aercoustics

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NOISE IMPACT STUDY – **Project: 21354.00**

Proposed Industrial Development
282a Highway 5 St. George
County of Brant, Ontario

Prepared for:

JRI Architects
4 Prince George Drive
Etobicoke, ON M9A 1X8

Prepared by:

Bryce Lemert, B.S.E.

Derek Flake, M.Sc., P.Eng

December 22, 2021

Revision History

Version	Description	Author	Reviewed	Date
- -	Initial Report	BL	DF	December 22, 2021

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Executive Summary

Aercoustics Engineering Limited has been retained by JRI Architects to prepare a Noise Impact Study to support an application for Site Plan Approval for a proposed Industrial Warehouse in the County of Brant, Ontario.

The proposed development is to be located on the south side of Highway 5 in Brant, Ontario and will consist of two industrial warehouses ("Building 1" and "Building 2"). The location of the proposed facility as well as the nearby noise-sensitive receptors are shown in Figure 1.

Facility operations will include regular truck deliveries including idling at the loading bay as well as rooftop mechanical equipment servicing the storage area and associated offices. Figure 2 shows the proposed development and location of the stationary noise sources.

The purpose of this study was to assess the existing and future noise environment in the development area and to evaluate the impact of the proposed development on nearby noise-sensitive receptors. The predicted impact on noise-sensitive receptors has been calculated in accordance with the noise guidelines of the Ministry of the Environment, Conservation, and Parks (MECP) publication NPC-300 "*Stationery and Transportation Sources – Approval and Planning*" (August 2013).

Based on the analysis discussed herein and summarized in Table 5, the predicted sound levels at the noise-sensitive receptors will not exceed the sound level limits specified in NPC-300 with noise mitigation measures as detailed in Section 4. These noise controls include an acoustic barrier. Further, the proposed facility operations are understood to comply with the County of Brant noise by-law, BY-LAW NO. 185-00.

Table of Contents

1 Introduction

Aercoustics Engineering Limited (Aercoustics) has been retained by JRI Architects to prepare a Noise Impact Study (NIS) to support an application for Site Plan Approval (SPA) for proposed Industrial Warehouses ("Building 1" and "Building 2") in the County of Brant, Ontario.

The purpose of this study was to assess the noise impact from the stationary sources in the proposed development on the noise-sensitive receptors in the area. This report considered the Ontario Ministry of the Environment, Conservation, and Parks (MECP) guideline NPC-300 "*Stationary and Transportation Sources – Approval and Planning*" (August 2013) and the County of Brant noise by-law, BY-LAW NO. 185-00.

The proposed Industrial Warehouse development is to be located on the south side of Highway 5 in the County of Brant, Ontario and will consist of two warehouse buildings and associated parking areas. This study was based on the following sit-specific documents and drawings prepared by JRI Architects, which have been included in Appendix A:

- Site plan , dated August 17, 2021;
- Section Elevation drawings, dated September 2021 and revised November 2, 2021; and
- Grading Concept drawing, received November 29, 2021

Surrounding land uses include similar warehousing and industrial uses immediately adjacent the subject site, agricultural zoned lands with single detached dwellings, as well as rural lands zoned to allow residential uses to the north and west.

Figure 1 provides a key plan showing the development location and the surrounding area. Figure 2 shows the proposed development and location of the stationary noise sources.

2 Guidelines and Criteria

Sound levels are assessed at the noise-sensitive receptors around the site which are predicted to experience the highest sound impact from the proposed facility. A determination of compliance with the relevant sound level limits at these worst-case locations reflects compliance at noise-sensitive receptors located further away, as sound levels decrease with distance from the source.

The MECP guidelines require consideration of outdoor points of reception in backyards, such as the existing residential units to the north of the development. Receptors representing these outdoor points of reception have been considered in this study and are represented with a "g" at the end of the Receptor ID. The height and location of the receptors have been selected in accordance with NPC-300. The receptors considered in this study are detailed further in Table 1.

Table 1: Receptor Location Summary

Receptor ID	Description	Location[1]
R01	Existing 1-storey dwelling	80 m north
R02	Existing 1-storey dwelling	80 m north
R03	Existing 2-storey dwelling	50 m north
R03g	Outdoor Receptor for R03	30 m north
R04	Existing 2-storey dwelling	50 m north
R04g	Outdoor Receptor for R04	25 m north
405	Existing 2-storey dwelling	60 m north
R05g	Outdoor Receptor for R05	25 m north
R06	Existing 1-storey dwelling	20 m west
R06g	Outdoor Receptor for R06	20 m west
R07	Existing 1-storey dwelling	20 m east
R07g	Outdoor Receptor for R07	20 m east
R08	Existing 1-storey dwelling	65 m north
R08g	Outdoor Receptor for R08	45 m north
R09	Existing 2-storey dwelling	45 m north
R10	Existing 1-storey dwelling	95 m northeast
R11	Existing 1-storey dwelling	105 m northeast
R12	Existing 1-storey dwelling	130 m northeast
R13	Existing 2-storey dwelling	130 m southeast
R13g	Outdoor Receptor for R13	130 m southeast
R14	Existing 1-storey dwelling	490 m west
R15	Existing 1-storey dwelling	490 m west
R16	Existing 1-storey dwelling	450 m west

[1] – Distances from receptor to closest stationary source; directions from source to receiver.

The noise level limits pertaining to stationary noise sources have been established based on the Ministry of the Environment, Conservation, and Parks (MECP) publication NPC-300. For sound from a stationary source, the sound level limit at a point of reception, expressed in terms of the one-hour equivalent sound level (L_{eq}-1hr), is the higher of the applicable exclusion limit value given in Table 2, or the background sound level for that point of reception.

Table 2: Noise Exclusion Limits – Stationary Noise Sources – Classes 1, 2, 3, and 4

Time of Day	Sound Level Exclusion Limit* Class 1 Area	Sound Level Exclusion Limit* Class 2 Area	Sound Level Exclusion Limit* Class 3 Area	Sound Level Exclusion Limit* Class 4 Area
	Outdoor Points of Reception			
Day (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	55 dBA
Evening (19:00 to 23:00)	50 dBA	45 dBA	40 dBA	55 dBA
	Plane of Window of Noise Sensitive Spaces			
Day (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	60 dBA
Evening (19:00 to 23:00)	50 dBA	50 dBA	40 dBA	60 dBA
Night (23:00 to 07:00)	45 dBA	45 dBA	40 dBA	55 dBA

*or the minimum existing hourly background sound level L_{eq}, whichever is higher

The applicable MECP sound level limit is determined by the exclusion limit listed above or the minimum hourly equivalent background sound level, whichever is higher. It is not expected that the background sound level will increase the sound level limit above the noise exclusion limits for the receptors in this study.

The proposed site and lands to the north and west are considered MECP Class 2 areas. In a Class 2 area, the background sound level during the daytime (07:00 to 19:00) are defined by man-made sources; in this case, noise is generated primarily by road traffic on Highway 5. Sound levels at evening time (19:00 to 23:00) and nighttime (23:00 to 07:00) are primarily defined by the natural environment and infrequent human activity. The dwelling to the southeast of the development identified by receptor R13 is considered an MECP Class 3 area, where the daytime, evening, and nighttime sound levels are dominated by the natural environment and infrequent human activity.

The noise-sensitive receptors and associated sound level limits are outlined in Table 3, below.

Table 3: Applicable Sound Level Limits

Receptor ID	Applicable Sound Level Limit (dBA)		
	Daytime[1]	Evening[1]	Nighttime[1]
R01-R12	50	50	45
R03g-R08g	50	45	-
R13	45	40	40
R13g	45	40	-
R14-R16	50	50	45

[1] – Daytime (07:00 – 19:00), Evening (19:00 – 23:00), Nighttime (23:00 – 07:00)

3 Stationary Noise Sources

The stationary noise source prediction model was generated using Datakustik's CadnaA Noise Prediction Software. This model is based on established noise prediction methods outlined in the ISO 9613-2 standard "Acoustics - Attenuation of sound during propagation outdoors – Part 2: General method of calculation". Noise levels were predicted using conditions of downwind propagation, generally with hard ground in paved areas or bodies of water.

This assessment was based on the facility operating 24 hours per day. For the sake of conservatism and operational flexibility, a worst-case daytime, evening, and nighttime operating scenario have been modelled using the truck counts shown in Table 4. In actuality, the total truck volumes active at the site may fall below those considered in this study. Truck movements were modelled conservatively by considering two scenarios. In each scenario the full count of trucks outlined in Table 4 was modelled travelling around each of Building 1 (Figures 3a, 4a) and Building 2 (Figure 3b, 4b). In practice, truck traffic will be distributed between both buildings representing a lower noise impact than was considered in this study.

It is assumed that regular truck idling will be kept to a minimum such that the contribution can be considered acoustically insignificant. Refrigerated trucks were modelled to idle for 30 minutes per delivery.

Table 4: Worst-case truck counts

Truck Type	Daytime (07:00-19:00)	Evening (19:00-23:00)	Nighttime (23:00-7:00)
Regular Trucks*	80	20	20
Refrigerated Trucks	20	10	10

*One refrigerated truck is acoustically equivalent to two regular trucks; higher volumes of regular trucks are permissible provided that a lower volume of refrigerated trucks are used, at a 2:1 ratio. Refrigerated truck counts should not exceed the given values.

The use of shunt trucks to relocate empty trailers is not planned. Operation of rooftop mechanical equipment was based on an assumed duty cycle of 50% at nighttime and in the evening (19:00 – 07:00) and 100% during the daytime (07:00 – 19:00).

4 Summary of Noise Control Recommendations

This report has been prepared in accordance with the MECP Guidelines which were the base for establishing the noise level limits, predicting the noise impact of the proposed facility, as well as recommendations of the noise controls. Some noise mitigation is required for this development and the recommendations are discussed below.

An acoustic barrier is required along the north side of the property in order for the noise impact at receptors R01 to R09 to fall below the sound level limits. This study is based on

the grading plan and section elevations provided by JRI Architects, dated November 2, 2021, which have been included in Appendix A. The barrier is located on both sides of the entrance corridor as shown in Figure 5, with a total length of 215 m to the west of the corridor and 240 m to the east of the corridor. The height of this barrier must be 2.2 m, with the base of the barrier situated atop the proposed retaining wall along the entrance corridor, and atop the existing topography running east and west of the south end of the entrance corridor, as shown in Figure 5.

The provided retaining wall (maximum height of approximately 5 m) forms an integral part of the noise control design. The noise sources were modelled with a final ground elevation of 256.7 m. Significant changes to the site topography compared to what is shown in Appendix A could result in ineffective attenuation from the proposed barriers.

Table 5 below provides the results of the maximum noise predictions at nearby noise-sensitive receptors based on a worst-case operating scenario including mitigation measures for the proposed development.

