HGC ENGINEERING

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February 11, 2021

Via email to: Maurizio Rogato mrogato@blackthorncorp.ca

Atten: Su Youn Oh
Rafat General Contractors Inc.
8850 George Bolton Pkwy
Caledon, ON
L7E 2Y4
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su@rafat.ca

Re: Noise Feasibility Study, Proposed Outdoor Parking and Storage,
12423 Coleraine Drive and 0 Simpson Road
Caledon, Ontario

Dear Maurizio,

As requested, HGC Engineering has prepared this summary letter report to address the noise feasibility study for a proposed outdoor parking and storage area. The legal description of the property is Part of West Half of Lot 3 Concession 6. The site is located at 12423 Coleraine Drive and 0 Simpson Road, south of George Bolton Parkway, in Caledon, Ontario. The study is required as part of the approvals process in support of a temporary zoning by-law for the continued and current use of the lands.

The analysis is based on criteria contained in the noise guidelines of the Ministry of Environment, Conservation and Parks (MECP); an aerial photo and site visits. A computer model of the area was created using acoustic modelling software in order to predict the sound levels from truck movements in the outdoor parking and storage area to determine the impact on the nearby existing residences to the south and north along with a legal non-conforming use on the site.

The results indicate that the sound emissions of the outdoor storage and parking area can comply with the MECP criteria at the nearby residential receptors with the physical mitigation already included on the site and some further administrative controls. This report summarizes the investigation.

Site Description

The site is located on the south side of George Bolton Parkway, east of Coleraine Drive and on either side of Simpson Road. There are existing 2-storey residences (a legal non-conforming use on the site), to the south and north of the subject site. To the south and east are existing industrial and

warehousing facilities. Figure 1 represents a key plan of the area and identifies the location of the subject site. Figure 2a and 2b are site plans prepared by Fausto Cortese Architects dated 3.2.2021 for the site west of Simpson Road and east of Simpson Road. The site plan indicates access from Coleraine Drive and Simpson Road.

Purpose of the Site

The proposed site is an open storage and parking lot for industrial equipment, trailers and service vehicles. The site will have trucks/snow plows entering and exiting the lot daily. Employee parking is proposed at the northwest of the site. The site is expected to operate during the daytime hours from 7:30 am to 4:30 pm.

Existing Conditions

Site visits were completed by HGC Engineering personnel to determine the acoustic environment and make observations of the area. The acoustic environment of the site and surrounding area is best categorized as Class 1 (urban) under MECP noise assessment guidelines. Road traffic on Coleraine Road is the dominant noise source in the area with significant truck traffic. A secondary source of noise is road traffic on George Bolton Parkway.

The property located at 12423 Coleraine Drive currently incudes an existing residential dwelling, 2-storeys in height. The dwelling has an associated garage and a separate driveway.

The primary sources of sound associated with the proposed site will be arriving, departing, and idling trucks.

Currently there is no access to Simpson Road from either property.

The property is proposed to include access via Coleraine Drive and via Simpson Road. There will be no new structures added on-site. All existing structures will remain. An acoustic fence 2.4 m in height is noted along the south property line. A black fence approximately 8 feet high with screening material behind is included along Coleraine Drive, George Bolton Parkway and Simpson Road and visually screens the site.

As shown in the site plan, the site layout and parking arrangements are indicated (refer to the Site Plan on Figures 2a and 2b):
• The existing residential dwelling is occupied by the Client and is a legally non-conforming use.
• The existing building on the site is for car storage. The second building is a salt dome.
• The west end of the property is intended for the use of employee parking and entry/exit of smaller vehicles such as medium trucks.
• The Simpson Road access is intended for use of heavy vehicles such as snow plows, cement trucks and other heavy vehicles.

The Town of Caledon noise bylaw 86-110 (Item 15.) has restrictions on time and place for *The operation of any equipment in connection with construction* from 11:00 p.m. one day to 6:00 a.m. the next day. Idling of engines should not exceed a *continuous period exceeding five minutes.*

Criteria

Stationary Noise Criteria

In Ontario, the guidelines of the Ontario Ministry of the Environment and Climate Change (MECP) form the basis of environmental noise assessment. MECP publication NPC-300, *Environmental Noise Guidelines – Stationary and Transportation Sources – Approval and Planning* provides criteria for assessing the noise impact of the facility. The term Stationary Source is used to designate all noise sources at the site including truck movements and idling of engines within the site boundaries. The MECP guidelines assess the noise impact of fluctuating sounds on an hourly energy equivalent (average) sound level basis, rather than on short-duration maximum sound levels. Hourly equivalent sound levels are denoted as the $L_{EQ\text{-}1hr}$.

