HGC ENGINEERING

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Noise Feasibility Study
Proposed Warehousing Facility
560 Winston Churchill Boulevard
Oakville, Ontario

Prepared for:

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1 Introduction and Summary

Howe Gastmeier Chapnik Limited (HGC Engineering) was retained by Blackwood Partners to undertake a noise assessment for a proposed warehousing facility located at 560 Winston Churchill Boulevard in Oakville, Ontario. The noise study is required by the municipality as part of the planning and approvals process. The study has been completed in accordance with the guidelines of the Municipality and the Ministry of Environment, Conservation and Parks (MECP).

This report has been updated to include the latest site plan prepared by Baldassarra Architects Inc. last revised November 25, 2021, and includes responses to comments from the Peer Review dated April 18, 2022 and prepared by Dillon Consulting Limited included in Appendix C.

An investigation of the potential noise impact from the proposed warehousing facility onto the existing residences was conducted. The analysis is based on information obtained from discussion with Blackwood personnel, site visits and HGC Engineering's past experience with similar facilities. The results indicate that the sound emissions from the proposed facility have the potential to exceed the limits of the MECP under a worst case assumed operational scenario at the existing residence to the east only. Noise mitigation measures in the form of an acoustic barriers and/or administrative controls for the development site are recommended in the report. The reader is referred to the main body of the report for assumptions and results of the analysis.

2 Site Description

The site is located at 560 Winston Churchill Boulevard in Oakville, Ontario. Figure 1 shows a key plan of the area. Three industrial buildings with office spaces, parking areas, trucking routes, and loading areas are indicated on the site plan last revised March 1, 2021 and is attached as Figure 2. The buildings are intended for general warehousing. An acoustic screen 4.5 m in height is proposed between Buildings A and B.

A site visit was conducted in April 2021 to confirm the locations of the existing residences and the acoustical environment. The most potentially impacted residences are located on the east side of Winston Churchill Boulevard. The lands are essentially flat.

2.1 Noise Source Description

The primary sources of sound associated with the proposed buildings will be arriving, departing and idling trucks, and rooftop air conditioning condenser equipment.

3 Noise Level Criteria

3.1 D1 – D6 Guidelines for Land Use Compatibility

The requirements for this study requested by the Municipality refers to determining if the proposed development is feasible and compatible with adjacent existing residential uses. The MECP D1 [1] and D6 [2] Guidelines address issues of compatibility between industrial and noise sensitive land uses in relation to land use changes.

For planning purposes for Greenfield sites, the potential zone of influence of a Class I industrial use is 75 m and the minimum recommended distance setback is 20 m. The potential zone of influence of a Class II industry is 300 m and the minimum recommended distance setback is 75 m. For infill projects or projects located in transitional areas the recommended minimum distance setbacks can be reduced, based on the results of technical studies such as this study. In this case, the lands for the proposed facility are designated for commercial uses in the official plan.

A warehousing facility exhibits some of the characteristics of both a Class I and a Class II industry. Typically, the recommended minimum distance setbacks apply between the property lines of the facilities, but exceptions can be made if the property lines are adjoined and portions of the residential or industrial lands are reserved for non- noise related uses, such as driveways, parking lots or earth berms. In this case, there is a minimum 6 m distance separation between the proposed site and the closest residential property line. The results from the noise assessment, provided in Section 5, indicate that the MECP sound level limits can be met at all sensitive noise receptors with appropriate mitigation.

3.2 Criteria Governing Stationary Noise Sources

MECP Guideline NPC-300 [3] is the MECP guideline for use in investigating Land Use Compatibility issues with regard to noise. An industrial or commercial facility is classified in the MECP Guideline NPC-300 as a stationary source of sound (as compared to sources such as traffic or construction, for example) for noise assessment purposes. A stationary noise source encompasses the noise from all the activities and equipment within the property boundary of a facility including regular on-site truck traffic, material handling and mechanical equipment. Noise from these sources may potentially impact the proposed residential land use. In terms of background sound, the development is located in an urban acoustical environment which is characterized by an acoustical environment dominated by road traffic and human activity.

Stationary Source (Steady Sound)

NPC-300 is intended for use in the planning of both residential and commercial/industrial land uses and provides the acceptability limits for sound due to commercial operations in that regard. The facade of a residence (i.e., in the plane of a window), or any associated usable outdoor area is considered a sensitive point of reception. NPC-300 stipulates that the exclusionary sound level limit for a stationary noise source in an urban Class 1 area is taken to be 50 dBA during daytime hours (07:00 to 23:00), and 45 dBA during nighttime hours (23:00 to 07:00). If the background sound levels due to road traffic exceed the exclusionary limits, then that background sound level becomes the criterion. The background sound level is defined as the sound level that occurs when the source under consideration is not operating, and may include traffic noise and natural sounds.

The Town of Oakville By-Law 2008-098 Section 4 indicates that the sound level limits in Oakville differ slightly from the Class 1 limits included in NPC-300 and described above. The sound level limits are 50 dBA during the daytime (07:00 to 19:00); evening (19:00 to 23:00); and 45 dBA during the night (23:00 to 07:00).

The Town of Oakville has requested that the cumulative noise impacts from the proposed facilities at 560 Winston Churchill Boulevard and 772 Winston Churchill Boulevard be assessed. As noted in the NPC-300:

A "stationary source" means a source of sound or combination of sources of sound that are included and normally operated within the property lines of a facility, and includes the premises of a person as one stationary source, unless the dominant source of sound on those premises is construction.

Noise studies are prepared for individual facilities. The cumulative sound levels from separate facilities are not required by the MECP under NPC-300.

Commercial activities such as the occasional movement of customer/employee vehicles, deliveries to conveniences stores and restaurants and garbage collection are not of themselves considered to be significant noise sources in the MECP guidelines. Accordingly, these sources have not been considered in this study.

Residences to the east (R1), north (R2), south (R3) and west (R4) are considered the representative noise sensitive receptors in this assessment. R1 (645 Winston Churchill Boulevard, Mississauga) is an existing 1-storey dwelling; and R2 to R4 are existing 2-storey residences and are labelled on Figures 3 and 4. For R1 located in Mississauga, the Class 1 sound level limits included in NPC-300 are applicable, for the remaining receptors to the west of Winston Churchill Boulevard, the sound level limits for the Town of Oakville are applicable.

Zoning information for R1 (645 Winston Churchill Blvd) along with the land use designation from the City of Mississauga Official Plan (September 3, 2020) were obtained and are included in Appendix A. The Property Information Report for 645 Winston Churchill notes a single family detached residence. The land is currently zoned as D – Development Lands. In the official plan the lands are indicated to be Business Employment lands. During the site visit, the building appeared to be an occupied residence and therefore has been considered as such in the analysis.

Hourly daytime traffic data dated June 2019 was obtained for Winston Churchill Boulevard from the Region of Peel. The traffic impact study, "Transportation Impact Study, 560 Winston Churchill Boulevard" prepared by Crozier Consulting Engineers, last revised March 2021 was also reviewed to determine future site generated traffic on Winston Churchill Boulevard. Traffic information provided is included in Appendix B. Peak hour heavy vehicle volumes were obtained from the traffic impact study and applied to the existing hourly traffic data to calculate an updated heavy vehicle percentage.

The adjusted traffic volumes were used to predict sound levels at the residential receptors during the day/nighttime hours to determine minimum hour background sound levels at those locations due to the traffic. The minimum daytime hour was determined to occur at 22:00 to 23:00 and the minimum nighttime hour was determined to occur at 01:00 to 02:00, The minimum hour traffic volumes used in the analysis are summarized in the following table.

Table 1: Minimum Hourly Traffic Volumes on Adjacent Roadways

Roadway	Hourly Data		Heavy Vehicle %
	Day	Night	
Winston Churchill	99	17	9.5

The predicted quietest daytime hour and nighttime hour sound levels at the facades of the residential receptors, which will be exposed to the proposed warehousing development are found to be higher than the MECP exclusionary limits in the daytime hours. As such, the sound level limits as summarized in Table 2 are therefore used in the following sections of this report as the applicable criteria for each façade of the proposed residential buildings.

Table 2: Applicable Sound Level Limits, L_{EQ} (dBA) for Class I Areas

Receptor	Sound Level Limits in the OLA		Sound Level Limits at the Facade		
	Daytime (07:00 to 19:00)	Evening 19:00 to 23:00)	Daytime (07:00 to 19:00)	Evening 19:00 to 23:00)	Nighttime (23:00 to 07:00)
R1	54	54	50	50	45
R2	50	47	50	47	45
R3	50	47	50	47	45
R4	50	47	50	47	45
R5	50	47	50	47	45
R6	50	47	50	47	45

Note: R1 is a located in Mississauga, R2 to R4 are located in Oakville

Compliance with MECP criteria generally results in acceptable levels of sound at residential receptors although there may be residual audibility during periods of low background sound.

4 Assessment Methodology

Predictive noise modelling was used to assess the potential noise impact of mechanical equipment and trucking activities at the residential receptors. Assumed operational information provided outlined below and surrounding building locations obtained from aerial photograph were used as input to a predictive computer model (Cadna/A 2021 MR2 build: 189.5221), in order to estimate the sound levels from the proposed buildings at the existing residences. Cadna/A is a computer implementation of ISO Standard 9613-2 [4] which takes into account attenuation due to distance (geometrical spreading), shielding by intervening structures (such as buildings and bush), air attenuation and ground absorption.

Tenant information for the warehousing buildings is currently unknown. However, it is understood that the buildings are likely to be used for general warehousing. For general warehousing facilities, the main portion of the buildings would be ventilated passively and only the office areas would be provided with air conditioning.

All buildings are assumed to operate 24 hours per day. In this impact assessment, we have considered the following worst-case (busiest hour) scenarios for each time period. An Anti-Idling ByLaw (By-Law Number 2002-135) is in effect in the Town of Oakville restricts idling for more than 3 consecutive minutes. It has been assumed tractor trailer engines will idle for 15 minutes as a conservative assessment.

Assumed daytime worst-case scenario:

- 30 trucks arrive and depart the site;
- All rooftop equipment operates continuously at full capacity.

Assumed nighttime worst-case scenario:

- 15 trucks arrive and depart the site;
- All rooftop equipment mechanical equipment operates on a 50% duty cycle.

Additional information and assumptions used in the analysis:

- The height of the proposed Buildings A and B is 9.6 m and the height of Building C is 13.5 m;

- Six 5-ton HVAC units are located on each of the proposed buildings and are assumed to be 1.5 m tall;
- 4.5 m wing walls are proposed at the east end Buildings A and C as well as between Buildings B and C
- Back-up beepers have been assumed to operate for 15 minutes throughout the site during the day and night

Sound emission data for the trucking activities and rooftop equipment was obtained from HGC Engineering project files which were measured from past similar projects. The sound power levels for non-impulsive sources measured from similar facilities were used in our analysis and are summarized in Table 3.

Table 3: Sound Power Levels Used in the Analysis [dB re 10-12 W]

Source	Octave Band Centre Frequency [Hz]								A
	63	125	250	500	1k	2k	4k	8k	
HVAC unit, 5-ton	90	90	88	88	88	84	81	74	92
Tractor Trailer, Maneuvering	101	100	94	96	97	95	91	86	101
Back up beepers	--	--	--	--	112	--	--	--	112

Impulsive noises are assessed separately from the non-impulsive sound sources. Two types of impulsive sounds are expected to be emitted from the facility: loading/unloading of trailers by forklifts and coupling/uncoupling of trucks to/from trailers. The multiple impulsive noises are combined to obtain a logarithmic mean impulse sound level (L_{LM}) of 110 dBAI. This was calculated based on measurements conducted by HGC Engineering for similar past projects. The impulsive sounds were assumed to be emitted during all daytime, evening and nighttime periods.

5 Assessment Results and Recommendations

Non-Impulsive Sources

The predicted sound levels due to the trucking activities (arriving, idling and departing) and mechanical equipment at the closest neighbouring residences (R1 to R6) during a worst-case busiest hour operating scenario, are summarized in the following table.

Table 4: Predicted Non-Impulsive Source Sound Levels at Residential Receptors during a Worst-case Operating Scenario hour, Leq (dBA)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBA)	Predicted Sound Level Day/Eve (dBA)	Criteria Day/Eve/Night (dBA)	Predicted Sound Level Day/Eve/Night (dBA)
R1	1-storey residence to the east	54 / 54	51 / 51	50 / 50 / 45	50 / 50 / 48
R2	2-storey dwelling to the north	50 / 47	42 / 42	50 / 47 / 45	44 / 44 / 41
R3	2-storey residence to the south	50 / 47	45 / 45	50 / 47 / 45	46 / 46 / 43
R4	2-storey dwelling to the south	50 / 47	43 / 43	50 / 47 / 45	43 / 43 / 41
R5	2-storey dwelling to the south	50 / 47	46 / 46	50 / 47 / 45	47 / 47 / 44
R6	2-storey dwelling to the south	50 / 47	47 / 47	50 / 47 / 45	46 / 46 / 44

Note: + With proposed acoustic screen walls, 4.5 m as shown in Figure 2.

The results of this analysis indicate that the predicted non-impulsive sound levels due to activities at the proposed facility may exceed the criteria at R1 on the east side of Winston Churchill Boulevard by 3 dBA during the night. The sound level at the remaining residential receptors are expected to be within the applicable limits at the residential receptors during the day, evening, and night.

Impulsive Sources

The predicted impulsive sound levels are summarized in Table 5.

Table 5: Predicted Impulsive Sound Levels at Residential Receptors, L_{LM} (dBAI)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBAI)	Predicted Sound Level Day/Eve (dBAI)	Criteria Day/Eve/Night (dBAI)	Predicted Sound Level Day/Eve/Night (dBAI)
R1	1-storey residence to the east	54 / 54	49 / 49	50 / 50 / 45	49 / 49 / 49
R2	2-storey dwelling to the north	50 / 47	31 / 31	50 / 47 / 45	37 / 37 / 37
R3	2-storey residence to the south	50 / 47	41 / 41	50 / 47 / 45	42 / 42 / 42
R4	2-storey dwelling to the south	50 / 47	40 / 40	50 / 47 / 45	39 / 39 / 39
R5	2-storey dwelling to the south	50 / 47	42 / 42	50 / 47 / 45	42 / 42 / 42
R6	2-storey dwelling to the south	50 / 47	35 / 35	50 / 47 / 45	39 / 39 / 39

These results indicate that sound levels under a worst-case operational scenario from impulsive sources may exceed the criteria at R1 on the east side of Winston Churchill Boulevard. The sound level may exceed the criteria by up to 4 dBA during the night. The predicted impulsive sound levels

will be within the applicable limits at the remaining residential receptors during the day, evening, and night. Recommendations are provided in the following section.

5.1 Recommendations

Feasible means exist to reduce impulsive sound levels from the coupling/decoupling and loading/unloading at the nearest residential receptors to meet MECP criteria. Recommended mitigation is presented below.

5.1.1 Option 1 Mitigation

The wing wall for Building A should be extended northward for a total length of approximately 24.5 m; and an acoustic wall 2.6 m in height, approximately 30 m in length, at the residence to the east (R1) located as shown in Figure 5 – 7, also showing the mitigated sound level contours for Option 1, is required to reduce sound levels at the existing receptors to within MECP criteria.

Tables 6 and 7 below includes sound levels with the extended wing wall at Building A and the 2.6 m high acoustic barrier at R1.