Table 5: Maximum Predicted Sound Levels at Nearby Noise-Sensitive Receptors

Receptor	Time Period[1]	Predicted Noise Impact (dBA)	Sound Level Limit (dBA)	Compliance (Yes/No)
R01	Day	44	50	Yes
	Evening	40	50	Yes
	Night	40	45	Yes
R02	Day	43	50	Yes
	Evening	40	50	Yes
	Night	40	45	Yes
R03	Day	49	50	Yes
	Evening	45	50	Yes
	Night	45	45	Yes
R03g	Day	48	50	Yes
	Evening	44	45	Yes
	Night	-	-	Yes
R04	Day	48	50	Yes
	Evening	45	50	Yes
	Night	45	45	Yes
R04g	Day	47	50	Yes
	Evening	44	45	Yes
	Night	-	-	Yes

Receptor	Time Period[1]	Predicted Noise Impact (dBA)	Sound Level Limit (dBA)	Compliance (Yes/No)
R05	Day	49	50	Yes
	Evening	45	50	Yes
	Night	45	45	Yes
R05g	Day	48	50	Yes
	Evening	44	45	Yes
	Night	-	-	Yes
R06	Day	48	50	Yes
	Evening	44	50	Yes
	Night	44	45	Yes
R06g	Day	49	50	Yes
	Evening	45	45	Yes
	Night	-	-	Yes
R07	Day	49	50	Yes
	Evening	45	50	Yes
	Night	45	45	Yes
R07g	Day	49	50	Yes
	Evening	45	45	Yes
	Night	-	-	Yes
R08	Day	45	50	Yes
	Evening	41	50	Yes
	Night	41	45	Yes
R08g	Day	47	50	Yes
	Evening	43	45	Yes
	Night	-	-	Yes
R09	Day	46	50	Yes
	Evening	42	50	Yes
	Night	42	45	Yes
R10	Day	43	50	Yes
	Evening	39	50	Yes
	Night	39	45	Yes
R11	Day	42	50	Yes
	Evening	38	50	Yes

Receptor	Time Period[1]	Predicted Noise Impact (dBA)	Sound Level Limit (dBA)	Compliance (Yes/No)
	Night	38	45	Yes
R12	Day	41	50	Yes
	Evening	38	50	Yes
	Night	38	45	Yes
R13	Day	43	45	Yes
	Evening	40	40	Yes
	Night	40	40	Yes
R13g	Day	41	45	Yes
	Evening	37	40	Yes
	Night	-	-	Yes
R14	Day	32	50	Yes
	Evening	29	50	Yes
	Night	29	45	Yes
R15	Day	33	50	Yes
	Evening	29	50	Yes
	Night	29	45	Yes
R16	Day	34	50	Yes
	Evening	31	50	Yes
	Night	31	45	Yes

[1] – Daytime (07:00 – 19:00), Evening (19:00 – 23:00), Nighttime (23:00 – 07:00)

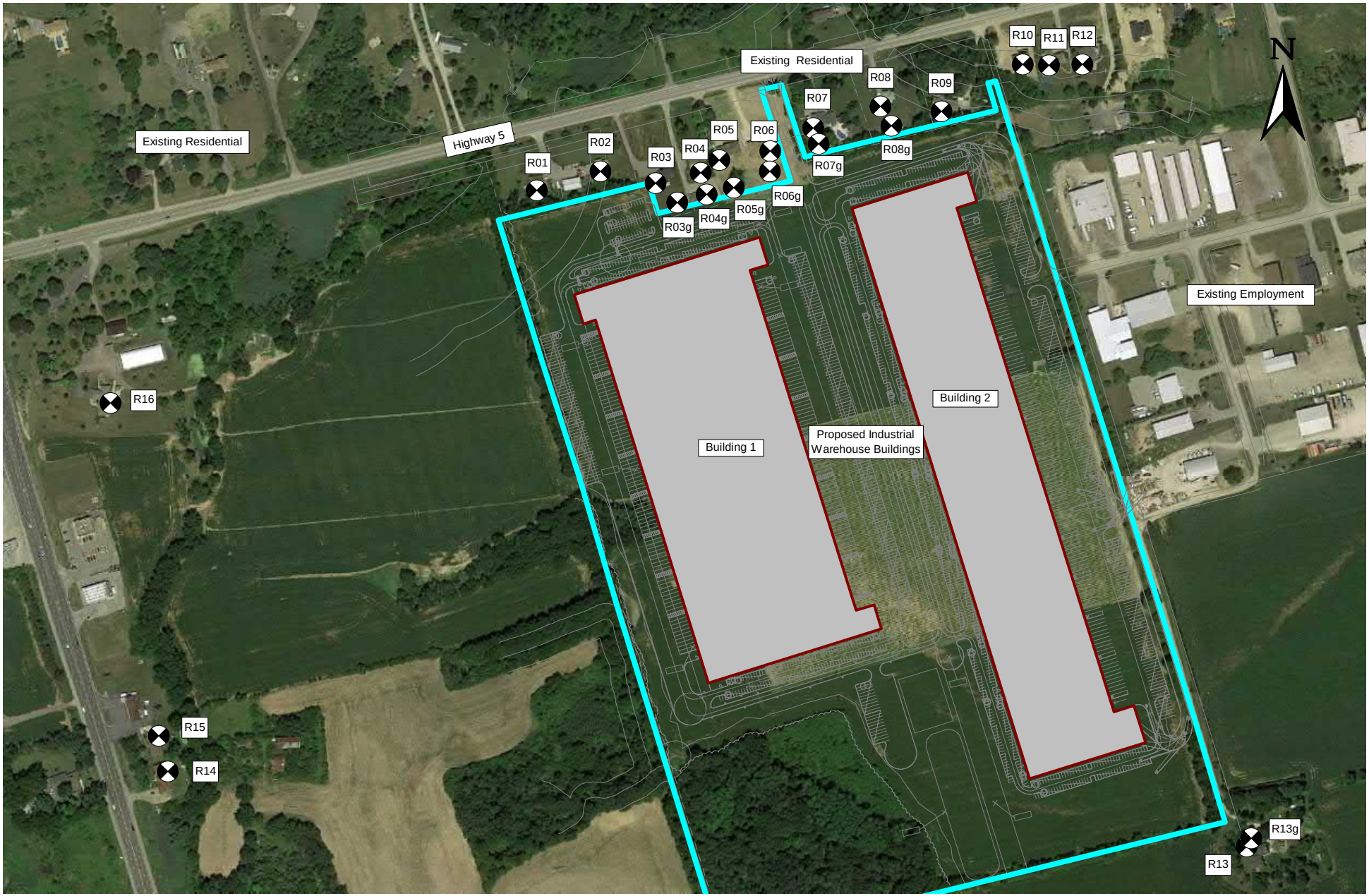
Per Table 5 above, the applicable MECP sound level limits are not exceeded at any of the noise-sensitive receptors most closely situated to the proposed development. Accordingly, the noise impact of the facility is predicted to meet the sound level limits at nearby receptors with implementation of the noise control measures described above. Figures 3a and 3b illustrate the predicted nighttime noise impact contours for each worst-case scenario at a height of 1.5 m (approximate height at first storey window). Figures 4a and 4b illustrate the predicted nighttime noise impact contours for each worst-case scenario at a height of 4.5 m (approximate height at second storey window).

5 Conclusion

Aercoustics Engineering Limited was retained by JRI Architects to prepare a Noise Impact Study to support an application for Site Plan Approval for proposed Industrial Warehouse developments in the County of Brant, Ontario.

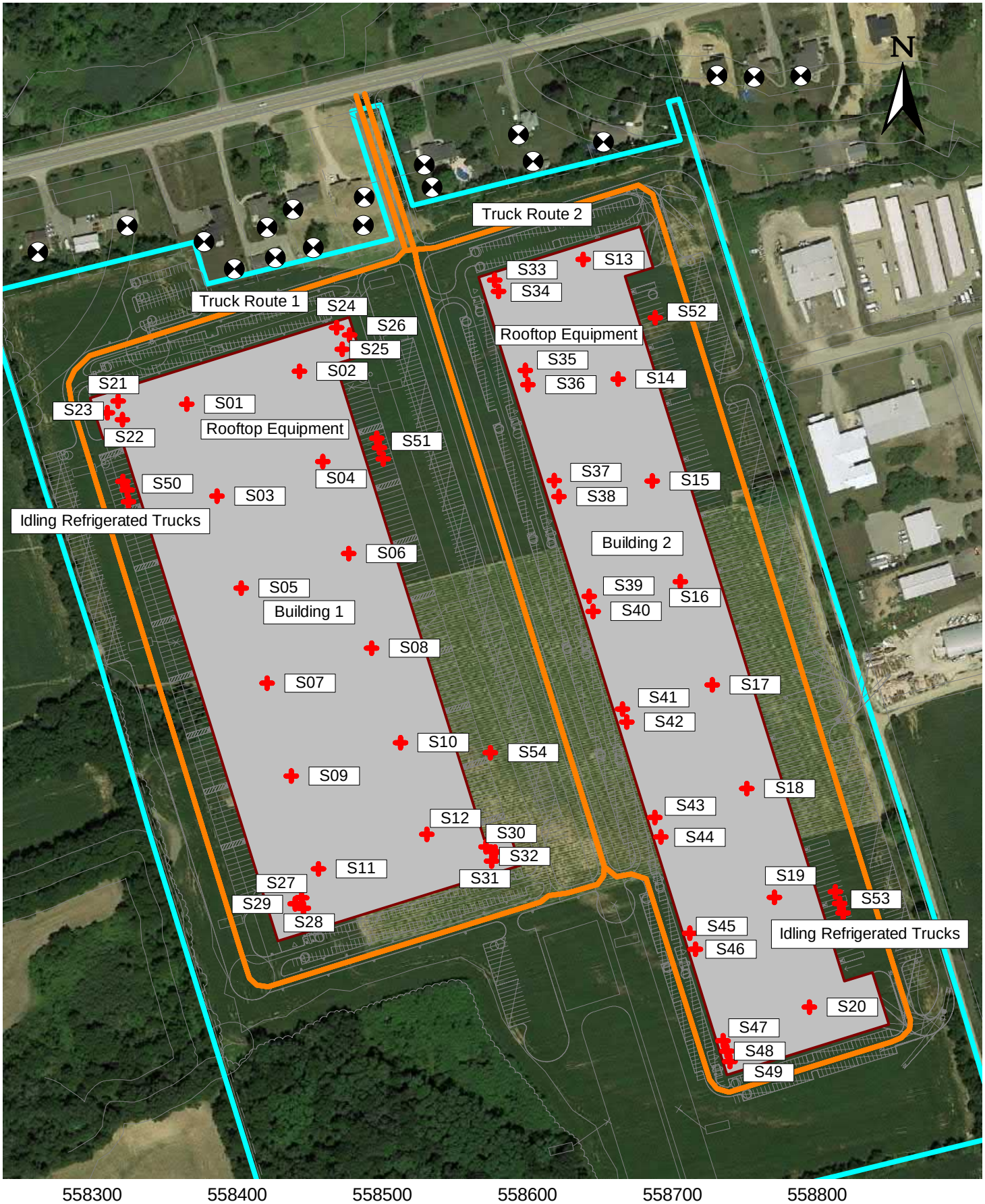
Based on the information available, the conclusions of this report are accurate as of the date it was signed and sealed. This report and associated calculations underwent a comprehensive internal review process to ensure minimization of errors and omissions.

The sound levels at the nearby noise-sensitive receptors are predicted to comply with the noise guidelines of the MECP.