Stationary Source (Steady Sound)

The criteria are based on the background $L_{EQ\text{-}1hr}$ at sensitive points of reception (which are typically residences) in the quietest hour that the source can be in operation. Background sound includes sound from road traffic and natural sounds, but excludes the sources under assessment. For relatively quiet areas where background sound may fall to low levels during some hours, NPC-300 stipulates various minimum limits. In Class 1 areas, these limits are 50 dBA for daytime periods (07:00 to 23:00), and 45 dBA at night (23:00 to 07:00).

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 (within 30 m of a dwelling façade).

Based on site observations and sound level measurement, the acoustic environment in the vicinity of the site is considered urban where the background sound is dominated by road traffic and human activity, mainly during the daytime hours. NPC-300 stipulates that the exclusionary sound level limit for a stationary noise source in an urban Class 1 areas are taken to be 50 dBA during daytime and evening hours (07:00 to 23:00), and 45 dBA during nighttime hours (23:00 to 07:00) at the plane of the windows of noise sensitive spaces. 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 MECP guidelines stipulate that the sound level impact during a "predicable worst-case hour" be considered. This is defined to be an hour when a typically busy "planned and predictable mode of operation" occurs at the subject facility coincident with a period of minimal background sound. Occasional deliveries are exempt, for example, but heavy trucking at a warehouse or busy shipping/receiving docks at an industry must generally be assessed. Since this is an outdoor storage

and parking area, commercial deliveries will be on an infrequent basis using small vehicles (couriers, vans etc), if any. These are not considered significant as per MECP guidelines.

Stationary Source (Impulsive Sound)

Acceptability limits for frequently occurring sounds that are impulsive in character (such as those from coupling and decoupling of trailers or from loading and unloading of trucks) are also provided in NPC-300. The limit is determined in a similar fashion to steady sounds, based on the background sound levels at that time of day or night, and the same limits apply in this case.

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.

Sound Level Criteria at the Neighbouring Residential Receptors

Typical ambient sound levels can be determined through prediction of road traffic volumes in areas where traffic sound is dominant. Where it can be demonstrated that the hourly ambient sound levels are greater than the exclusionary minimum limits listed above, the criterion becomes the lowest predicted one-hour L_{EQ} sound level during each respective period. At locations where the ambient sound levels are low, the exclusionary minimum criteria of 50/45 apply.

Existing traffic volumes for Coleraine Drive were obtained from the Region of Peel. Since hourly data was not available for Coleraine Drive, a generic 24 hour traffic pattern was applied to the roadway. This generic pattern was developed by the US Department of Transportation, Federal Highways Administration contained in the report titled "Summary of National and Regional Travel Trends 1970 – 1995", dated May 1996. Minimum background sound levels were calculated using the basic road element included in Cadna/A, which follows the German guideline RLS-90 for road traffic noise predictions. The minimum daytime traffic volume occurs from 10 am to 11 am, the minimum nighttime traffic volume occurs from 3 am to 4 am and the minimum evening traffic volume occurs from 10 pm to 11 pm. The higher of the minimum hourly sound levels and the exclusionary minimum limits of 50/45 dBA during the daytime and nighttime hours, respectively, are detailed below in Table I.

Table I: Stationary Source Sound Level Limits at the Existing Sensitive Receptors [dBA]

Receptor	Daytime at Façade (07:00-23:00)	Nighttime at Façade (23:00-7:00)
R1 – legal non-conforming use, north façade of dwelling	62	52
R2 – existing 2-storey dwelling to the south, rear of dwelling	50	45
R3 – existing 2-storey dwelling to the north of George Bolton Parkway, south side of dwelling	60	55

As per NPC-300, movement at employee parking lots are not considered to be stationary noise

sources. Garbage collection is also not considered to be significant noise sources in the MECP guidelines. Accordingly, these sources have not been considered in this study.

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. In each case, the limits apply at any point on the residential properties, and outside the residential windows. Consequently, the most stringent receptor location is the upper-storey windows of the closest dwellings.

Stationary Source Assessment

Predictive noise modelling was used to assess the potential sound impact of truck movements and activity in the parking area at the closest residential receptors. The noise prediction model was based on measured sound emission levels for the trucks from past similar HGC Engineering projects, assumed operational profiles (during the daytime and nighttime), and established engineering methods for the prediction of outdoor sound propagation.

These source levels are listed in Table II below in terms of sound power level.

Table II: Source Sound Power Levels [dB re 10-12 W]

Source	Octave Band Centre Frequency [Hz]								
	32	63	125	250	500	1k	2k	4k	8k
Medium truck passby	--	108	90	92	90	94	91	84	77
Medium truck idling	96	91	88	88	91	90	81	70	94
Dump trucks/cement mixing trucks/snow plow passby	--	93	88	83	90	87	88	82	71
Dump trucks/cement mixing trucks/snow plow idling	91	104	101	101	99	97	94	89	81
Front end loader movement	107	114	115	110	99	107	102	97	88

The above outlined sound levels and site features were used as input to a predictive computer model. The software used for this purpose (*Cadna-A version 2021 MR1 (32 Bit) build: 185.5110*) is a computer implementation of ISO Standard 9613-2.2 "Acoustics - Attenuation of Sound During Propagation Outdoors." The ISO method accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures such as barriers or buildings.

