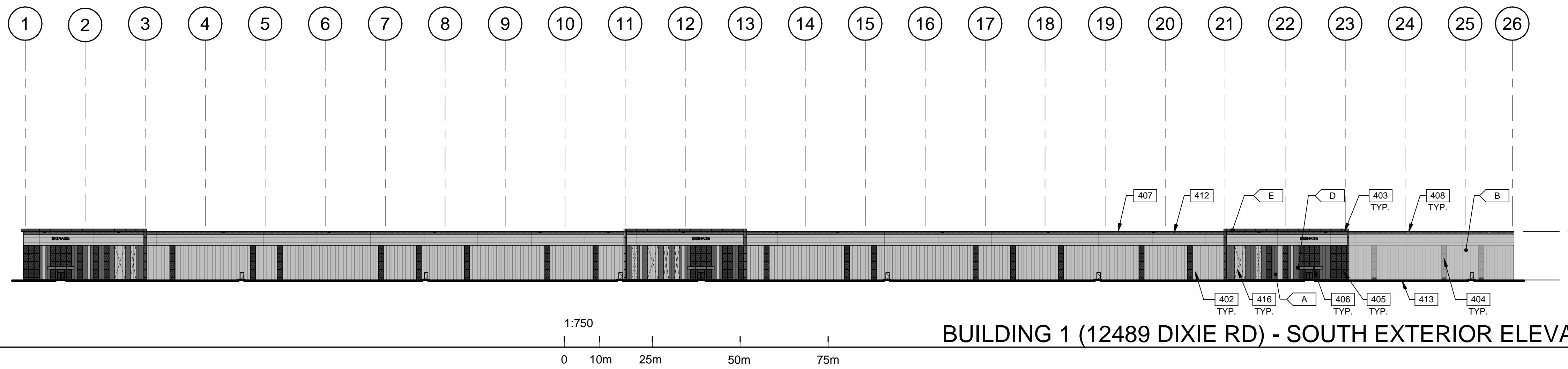
DATE	REMARKS
1 2023-12-12	ISSUED FOR OPABZA
2 2024-10-16	REVISED FOR OPABZA
3 2024-12-05	REVISED FOR OPABZA

P/A/P/M:	A. SANABRIA
DRAWN BY.:	T.M. / O.T.
JOB NO.:	TOR22-0060-01

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LEGENDS

GLASS:	VISION TINTED GLASS - VITRO ARCHITECTURAL GLASS - SOLARGRAY
	SPANDREL GLASS - OPACI-COAT-300 - #1-0016 CHARCOAL
	TEMPERED TINTED GLASS

COLOURS:

PROVIDE 1,828mm WIDE PAINT COLOUR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW.	
A	INSULATED METAL PANEL - DARK GREY KINGSPAN KS SERIES - OPTIMO - WEATHERED ZINC
B	INSULATED METAL PANEL - SILVER KINGSPAN KS SERIES - OPTIMO - BRIGHT SILVER
C	TEXTURED FLAT INSULATED PRECAST PANEL - WHITE
D	ALUMINUM COMPOSITE METAL PANEL - COPPER ALPOLIC - DCX - METALLIC COPPER
E	ALUMINUM COMPOSITE METAL PANEL - CHARCOAL ALPOLIC - CNC CHARCOAL

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408	OVERFLOW SCUPPER.
409	DOCK BUMPER.
410	DOCK SEAL, PAINTED TO MATCH ADJACENT WALL.
411	DOCK SHELTER.
412	ROOF LINE BEYOND.
413	FINISH GRADE VARIES.
416	KNOCK-OUT PANEL.