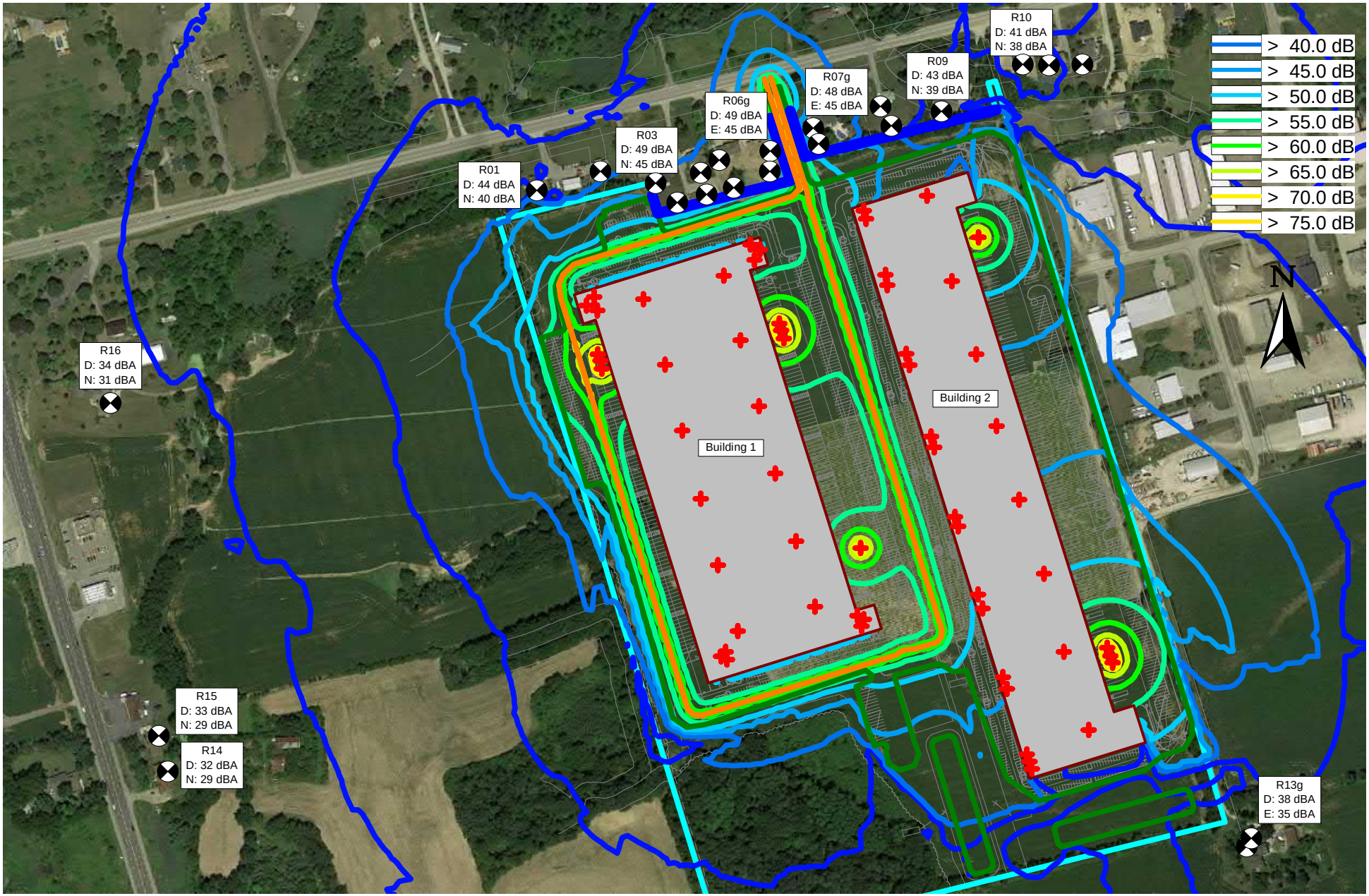


aercoustics	Project ID: 21354.00 Scale: NTS Drawn by: BL Reviewed by: DF Date: Dec 3, 2021 Revision: 1	**Project Name** 284 Highway 5 St George - Noise Impact Study **Figure Title** Key Plan Showing Location of Noise-Sensitive Receptors

Figure 1



aercoustics	Project ID: 21354.00 Scale: NTS Drawn by: BL Reviewed by: DF Date: Dec 3, 2021 Revision: 1	**Project Name** 284 Highway 5 St George - Noise Impact Study	
		Figure Title Site Plan Showing Location of Noise Sources	**Figure 2**



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Reviewed by: DF
Date: Dec 3, 2021
Revision: 1

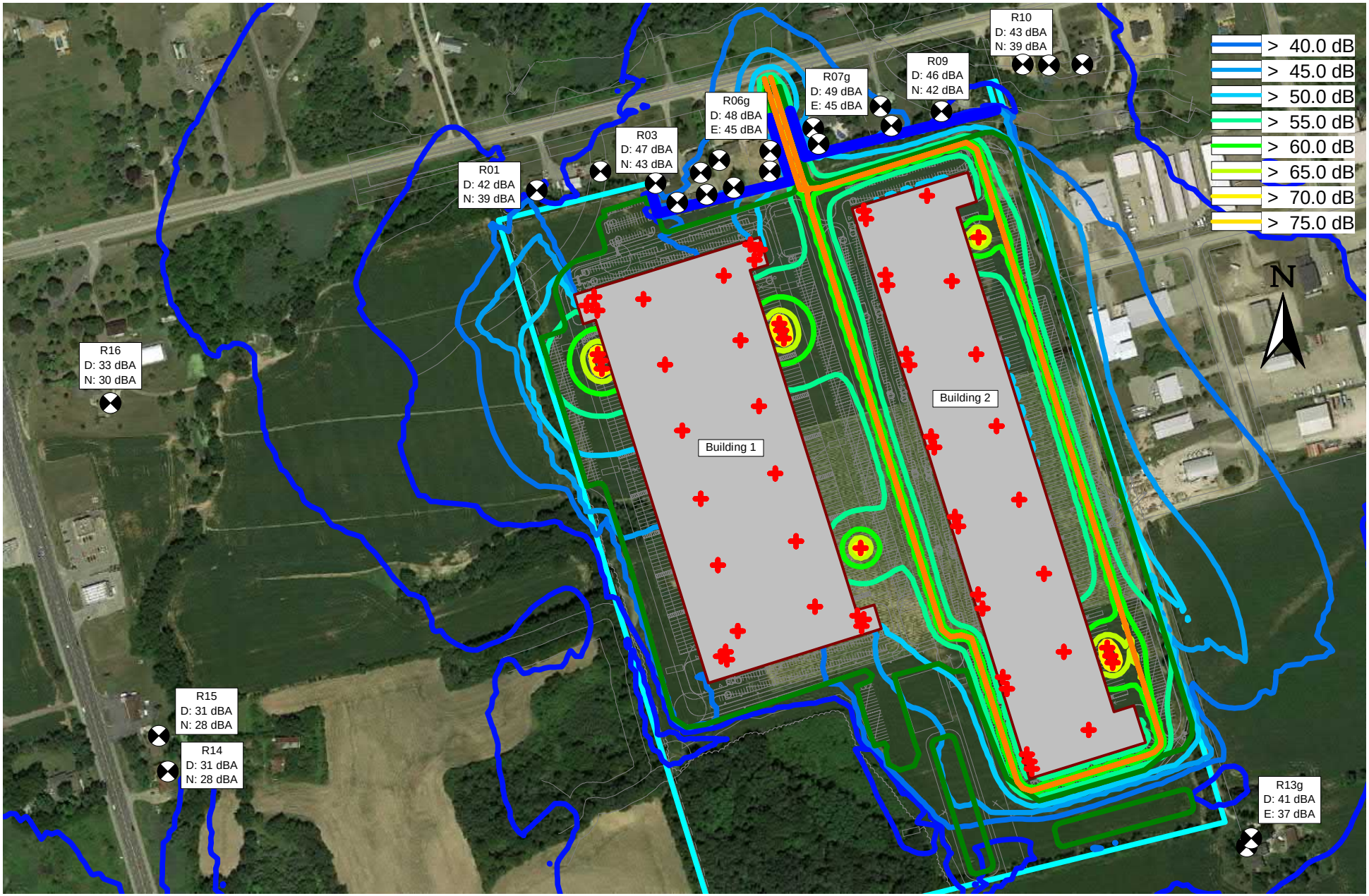
Project Name

284 Highway 5 St George - Noise Impact Study

Figure Title

Area Plan Showing Nighttime Noise Impact Contours at 1.5 m Height (1st storey window)
Worst-case trucks around Building 1

Figure 3a



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Scale: NTS
Drawn by: BL
Reviewed by: DF
Date: Dec 3, 2021
Revision: 1

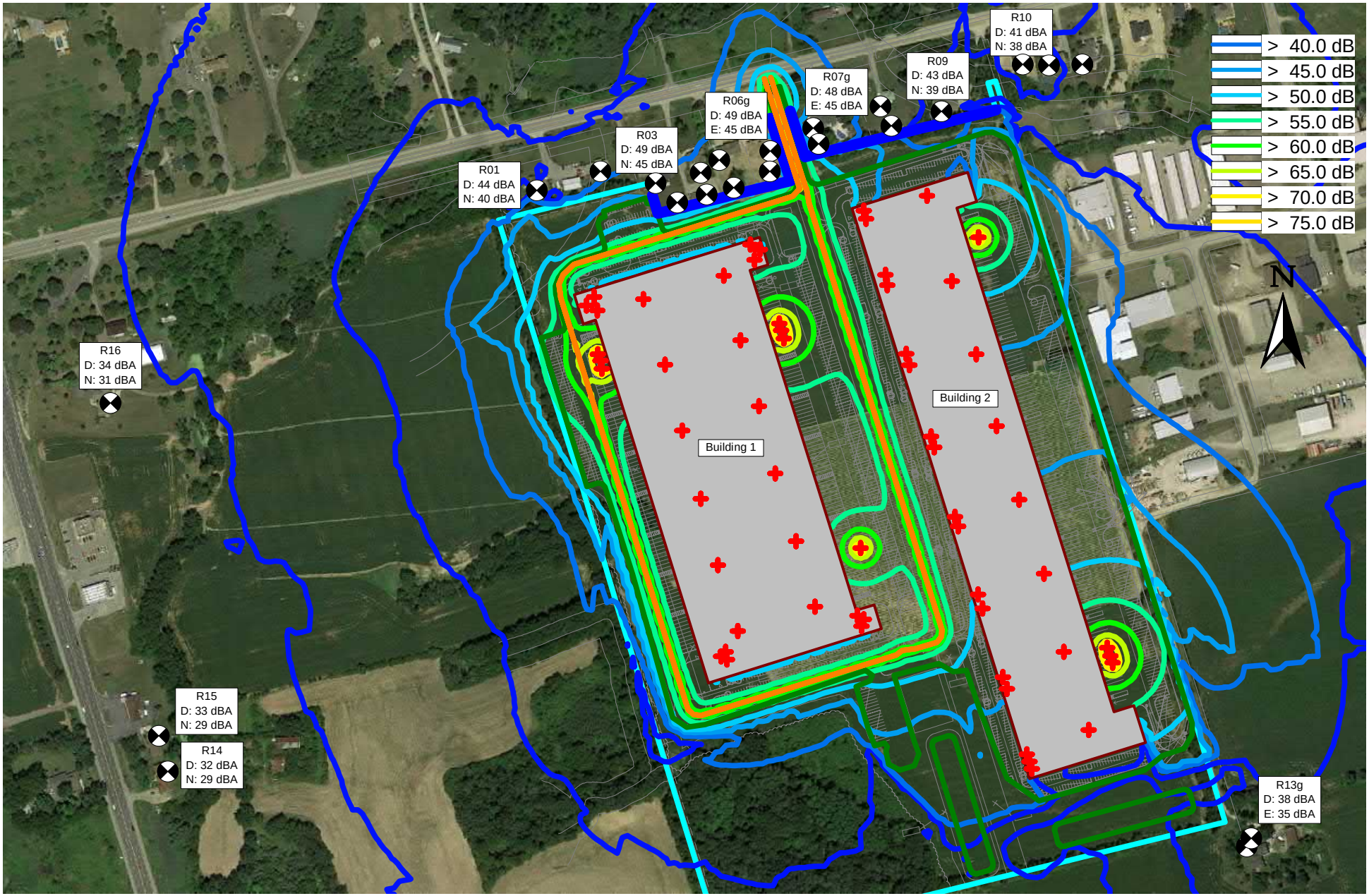
Project Name

284 Highway 5 St George - Noise Impact Study

Figure Title

Area Plan Showing Nighttime Noise Impact Contours at 1.5 m Height (1st storey window)
Worst-case trucks around Building 2