The following information and assumptions were used in the analysis. Figure 3 indicates the noise sources.

- The existing residences are 2-storey with a second storey window height of 4.5 m above grade.
- The existing salt dome is 8.72 m high.
- the existing garage building is 6.98 m high.
- The existing acoustic fence along the south property line is 2.4 m high.
- There are no manufacturing operations on the site.
- There are no tractor trailers on site and no loading/unloading or coupling/decoupling.

The following information and assumptions were used in the analysis:

- The site typically operates from 7:30 am to 4:30 pm.

In this impact assessment, we have considered typical worst-case (busiest hour) scenarios for each time period to be as follows:

Assumed daytime hour worst-case scenario:

- 5 medium trucks could access the site from Coleraine Drive. One engine may idle for 15 minutes.
- 1 front end loader accesses the salt dome.
- 30 dump trucks/cement mixing trucks/snow plows access the site from Simpson Road. 6 engines may idle for 15 minutes.

Assumed nighttime hour worst-case scenario:

- No activities at the site.

Results

Steady Sound Levels

The calculations consider the acoustical effects of distance and shielding. The predicted sound levels due to the trucking activities (arriving and departing) at the closest neighbouring residences (R1 to R3) during a worst-case busiest hour operating scenario, are summarized in the following table. The predicted sound levels are summarized in the following table.

Table III: Predicted Steady Sound Levels (L_{EQ-1HR}) at Residential Receptors during a Worst-case Operating Scenario hour

Receptor	Criteria Day/Night (dBA)	Predicted Steady Source Sound Level (dBA) – Day/Night
R1	62 / 52	62 / --
R2	50 / 45	48 / --
R3	60 / 55	54 / --

The results of this analysis indicate that the predicted steady sound levels due to truck movements and passbys on the site will be within the MECP's limits due to elevated background sound at the residential receptors during the daytime hours with the existing mitigation on the site. Figure 4 indicates daytime sound level contours due to steady stationary noise sources.

Noise Control Recommendations and Summary

In summary, HGC Engineering has predicted the sound levels of trucks accessing the outdoor storage and parking area during the daytime hours and performed calculations to determine the potential noise impact at the neighbouring residential receptors with respect to MECP guidelines.

The results indicate that MECP guidelines can be achieved. The following administrative controls are recommended.

1) The westerly access from Coleraine should be used only for medium trucks or employee vehicles only and not heavy vehicles such as dump trucks, cement mixing trucks or snow plows to reduce the impact at the legal non-conforming use dwelling and the existing dwelling to the south.
2) The access from Simpson Road should operate as the main access for heavy vehicles such as dump trucks, cement mixing trucks or snow plows.
3) Idling of engines should be kept to a minimum (less than 5 minutes).

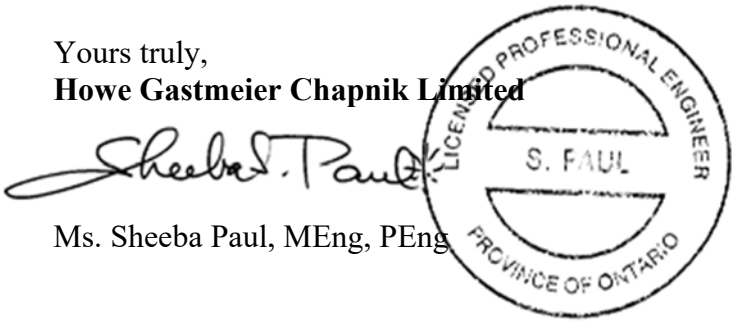
Conclusions

Assuming a typical operational scenario for the outdoor storage and parking area, the analysis indicates that the noise impact can comply with MECP criteria at the nearest façades of the existing residential buildings. The main access for heavy vehicles should be from Simpson Road. Administrative controls are also recommended. The reader is referred to previous sections of this report where the recommendations are discussed in detail.

We trust this information is sufficient for your present purposes. If you require further information or require clarification, please do not hesitate to contact us.

Thank you.