BUILDING 1 - EXTERIOR ELEVATIONS 12489 DIXIE RD

DATE	REMARKS
1 2023-12-12	ISSUED FOR OPAZBA
2 2024-10-16	REISSUED FOR OPAZBA
3 2024-12-05	REISSUED FOR OPAZBA

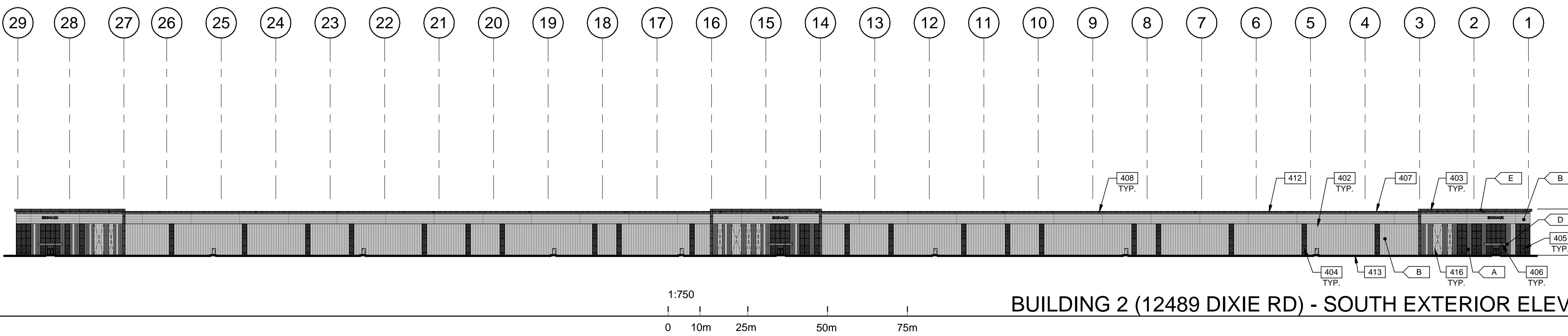
P/A/PM:	A. SANABRIA
DRAWN BY.:	C.G. / E.C. / O.T. / D.P.
JOB NO.:	TOR22-0111-00

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A212

**QUADREAL DIXIE
NEN & NES -
12489 & 12861 DIXIE RD,
CALEDON, ONTARIO,
CANADA, L7C 2K5**

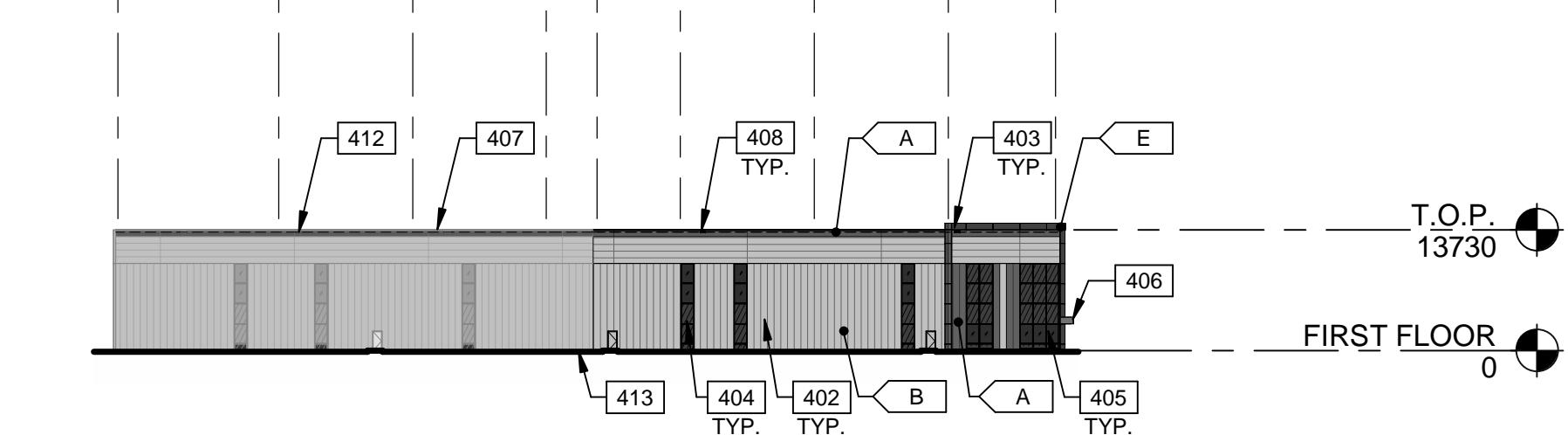
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BUILDING 2 (12489 DIXIE RD) - SOUTH EXTERIOR ELEVATION