Figure 3b



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Reviewed by: DF
Date: Dec 3, 2021
Revision: 1

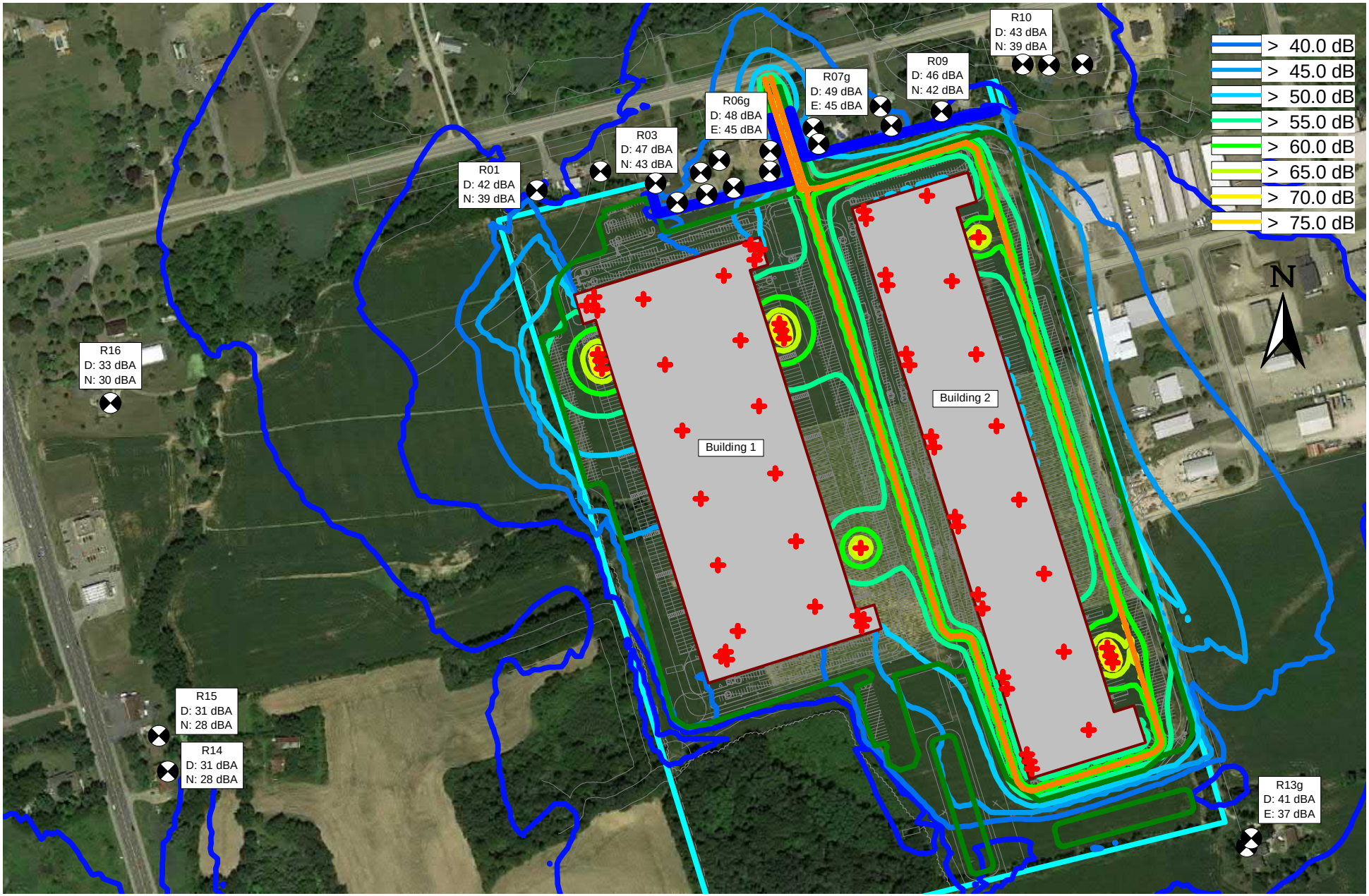
Project Name

284 Highway 5 St George - Noise Impact Study

Figure Title

Area Plan Showing Nighttime Noise Impact Contours at 4.5 m Height (2nd storey window)
Worst-case trucks around Building 1

Figure 4a



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Scale: NTS
Drawn by: BL
Reviewed by: DF
Date: Dec 3, 2021
Revision: 1

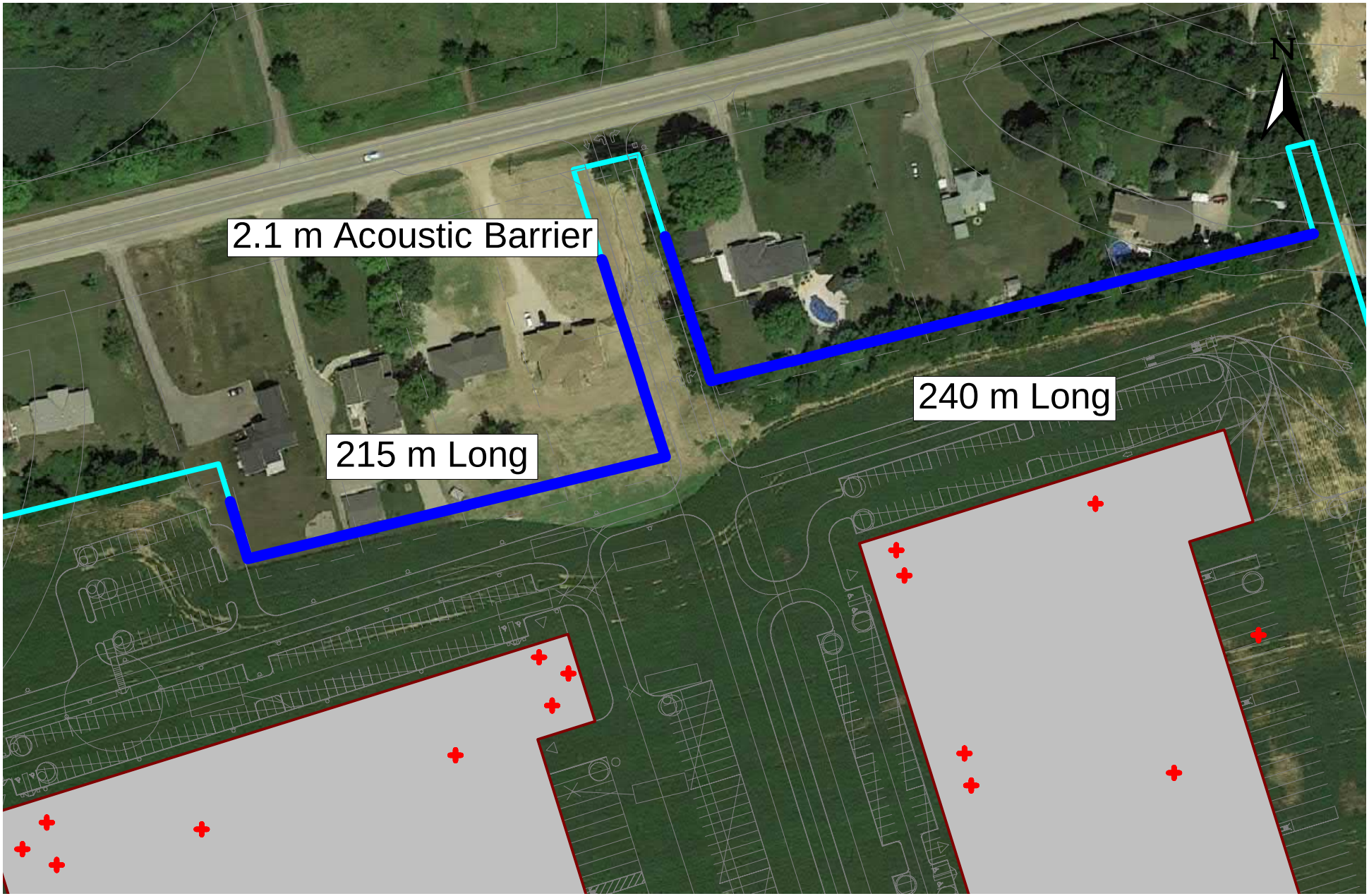
Project Name

284 Highway 5 St George - Noise Impact Study

Figure Title

Area Plan Showing Nighttime Noise Impact Contours at 4.5 m Height (2nd storey window)
Worst-case trucks around Building 2

Figure 4b



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Reviewed by: DF
Date: Dec 3, 2021
Revision: 1

Project Name

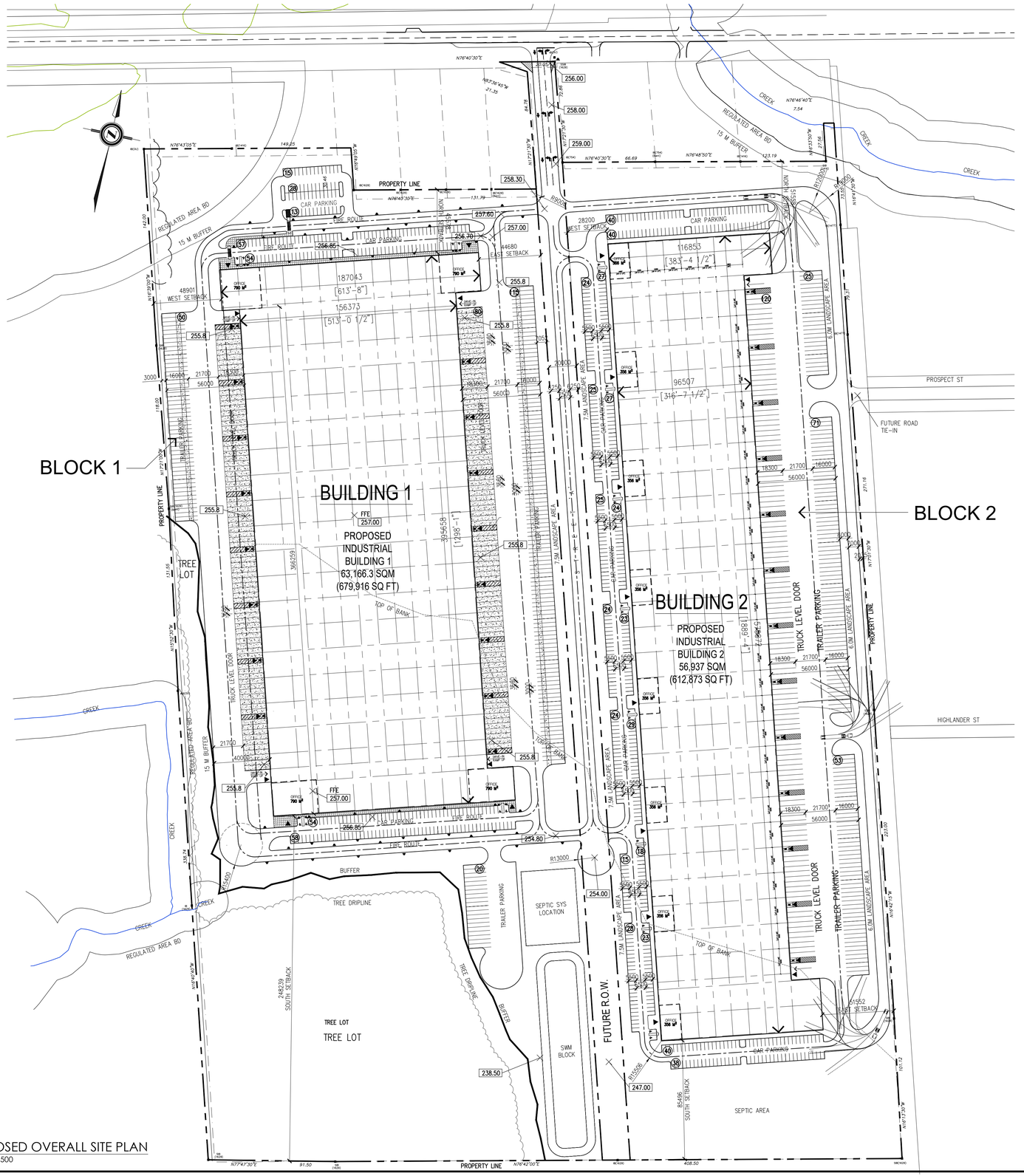
284 Highway 5 St George - Noise Impact Study