Yours truly,
Howe Gastmeier Chapnik Limited



Ms. Sheeba Paul, MEng, PEng

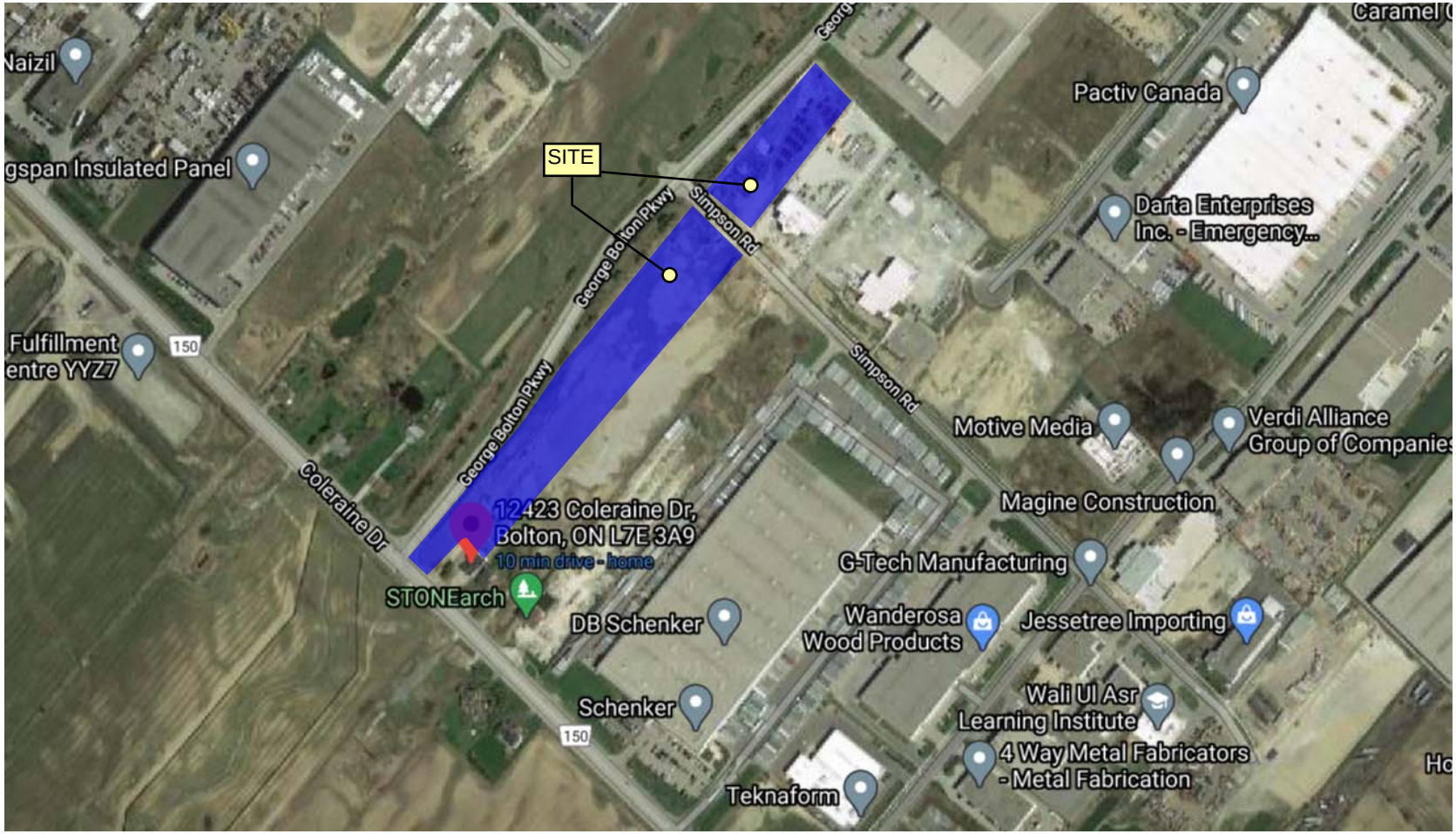
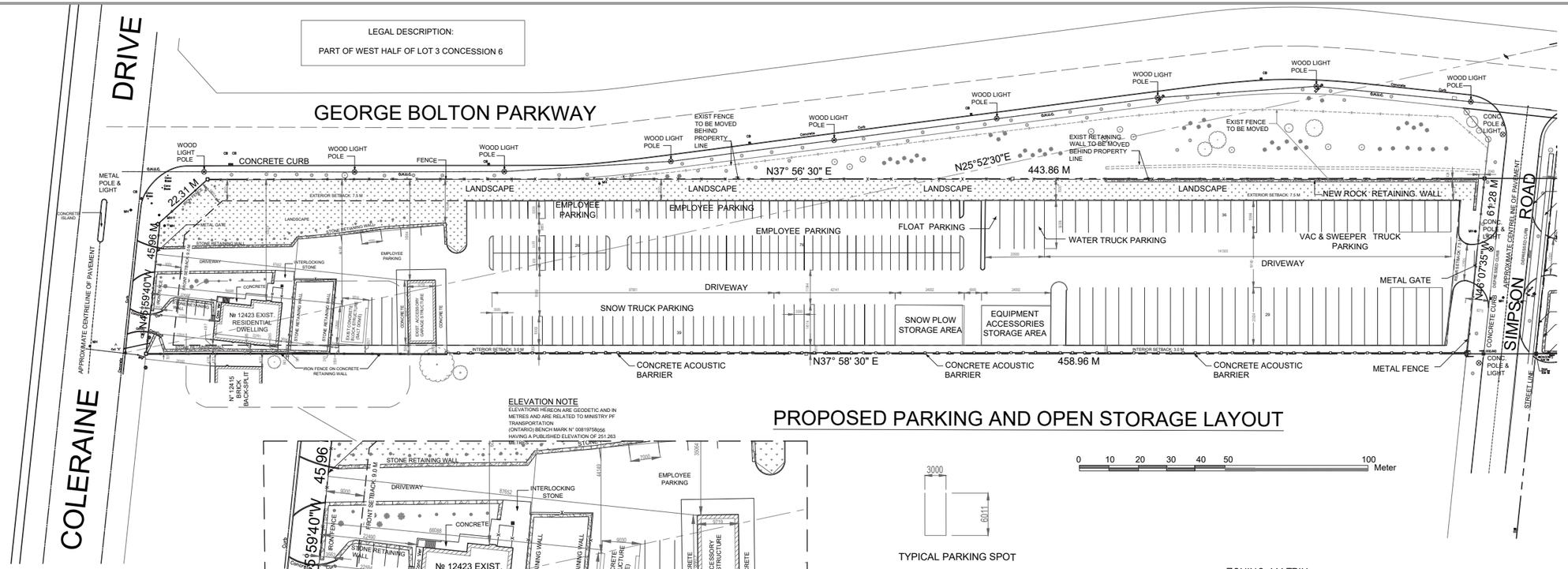