SCALE: 1 : 750

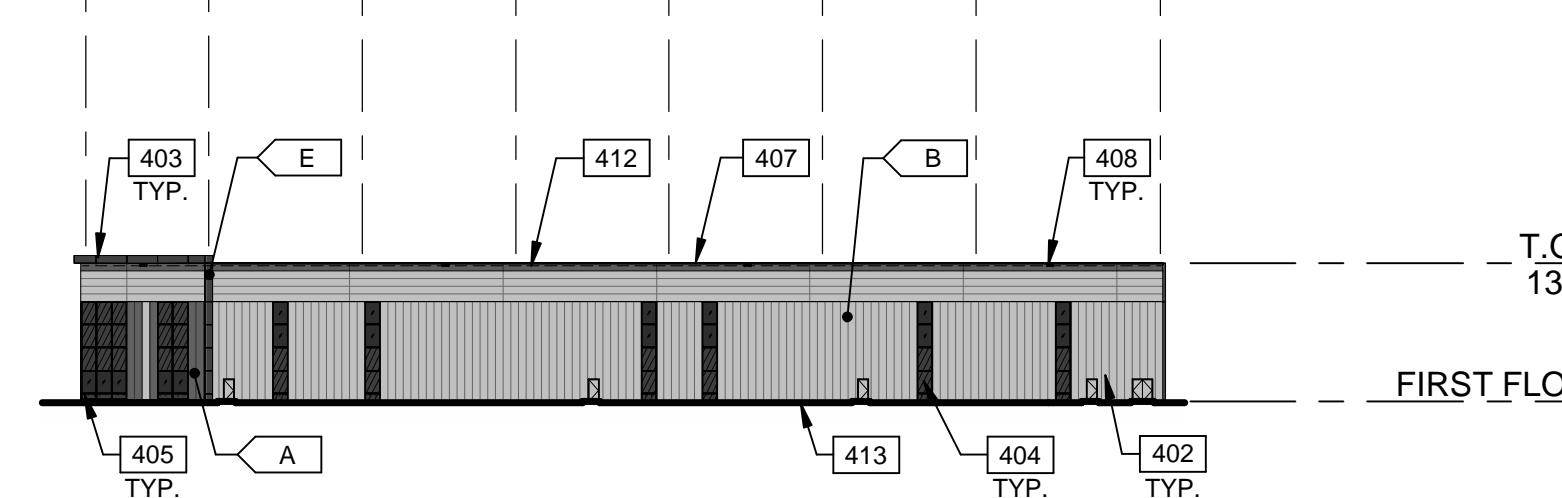
(A) (B) (C) (D) (D.2) (E) (F) (G) (H)



BUILDING 2 (12489 DIXIE RD) - EAST EXTERIOR ELEVATION

SCALE: 1 : 750

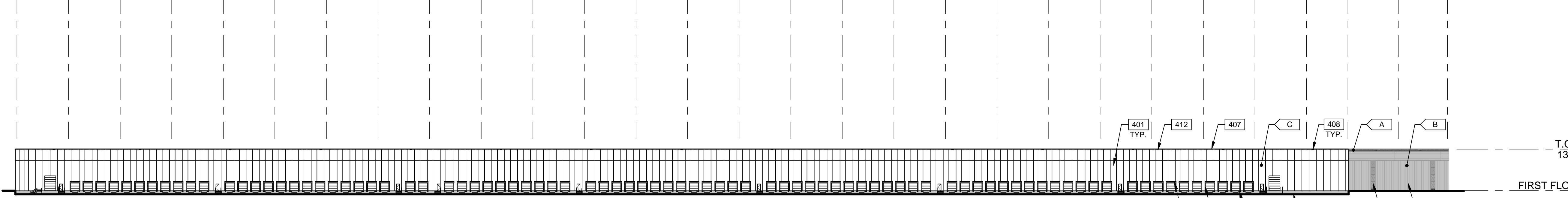
(H) (G) (F) (E) (D) (C) (B) (A)



BUILDING 2 (12489 DIXIE RD) - WEST EXTERIOR ELEVATION

SCALE: 1 : 750

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29)



BUILDING 2 (12489 DIXIE RD) - NORTH EXTERIOR ELEVATION

SCALE: 1 : 750

LEGENDS

GLASS:

- VISION TINTED GLASS - VITRO ARCHITECTURAL GLASS - SOLARGRAY
- SPANDEL GLASS - OPACI-COAT-300 - #1-0016 CHARCOAL
- TEMPERED TINTED GLASS

COLOURS:

PROVIDE 1,828 mm WIDE PAINT COLOUR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW.