Figure Title

Location of 2.1 m Acoustic Barrier

Figure 5

Appendix A
Site Plan Drawings



1 / SK-07 PROPOSED OVERALL SITE PLAN
SCALE 1 : 1500

SITE STATISTICS

285 HIGHWAY 5 ST. GEORGE, COUNTY OF BRANT, ONTARIO
BLOCK 2

EXISTING ZONING A - Agricultural
PROPOSED BASE ZONING M2 - Light Industrial

	COVERAGE %	HA	ACRE	SQ FT	SQ M
TOTAL LOT AREA	100.00%	36.02	89.01	3,877,400.78	360,222.32
BLOCK 1 *	55.39%	19.95	49.31	2,147,786.01	199,535.85
BLOCK 2 *	39.12%	14.09	34.82	1,516,692.03	140,905.30
STREET 'A'/R.O.W.	5.49%	1.98	4.89	212,922.74	19,781.17

** Minimum Lot Area = 1,100 sqm*

BLOCK 1

	COVERAGE PERMITTED	COVERAGE PROVIDED	SQ FT	SQ M
BLOCK 1 AREA	n/a	100.00%	2,147,786.0	199,535.9
BUILDING 1 GFA	60% (MAX.)	31.66%	679,916.4	63,166.3
OFFICE (INCLUDED IN BUILDING GFA)			33,995.8	3,158.3
PAVED AREA	n/a	26.67%	572,734.2	53,208.8
LANDSCAPED AREA (HARD + SOFT INC. TREE LOT, CONSERVATION AREAS AND BUFFER. SEPTIC AREA)	10% (MIN.)	41.68%	895,135.4	83,160.8

PARKING

	REQUIRED	PROVIDED
CAR PARKING (INC. BARRIER FREE) = 1/30 sqm OF OFFICE SPACE*	106	279
BARRIER FREE (4% OF CAR PARKING) **	4	16 **
BIKE PARKING (5% OF CAR PARKING)	5	10
LONG TERM BIKE PARKING (5%)	5	10

** Current M2 Zone parking requirement calculation at 1/100 sqm of Gross Floor Area for Warehouse*
Car Parking Dimension min. 2.8m x 5.5m
*** 8 - Type A (3.4m width) and 8-Type B (2.8m) provided*

LOADING SPACES

	REQUIRED	PROVIDED
TRUCK LEVEL DOOR/LOADING SPACE *	9	160
TRAILER PARK	n/a	185
DRIVE-IN	n/a	4

** Required Min. Loading Space = 3 + 1 per 10,000 sqm in excess to 7,500 sqm*

FIRE TRUCK ROUTE

MIN. (m)	PROPOSED (m)
6	6.5

PARKING STALLS

MIN. (m)	PROPOSED (m)
2.8 x 5.5	2.8 x 5.5

BUILDING HEIGHT ABOVE GRADE

MAX. (m) *	PROPOSED (m)
13.7 **	13.7

** 11.2 of County of Brant zoning by-law states that if any portion of any building is erected above a height of 12.0 metres, the required yard dimensions shall be increased by 1.0 metres for each 1.0 metres by which such portion of the building exceeds 12.0 metres*
*** Proposed building height exceed 1.7 m from 12.0 maximum height requirement.However, the provided setbacks allows additional building height per except from County of Brant zoning by-law 11.2*

PROPOSED YARD SETBACKS

	MIN. (m)	PROPOSED (m)
NORTH (SIDE)	3.0	42.4
EAST (FRONT)	7.5	45.2
SOUTH (SIDE)	3.0	248.4
WEST (REAR)	9.0	46.7

BLOCK 2

	COVERAGE PERMITTED	COVERAGE PROVIDED	SQ FT	SQ M
BLOCK 2 AREA	n/a	70.62%	1,516,692.0	140,905.3
BUILDING 2 GFA	60% (MAX.)	28.53%	612,864.8	56,937.0
OFFICE (INCLUDED IN BUILDING GFA)			30,643.2	2,846.9
PAVED AREA	n/a	24.17%	519,020.3	48,218.6
LANDSCAPED AREA (HARD + SOFT INC. TREE LOT, CONSERVATION AREAS AND BUFFER. SEPTIC AREA)	10% (MIN.)	17.92%	384,807.0	35,749.7

PARKING

	REQUIRED	PROVIDED
CAR PARKING (INC. BARRIER FREE) = 1/30 sqm OF OFFICE SPACE*	94	491
BARRIER FREE (4% OF CAR PARKING) **	4	16 **
BIKE PARKING (5% OF CAR PARKING)	5	10
LONG TERM BIKE PARKING (5%)	5	10

** Current M2 Zone parking requirement calculation at 1/100 sqm of Gross Floor Area for Warehouse*
Car Parking Dimension min. 2.8m x 5.5m
*** 8 - Type A (3.4m width) and 8-Type B (2.8m) provided*

LOADING SPACES

	REQUIRED	PROVIDED
TRUCK LEVEL DOOR/LOADING SPACE *	9	120
TRAILER PARK	n/a	149
DRIVE-IN	n/a	2

** Required Min. Loading Space = 3 + 1 per 10,000 sqm in excess to 7,500 sqm*

FIRE TRUCK ROUTE

MIN. (m)	PROPOSED (m)
6	6.5

PARKING STALLS

MIN. (m)	PROPOSED (m)
2.8 x 5.5	2.8 x 5.5

BUILDING HEIGHT ABOVE GRADE

MAX. (m) *	PROPOSED (m)
13.7 **	13.7

** 11.2 of County of Brant zoning by-law states that if any portion of any building is erected above a height of 12.0 metres, the required yard dimensions shall be increased by 1.0 metres for each 1.0 metres by which such portion of the building exceeds 12.0 metres*
*** Proposed building height exceed 1.7 m from 12.0 maximum height requirement.However, the provided setbacks allows additional building height per except from County of Brant zoning by-law 11.2*

PROPOSED YARD SETBACKS

	MIN. (m)	PROPOSED (m)
NORTH (SIDE)	3.0	48.7
EAST (REAR)	7.5	50.7
SOUTH (SIDE)	3.0	85.5
WEST (REAR)	9.0	28.2

NORTH

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
5. THE DRAWINGS ARE THE PROPERTY OF JRI ARCHITECTS INC. AND MUST BE RETURNED ON COMPLETION OF THE PROJECT. ANY UNAUTHORIZED USE IS PROHIBITED.

NOTE:
SURVEY INFORMATION ILLUSTRATED ON THIS DRAWING WAS TAKEN FROM SURVEY FILE NO. A2010252.DWG. PREPARED BY SPEIGHT VAN NOSTRAND & GIBSON LTD.

NO.	DATE	REVISIONS	APVD BY
7.			
6.			
5.			
4.			
3.			
2.			
1.	AUG 17/21	ISSUED FOR CLIENT REVIEW	

ONTARIO ASSOCIATION OF ARCHITECTS
JOHN R. ROBULACK
LICENCE
3944

JRI ARCHITECTS
4 PRINCE GEORGE DRIVE ETOBICOKE, ONTARIO M9A1X8

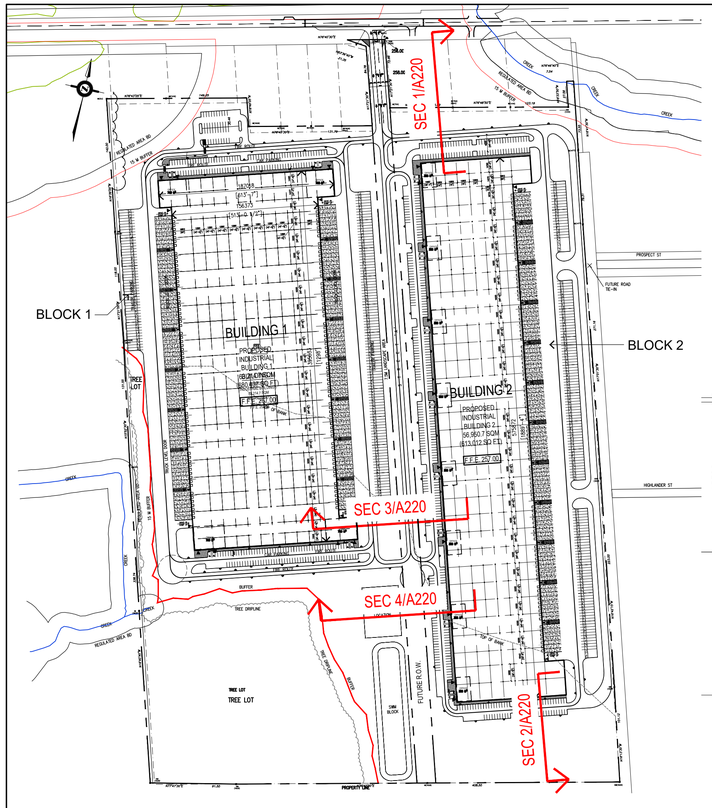
CLIENT
PANATTONI
185 The West Mall, Suite 860
Toronto, ON M9C 5L