Table 6: Predicted Option 1 Mitigated Non-Impulsive Source Sound Levels at Residential Receptors Leq (dBA)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBA)	Predicted Sound Level Day/Eve (dBA)	Criteria Day/Eve/Night (dBA)	Predicted Sound Level Day/Eve/Night (dBA)
R1	1-storey residence to the east	54 / 54	46 / 46	50 / 50 / 45	46 / 46 / 45
R2	2-storey dwelling to the north	50 / 47	42 / 42	50 / 47 / 45	44 / 44 / 41
R3	2-storey residence to the south	50 / 47	45 / 45	50 / 47 / 45	46 / 46 / 43
R4	2-storey dwelling to the south	50 / 47	43 / 43	50 / 47 / 45	43 / 43 / 41
R5	2-storey dwelling to the south	50 / 47	46 / 46	50 / 47 / 45	47 / 47 / 44
R6	2-storey dwelling to the south	50 / 47	47 / 47	50 / 47 / 45	46 / 46 // 44

Table 7: Predicted Option 1 Mitigated Impulsive Sound Levels at Residential Receptors, L_{LM} (dBAI)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBAI)	Predicted Sound Level Day/Eve (dBAI)	Criteria Day/Eve/Night (dBAI)	Predicted Sound Level Day/Eve/Night (dBAI)
R1	1-storey residence to the east	54 / 54	45 / 45	50 / 50 / 45	45 / 45 / 45
R2	2-storey dwelling to the north	50 / 47	31 / 31	50 / 47 / 45	37 / 37 / 37
R3	2-storey residence to the south	50 / 47	41 / 41	50 / 47 / 45	42 / 42 / 42
R4	2-storey dwelling to the south	50 / 47	40 / 40	50 / 47 / 45	39 / 39 / 39
R5	2-storey dwelling to the south	50 / 47	42 / 42	50 / 47 / 45	42 / 42 / 42
R6	2-storey dwelling to the south	50 / 47	35 / 35	50 / 47 / 45	39 / 39 / 39

5.1.2 Option 2 Mitigation

If an acoustic barrier cannot be implemented to the east of the residence to the north of the site (R1), administrative controls be applied to the operations of the proposed warehouse facility. A wing wall for Building A should be extended northward for a total length of approximately 24.5 m. Administrative controls restricting loading/unloading at the 12 northern loading bays of Building A during nighttime hours (23:00 to 07:00) should be implemented. Figure 8 shows the mitigation requirements for Option 2.

Tables 8 and 9 below include sound levels with the extended wing wall at Building A, and administrative controls during nighttime hours at the indicated loading areas. Figures 9 – 12 show the sound level contours with the Option 2 mitigation recommendations.

Table 8: Predicted Option 2 Mitigated Non-Impulsive Source Sound Levels at Residential Receptors Leq (dBA)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBA)	Predicted Sound Level Day/Eve (dBA)	Criteria Day/Eve/Night (dBA)	Predicted Sound Level Day/Eve/Night (dBA)
R1	1-storey residence to the east	54 / 54	51 / 51	50 / 50 / 45	49 / 49 / 45
R2	2-storey dwelling to the north	50 / 47	42 / 42	50 / 47 / 45	44 / 44 / 41
R3	2-storey residence to the south	50 / 47	45 / 45	50 / 47 / 45	46 / 46 / 43
R4	2-storey dwelling to the south	50 / 47	43 / 43	50 / 47 / 45	43 / 43 / 41
R5	2-storey dwelling to the south	50 / 47	46 / 46	50 / 47 / 45	47 / 47 / 44
R6	2-storey dwelling to the south	50 / 47	47 / 47	50 / 47 / 45	46 / 46 / 43

Table 9: Predicted Mitigated Impulsive Sound Levels at Residential Receptors, L_{LM} (dBAI)

Receptor	Description	In the OLA		At the Façade	
		Criteria Day/Eve (dBAI)	Predicted Sound Level Day/Eve (dBAI)	Criteria Day/Eve/Night (dBAI)	Predicted Sound Level Day/Eve/Night (dBAI)
R1	1-storey residence to the east	54 / 54	49 / 49	50 / 50 / 45	49 / 49 / 45
R2	2-storey dwelling to the north	50 / 47	31 / 31	50 / 47 / 45	37 / 37 / 34
R3	2-storey residence to the south	50 / 47	41 / 41	50 / 47 / 45	42 / 42 / 42
R4	2-storey dwelling to the south	50 / 47	40 / 40	50 / 47 / 45	40 / 40 / 40
R5	2-storey dwelling to the south	50 / 47	42 / 42	50 / 47 / 45	42 / 42 / 42
R6	2-storey dwelling to the south	50 / 47	35 / 35	50 / 47 / 45	39 / 39 / 39

5.1.3 General Recommendations for Options 1 and 2

If the residence at R1 is confirmed to no longer be a residence or there is a development application for that property, the above recommendations would not be required. The rooftop mechanical equipment should be selected to conform with the assumptions included in this report.

As a general note, acoustic barriers may be a combination of an acoustic wall and an earth berm. The noise barriers must return back to the proposed building. The wall component of the barrier should be of a solid construction with a surface density of no less than 20 kg/m^2. When final grading information is available, the height of the acoustic wall should be confirmed. Barrier height

requirements should also be reviewed when tenant and their operational information such as trucking activities is available.

As previously discussed, the cumulative impact of noise from the facility at 560 and 772 Winston Churchill Boulevard is not required by NPC-300 and both facilities are being designed to meet the applicable MECP criteria. As indicated in the peer review conducted by Dillon Consulting: "…the worst-case cumulative impacts would likely only be a marginal exceedance of the noise criteria, less than 3 dB, which is typically imperceptible."

6 Conclusions

The results of the analysis indicate that the unmitigated predicted sound levels due to impulsive noise sources associated with the warehousing facility may exceed the MECP's limits at the residential receptor at the east side of Winston Churchill. The wing wall at Building A should be extended northward and an acoustic barrier 2.6 m in height and approximately 30 m in length is required at the dwelling to the north to reduce sound levels at the surrounding receptors to within MECP criteria. If an acoustic barrier cannot be implemented along the residence to the north, administrative controls should be implemented to restrict loading/unloading during nighttime hours at some of the loading bays of Building A. If the residence at R1 is confirmed to no longer be a residence or a development application is brought forward for the lands, the above recommendations would not apply.

The acoustic recommendations may be subject to modifications if the site plan is changed significantly, or the operations of the facility are significantly different than the assumptions used in the noise study.

7 Implementation

To ensure that the noise control recommendations outlined above are fully implemented, it is recommended that:

1) Prior to the issuance of building permits, a Professional Engineer qualified to perform acoustical services in the province of Ontario or the Municipal Building Department shall review the builder's plans to ensure that the sound control measures (acoustic barrier) have been incorporated in their entirety.

2) Prior to occupancy, a Professional Engineer qualified to perform acoustical services in the province of Ontario or the Municipal Building Department shall conduct a site inspection to confirm that the sound control measures have been incorporated in their entirety.

8 References

1. Ontario Ministry of the Environment Publication Guideline D1, *Land Use Compatibility, July 1995*

2. Ontario Ministry of the Environment Publication Guideline D6, *Compatibility Between Industrial Facilities and Sensitive Land Uses, July 1995*

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

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

5. Google Maps and Google Earth Aerial Imagery, Internet application: *maps.google.com*.

Limitations

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Any conclusions and/or recommendations herein reflect the judgment of HGC Engineering based on information available at the time of preparation, and were developed in good faith on information provided by others, as noted in the report, which has been assumed to be factual and accurate. Changed conditions or information occurring or becoming known after the date of this report could affect the results and conclusions presented.

Figure 1 - Key Plan

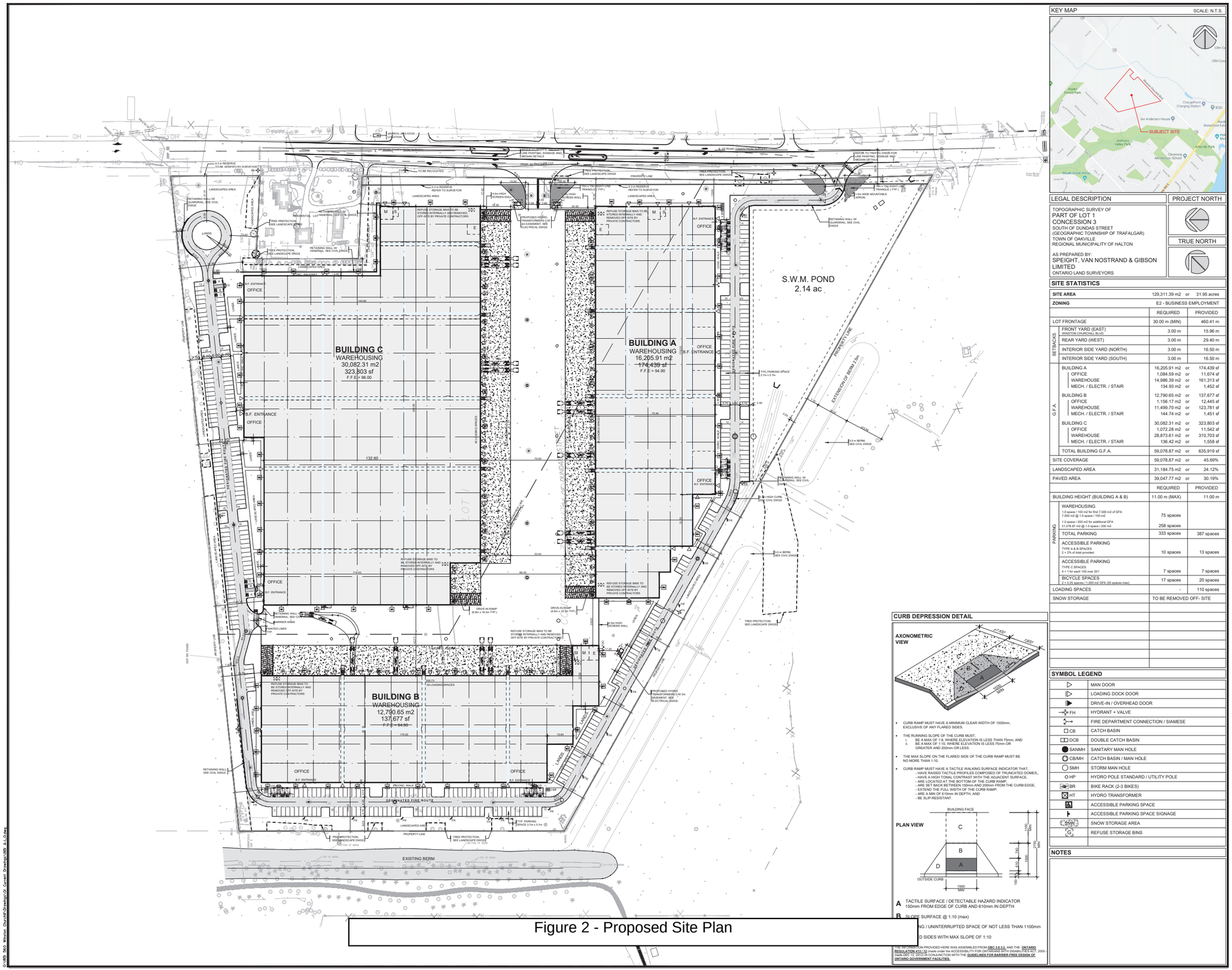


Figure 2 - Proposed Site Plan

KEY MAP SCALE: N.T.S.

LEGAL DESCRIPTION

TOPOGRAPHIC SURVEY OF
PART OF LOT 1
CONCESSION 3
SOUTH OF DUNDAS STREET
(GEOGRAPHIC TOWNSHIP OF TRAFALGAR)
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON

AS PREPARED BY:
SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS

PROJECT NORTH

TRUE NORTH

SITE STATISTICS

SITE AREA		129,311.39 m2 or	31.95 acres
ZONING		E2 - BUSINESS EMPLOYMENT	
		REQUIRED	PROVIDED
LOT FRONTAGE		30.00 m (MIN)	460.41 m
SETBACKS	FRONT YARD (EAST) WINSTON CHURCHILL BLVD	3.00 m	15.96 m
	REAR YARD (WEST)	3.00 m	29.40 m
	INTERIOR SIDE YARD (NORTH)	3.00 m	16.50 m
	INTERIOR SIDE YARD (SOUTH)	3.00 m	16.50 m
G.F.A.	BUILDING A	16,205.91 m2 or	174,439 sf
	OFFICE	1,084.59 m2 or	11,674 sf
	WAREHOUSE	14,986.39 m2 or	161,313 sf
	MECH. / ELECTR. / STAIR	134.93 m2 or	1,452 sf
	BUILDING B	12,790.65 m2 or	137,677 sf
	OFFICE	1,156.17 m2 or	12,445 sf
	WAREHOUSE	11,499.70 m2 or	123,781 sf
	MECH. / ELECTR. / STAIR	144.74 m2 or	1,451 sf
	BUILDING C	30,082.31 m2 or	323,803 sf
	OFFICE	1,072.28 m2 or	11,542 sf
	WAREHOUSE	28,873.61 m2 or	310,703 sf
	MECH. / ELECTR. / STAIR	136.42 m2 or	1,558 sf
	TOTAL BUILDING G.F.A.	59,078.87 m2 or	635,919 sf
SITE COVERAGE		59,078.87 m2 or	45.69%
LANDSCAPED AREA		31,184.75 m2 or	24.12%
PAVED AREA		39,047.77 m2 or	30.19%
		REQUIRED	PROVIDED
BUILDING HEIGHT (BUILDING A & B)		11.00 m (MAX)	11.00 m
PARKING	WAREHOUSING 1.0 space / 100 m2 for first 7,500 m2 of GFA 7,500 m2 @ 1.0 space / 100 m2 1.0 space / 200 m2 for additional GFA 51,578.87 m2 @ 1.0 space / 200 m2	75 spaces 258 spaces	
	TOTAL PARKING	333 spaces	387 spaces
	ACCESSIBLE PARKING TYPE A & B SPACES 2 + 2% of total provided	10 spaces	13 spaces
	ACCESSIBLE PARKING TYPE C SPACES 4 + 1 for each 100 over 201	7 spaces	7 spaces
	BICYCLE SPACES 2 + 0.25 spaces / 1,000 m2 GFA (50 spaces max)	17 spaces	20 spaces
LOADING SPACES		-	110 spaces
SNOW STORAGE		TO BE REMOVED OFF- SITE	

CURB DEPRESSION DETAIL

AXONOMETRIC VIEW

- CURB RAMP MUST HAVE A MINIMUM CLEAR WIDTH OF 1500mm, EXCLUSIVE OF ANY FLARED SIDES.
- THE RUNNING SLOPE OF THE CURB MUST,
  - i. BE A MAX OF 1:8, WHERE ELEVATION IS LESS THAN 75mm, AND
  - ii. BE A MAX OF 1:10, WHERE ELEVATION IS LESS 75mm OR GREATER AND 200mm OR LESS.
- THE MAX SLOPE ON THE FLARED SIDE OF THE CURB RAMP MUST BE NO MORE THAN 1:10.
- CURB RAMP MUST HAVE A TACTILE WALKING SURFACE INDICATOR THAT,
  - HAVE RAISED TACTILE PROFILES COMPOSED OF TRUNCATED DOMES.,
  - HAVE A HIGH TONAL CONTRAST WITH THE ADJACENT SURFACE,
  - ARE LOCATED AT THE BOTTOM OF THE CURB RAMP,
  - ARE SET BACK BETWEEN 150mm AND 200mm FROM THE CURB EDGE,
  - EXTEND THE FULL WIDTH OF THE CURB RAMP,
  - ARE A MIN OF 610mm IN DEPTH, AND
  - BE SLIP-RESISTANT.