- INSULATED METAL PANEL - DARK GREY
KINGSPAN KS SERIES - OPTIMO - WEATHERED ZINC
- INSULATED METAL PANEL - SILVER
KINGSPAN KS SERIES - OPTIMO - BRIGHT SILVER
- TEXTURED FLAT INSULATED PRECAST PANEL - WHITE
- ALUMINUM COMPOSITE METAL PANEL - COPPER
ALPOLIC - DCX - METALLIC COPPER
- ALUMINUM COMPOSITE METAL PANEL - CHARCOAL
ALPOLIC - CNC CHARCOAL

KEYNOTES

- 401 INSULATED PRECAST CONCRETE PANEL.
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- 404 CLERESTORY WINDOW.
- 405 CURTAIN WALL GLAZING SYSTEM.
- 406 CANOPY WITH ALUMINUM COMPOSITE PANEL FASCIA AND METAL SOFFIT.
- 407 CONTINUOUS METAL CAP FLASHING, PAINTED TO MATCH ADJACENT WALL.
- 408 OVERFLOW SCUPPER.
- 409 DOCK BUMPER.
- 410 DOCK SEAL, PAINTED TO MATCH ADJACENT WALL.
- 411 DOCK SHELTER.
- 412 ROOF LINE BEYOND.
- 413 FINISH GRADE VARIES.
- 416 KNOCK-OUT PANEL.

BUILDING 2 - EXTERIOR ELEVATIONS
12489 DIXIE RDDATE ISSUED FOR OP/ZA
REISSUED FOR OP/ZA
REISSUED FOR OP/ZA

P/A/P:	A. SANABRIA
DRAWN BY:	C.G. / E.C. / O.T. / D.P.
JOB NO.:	TOR22-0111-00

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QUADREAL DIXIE
NEN & NES -
12489 & 12861 DIXIE RD,
CALEDON, ONTARIO,
CANADA, L7C 2K5

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REVIEWED

APPROVED

ISSUED

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6220 Highway 7, Suite 300
Vaughan, Ontario, L4R 0R1 Canada
P 905.350.4696

CIVIL ENGINEERING
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BUILDING MEASUREMENT



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BUILDING 3 - EXTERIOR ELEVATIONS 12489 DIXIE RD