PROJECT
NEW INDUSTRIAL DEVELOPMENT
285 HWY 5 ST GEORGE,
COUNTY OF BRANT, ON

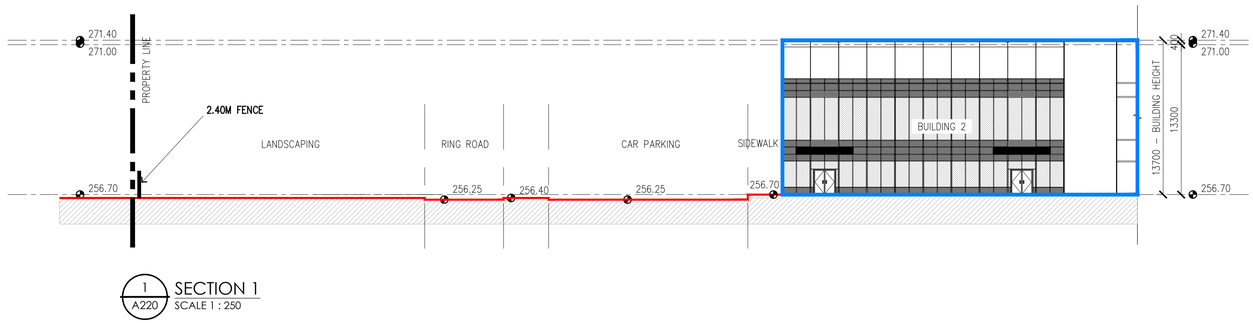
DRAWING TITLE
OVERALL SITE PLAN

DRAWN MS
CHECKED JR
SCALE 1:1500
DATE SEPTEMBER 2021

PROJECT NUMBER 2021-00
DRAWING NUMBER SP101



- / A220 KEY PLAN
SCALE 1 : 3000



1 / A220 SECTION 1
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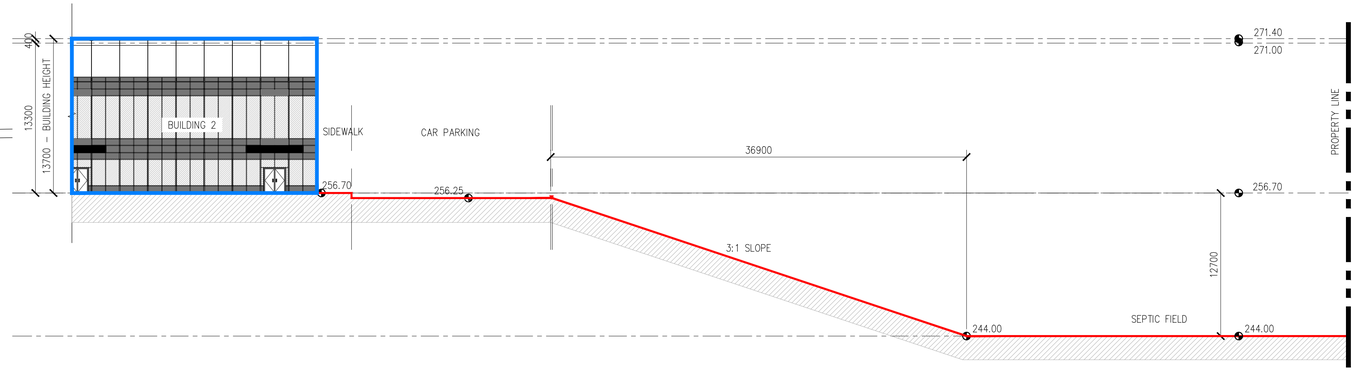

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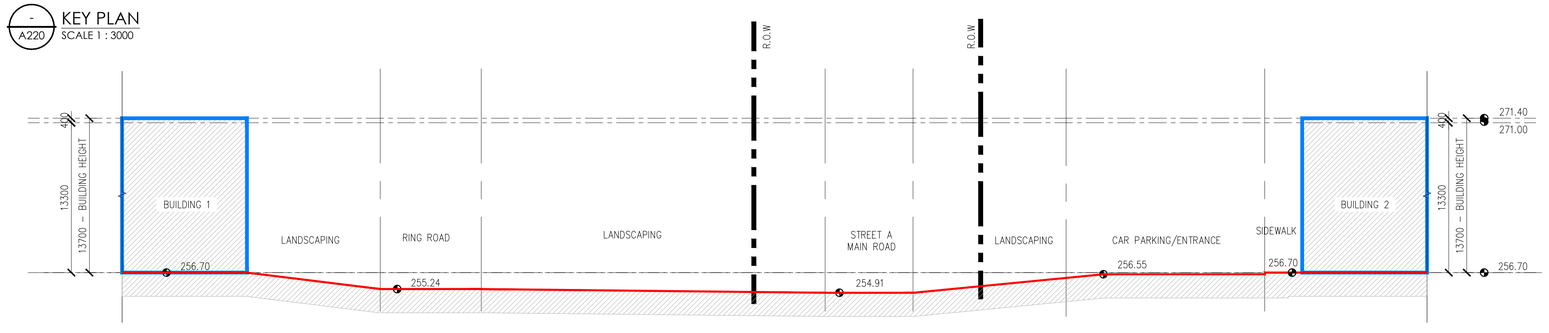

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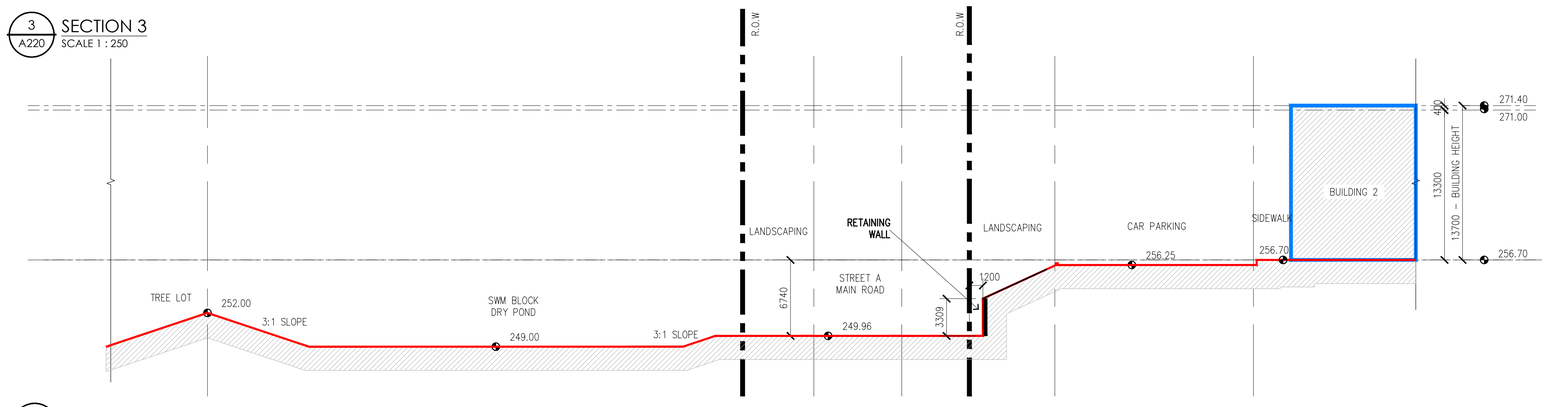

4 / A220 SECTION 4
SCALE 1 : 250

NORTH

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
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NO.	DATE	REVISIONS	APVD BY
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JRI ARCHITECTS
4 PRINCE GEORGE DRIVE ETOBICOKE, ONTARIO M9A1X8

CLIENT

PANATTONI

185 The West Mall, Suite 860
Toronto, ON M9C 5L

PROJECT

NEW INDUSTRIAL DEVELOPMENT
285 HWY 5 ST GEORGE,
COUNTY OF BRANT, ON

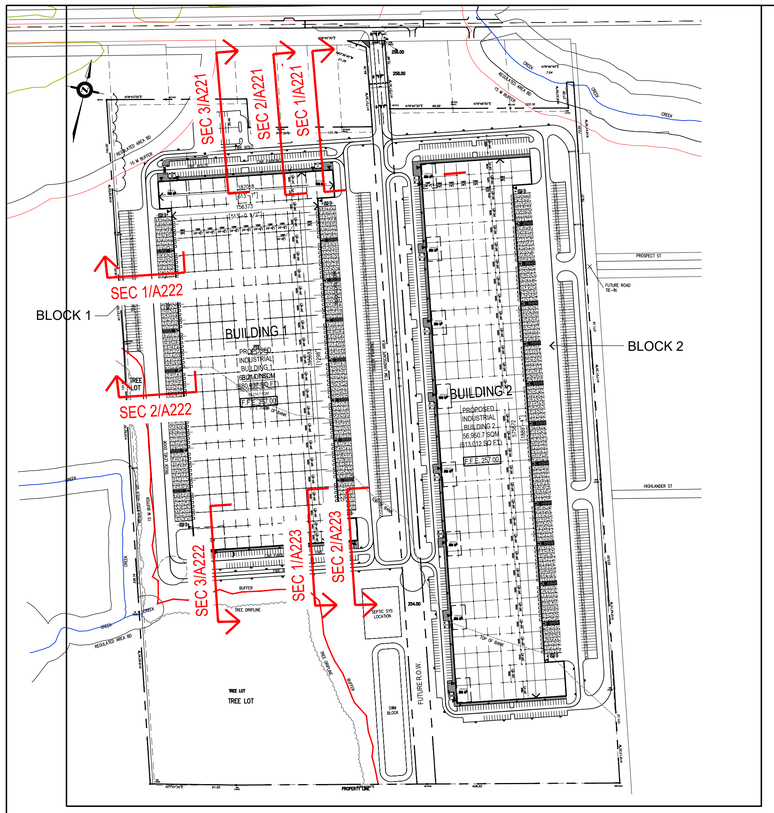
DRAWING TITLE

SECTION ELEVATIONS
BUILDING 2

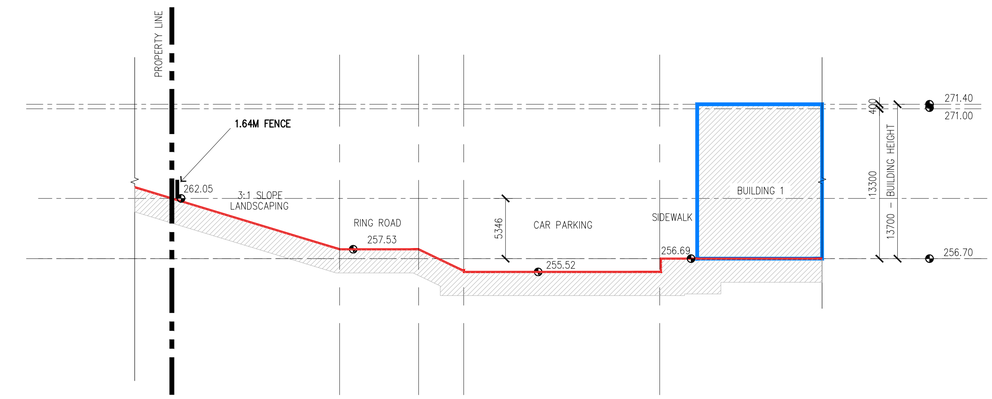
DRAWN	MS
CHECKED	JR
SCALE	1:300
DATE	SEPTEMBER 2021

PROJECT NUMBER: 2021-00

DRAWING NUMBER: A220



- / A221 KEY PLAN
SCALE 1 : 3000



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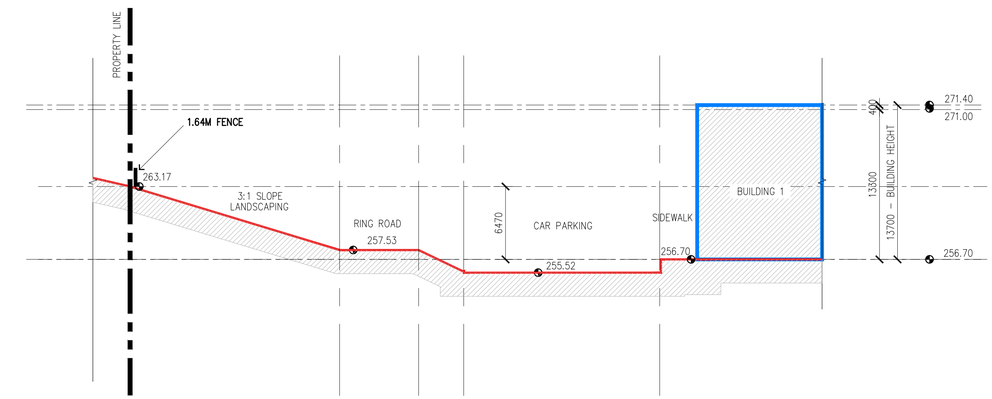