PLAN VIEW

A TACTILE SURFACE / DETECTABLE HAZARD INDICATOR
150mm FROM EDGE OF CURB AND 610mm IN DEPTH

B SLOPE SURFACE @ 1:10 (max)

C NG / UNINTERRUPTED SPACE OF NOT LESS THAN 1100mm

D SIDES WITH MAX SLOPE OF 1:10

THE INFORMATION PROVIDED HERE WAS ASSEMBLED FROM **OBC 3.8.3.2.** AND THE **ONTARIO REGULATION 413 / 12** (made under the ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT, 2005 - made DEC 12, 2012) IN CONJUNCTION WITH THE **GUIDELINES FOR BARRIER-FREE DESIGN OF ONTARIO GOVERNMENT FACILITIES.**

SYMBOL LEGEND

	MAN DOOR
	LOADING DOCK DOOR
	DRIVE-IN / OVERHEAD DOOR
FH	HYDRANT + VALVE
	FIRE DEPARTMENT CONNECTION / SIAMESE
CB	CATCH BASIN
DCB	DOUBLE CATCH BASIN
SANMH	SANITARY MAN HOLE
CB/MH	CATCH BASIN / MAN HOLE
SMH	STORM MAN HOLE
HP	HYDRO POLE STANDARD / UTILITY POLE
BR	BIKE RACK (2-3 BIKES)
HT	HYDRO TRANSFORMER
	ACCESSIBLE PARKING SPACE
	ACCESSIBLE PARKING SPACE SIGNAGE
SNOW	SNOW STORAGE AREA
G	REFUSE STORAGE BINS

NOTES

No.	ISSUED	DATE
1	ISSUED FOR COORDINATION	SEPT. 17, 2020
2	RE-ISSUED FOR SPA	MAR. 1 2021
3	RE-ISSUED FOR SPA	NOV. 25 2021

No.	REVISION	DATE

BALDASSARRA Architects Inc.
30 Great Gulf Drive, Unit 20 | Concord ON | L4K 0K7
T. 905.660.0722 | **www.baldassarra.ca**

ONTARIO ASSOCIATION OF ARCHITECTS
A. BALDASSARRA LICENSE 3654

OWNERS INFORMATION:

560 Winston Churchill Blvd.

Oakville, Ontario

SITE PLAN

DATE:	DRAWN BY:	CHECKED:	SCALE:
AUG. 2020	DM/LY		1:1000

PROJECT No. 18-51

DRAWING No. A-1.0

D:\MDS 560 Winston Churchill\Drawings\01 Current Drawings\MDS A-1.0.dwg

Figure 3: Aerial Photo Showing Steady Noise Sources and Receptor Locations

Figure 4: Aerial Photo Showing Impulsive Noise Sources and Receptor Locations

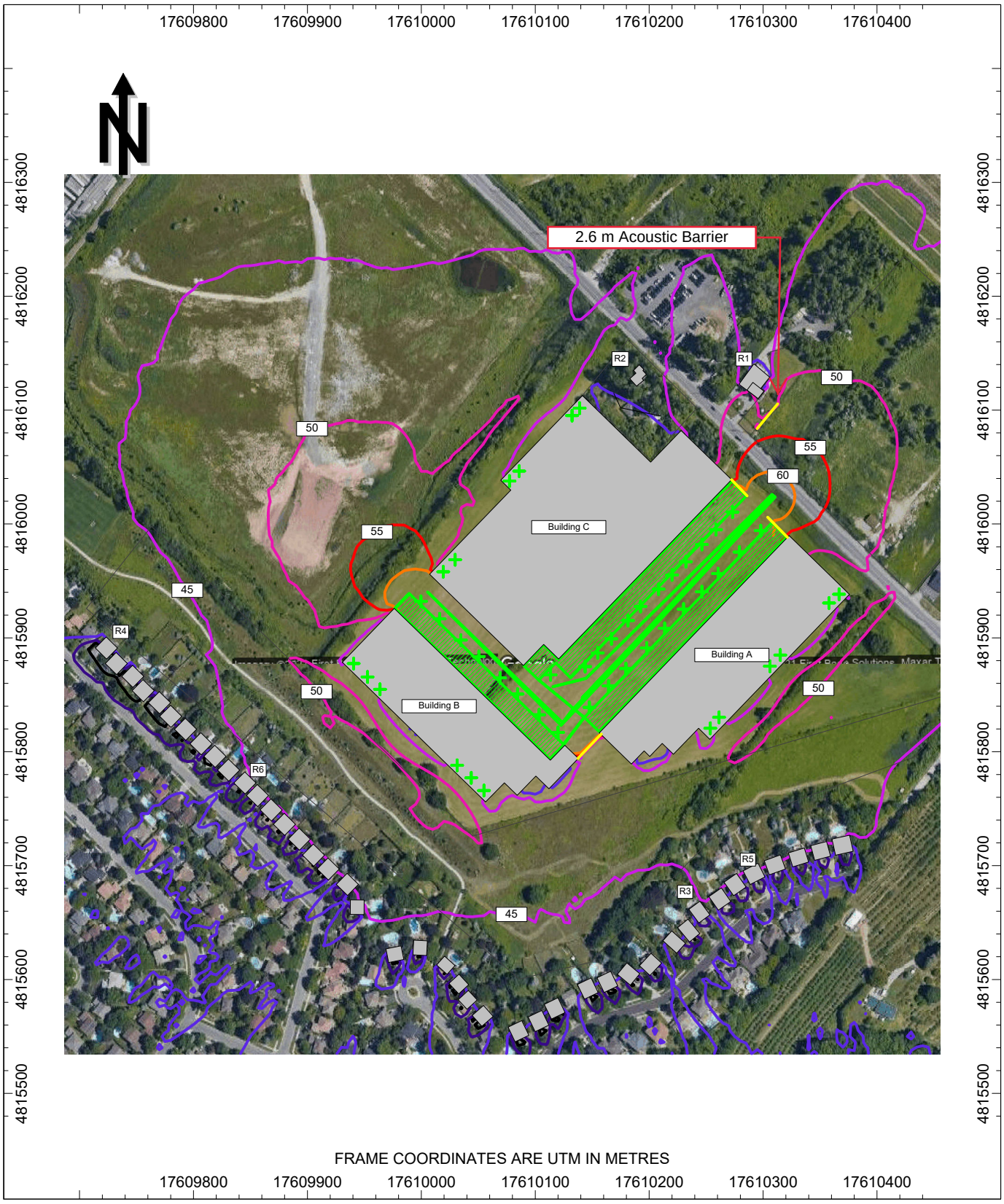


Figure 5: Predicted Mitigated Daytime/Evening Sound Level Contours, Option 1, Non-Impulse Sources, Leq1hr (dBA)

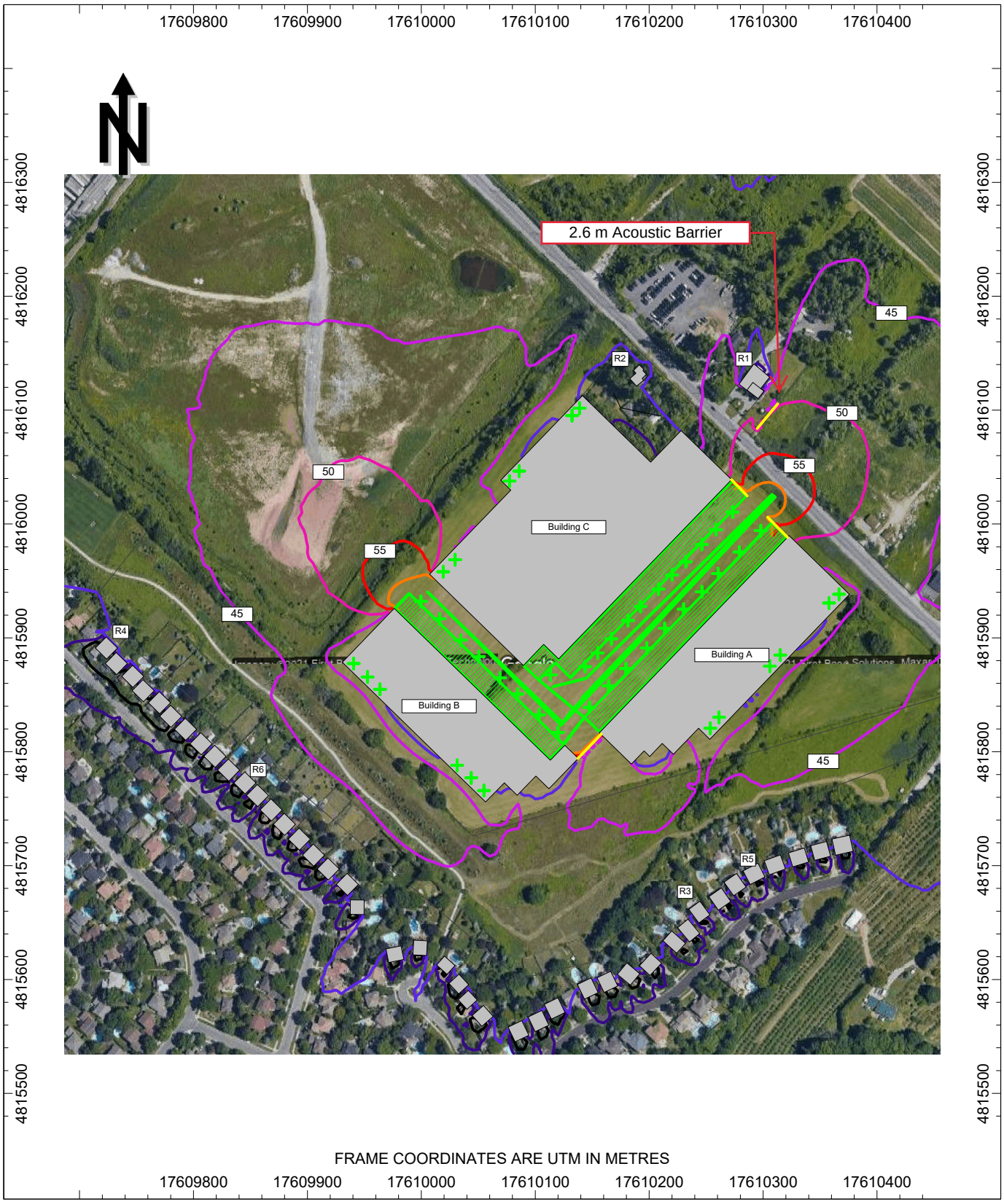


Figure 6: Predicted Mitigated Nighttime Sound Level Contours, Option 1, Non-Impulse Sources, Leq1hr (dBA)

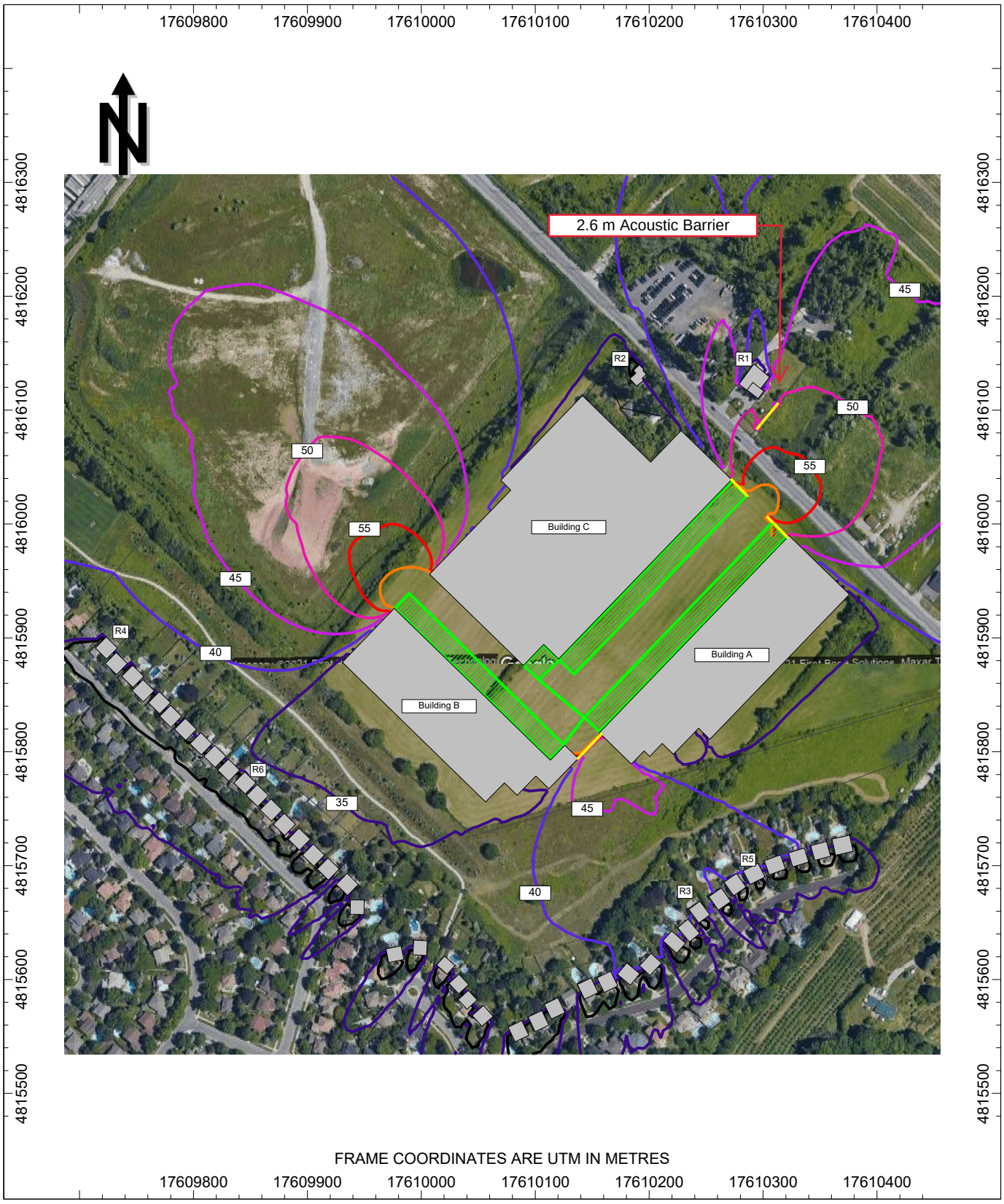


Figure 7: Predicted Mitigated Sound Level Contours, Impulsive Sources, Option 1, LLM (dBAI)