DATE	REMARKS
1 2023-12-12	ISSUED FOR OPAZBA
2 2024-10-16	REISSUED FOR OPAZBA
3 2024-12-05	REISSUED FOR OPAZBA

P/A/PM:	A. SANABRIA
DRAWN BY:	C.G. / E.C. / O.T./D.P.
JOB NO.:	TOR22-0111-00

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A214

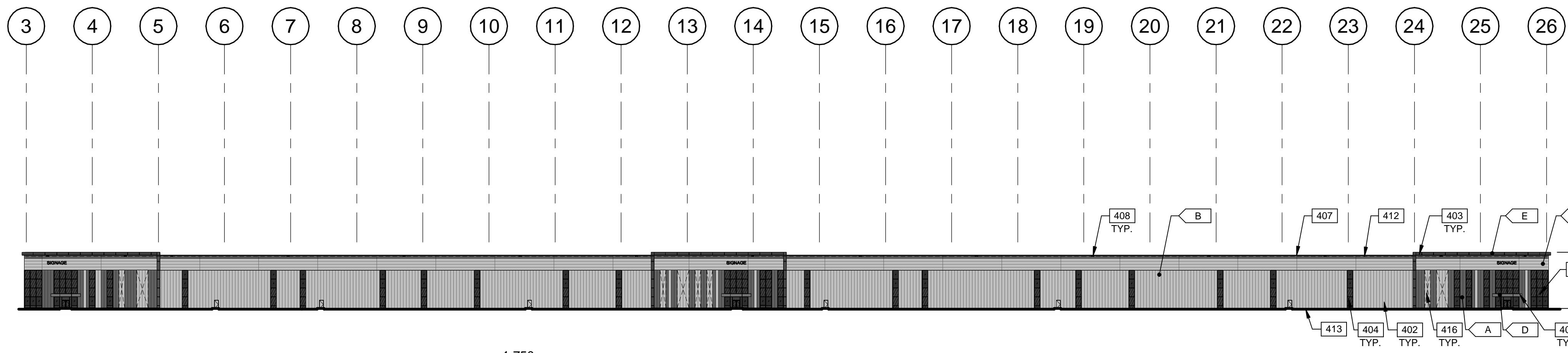
12/12/2023 ISSUED FOR OPAZBA

BUILDING 3 (12489 DIXIE RD) - SOUTH EXTERIOR ELEVATION

SCALE: 1 : 750

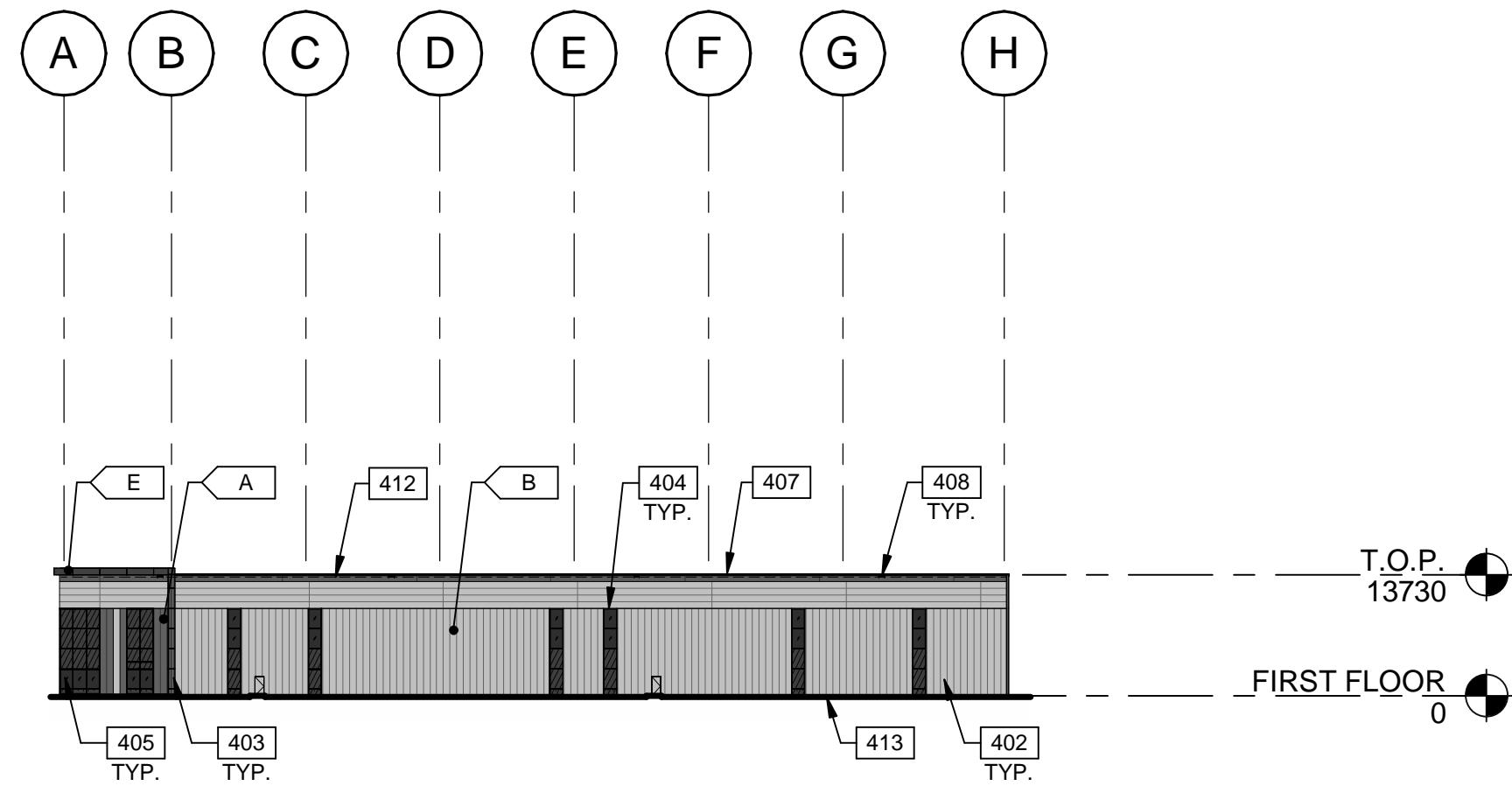
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0 10m 25m 50m 75m