Figure 1 - Key Plan

LEGAL DESCRIPTION:

PART OF WEST HALF OF LOT 3 CONCESSION 6



ELEVATION NOTE

ELEVATIONS HEREON ARE GEODETIC AND IN METRES AND ARE RELATED TO MINISTRY PF TRANSPORTATION (ONTARIO) BENCH MARK N° 00819758056 HAVING A PUBLISHED ELEVATION OF 251.263 METRES.

PROPOSED PARKING AND OPEN STORAGE LAYOUT

0 10 20 30 40 50 100 Meter

TYPICAL PARKING SPOT

1 / A1.0 SITE PLAN

SCALE: 1:750

ZONING MATRIX

ZONING EXISTING ZONING: MP (PRESTIGE INDUSTRIAL)		PROPOSED ZONING: MP-TXX (Temporary Uses)
LOT AREA		
TOTAL LOT AREA	38,673 SQ.M	416,272.71 SQ.FT.
BUILDING AREA		
EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING		
GROUND FLOOR	309.94 SQ.M.	3336.26 SQ.FT.
SECOND FLOOR	250.24 SQ.M.	2693.52 SQ.FT.
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)		
GROUND FLOOR	209.73 SQ.M.	2257.51493 SQ.FT.
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO) CONTRACTOR'S FACILITY)		
GROUND FLOOR	117.38 SQ.M.	1263.47 SQ.FT.
CONTRACTORS FACILITY AREA	26429 SQ.M.	284479.39 SQ.FT.
OPEN STORAGE ACCESSORY (TO CONTRACTORS FACILITY)	783 SQ.M.	8428.14 SQ.FT.
TOTAL BLDG FOOTPRINT	637.05 SQ.M.	6857.15 SQ.FT.
TOTAL GFA	637.05 SQ.M.	6857.15 SQ.FT.
BUILDING HEIGHT	ALLOWED	PROVIDED
EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING	N/A	6.71 M
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)	6 M	6.98 M
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO) CONTRACTOR'S FACILITY)	6 M	8.72 M
LOT COVERAGE	ALLOWED	PROVIDED
MAXIMUM		2%
CONTRACTORS FACILITY AREA	50% MAX	40%
PARKING REQUIREMENTS	REQUIRED	PROVIDED
	69 SPOTS	383 SPOTS

SETBACKS

EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING	BY-LAW	PROVIDED
FRONT YARD	9 M	22.59 M
REAR YARD	N/A	N/A
EXTERIOR SIDE YARD	7.5 M	42.03 M
INTERIOR SIDE YARD	N/A	2.37 M
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)	BY-LAW	PROVIDED
FRONT YARD	9.5 M	87.65 M
REAR YARD	1.5 M	N/A
EXTERIOR SIDE YARD	7.5 M	35.06 M
INTERIOR SIDE YARD	1.2 M	3.57 M
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO) CONTRACTOR'S FACILITY)	BY-LAW	PROVIDED
FRONT YARD	9.5 M	66 M
REAR YARD	1.5	N/A
EXTERIOR SIDE YARD	7.5 M	44.2 M
INTERIOR SIDE YARD	1.2M	2.9 M
LANDSCAPE REQUIREMENTS	REQUIRED	PROVIDED
	10 %	16.00 %