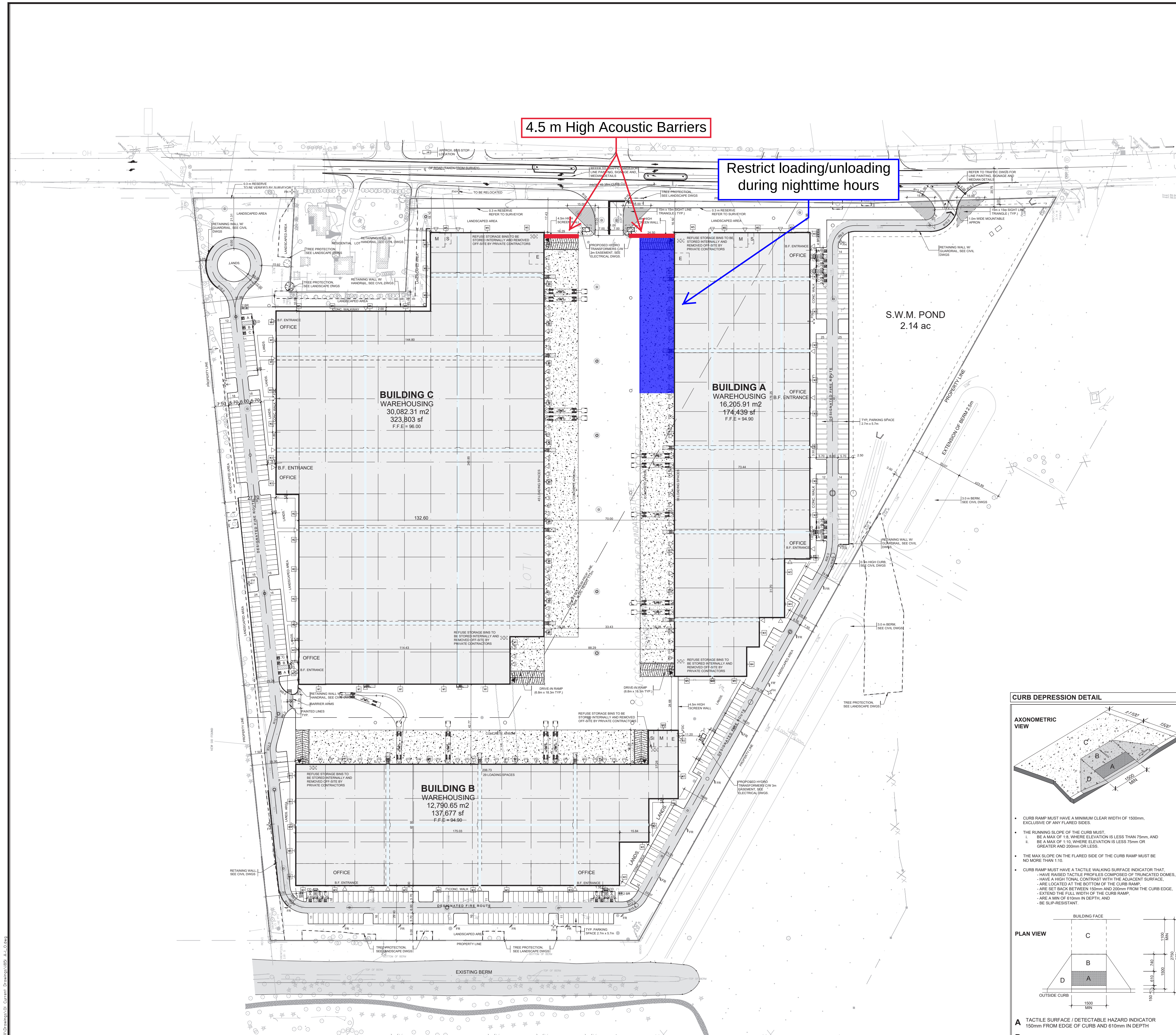
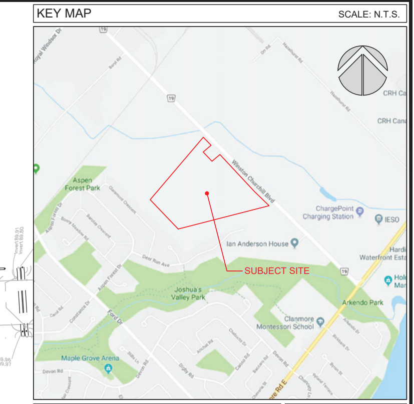


Figure 8 - Mitigation Requirments for Option 2

KEY MAP SCALE: N.T.S.



No.	ISSUED	DATE
1	ISSUED FOR COORDINATION	SEPT. 17, 2020
2	RE-ISSUED FOR SPA	MAR. 1 2021
3	RE-ISSUED FOR SPA	NOV. 25 2021

LEGAL DESCRIPTION

TOPOGRAPHIC SURVEY OF
PART OF LOT 1
CONCESSION 3
SOUTH OF DUNDAS STREET
(GEOGRAPHIC TOWNSHIP OF TRAFALGAR)
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON

AS PREPARED BY:
SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS

PROJECT NORTH

TRUE NORTH

SITE STATISTICS

		REQUIRED	PROVIDED
SITE AREA		129,311.39 m2 or	31.95 acres
ZONING			E2 - BUSINESS EMPLOYMENT
		REQUIRED	PROVIDED
LOT FRONTAGE		30.00 m (MIN)	460.41 m
SETBACKS	FRONT YARD (EAST) WINSTON CHURCHILL BLVD.	3.00 m	15.96 m
	REAR YARD (WEST)	3.00 m	29.40 m
	INTERIOR SIDE YARD (NORTH)	3.00 m	16.50 m
	INTERIOR SIDE YARD (SOUTH)	3.00 m	16.50 m
G.F.A.	BUILDING A	16,205.91 m2 or	174,439 sf
	OFFICE	1,084.59 m2 or	11,674 sf
	WAREHOUSE	14,986.39 m2 or	161,313 sf
	MECH. / ELECTR. / STAIR	134.93 m2 or	1,452 sf
	BUILDING B	12,790.65 m2 or	137,677 sf
	OFFICE	1,156.17 m2 or	12,445 sf
	WAREHOUSE	11,499.70 m2 or	123,781 sf
	MECH. / ELECTR. / STAIR	144.74 m2 or	1,451 sf
	BUILDING C	30,082.31 m2 or	323,803 sf
	OFFICE	1,072.28 m2 or	11,542 sf
	WAREHOUSE	28,873.61 m2 or	310,703 sf
	MECH. / ELECTR. / STAIR	136.42 m2 or	1,558 sf
	TOTAL BUILDING G.F.A.	59,078.87 m2 or	635,919 sf
SITE COVERAGE		59,078.87 m2 or	45.69%
LANDSCAPED AREA		31,184.75 m2 or	24.12%
PAVED AREA		39,047.77 m2 or	30.19%
		REQUIRED	PROVIDED
BUILDING HEIGHT (BUILDING A & B)		11.00 m (MAX)	11.00 m
PARKING	WAREHOUSING 1.0 space / 100 m2 for first 7,500 m2 of GFA 7,500 m2 @ 1.0 space / 100 m2	75 spaces	
	1.0 space / 200 m2 for additional GFA 51,578.87 m2 @ 1.0 space / 200 m2	258 spaces	
	TOTAL PARKING	333 spaces	387 spaces
	ACCESSIBLE PARKING TYPE A & B SPACES 2 + 2% of total provided	10 spaces	13 spaces
	ACCESSIBLE PARKING TYPE C SPACES 4 + 1 for each 100 over 201	7 spaces	7 spaces
	BICYCLE SPACES 2 + 0.25 spaces / 1,000 m2 GFA (30 spaces max)	17 spaces	20 spaces
LOADING SPACES		-	110 spaces
SNOW STORAGE		TO BE REMOVED OFF- SITE	

SYMBOL LEGEND

	MAN DOOR
	LOADING DOCK DOOR
	DRIVE-IN / OVERHEAD DOOR
FH	HYDRANT + VALVE
	FIRE DEPARTMENT CONNECTION / SIAMESE
CB	CATCH BASIN
DCB	DOUBLE CATCH BASIN
SANMH	SANITARY MAN HOLE
CB/MH	CATCH BASIN / MAN HOLE
SMH	STORM MAN HOLE
HP	HYDRO POLE STANDARD / UTILITY POLE
BR	BIKE RACK (2-3 BIKES)
HT	HYDRO TRANSFORMER
	ACCESSIBLE PARKING SPACE
	ACCESSIBLE PARKING SPACE SIGNAGE
SNW	SNOW STORAGE AREA
G	REFUSE STORAGE BINS

NOTES

No.	REVISION	DATE

BALDASSARRA Architects Inc.

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ONTARIO ASSOCIATION OF ARCHITECTS
A. BALDASSARRA LICENSE 3654

OWNERS INFORMATION:

560 Winston Churchill Blvd.

Oakville, Ontario

SITE PLAN

DATE:	DRAWN BY:	CHECKED:	SCALE:
AUG. 2020	DM/LY		1:1000

PROJECT No. 18-51

DRAWING No. A-1.0

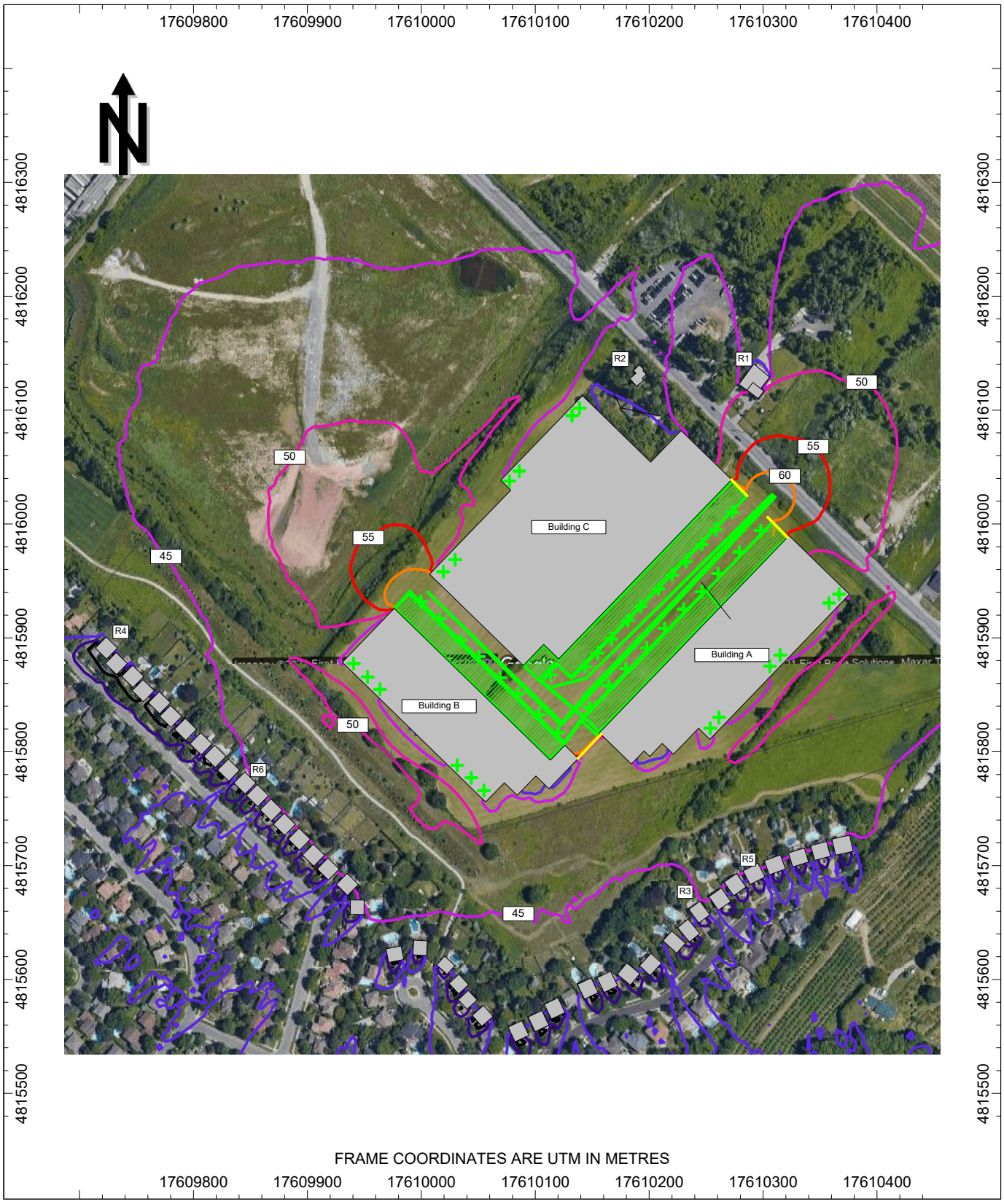


Figure 9: Predicted Mitigated Daytime/Evening Sound Level Contours, Option 2, Non-Impulsive Sources, Leq1hr (dBA)

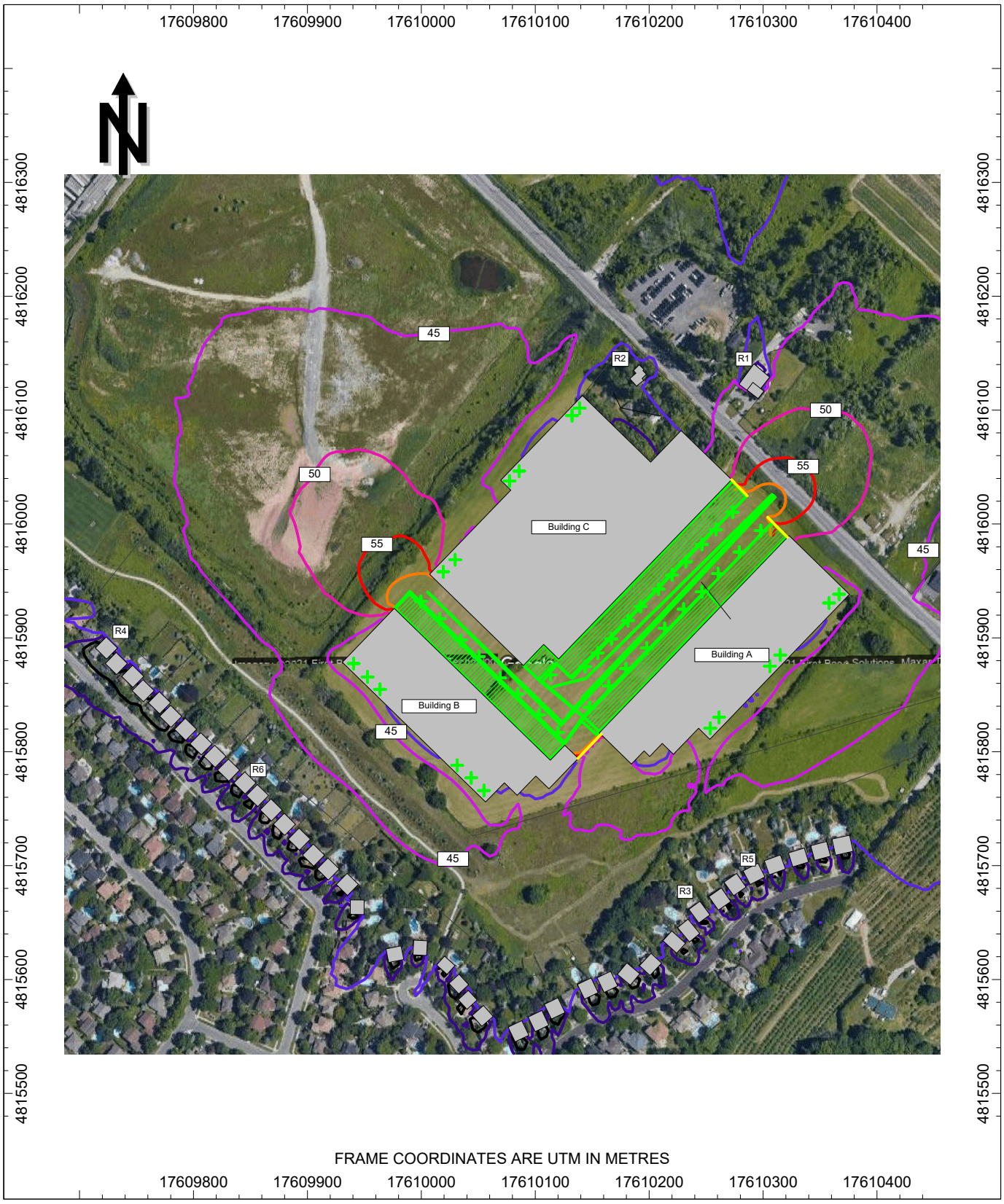


Figure 10: Predicted Mitigated Nighttime Sound Level Contours, Option 2, Non-Impulsive Sources, Leq1hr (dBA)