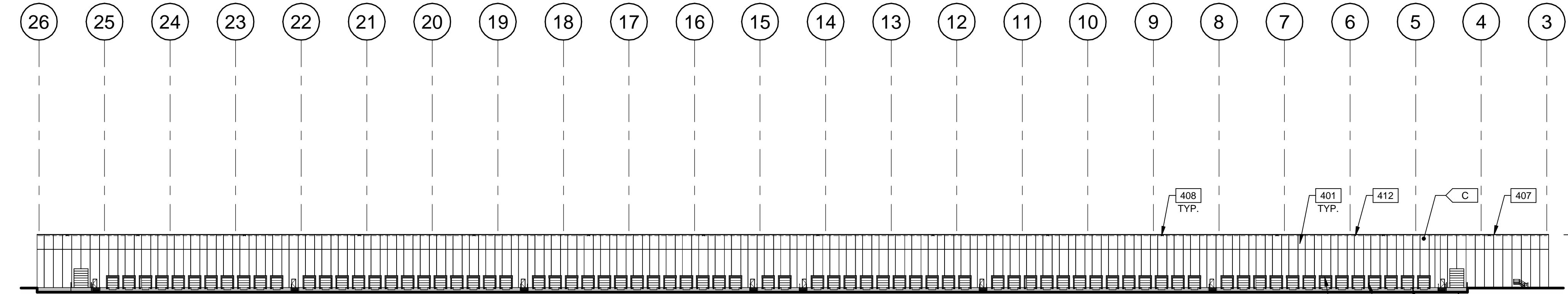
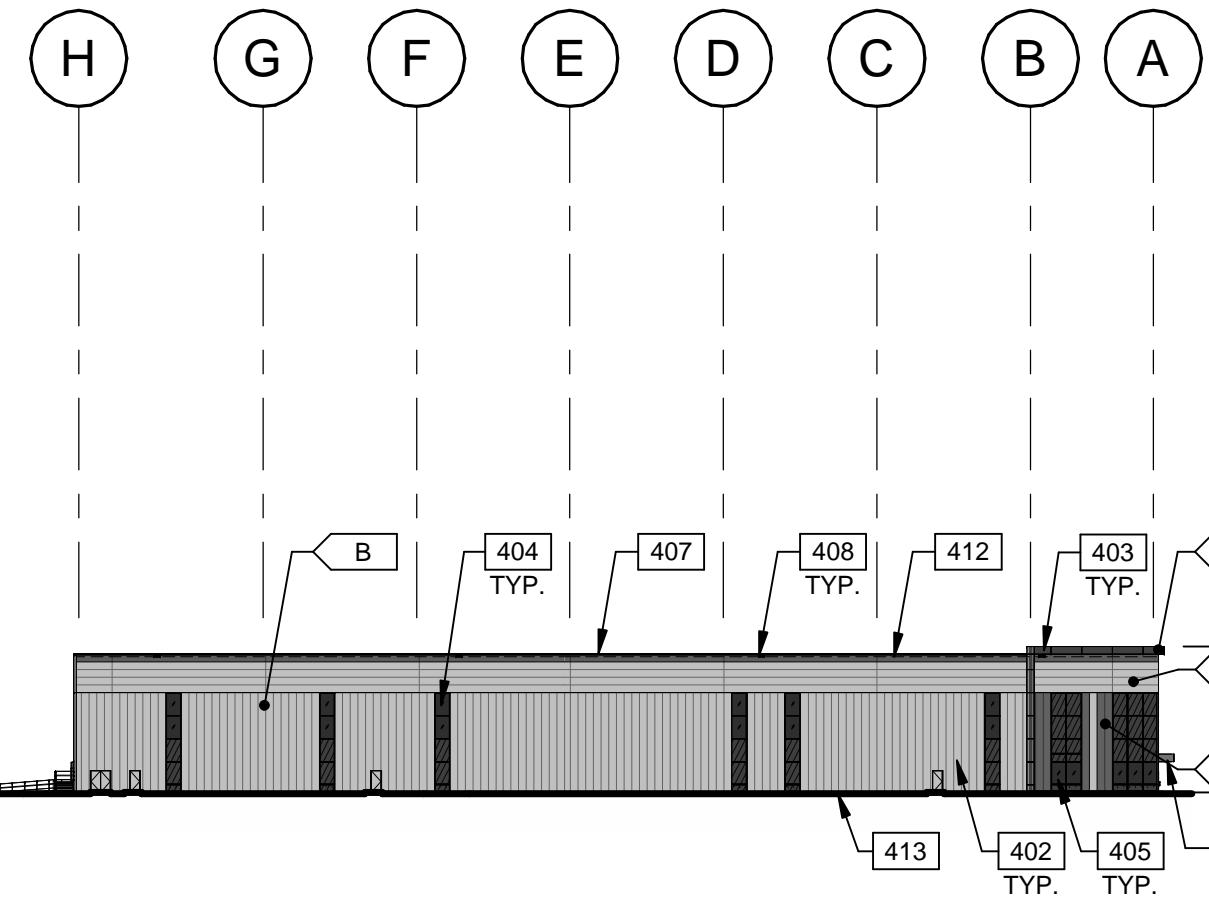
BUILDING 3 (12489 DIXIE RD) - EAST EXTERIOR ELEVATION