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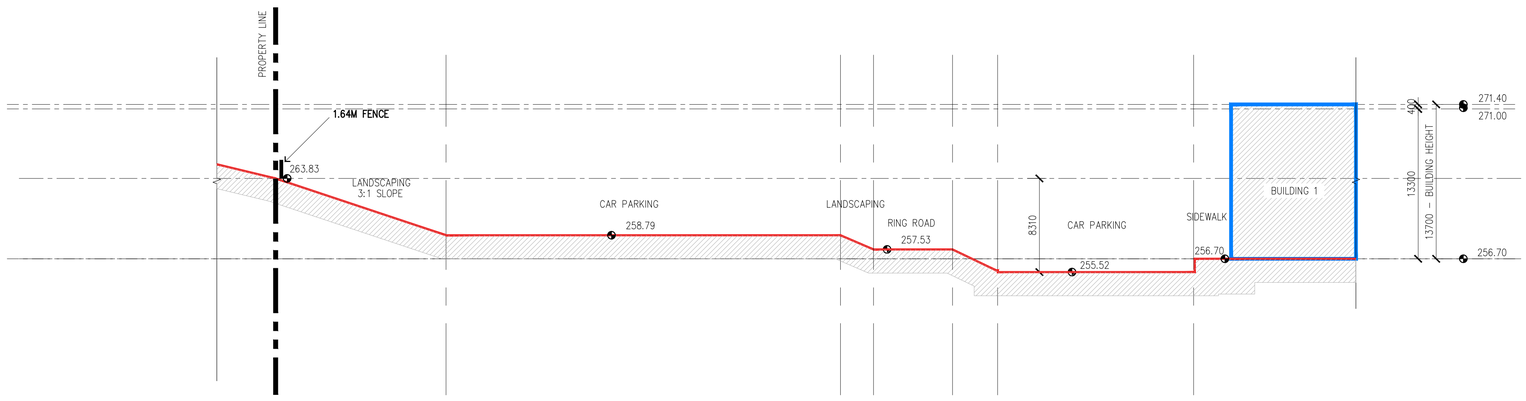

3 / A221 SECTION 3
SCALE 1 : 250

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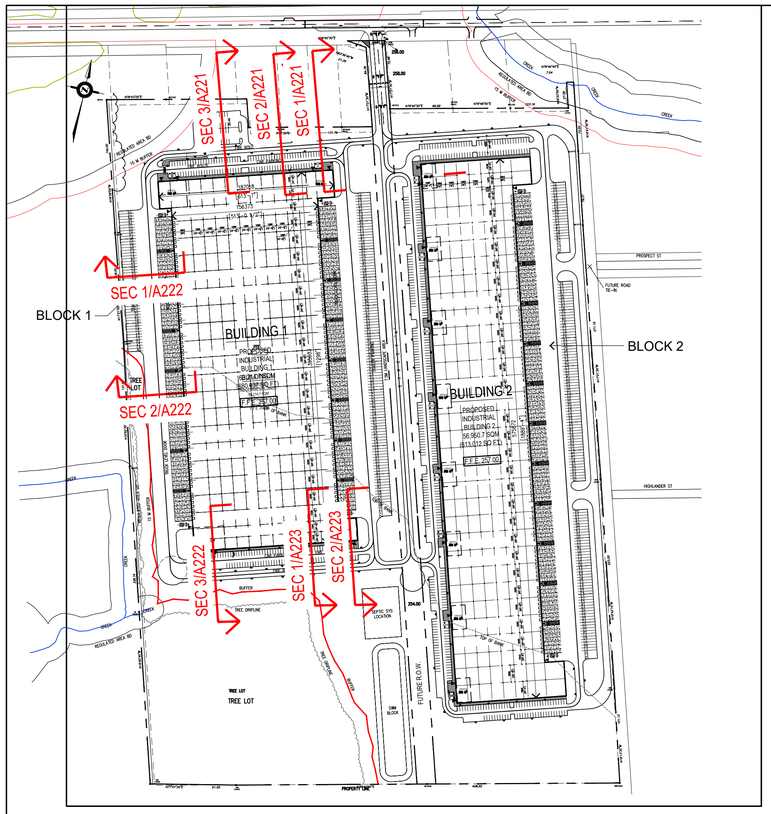
JRI ARCHITECTS
4 PRINCE GEORGE DRIVE ETOBICOKE, ONTARIO M8A1X8

CLIENT
PANATTONI
185 The West Mall, Suite 860
Toronto, ON M9C 5L

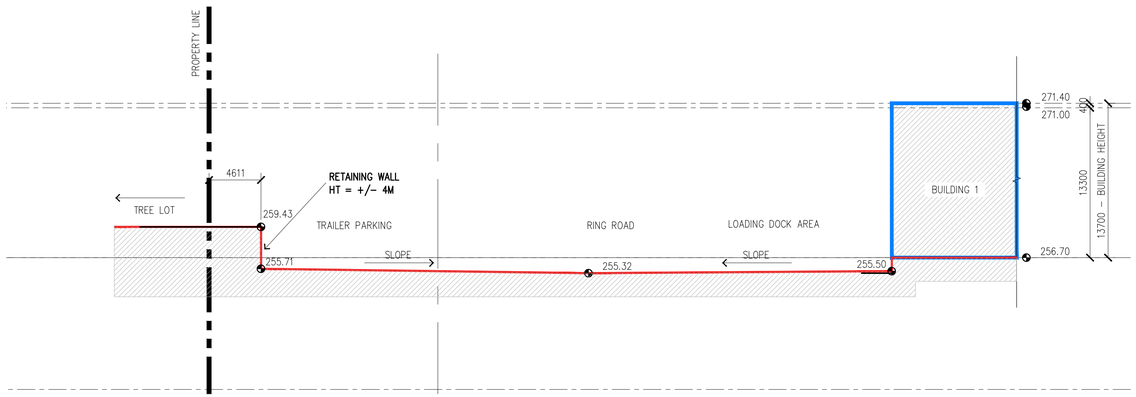
PROJECT
NEW INDUSTRIAL DEVELOPMENT
285 HWY 5 ST GEORGE,
COUNTY OF BRANT, ON

DRAWING TITLE
SECTION ELEVATIONS
BUILDING 1

DRAWN	MS
CHECKED	JR
SCALE	1:300
DATE	SEPTEMBER 2021
PROJECT NUMBER	2021-00
DRAWING NUMBER	A221



- / A222 KEY PLAN
SCALE 1 : 3000



1 / A222 SECTION 1
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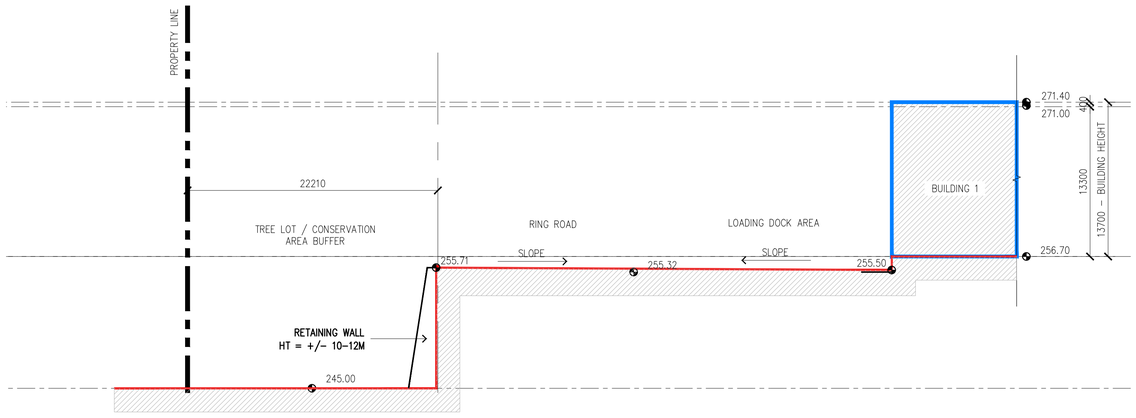

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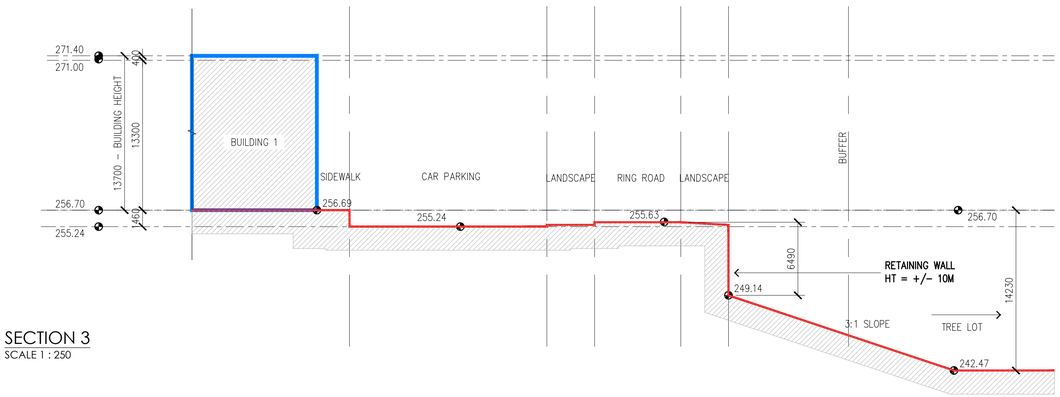

3 / A222 SECTION 3
SCALE 1 : 250

NORTH

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JRI ARCHITECTS
4 PRINCE GEORGE DRIVE ETOBICOKE, ONTARIO M9A1X8

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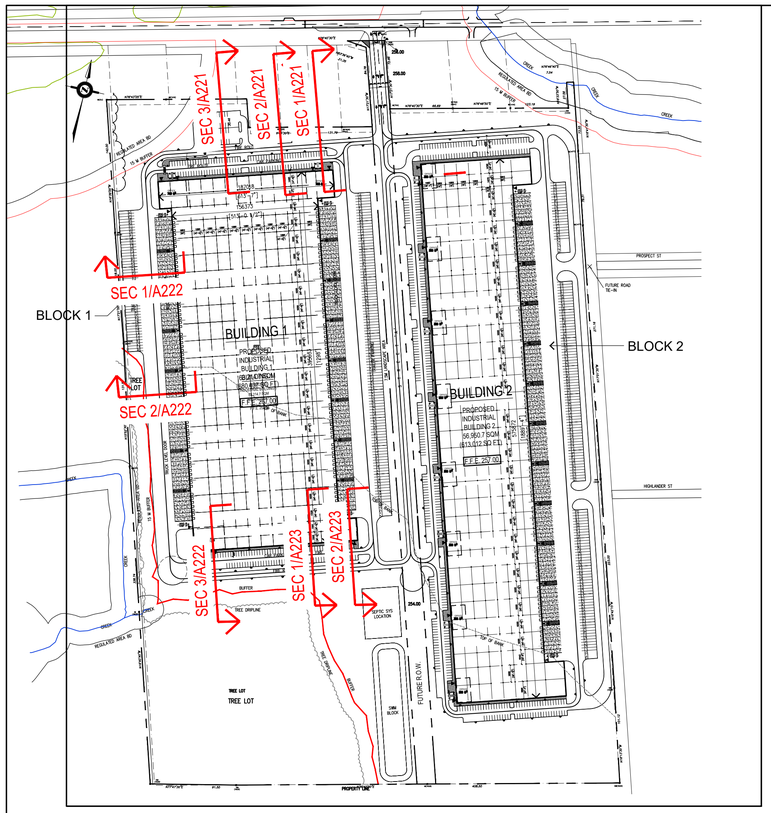
PROJECT
NEW INDUSTRIAL DEVELOPMENT
285 HWY 5 ST GEORGE,
COUNTY OF BRANT, ON