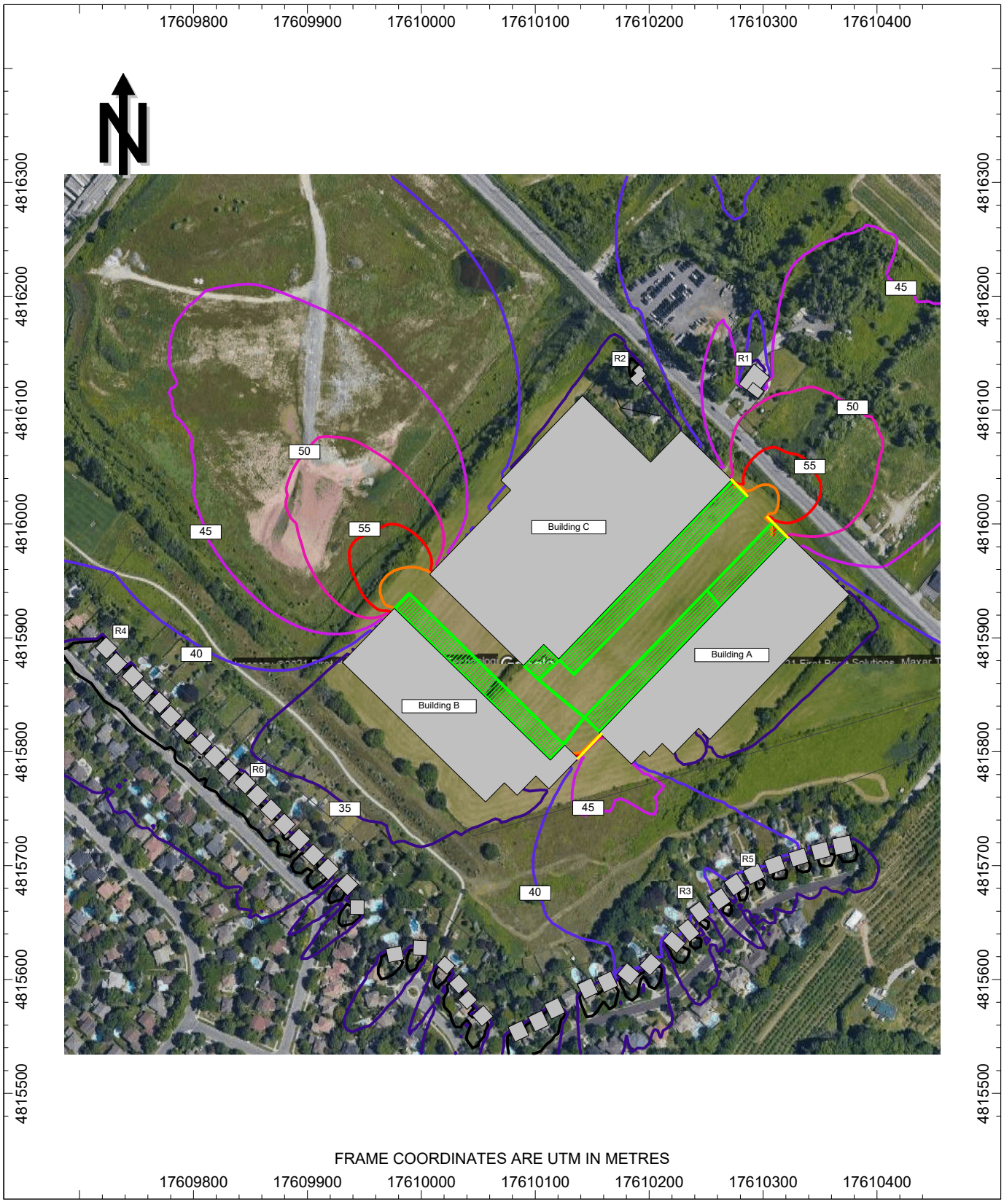


Figure 11: Predicted Daytime/Evening Mitigated Sound Level Contours, Impulsive Sources, Option 2, LLM (dBAI)

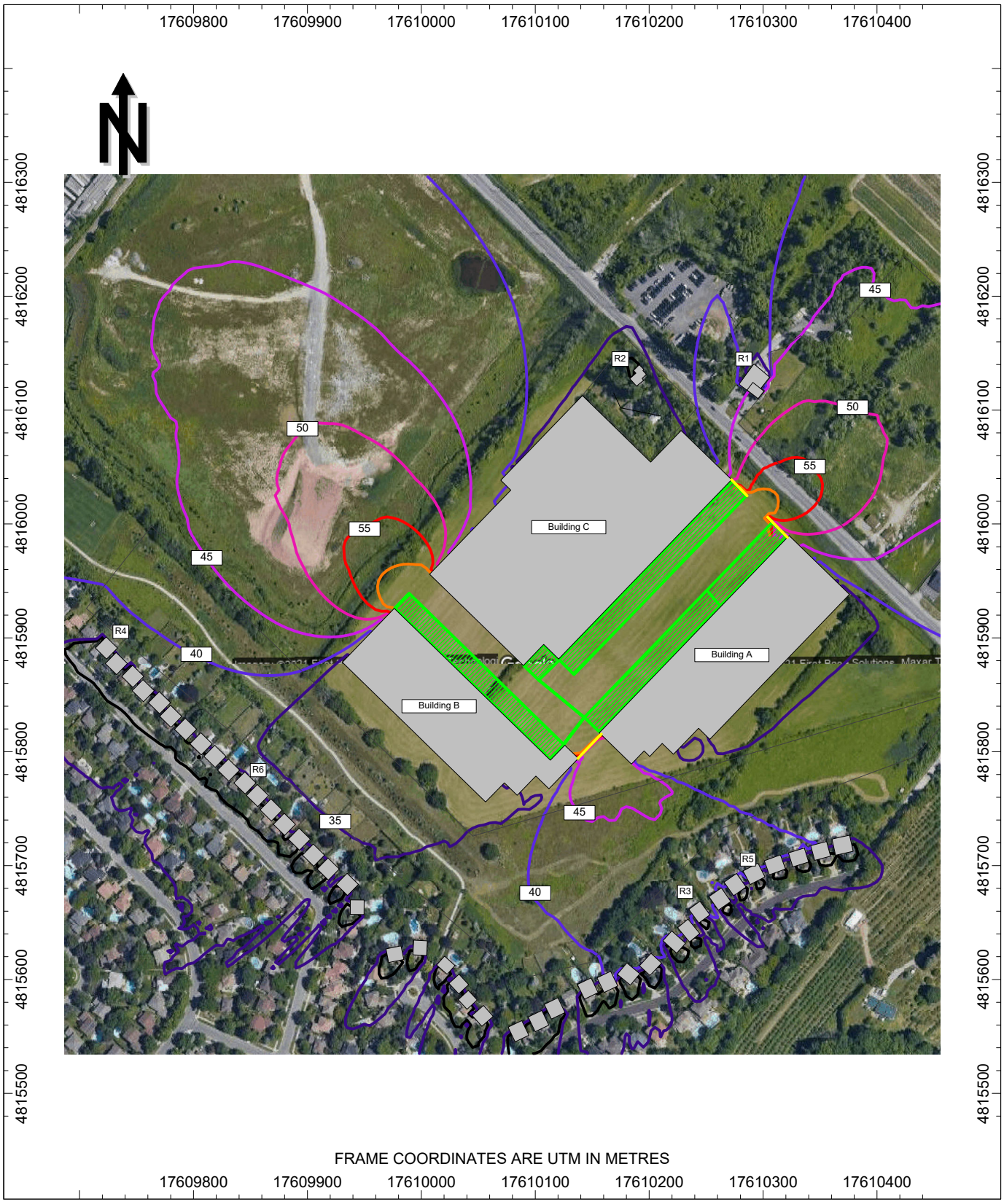


Figure 12: Predicted Nighttime Mitigated Sound Level Contours, Impulsive Sources, Option 2, LLM (dBAI)

APPENDIX A

Road Traffic Information

Report-3.1		Location :	1901300NS		Winston Churchill Blvd - 1.3 North of Lakeshore Road						
		Dates :	6/18/2019		Road :						
Directions ---------->		North		South		East		West		Total	
		Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
00:00	0:15	5	0.2%	3	0.1%					8	0.1%
0:15	0:30	3	0.1%	5	0.2%					8	0.1%
0:30	0:45	5	0.2%							5	0.1%
0:45	1:00			1	0.0%					1	0.0%
00:00	1:00	13	0.4%	9	0.3%					22	0.4%
1:00	1:15	1	0.0%							1	0.0%
1:15	1:30	3	0.1%	4	0.1%					7	0.1%
1:30	1:45	2	0.1%	2	0.1%					4	0.1%
1:45	2:00	4	0.1%	2	0.1%					6	0.1%
1:00	2:00	10	0.3%	8	0.2%					18	0.3%
2:00	2:15	5	0.2%							5	0.1%
2:15	2:30	4	0.1%	4	0.1%					8	0.1%
2:30	2:45	2	0.1%							2	0.0%
2:45	3:00	1	0.0%	2	0.1%					3	0.0%
2:00	3:00	12	0.4%	6	0.2%					18	0.3%
3:00	3:15	4	0.1%	2	0.1%					6	0.1%
3:15	3:30	7	0.2%	3	0.1%					10	0.2%
3:30	3:45	3	0.1%	1	0.0%					4	0.1%
3:45	4:00	2	0.1%	4	0.1%					6	0.1%
3:00	4:00	16	0.5%	10	0.3%					26	0.4%
4:00	4:15	3	0.1%	2	0.1%					5	0.1%
4:15	4:30	7	0.2%	5	0.2%					12	0.2%
4:30	4:45	4	0.1%	4	0.1%					8	0.1%
4:45	5:00	6	0.2%	10	0.3%					16	0.3%
4:00	5:00	20	0.7%	21	0.6%					41	0.7%
5:00	5:15	12	0.4%	23	0.7%					35	0.6%
5:15	5:30	9	0.3%	26	0.8%					35	0.6%
5:30	5:45	14	0.5%	27	0.8%					41	0.7%
5:45	6:00	24	0.8%	37	1.1%					61	1.0%
5:00	6:00	59	2.0%	113	3.5%					172	2.8%
6:00	6:15	10	0.3%	27	0.8%					37	0.6%
6:15	6:30	16	0.5%	42	1.3%					58	0.9%
6:30	6:45	30	1.0%	50	1.5%					80	1.3%
6:45	7:00	21	0.7%	51	1.6%					72	1.2%
6:00	7:00	77	2.6%	170	5.2%					247	4.0%
7:00	7:15	41	1.4%	50	1.5%					91	1.5%
7:15	7:30	23	0.8%	70	2.1%					93	1.5%
7:30	7:45	37	1.3%	63	1.9%					100	1.6%
7:45	8:00	39	1.3%	66	2.0%					105	1.7%
7:00	8:00	140	4.8%	249	7.6%					389	6.3%
8:00	8:15	55	1.9%	55	1.7%					110	1.8%
8:15	8:30	42	1.4%	76	2.3%					118	1.9%
8:30	8:45	62	2.1%	84	2.6%					146	2.3%
8:45	9:00	56	1.9%	87	2.7%					143	2.3%
8:00	9:00	215	7.3%	302	9.2%					517	8.3%
9:00	9:15	33	1.1%	75	2.3%					108	1.7%
9:15	9:30	37	1.3%	46	1.4%					83	1.3%
9:30	9:45	28	1.0%	32	1.0%					60	1.0%
9:45	10:00	33	1.1%	45	1.4%					78	1.3%
9:00	10:00	131	4.5%	198	6.1%					329	5.3%
10:00	10:15	40	1.4%	37	1.1%					77	1.2%
10:15	10:30	32	1.1%	45	1.4%					77	1.2%
10:30	10:45	42	1.4%	36	1.1%					78	1.3%
10:45	11:00	19	0.6%	53	1.6%					72	1.2%
10:00	11:00	133	4.5%	171	5.2%					304	4.9%
11:00	11:15	45	1.5%	34	1.0%					79	1.3%
11:15	11:30	48	1.6%	38	1.2%					86	1.4%
11:30	11:45	46	1.6%	51	1.6%					97	1.6%
11:45	12:00	48	1.6%	79	2.4%					127	2.0%
11:00	12:00	187	6.4%	202	6.2%					389	6.3%