SCALE: 1 : 750



BUILDING 3 (12489 DIXIE RD) - WEST EXTERIOR ELEVATION

SCALE: 1 : 750



BUILDING 3 (12489 DIXIE RD) - NORTH EXTERIOR ELEVATION

SCALE: 1 : 750

LEGENDS

GLASS:

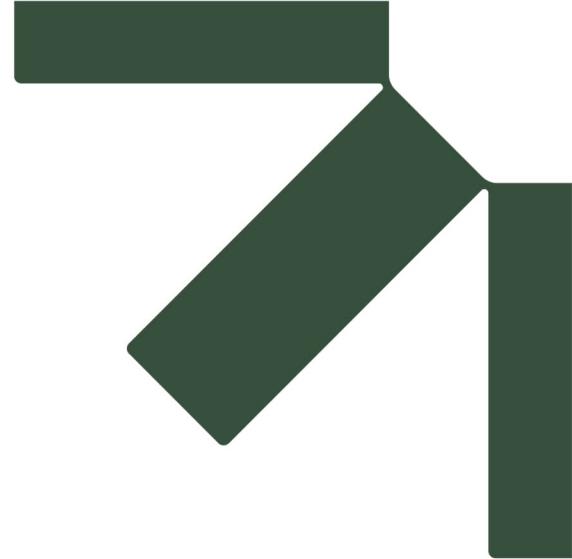
- VISION TINTED GLASS - VITRO ARCHITECTURAL GLASS - SOLARGRAY
- SPANDEL GLASS - OPACI-COAT-300 - #1-0016 CHARCOAL
- TEMPERED TINTED GLASS

COLOURS:

- PROVIDE 1,828mm WIDE PAINT COLOUR MOCK-UP FULL HEIGHT OF BUILDING FOR OWNER/ARCHITECT REVIEW.
- INSULATED METAL PANEL - DARK GREY
KINGSPAN KS SERIES - OPTIMO - WEATHERED ZINC
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ALPOLIC - DCX - METALLIC COPPER
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ALPOLIC - CNC CHARCOAL

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- 411 DOCK SHELTER.
- 412 ROOF LINE BEYOND.
- 413 FINISH GRADE VARIES.
- 416 KNOCK-OUT PANEL.