BARN

Name of Project: PROPOSED MIXED USE DEVELOPMENT

Location: 12423 COLERAINE DRIVE TOWN OF BOLTON, ONTARIO

FCA FAUSTO CORTESE ARCHITECTS — 3590 RUTHERFORD RD. UNIT 7 VAUGHAN, ONTARIO, L4H 3T8 416-806-7600 FCORTESE@FCARCHITECTS.CA

ITEM	Ontario Building Code Data Matrix - Part 3 & 9	OBC Reference (References are to Division B unless noted [A] for Division A or [C] for Division C)	
1	Project Description: ☐ New ☐ Addition ☒ Alteration ☐ Change of Use — ☐ Part 11 11.1 to 11.4	☒ Part 3 1.1.2. [A]	☐ Part 9 1.1.2. 9.10.1.3.
2	Major Occupancy(s)	Group F1	3.1.2.1.(1)	9.10.2.
3	Building Area (m²)	EXISTING_113.43 NEW__ 0 TOTAL__113.43	1.4.1.2 [A] 1	1.4.1.2 [A]
4	Gross Area (m²)	EXISTING_113.43 NEW__ 0 TOTAL__113.43	1.4.1.2 [A]	1.4.1.2 [A]
5	Number of Storeys	Above Grade: 1	1.4.1.2 [A] & 3.2.1.1.	1.4.1.2 [A] 9.10.4.
6	Number of Streets/Fire Fighter Access: 2		3.2.2.10 & 3.2.5.	9.10.20.
7	Building Classification:	GROUP F1	3.2.2.24 & 3.2.2.54	9.10.2.
8	Sprinkler System Proposed ☐ entire building ☐ selected compartments ☐ selected floor areas ☐ basement — ☐ in lieu of roof rating ☐ not required ☒ EXISTING NO CHANGE		3.2.2.67 3.2.1.5 3.2.2.17	9.10.8.2. INDEX
9	Standpipe required	☐ Yes ☒ No	3.2.9.	N/A
10	Fire Alarm required	☐ Yes ☒ No	3.2.4.	9.10.18.
11	Water Service/Supply is Adequate	☒ Yes ☐ No	3.2.5.7.	N/A
12	High Building	☐ Yes ☒ No	3.2.6	N/A
13	Construction Restrictions ☒ Combustible Permitted ☐ Non-combustible Required ☐ Both — Actual Construction ☒ Combustible ☐ Non-combustible ☐ Both		3.2.2.71	9.10.6.
14	Second floor(s) Area (m²): N/A Third Floor Area (m²): N/A		3.2.1.1.(3)-(8)	9.10.4.1.
15	Occupant load based on ☒ m²/person ☐ design of building — Occupancy: GROUP F1 Load: 5 persons		3.1.17	9.9.1.3.
16	Barrier-free Design	☒ Yes ☐ No (Explain):	3.8	9.5.2.
17	Hazardous Substances	☐ Yes ☒ No	3.3.1.2. & 3.3.1.19	9.10.1.3.(4)
18	Required Fire Resistance Rating (FRR) — Horizontal Assemblies FRR (Hours): Floor: N/A Hours; Roof: 0 Hours — FRR of Supporting Members: Floor: N/A Hours; Roof: 0 Hours	Listed Design No. or Description (SB-3)	3.2.2.20.-83 & 3.2.1.4	9.10.8. 9.10.9.
19	Spatial Separation - Construction of Exterior Walls - Existing Building		3.2.3	9.10.14.

Wall	Area of EBF (m²)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding	Non-comb Const
North	0	35.20 m	1:10<	100 %	0 %					
South	4.26	3.80 m	1:10<	96 %	7 %					
East	7	--	1:10<	100 %	6 %					
West	7	92.08 m	1:10<	100 %	6 %					

DWELLING

Name of Project: PROPOSED MIXED USE DEVELOPMENT

Location: 12423 COLERAINE DRIVE TOWN OF BOLTON, ONTARIO

FCA FAUSTO CORTESE ARCHITECTS — 3590 RUTHERFORD RD. UNIT 7 VAUGHAN, ONTARIO, L4H 3T8 416-806-7600 FCORTESE@FCARCHITECTS.CA