12:00	**12:15**	**63**	2.1%	**45**	1.4%			**108**	1.7%
12:15	**12:30**	**47**	1.6%	**53**	1.6%			**100**	1.6%
12:30	**12:45**	**31**	1.1%	**51**	1.6%			**82**	1.3%
12:45	**13:00**	**42**	1.4%	**46**	1.4%			**88**	1.4%
12:00	**13:00**	**183**	6.2%	**195**	6.0%			**378**	6.1%
13:00	**13:15**	**39**	1.3%	**53**	1.6%			**92**	1.5%
13:15	**13:30**	**38**	1.3%	**47**	1.4%			**85**	1.4%
13:30	**13:45**	**37**	1.3%	**39**	1.2%			**76**	1.2%
13:45	**14:00**	**49**	1.7%	**45**	1.4%			**94**	1.5%
13:00	**14:00**	**163**	5.5%	**184**	5.6%			**347**	5.6%
14:00	**14:15**	**47**	1.6%	**34**	1.0%			**81**	1.3%
14:15	**14:30**	**42**	1.4%	**52**	1.6%			**94**	1.5%
14:30	**14:45**	**60**	2.0%	**52**	1.6%			**112**	1.8%
14:45	**15:00**	**65**	2.2%	**46**	1.4%			**111**	1.8%
14:00	**15:00**	**214**	7.3%	**184**	5.6%			**398**	6.4%
15:00	**15:15**	**65**	2.2%	**52**	1.6%			**117**	1.9%
15:15	**15:30**	**62**	2.1%	**66**	2.0%			**128**	2.1%
15:30	**15:45**	**78**	2.7%	**60**	1.8%			**138**	2.2%
15:45	**16:00**	**70**	2.4%	**60**	1.8%			**130**	2.1%
15:00	**16:00**	**275**	9.3%	**238**	7.3%			**513**	8.3%
16:00	**16:15**	**105**	3.6%	**48**	1.5%			**153**	2.5%
16:15	**16:30**	**73**	2.5%	**61**	1.9%			**134**	2.2%
16:30	**16:45**	**80**	2.7%	**50**	1.5%			**130**	2.1%
16:45	**17:00**	**78**	2.7%	**60**	1.8%			**138**	2.2%
16:00	**17:00**	**336**	11.4%	**219**	6.7%			**555**	8.9%
17:00	**17:15**	**58**	2.0%	**75**	2.3%			**133**	2.1%
17:15	**17:30**	**64**	2.2%	**60**	1.8%			**124**	2.0%
17:30	**17:45**	**43**	1.5%	**54**	1.7%			**97**	1.6%
17:45	**18:00**	**51**	1.7%	**46**	1.4%			**97**	1.6%
17:00	**18:00**	**216**	7.3%	**235**	7.2%			**451**	7.3%
18:00	**18:15**	**49**	1.7%	**49**	1.5%			**98**	1.6%
18:15	**18:30**	**39**	1.3%	**52**	1.6%			**91**	1.5%
18:30	**18:45**	**36**	1.2%	**38**	1.2%			**74**	1.2%
18:45	**19:00**	**50**	1.7%	**31**	0.9%			**81**	1.3%
18:00	**19:00**	**174**	5.9%	**170**	5.2%			**344**	5.5%
19:00	**19:15**	**41**	1.4%	**31**	0.9%			**72**	1.2%
19:15	**19:30**	**37**	1.3%	**34**	1.0%			**71**	1.1%
19:30	**19:45**	**28**	1.0%	**34**	1.0%			**62**	1.0%
19:45	**20:00**	**28**	1.0%	**30**	0.9%			**58**	0.9%
19:00	**20:00**	**134**	4.6%	**129**	3.9%			**263**	4.2%
20:00	**20:15**	**24**	0.8%	**20**	0.6%			**44**	0.7%
20:15	**20:30**	**30**	1.0%	**27**	0.8%			**57**	0.9%
20:30	**20:45**	**13**	0.4%	**24**	0.7%			**37**	0.6%
20:45	**21:00**	**22**	0.7%	**28**	0.9%			**50**	0.8%
20:00	**21:00**	**89**	3.0%	**99**	3.0%			**188**	3.0%
21:00	**21:15**	**28**	1.0%	**33**	1.0%			**61**	1.0%
21:15	**21:30**	**17**	0.6%	**23**	0.7%			**40**	0.6%
21:30	**21:45**	**17**	0.6%	**15**	0.5%			**32**	0.5%
21:45	**22:00**	**17**	0.6%	**13**	0.4%			**30**	0.5%
21:00	**22:00**	**79**	2.7%	**84**	2.6%			**163**	2.6%
22:00	**22:15**	**15**	0.5%	**13**	0.4%			**28**	0.5%
22:15	**22:30**	**9**	0.3%	**16**	0.5%			**25**	0.4%
22:30	**22:45**	**7**	0.2%	**2**	0.1%			**9**	0.1%
22:45	**23:00**	**7**	0.2%	**11**	0.3%			**18**	0.3%
22:00	**23:00**	**38**	1.3%	**42**	1.3%			**80**	1.3%
23:00	**23:15**	**7**	0.2%	**8**	0.2%			**15**	0.2%
23:15	**23:30**	**11**	0.4%	**6**	0.2%			**17**	0.3%
23:30	**23:45**	**7**	0.2%	**10**	0.3%			**17**	0.3%
23:45	**OO:OO**	**4**	0.1%	**8**	0.2%			**12**	0.2%
23:00	**OO:OO**	**29**	1.0%	**32**	1.0%			**61**	1.0%
Total		**2943**		**3270**				**6213**	100.0%
		47.4%		**52.6%**				100.0%	
AM PEAK		**62**		**87**				**146**	
period		**8:30**		**8:45**				**8:30**	
% of class			2.1%		2.7%				2.3%
PM PEAK		**105**		**75**				**153**	
period		**16:00**		**17:00**				**16:00**	
% of class			3.6%		2.3%				2.5%

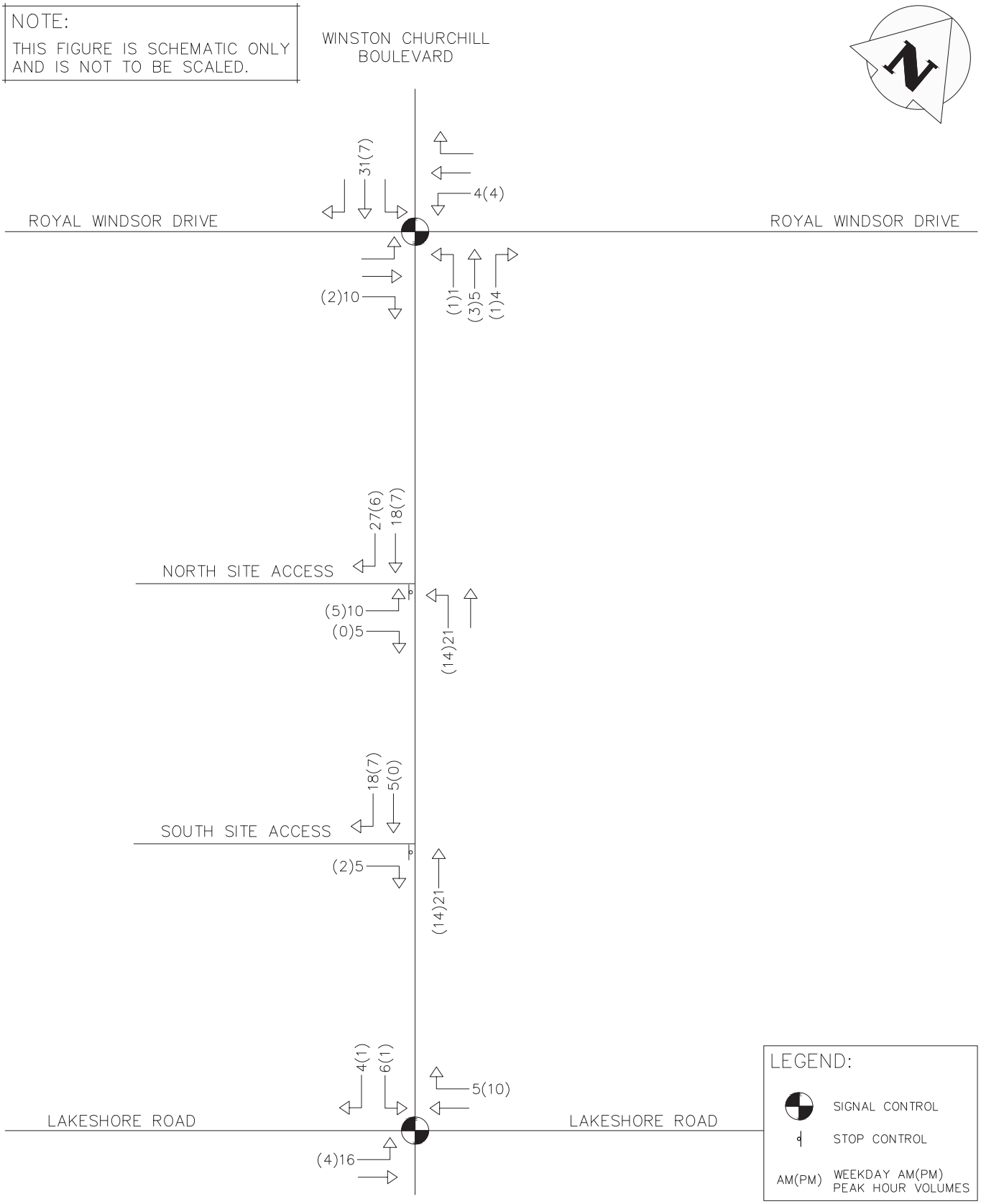
Report-3.2		Location :	1901300NS	Winston Churchill Blvd - 1.3 North of Lakeshore Road							
		Dates :	6/19/2019	Road :							
		North		South		East		West		Total	
Directions ---------->		Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
OO:OO	0:15	6	0.2%	6	0.2%					12	0.2%
0:15	0:30	7	0.2%	5	0.1%					12	0.2%
0:30	0:45	3	0.1%	5	0.1%					8	0.1%
0:45	1:00	3	0.1%	5	0.1%					8	0.1%
OO:OO	1:00	19	0.7%	21	0.6%					40	0.6%
1:00	1:15	1	0.0%	1	0.0%					2	0.0%
1:15	1:30	2	0.1%	3	0.1%					5	0.1%
1:30	1:45	4	0.1%	3	0.1%					7	0.1%
1:45	2:00	1	0.0%	3	0.1%					4	0.1%
1:00	2:00	8	0.3%	10	0.3%					18	0.3%
2:00	2:15	4	0.1%	2	0.1%					6	0.1%
2:15	2:30	7	0.2%	2	0.1%					9	0.1%
2:30	2:45			2	0.1%					2	0.0%
2:45	3:00	1	0.0%	1	0.0%					2	0.0%
2:00	3:00	12	0.4%	7	0.2%					19	0.3%
3:00	3:15	5	0.2%	3	0.1%					8	0.1%
3:15	3:30	6	0.2%	2	0.1%					8	0.1%
3:30	3:45	2	0.1%	1	0.0%					3	0.0%
3:45	4:00	3	0.1%	8	0.2%					11	0.2%
3:00	4:00	16	0.6%	14	0.4%					30	0.5%
4:00	4:15	4	0.1%	2	0.1%					6	0.1%
4:15	4:30	1	0.0%	5	0.1%					6	0.1%
4:30	4:45	4	0.1%	6	0.2%					10	0.2%
4:45	5:00	2	0.1%	12	0.4%					14	0.2%
4:00	5:00	11	0.4%	25	0.7%					36	0.6%
5:00	5:15	3	0.1%	24	0.7%					27	0.4%
5:15	5:30	9	0.3%	22	0.7%					31	0.5%
5:30	5:45	10	0.3%	24	0.7%					34	0.5%
5:45	6:00	23	0.8%	38	1.1%					61	1.0%
5:00	6:00	45	1.6%	108	3.2%					153	2.4%
6:00	6:15	11	0.4%	35	1.0%					46	0.7%
6:15	6:30	17	0.6%	40	1.2%					57	0.9%
6:30	6:45	18	0.6%	55	1.6%					73	1.2%
6:45	7:00	15	0.5%	47	1.4%					62	1.0%
6:00	7:00	61	2.1%	177	5.2%					238	3.8%
7:00	7:15	20	0.7%	50	1.5%					70	1.1%
7:15	7:30	24	0.8%	70	2.1%					94	1.5%
7:30	7:45	27	0.9%	66	2.0%					93	1.5%
7:45	8:00	36	1.2%	72	2.1%					108	1.7%
7:00	8:00	107	3.7%	258	7.6%					365	5.8%
8:00	8:15	36	1.2%	64	1.9%					100	1.6%
8:15	8:30	46	1.6%	80	2.4%					126	2.0%
8:30	8:45	55	1.9%	86	2.5%					141	2.2%
8:45	9:00	45	1.6%	87	2.6%					132	2.1%
8:00	9:00	182	6.3%	317	9.4%					499	8.0%
9:00	9:15	39	1.3%	77	2.3%					116	1.9%
9:15	9:30	34	1.2%	64	1.9%					98	1.6%
9:30	9:45	34	1.2%	54	1.6%					88	1.4%
9:45	10:00	39	1.3%	42	1.2%					81	1.3%
9:00	10:00	146	5.0%	237	7.0%					383	6.1%
10:00	10:15	29	1.0%	44	1.3%					73	1.2%
10:15	10:30	37	1.3%	29	0.9%					66	1.1%
10:30	10:45	37	1.3%	48	1.4%					85	1.4%
10:45	11:00	31	1.1%	27	0.8%					58	0.9%
10:00	11:00	134	4.6%	148	4.4%					282	4.5%
11:00	11:15	34	1.2%	35	1.0%					69	1.1%
11:15	11:30	36	1.2%	39	1.2%					75	1.2%
11:30	11:45	56	1.9%	40	1.2%					96	1.5%
11:45	12:00	56	1.9%	49	1.5%					105	1.7%
11:00	12:00	182	6.3%	163	4.8%					345	5.5%

12:00	**12:15**	**62**	2.1%	**47**	1.4%			**109**	1.7%
12:15	**12:30**	**63**	2.2%	**53**	1.6%			**116**	1.9%
12:30	**12:45**	**53**	1.8%	**59**	1.7%			**112**	1.8%
12:45	**13:00**	**51**	1.8%	**47**	1.4%			**98**	1.6%
12:00	**13:00**	**229**	7.9%	**206**	6.1%			**435**	6.9%
13:00	**13:15**	**33**	1.1%	**55**	1.6%			**88**	1.4%
13:15	**13:30**	**46**	1.6%	**62**	1.8%			**108**	1.7%
13:30	**13:45**	**42**	1.5%	**49**	1.5%			**91**	1.5%
13:45	**14:00**	**48**	1.7%	**39**	1.2%			**87**	1.4%
13:00	**14:00**	**169**	5.8%	**205**	6.1%			**374**	6.0%
14:00	**14:15**	**46**	1.6%	**47**	1.4%			**93**	1.5%
14:15	**14:30**	**43**	1.5%	**51**	1.5%			**94**	1.5%
14:30	**14:45**	**63**	2.2%	**46**	1.4%			**109**	1.7%
14:45	**15:00**	**62**	2.1%	**62**	1.8%			**124**	2.0%
14:00	**15:00**	**214**	7.4%	**206**	6.1%			**420**	6.7%
15:00	**15:15**	**71**	2.5%	**60**	1.8%			**131**	2.1%
15:15	**15:30**	**46**	1.6%	**47**	1.4%			**93**	1.5%
15:30	**15:45**	**94**	3.3%	**52**	1.5%			**146**	2.3%
15:45	**16:00**	**66**	2.3%	**65**	1.9%			**131**	2.1%
15:00	**16:00**	**277**	9.6%	**224**	6.6%			**501**	8.0%
16:00	**16:15**	**75**	2.6%	**57**	1.7%			**132**	2.1%
16:15	**16:30**	**64**	2.2%	**47**	1.4%			**111**	1.8%
16:30	**16:45**	**84**	2.9%	**57**	1.7%			**141**	2.2%
16:45	**17:00**	**84**	2.9%	**51**	1.5%			**135**	2.2%
16:00	**17:00**	**307**	10.6%	**212**	6.3%			**519**	8.3%
17:00	**17:15**	**69**	2.4%	**78**	2.3%			**147**	2.3%
17:15	**17:30**	**52**	1.8%	**62**	1.8%			**114**	1.8%
17:30	**17:45**	**50**	1.7%	**67**	2.0%			**117**	1.9%
17:45	**18:00**	**58**	2.0%	**63**	1.9%			**121**	1.9%
17:00	**18:00**	**229**	7.9%	**270**	8.0%			**499**	8.0%
18:00	**18:15**	**45**	1.6%	**55**	1.6%			**100**	1.6%
18:15	**18:30**	**37**	1.3%	**42**	1.2%			**79**	1.3%
18:30	**18:45**	**40**	1.4%	**45**	1.3%			**85**	1.4%
18:45	**19:00**	**49**	1.7%	**51**	1.5%			**100**	1.6%
18:00	**19:00**	**171**	5.9%	**193**	5.7%			**364**	5.8%
19:00	**19:15**	**38**	1.3%	**38**	1.1%			**76**	1.2%
19:15	**19:30**	**36**	1.2%	**35**	1.0%			**71**	1.1%
19:30	**19:45**	**27**	0.9%	**34**	1.0%			**61**	1.0%
19:45	**20:00**	**26**	0.9%	**31**	0.9%			**57**	0.9%
19:00	**20:00**	**127**	4.4%	**138**	4.1%			**265**	4.2%
20:00	**20:15**	**28**	1.0%	**22**	0.7%			**50**	0.8%
20:15	**20:30**	**28**	1.0%	**18**	0.5%			**46**	0.7%
20:30	**20:45**	**19**	0.7%	**22**	0.7%			**41**	0.7%
20:45	**21:00**	**17**	0.6%	**21**	0.6%			**38**	0.6%
20:00	**21:00**	**92**	3.2%	**83**	2.5%			**175**	2.8%
21:00	**21:15**	**27**	0.9%	**27**	0.8%			**54**	0.9%
21:15	**21:30**	**16**	0.6%	**17**	0.5%			**33**	0.5%
21:30	**21:45**	**22**	0.8%	**15**	0.4%			**37**	0.6%
21:45	**22:00**	**25**	0.9%	**23**	0.7%			**48**	0.8%
21:00	**22:00**	**90**	3.1%	**82**	2.4%			**172**	2.7%
22:00	**22:15**	**15**	0.5%	**22**	0.7%			**37**	0.6%
22:15	**22:30**	**9**	0.3%	**10**	0.3%			**19**	0.3%
22:30	**22:45**	**10**	0.3%	**8**	0.2%			**18**	0.3%
22:45	**23:00**	**5**	0.2%	**9**	0.3%			**14**	0.2%
22:00	**23:00**	**39**	1.3%	**49**	1.5%			**88**	1.4%
23:00	**23:15**	**3**	0.1%	**8**	0.2%			**11**	0.2%
23:15	**23:30**	**5**	0.2%	**4**	0.1%			**9**	0.1%
23:30	**23:45**	**7**	0.2%	**8**	0.2%			**15**	0.2%
23:45	**OO:OO**	**10**	0.3%	**5**	0.1%			**15**	0.2%
23:00	**OO:OO**	**25**	0.9%	**25**	0.7%			**50**	0.8%
Total		**2892**		**3378**				**6270**	100.0%
		46.1%		**53.9%**				100.0%	
AM PEAK		**56**		**87**				**141**	
period		**11:30**		**8:45**				**8:30**	
% of class			1.9%		2.6%				2.2%
PM PEAK		**94**		**78**				**147**	
period		**15:30**		**17:00**				**17:00**	
% of class			3.3%		2.3%				2.3%