DRAWING TITLE
SECTION ELEVATIONS
BUILDING 1

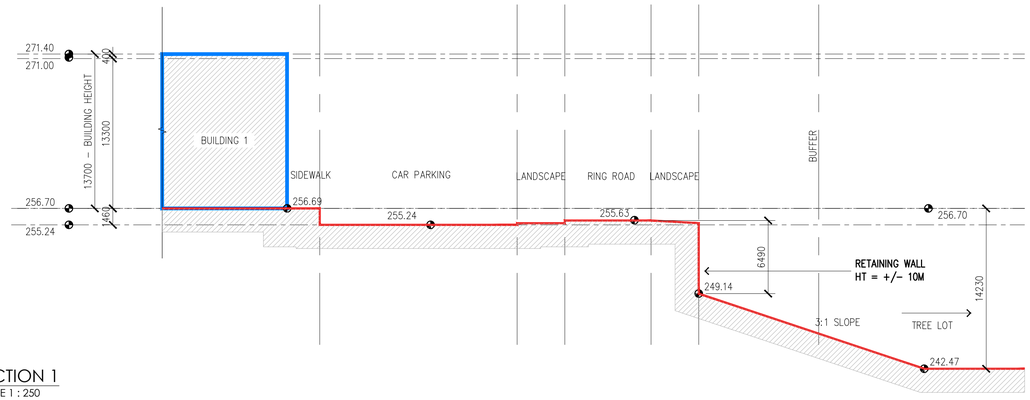
DRAWN	MS
CHECKED	JR
SCALE	1:300
DATE	SEPTEMBER 2021

PROJECT NUMBER
2021-00

DRAWING NUMBER
A222



- / A223 KEY PLAN
SCALE 1 : 3000



1 / A223 SECTION 1
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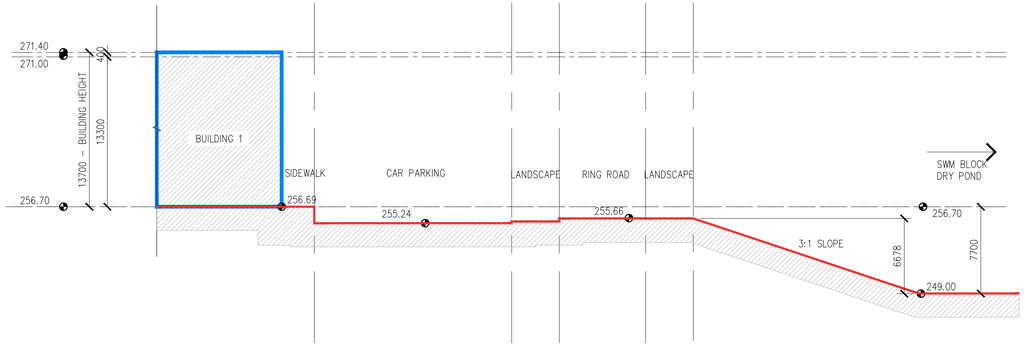

2 / A223 SECTION 2
SCALE 1 : 250

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JRI ARCHITECTS
4 PRINCE GEORGE DRIVE ETOBICOKE,
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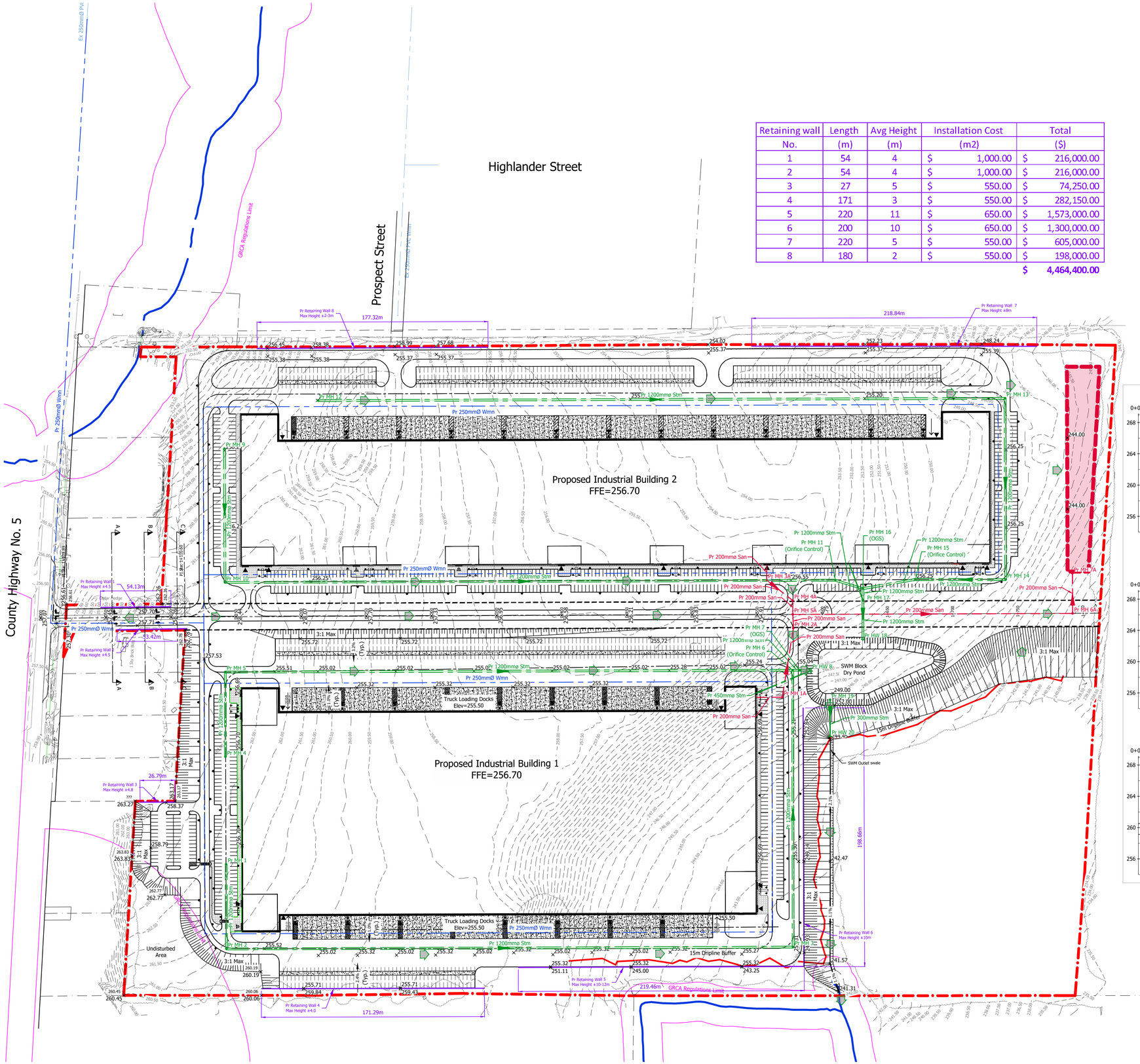
PROJECT
NEW INDUSTRIAL DEVELOPMENT
285 HWY 5 ST GEORGE,
COUNTY OF BRANT, ON

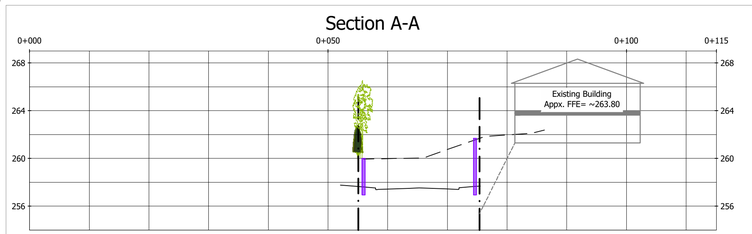
DRAWING TITLE
SECTION ELEVATIONS
BUILDING 1

DRAWN	MS
CHECKED	JR
SCALE	1:300
DATE	SEPTEMBER 2021
PROJECT NUMBER	2021-00
DRAWING NUMBER	A223

Retaining wall	Length	Avg Height	Installation Cost	Total
No.	(m)	(m)	(m2)	($)
1	54	4	$ 1,000.00	$ 216,000.00
2	54	4	$ 1,000.00	$ 216,000.00
3	27	5	$ 550.00	$ 74,250.00
4	171	3	$ 550.00	$ 282,150.00
5	220	11	$ 650.00	$ 1,573,000.00
6	200	10	$ 650.00	$ 1,300,000.00
7	220	5	$ 550.00	$ 605,000.00
8	180	2	$ 550.00	$ 198,000.00
				$ 4,464,400.00



Section A-A



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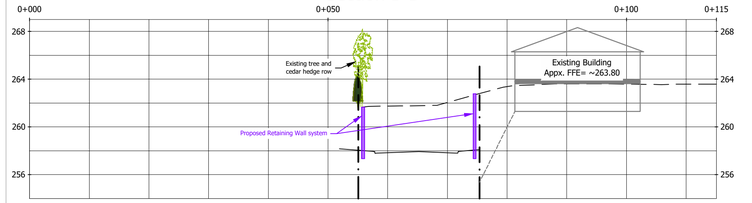

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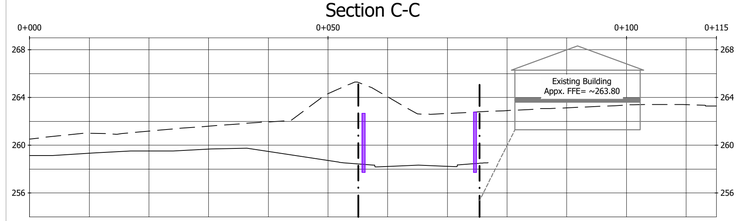

Appendix B
Sound Power Data

Sound Power Data

Source ID	Source Description	Octave Band Centre Frequency (Hz)								Overall Level	
		63	125	250	500	1000	2000	4000	8000	**dBA**	**dB**
S01 – S20	Rooftop Unit DFIAH	64	73	79	83	84	79	73	65	**88**	**102**
S21 – S49	Rooftop Unit HVAC	60	73	77	80	82	80	76	72	**86**	**100**
S50 – S54	Refrigerated Truck Idle	100	100	92	91	94	92	88	78	**98**	**109**
T01, T02	Regular Truck	97	101	100	97	93	90	83	76	**99**	**106**
T01_ref, T02_ref	Refrigerated Truck	108	106	104	99	96	96	91	85	**103**	**111**

End of Report