Appendix B Source Sound Level Data

Environmental Noise and Vibration Study

12489 and 12861 Dixie Road, Caledon, ON

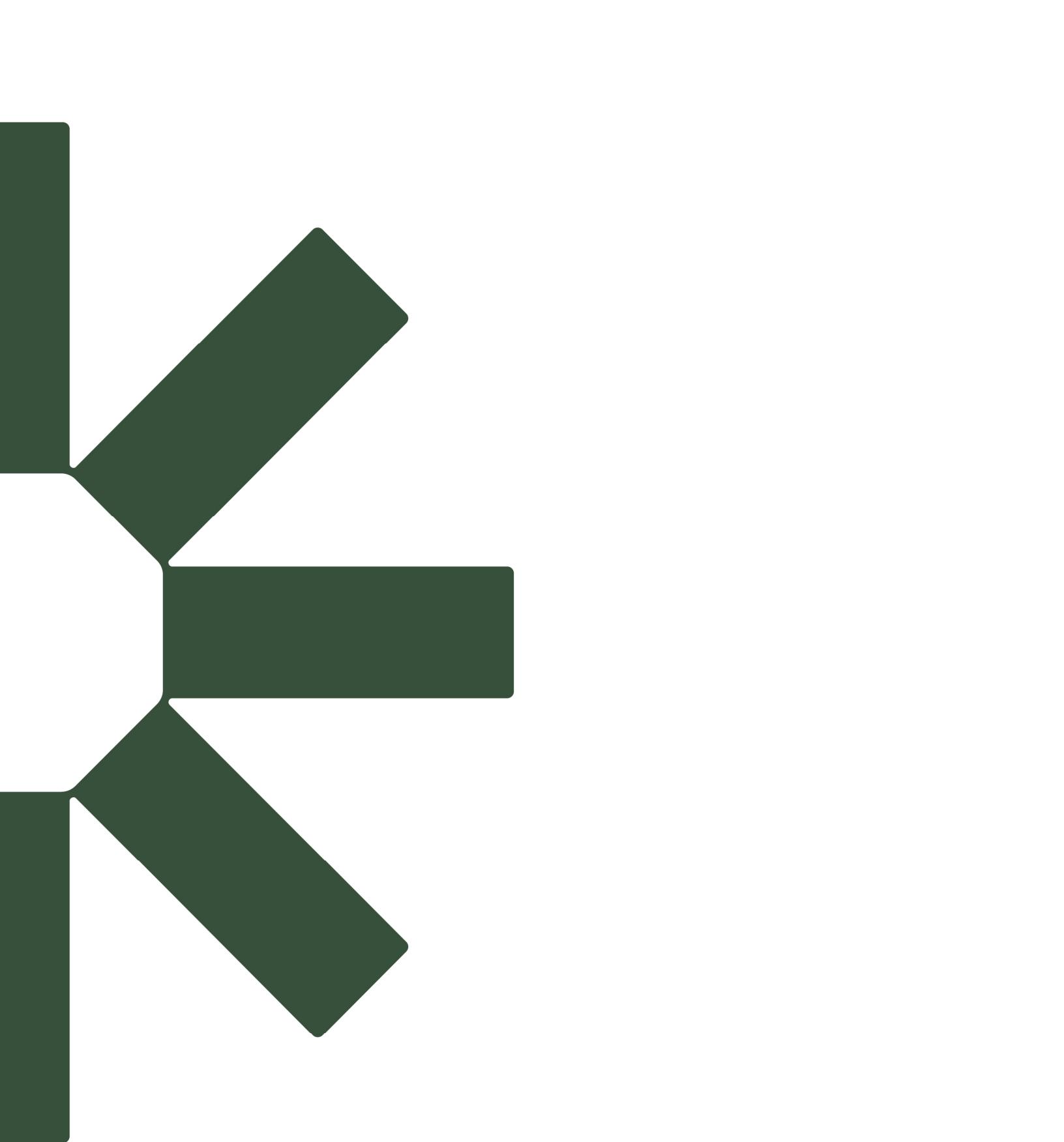
QuadReal Property Group

SLR Project No.: 241.030011.00001

December 14, 2024

Sound Power Levels

Name	ID	Type	1/3 Oktave Spectrum (dB)										Source		
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
15 HP Cooling Tower (single cell)	CT15	Lw		100	103	103	100	97	93	90	87	79	99.2	108.4	H&K calc for Propeller CT (15 hp assumed)
Large Reefer Truck - front	reefer_lrg	Lw		97.3	112.1	101.9	103.7	99.7	94.7	93.5	89.4	80.4	102	113.5	historical data from Ice Cream Facility
HVAC Unit (10 ton)	HVAC_10ton	Lw		80	83	84	84	83	81	77	73	67	85.5	90.8	H&K calc, adj against Man Data Avg
HVAC Unit (20 ton)	HVAC_20ton	Lw		89	92	93	93	92	90	86	82	76	94.5	99.8	H&K calc, adj against Man Data Avg
Heavy Truck - Passby	HeavyTruckPassby	Lw (c)		98.2	101.4	101.1	96.5	96.3	95.6	91.5	84.1	78	99.5	106.8	14-0126 Polytainers
Heavy Truck - Idling	HeavyTruckIdle	Lw (c)		19	93	88	83	90	87	88	82	71	93.1	97.1	14-0126 Polytainers
Forklift over threshold of truck - spectral	loading_impl2	Lw		107	102.2	102.4	99.4	95.2	91.7	88.2	85	80.7	97.9	109.9	Meas - ideal supply (overall), VCL for spectrum



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