Report-3.3		Location :		1901300NS		Winston Churchill Blvd - 1.3 North of Lakeshore Road					
						Road :					
		Dates :		6/20/2019							
		North		South		East		West		Total	
Directions ---------->		Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
00:00	0:15	4	0.2%	6	0.2%					10	0.2%
0:15	0:30	4	0.2%	6	0.2%					10	0.2%
0:30	0:45	1	0.0%	4	0.1%					5	0.1%
0:45	1:00	3	0.1%	3	0.1%					6	0.1%
00:00	1:00	12	0.5%	19	0.6%					31	0.6%
1:00	1:15	1	0.0%	1	0.0%					2	0.0%
1:15	1:30	2	0.1%	3	0.1%					5	0.1%
1:30	1:45	3	0.1%	1	0.0%					4	0.1%
1:45	2:00			1	0.0%					1	0.0%
1:00	2:00	6	0.2%	6	0.2%					12	0.2%
2:00	2:15	3	0.1%	3	0.1%					6	0.1%
2:15	2:30	3	0.1%	1	0.0%					4	0.1%
2:30	2:45	3	0.1%	2	0.1%					5	0.1%
2:45	3:00	2	0.1%	1	0.0%					3	0.1%
2:00	3:00	11	0.4%	7	0.2%					18	0.3%
3:00	3:15	3	0.1%	2	0.1%					5	0.1%
3:15	3:30	6	0.2%	4	0.1%					10	0.2%
3:30	3:45			5	0.2%					5	0.1%
3:45	4:00	2	0.1%	5	0.2%					7	0.1%
3:00	4:00	11	0.4%	16	0.5%					27	0.5%
4:00	4:15	4	0.2%	3	0.1%					7	0.1%
4:15	4:30	3	0.1%	3	0.1%					6	0.1%
4:30	4:45	3	0.1%	5	0.2%					8	0.1%
4:45	5:00	2	0.1%	15	0.5%					17	0.3%
4:00	5:00	12	0.5%	26	0.9%					38	0.7%
5:00	5:15	7	0.3%	17	0.6%					24	0.4%
5:15	5:30	7	0.3%	19	0.6%					26	0.5%
5:30	5:45	13	0.5%	22	0.7%					35	0.6%
5:45	6:00	14	0.5%	42	1.4%					56	1.0%
5:00	6:00	41	1.6%	100	3.3%					141	2.5%
6:00	6:15	14	0.5%	26	0.9%					40	0.7%
6:15	6:30	9	0.3%	31	1.0%					40	0.7%
6:30	6:45	12	0.5%	40	1.3%					52	0.9%
6:45	7:00	24	0.9%	33	1.1%					57	1.0%
6:00	7:00	59	2.3%	130	4.3%					189	3.4%
7:00	7:15	23	0.9%	37	1.2%					60	1.1%
7:15	7:30	26	1.0%	58	1.9%					84	1.5%
7:30	7:45	37	1.4%	51	1.7%					88	1.6%
7:45	8:00	37	1.4%	61	2.0%					98	1.7%
7:00	8:00	123	4.7%	207	6.9%					330	5.9%
8:00	8:15	41	1.6%	58	1.9%					99	1.8%
8:15	8:30	31	1.2%	65	2.2%					96	1.7%
8:30	8:45	34	1.3%	75	2.5%					109	1.9%
8:45	9:00	42	1.6%	70	2.3%					112	2.0%
8:00	9:00	148	5.7%	268	8.9%					416	7.4%
9:00	9:15	28	1.1%	58	1.9%					86	1.5%
9:15	9:30	31	1.2%	52	1.7%					83	1.5%
9:30	9:45	36	1.4%	49	1.6%					85	1.5%
9:45	10:00	29	1.1%	28	0.9%					57	1.0%
9:00	10:00	124	4.8%	187	6.2%					311	5.5%
10:00	10:15	25	1.0%	50	1.7%					75	1.3%
10:15	10:30	23	0.9%	29	1.0%					52	0.9%
10:30	10:45	26	1.0%	53	1.8%					79	1.4%
10:45	11:00	31	1.2%	45	1.5%					76	1.4%
10:00	11:00	105	4.0%	177	5.9%					282	5.0%
11:00	11:15	38	1.5%	34	1.1%					72	1.3%
11:15	11:30	36	1.4%	40	1.3%					76	1.4%
11:30	11:45	49	1.9%	36	1.2%					85	1.5%
11:45	12:00	52	2.0%	45	1.5%					97	1.7%
11:00	12:00	175	6.7%	155	5.2%					330	5.9%

12:00	**12:15**	**50**	1.9%	**42**	1.4%			**92**	1.6%
12:15	**12:30**	**52**	2.0%	**52**	1.7%			**104**	1.9%
12:30	**12:45**	**41**	1.6%	**47**	1.6%			**88**	1.6%
12:45	**13:00**	**41**	1.6%	**57**	1.9%			**98**	1.7%
12:00	**13:00**	**184**	7.1%	**198**	6.6%			**382**	6.8%
13:00	**13:15**	**43**	1.6%	**53**	1.8%			**96**	1.7%
13:15	**13:30**	**42**	1.6%	**52**	1.7%			**94**	1.7%
13:30	**13:45**	**40**	1.5%	**44**	1.5%			**84**	1.5%
13:45	**14:00**	**37**	1.4%	**54**	1.8%			**91**	1.6%
13:00	**14:00**	**162**	6.2%	**203**	6.8%			**365**	6.5%
14:00	**14:15**	**60**	2.3%	**46**	1.5%			**106**	1.9%
14:15	**14:30**	**47**	1.8%	**39**	1.3%			**86**	1.5%
14:30	**14:45**	**60**	2.3%	**34**	1.1%			**94**	1.7%
14:45	**15:00**	**65**	2.5%	**48**	1.6%			**113**	2.0%
14:00	**15:00**	**232**	8.9%	**167**	5.6%			**399**	7.1%
15:00	**15:15**	**67**	2.6%	**41**	1.4%			**108**	1.9%
15:15	**15:30**	**57**	2.2%	**49**	1.6%			**106**	1.9%
15:30	**15:45**	**71**	2.7%	**38**	1.3%			**109**	1.9%
15:45	**16:00**	**64**	2.5%	**51**	1.7%			**115**	2.0%
15:00	**16:00**	**259**	9.9%	**179**	6.0%			**438**	7.8%
16:00	**16:15**	**77**	3.0%	**52**	1.7%			**129**	2.3%
16:15	**16:30**	**72**	2.8%	**50**	1.7%			**122**	2.2%
16:30	**16:45**	**84**	3.2%	**42**	1.4%			**126**	2.2%
16:45	**17:00**	**57**	2.2%	**58**	1.9%			**115**	2.0%
16:00	**17:00**	**290**	11.1%	**202**	6.7%			**492**	8.8%
17:00	**17:15**	**67**	2.6%	**50**	1.7%			**117**	2.1%
17:15	**17:30**	**59**	2.3%	**67**	2.2%			**126**	2.2%
17:30	**17:45**	**35**	1.3%	**50**	1.7%			**85**	1.5%
17:45	**18:00**	**41**	1.6%	**42**	1.4%			**83**	1.5%
17:00	**18:00**	**202**	7.7%	**209**	7.0%			**411**	7.3%
18:00	**18:15**	**28**	1.1%	**52**	1.7%			**80**	1.4%
18:15	**18:30**	**24**	0.9%	**44**	1.5%			**68**	1.2%
18:30	**18:45**	**21**	0.8%	**58**	1.9%			**79**	1.4%
18:45	**19:00**	**34**	1.3%	**29**	1.0%			**63**	1.1%
18:00	**19:00**	**107**	4.1%	**183**	6.1%			**290**	5.2%
19:00	**19:15**	**27**	1.0%	**32**	1.1%			**59**	1.1%
19:15	**19:30**	**19**	0.7%	**30**	1.0%			**49**	0.9%
19:30	**19:45**	**23**	0.9%	**29**	1.0%			**52**	0.9%
19:45	**20:00**	**18**	0.7%	**26**	0.9%			**44**	0.8%
19:00	**20:00**	**87**	3.3%	**117**	3.9%			**204**	3.6%
20:00	**20:15**	**18**	0.7%	**20**	0.7%			**38**	0.7%
20:15	**20:30**	**7**	0.3%	**14**	0.5%			**21**	0.4%
20:30	**20:45**	**14**	0.5%	**18**	0.6%			**32**	0.6%
20:45	**21:00**	**15**	0.6%	**13**	0.4%			**28**	0.5%
20:00	**21:00**	**54**	2.1%	**65**	2.2%			**119**	2.1%
21:00	**21:15**	**16**	0.6%	**27**	0.9%			**43**	0.8%
21:15	**21:30**	**13**	0.5%	**26**	0.9%			**39**	0.7%
21:30	**21:45**	**18**	0.7%	**15**	0.5%			**33**	0.6%
21:45	**22:00**	**26**	1.0%	**19**	0.6%			**45**	0.8%
21:00	**22:00**	**73**	2.8%	**87**	2.9%			**160**	2.9%
22:00	**22:15**	**17**	0.7%	**11**	0.4%			**28**	0.5%
22:15	**22:30**	**12**	0.5%	**18**	0.6%			**30**	0.5%
22:30	**22:45**	**14**	0.5%	**14**	0.5%			**28**	0.5%
22:45	**23:00**	**45**	1.7%	**15**	0.5%			**60**	1.1%
22:00	**23:00**	**88**	3.4%	**58**	1.9%			**146**	2.6%
23:00	**23:15**	**14**	0.5%	**11**	0.4%			**25**	0.4%
23:15	**23:30**	**9**	0.3%	**11**	0.4%			**20**	0.4%
23:30	**23:45**	**9**	0.3%	**8**	0.3%			**17**	0.3%
23:45	**OO:OO**	**11**	0.4%	**7**	0.2%			**18**	0.3%
23:00	**OO:OO**	**43**	1.6%	**37**	1.2%			**80**	1.4%
Total		**2608**		**3003**				**5611**	100.0%
		46.5%		**53.5%**				100.0%	
AM PEAK		**52**		**75**				**112**	
period		**11:45**		**8:30**				**8:45**	
% of class			2.0%		2.5%				2.0%
PM PEAK		**84**		**67**				**129**	
period		**16:30**		**17:15**				**16:00**	
% of class			3.2%		2.2%				2.3%

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



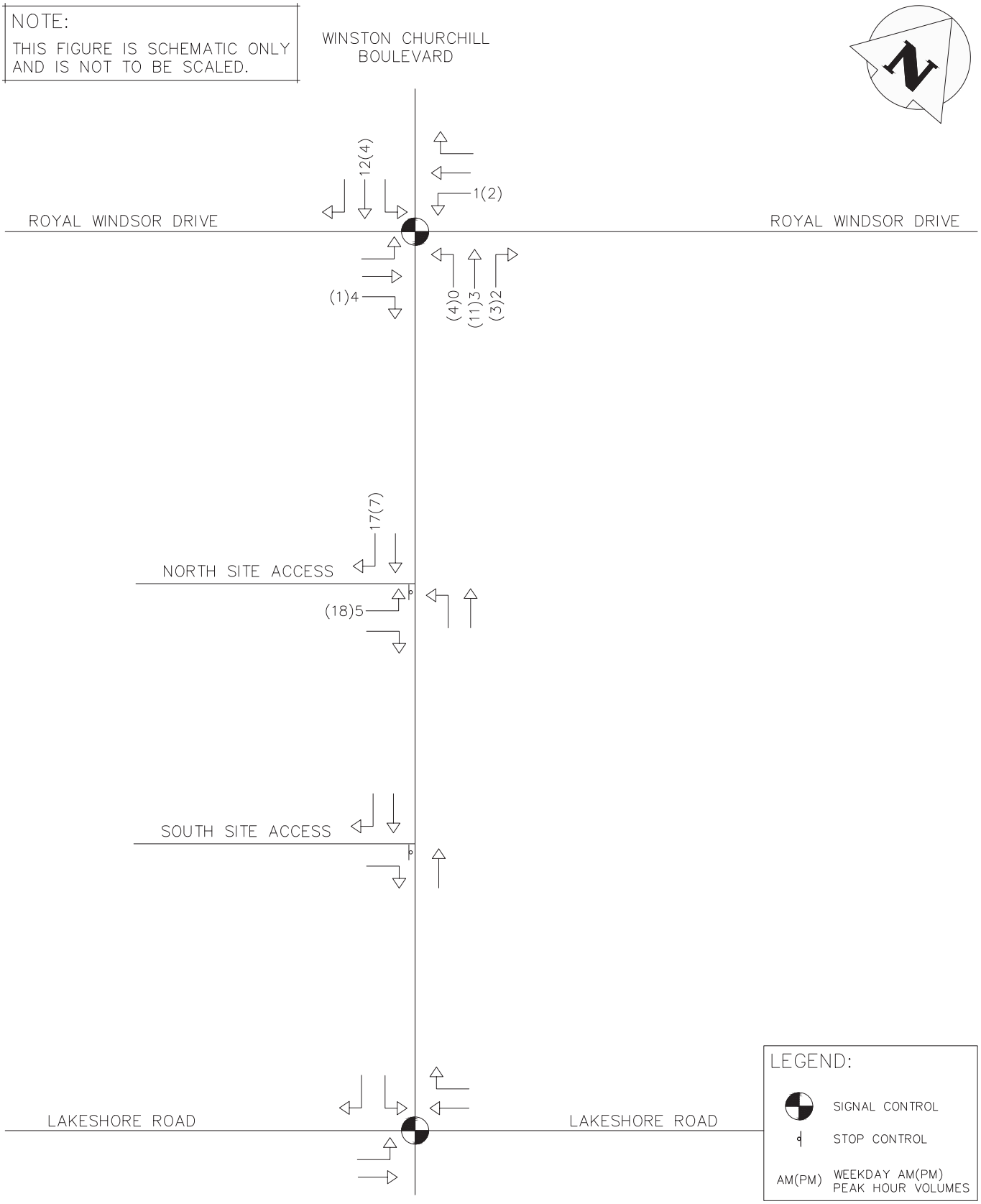
560 WINSTON CHURCHILL BOULEVARD

SITE TRIP ASSIGNMENT – PASSENGER VEHICLES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.Y./T.D.S.	S.Y./K.S.		0756–5105
Check	Check	Scale	Dwg.
A.W.	K.S.	N.T.S	FIG.06

NOTE:
THIS FIGURE IS SCHEMATIC ONLY AND IS NOT TO BE SCALED.