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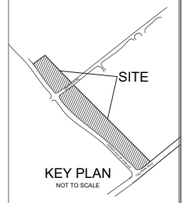
2	Major Occupancy(s)	Group A2 / D	3.1.2.1.(1)	9.10.2.
3	Building Area (m²)	EXISTING_8,122.87 NEW__ 26.9 TOTAL__8,149.77	1.4.1.2 [A] 1	1.4.1.2 [A]
4	Gross Area (m²)	EXISTING_8,122.87 NEW__ 26.9 TOTAL__8,149.77	1.4.1.2 [A]	1.4.1.2 [A]
5	Number of Storeys	Above Grade: 1	1.4.1.2 [A] & 3.2.1.1.	1.4.1.2 [A] 9.10.4.
6	Number of Streets/Fire Fighter Access: 4		3.2.2.10 & 3.2.5.	9.10.20.
7	Building Classification:	GROUP A2 / D	3.2.2.24 & 3.2.2.54	9.10.2.
8	Sprinkler System Proposed ☒ entire building ☐ selected compartments ☐ selected floor areas ☐ basement — ☐ in lieu of roof rating ☐ not required ☐ EXISTING NO CHANGE		3.2.2.67 3.2.1.5 3.2.2.17	9.10.8.2. INDEX
9	Standpipe required	☐ Yes ☒ No	3.2.9.	N/A
10	Fire Alarm required	☒ Yes ☐ No	3.2.4.	9.10.18.
11	Water Service/Supply is Adequate	☒ Yes ☐ No	3.2.5.7.	N/A
12	High Building	☐ Yes ☒ No	3.2.6	N/A
13	Construction Restrictions ☐ Combustible Permitted ☒ Non-combustible Required ☐ Both — Actual Construction ☐ Combustible ☒ Non-combustible ☐ Both		3.2.2.71	9.10.6.
14	Second floor(s) Area (m²): N/A Third Floor Area (m²): N/A		3.2.1.1.(3)-(8)	9.10.4.1.
15	Occupant load based on ☒ m²/person ☐ design of building — Occupancy: GROUP D/E Load: 1146 persons		3.1.17	9.9.1.3.
16	Barrier-free Design	☒ Yes ☐ No (Explain):	3.8	9.5.2.
17	Hazardous Substances	☐ Yes ☒ No	3.3.1.2. & 3.3.1.19	9.10.1.3.(4)
18	Required Fire Resistance Rating (FRR) — Horizontal Assemblies FRR (Hours): Floor: N/A Hours; Roof: 0 Hours — FRR of Supporting Members: Floor: N/A Hours; Roof: 0 Hours	Listed Design No. or Description (SB-3)	3.2.2.20.-83 & 3.2.1.4	9.10.8. 9.10.9.
19	Spatial Separation - Construction of Exterior Walls - Existing Building		3.2.3	9.10.14.

Wall	Area of EBF (m²)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding	Non-comb Const
North	3.9	41.99 m	1:10<	100 %	7.5 %					
South	9.9	2.42 m	1:10<	100 %	13 %					
East	10	--	1:10<	100 %	13%					
West	6	30 m	1:10<	100 %	34.50 %					

LEGEND

+179.00	PROPOSED FIN. GRADE
x179.00 OR x179.00	EXISTING GRADE
(179.00) T/C	TOP OF CURB
(179.00) C/B	TOP OF CATCH BASIN
	MAN DOOR LOCATIONS
	DRIVE-IN DR LOCATIONS
C.B.	CATCH BASIN
C.B.M.H.	CATCH BASIN MANHOLE
M.H.	SANITARY MANHOLE
M.H.	STORM SEWER MANHOLE
	FIRE HYDRANT
G	GAS
R.D.	ROOF DRAIN
	PEDESTRIAN WALKWAYS
	DENOTES FINISHED FLOOR
	DENOTES MANHOLE
	DENOTES CATCH BASIN
	DENOTES WATER VALVE
	DENOTES EXISTING GRADE ELEVATION
	DENOTES LIGHT POST
	DENOTES BOREHOLE
	STAMPED CONCRETE
	HEAVY DUTY ASPHALT
	LIGHT DUTY ASPHALT
	HEAVY DUTY ROADWAY

Figure 2a - Site Plan, West of Simpson Road



No.	DESCRIPTION / REVISIONS	DD/MM/YR
1	ISSUED FOR REVIEW	09/30/19

ISSUED FOR CONSTRUCTION

ISSUED FOR BID

ISSUED FOR BUILDING PERMIT

ISSUED FOR SITE PLAN APPROVAL DATE

SUBMITTALS

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DO NOT SCALE DRAWINGS.