560 WINSTON CHURCHILL BOULEVARD

SITE TRIP ASSIGNMENT – HEAVY VEHICLES

CROZIER & ASSOCIATES Consulting Engineers
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
S.Y./T.D.S.	S.Y./K.S.		0756–5105
Check	Check	Scale	Dwg.
A.W.	K.S.	N.T.S	FIG.07

APPENDIX B

Supporting Information

Property Information Report

City of Mississauga, 300 City Centre Drive, Mississauga, Ontario Canada L5B 3C1

Property Details

Address:	645 WINSTON CHURCHILL BLVD
Legal Description:	CON 3 SDS PT LOT 35
Roll Number:	21-05-020-025-03000-0000
Common Name:	
Property Code:	SINGLE FAMILY DETACHED (NOT ON WATER)
Ward:	2
Councillor:	KAREN RAS
Area:	8,162.31
Site Plan Control?	Yes

Detail Map

Aerial Map

Property Zoning Information

The zone(s) for this property are listed below. To access the Mississauga Zoning By-law, please visit www.mississauga.ca/zoningbylaw. If you have any questions about the zoning information displayed below, please contact 311 (905-615-4311 outside City limits) or visit www.mississauga.ca/zoning.

Zone	Master Bylaw	Enacting Bylaw	OMB Case/File No.	Status
D	0225-2007	BL-0396/09	PL081164 / PL100096	Board Order

Property Building Permits

Below is a listing of all Building Permits associated with the property. Since properties may contain multiple buildings, you may see different addresses than originally requested in your lookup. Building permit data is displayed in order of Application Date with the most recent application appearing first in the list below. If you have any questions about the building permit data displayed below, please contact 311 (905-615-4311 outside City limits) or visit www.mississauga.ca/permits.

App Number	App Date	Address	Description	Scope	Type Description	Issue Date	Status
BPC 86-7701	1986-06-18	645 WINSTON CHURCHILL BLVD		NEW BUILDING	DETACHED DWELLING	1986-07-31	ISSUED PERMIT

Development Applications

Below is a listing of all Development Applications associated with the property. Development Applications are, in some cases, the pre-requisite to a Building Permit. These applications include Re-zoning, Site Plan and Official Plan Amendment. Development Application data is displayed in order of Application Date with the most recent application appearing first in the list below. If you have any questions about the development application data displayed below, please contact our Planning Division at (905) 615-3200 ext 5541.

Date Created: 2021-05-06

Property Information Report

City of Mississauga, 300 City Centre Drive, Mississauga, Ontario Canada L5B 3C1

App Number: OZ/OPA 84-66
Type: REZONING
Location: NE CORNER OF WINSTON CHURCHILL BLVD & LA
Site Address:
Description: GOODMAN, MARVIN
App Date: 1984-10-10
Status: CANCELLED APPLICATION

Committee of Adjustment Applications

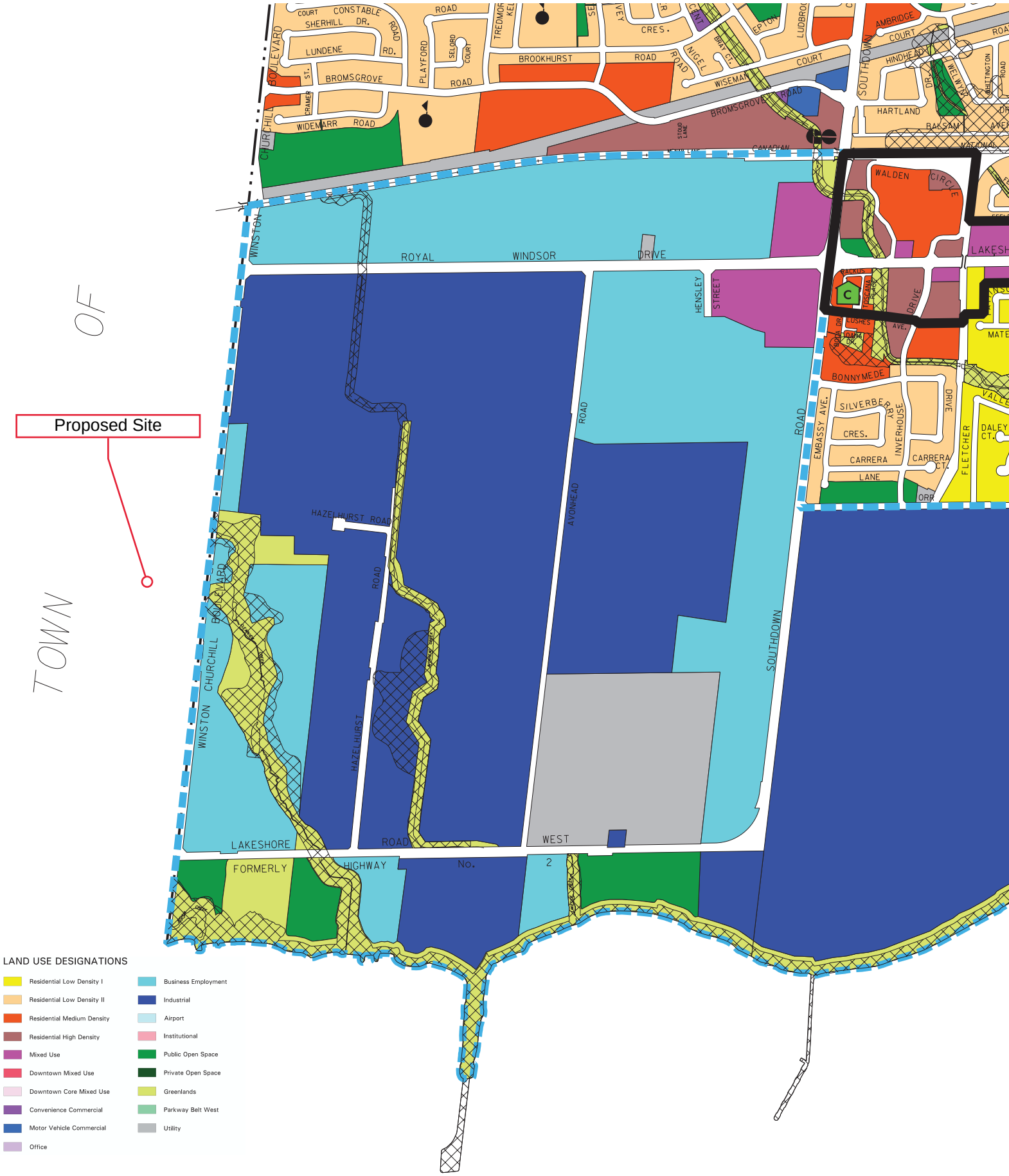
The Committee of Adjustment is authorized by the Ontario Planning Act to grant minor variances from the provisions of the Zoning By-law, to permit extensions, enlargements or variations of existing legal non-conforming uses and give consent to an owner of land who wishes to sell, convey or transfer an interest "part" of their land.

Heritage Status

Mississauga's heritage, which extends over 10,000 years, includes archaeological resources, numerous residential, commercial and industrial buildings, views, vistas, ridge lines, scenic routes and a variety of natural heritage properties. For more information, please visit www.mississauga.ca/heritage.

Status: NOT LISTED ON THE HERITAGE REGISTER
Conservation District:
Bylaw:
Bylaw Date:
Designation Statement:
Inventory Item:

Date Created: 2021-05-06



Land Use Designation Map from City of Mississauga Official Plan

APPENDIX C

Responses to Peer Review Comments

Responses to Peer Review Comments Dated April 18, 2022

1. Section 3.2 of the Noise Feasibility Study identifies four representative noise sensitive receptors for existing one-storey and two-storey residences in close proximity to the Proposed Facility. The Noise Feasibility Study identifies assessment at the receptor façades.

   As per NPC-300, a point of reception is any location on a noise sensitive land use where noise from a stationary source is received. In addition to the façades of the sensitive uses, outdoor points of reception for each residence should be assessed for non-impulsive and impulsive noise impacts. The Noise Report should be updated to consider outdoor points of reception.

   Outdoor points of reception were considered in the analysis. The table will be updated with an additional column for the OLA.

2. Section 3.2 and Tables 1 and 2 of the Noise Feasibility Study provides details on the process used to determine applicable sound level limits at the surrounding sensitive receptors based on minimum hour background sound levels due to traffic on Winston Churchill Boulevard.

   No indication was provided regarding the analysis method used in determining background sound levels (e.g., STAMSON, TNM, RLS-90, etc.). Additionally, it is unclear how the traffic counts and heavy vehicle percentage were calculated for the minimum hourly traffic volumes for Winston Churchill Boulevard.

   Stamson was used to determine background sound levels. The Stamson file was then calibrated to a line source in Cadna, at 15 m, to determine the applicable criteria at the surrounding receptors. Commercial vehicle percentages were taken from the TMC counts for the year included in the traffic impact study entitled, "Transportation Impact Study, 560 Winston Churchill Boulevard", last updated March 2021. The future site generated traffic, for both cars and heavy trucks also included in the study, were also added to the background traffic levels. Regardless, the recommendations included in our report reduced sound levels to meet the MECP minimum exclusionary criteria for R1, located in Mississauga; and meeting the Town of Oakville sound level limits for R2 to R4 which are located in Oakville.

3. Background sound levels were calculated for the daytime and evening periods combined (07:00 – 23:00), as well as nighttime (23:00 – 07:00). Compared to daytime traffic, volumes typically decrease during evening hours (19:00 – 23:00). As such, background sound levels should be calculated independently for daytime and evening periods to account for the potential decrease, and align with NPC-300.

   The calculated background daytime and evening criteria were calculated using traffic data from the 10:00 pm to 11:00 pm hour. This sound level was used for daytime and evening hours (07:00 to 23:00).

   The Noise Feasibility Study should be updated to include: details and parameters regarding the method used in determining background sound levels (as well as analysis output), further details regarding how the traffic counts and heavy vehicle percentage were calculated, and the calculation of evening (19:00 – 23:00) background sound levels.

Please see response to comment 2.

4. Section 3.2 of the Noise Feasibility Study identifies the MECP Class 1 Area exclusionary limits to be applied to the surrounding sensitive receptors. The Town of Oakville By-Law 2008-098 Section 4 provides quantitative general limitations on sound levels. Daytime and nighttime limitations are aligned with NPC-300 Class 1 limits, however evening limitations are 47 dBA/dBAI as opposed to 50 dBA/dBAI.

   The Noise Feasibility Study should be updated to consider the Oakville By-Law 2008-098 noise limitations on the surrounding sensitive uses.

   R1 is located on the east side of Winston Churchill Boulevard and part of the City of Mississauga. As a result, the sound level limits at this receptor include the NPC-300 Class 1 sound level limits. For R2 to R4 which are located on the west side of Winston Churchill Boulevard and within the Town of Oakville, the 47 dBA/dBAI evening limit has been assessed in the updated study.

5. Section 4 of the Noise Feasibility Study identifies the noise sources assessed. Back-up alarms associated with truck movements were not included in the assessment. MECP NPC-300 Noise Guidelines identifies back-up beepers as a safety device, and as such are not considered a stationary noise source. However, The Town of Oakville by-Law Number 2008-098 identifies back-up alarms mounted on vehicles when engaged in activities within a property as a stationary source.

   The Noise Feasibility Study should be updated to include the assessment of back-up alarms as a stationary noise source.

   Back up beepers have been considered in the updated report.

6. Section 4 of the Noise Feasibility Study identifies the noise sources assessed. Additional information should be provided with respect to the trucking on site, specifically the potential for reefer trucks, as well as the truck speeds.

   Reefer trucks are not expected on this site as the proposed use includes general warehousing with no grocery or food uses. The truck speeds while on site were assumed to be 10 km/h.

As requested by the Region, Dillon has reviewed the relevant material of the Noise Feasibility Study prepared for 560 Winston Churchill Boulevard and the Noise Report prepared for 772 Winston Churchill Boulevard to comment on potential cumulative noise impacts from the two proposed industrial uses on the surrounding sensitive receptors. A peer review of the Noise Report for the proposed facility at 772 Winston Churchill Boulevard is included in a separate memo.

Through reviewing the Noise Feasibility Study completed by HGC Engineering (560 Winston Churchill Boulevard) and the Noise Report completed by Jade Acoustics Inc. (772 Winston Churchill Boulevard), the surrounding sensitive receptors with the greatest potential to experience cumulative noise impacts were identified to be residential houses located at 658 Winston Churchill Boulevard and 645 Winston Churchill Boulevard.

Based on the predicted worst-case noise impacts presented in both noise assessments, there is the likelihood that both 658 Winston Churchill Boulevard and 645 Winston Churchill Boulevard would experience cumulative noise impacts. However, the worst-case cumulative impacts would likely only be a marginal exceedance of the noise criteria, less than 3 dB, which is typically imperceptible.

To fully understand the potential quantitative cumulative noise impacts from both industrial uses on the surrounding sensitive receptors, a stationary noise assessment should be completed by a Qualified Acoustic Consultant encompassing the operations of both 560 Winston Churchill Boulevard and 772 Winston Churchill Boulevard proposed facilities.

The following is a definition obtained from NPC-300 of a "Stationary source" means a source of sound or combination of sources of sound that are included and normally operated within the property lines of a facility, and includes the premises of a person as one stationary source, unless the dominant source of sound on those premises is construction.

Noise studies are prepared for individual facilities. The cumulative sound levels from separate facilities are not required by the MECP under NPC-300.