FCA FAUSTO CORTESE ARCHITECTS
3590 RUTHERFORD RD. UNIT 7
VAUGHAN, ONTARIO, L4H 3T8
416-806-7600
FCORTESE@FCARCHITECTS.CA

PROJECT: 12423 COLERAINE DR TOWN OF BOLTON

DRAWING: SITE PLAN

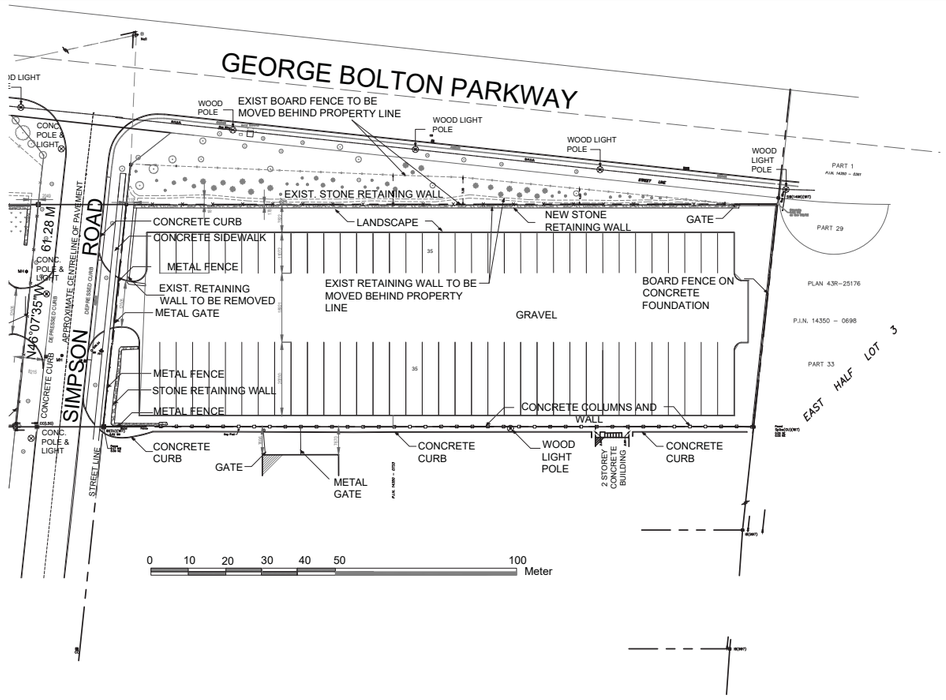
PLOTTED:

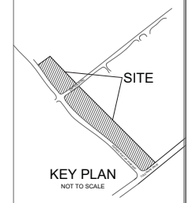
DATE: Feb 2 2021 PROJECT No: 2020-42

SCALE: AS NOTED DRAWING No: A1.0

DRAWN BY: REVIEWED BY:

PLOT SCALE: 1 FILE NAME:





1 / A1.1 SITE PLAN
SCALE: 1:750

TYPICAL PARKING SPOT

ZONING MATRIX

ZONING EXISTING ZONING: MP (PRESTIGE INDUSTRIAL)		PROPOSED ZONING: MP-TXX (Temporary Uses)
LOT AREA		
TOTAL LOT AREA	38,673 SQ.M	416,272.71 SQ.FT.
BUILDING AREA		
EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING		
GROUND FLOOR	309.94 SQ.M.	3336.26 SQ.FT.
SECOND FLOOR	250.24 SQ.M.	2693.52 SQ.FT.
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)		
GROUND FLOOR	209.73 SQ.M.	2257.51493 SQ.FT.
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO CONTRACTOR'S FACILITY)		
GROUND FLOOR	117.38 SQ.M.	1263.47 SQ.FT.
CONTRACTORS FACILITY AREA	26429 SQ.M.	284479.39 SQ.FT.
OPEN STORAGE ACCESSORY (TO CONTRACTORS FACILITY)	783 SQ.M.	8428.14 SQ.FT.
TOTAL BLDG FOOTPRINT	637.05 SQ.M.	6857.15 SQ.FT.
TOTAL GFA	637.05 SQ.M.	6857.15 SQ.FT.
BUILDING HEIGHT	ALLOWED	PROVIDED
EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING	N/A	6.71 M
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)	6 M	6.98 M
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO CONTRACTOR'S FACILITY)	6 M	8.72 M
LOT COVERAGE	ALLOWED	PROVIDED
MAXIMUM CONTRACTORS FACILITY AREA	50% MAX	2% 40%
PARKING REQUIREMENTS	REQUIRED 69 SPOTS	PROVIDED 383 SPOTS
SETBACKS		
EXISTING, LEGALLY NON-CONFORMING DETACHED DWELLING	BY-LAW	PROVIDED
FRONT YARD	9 M	22.59 M
REAR YARD	N/A	N/A
EXTERIOR SIDE YARD	7.5 M	42.03 M
INTERIOR SIDE YARD	N/A	2.37 M
EXISTING GARAGE, PRIVATE (ACCESSORY TO EXISTING SINGLE DETACHED DWELLING)	BY-LAW	PROVIDED
FRONT YARD	9.5 M	87.65 M
REAR YARD	1.5 M	N/A
EXTERIOR SIDE YARD	7.5 M	35.06 M
INTERIOR SIDE YARD	1.2 M	3.57 M
EXISTING BUILDING ACCESSORY (SALT DOME, ACCESSORY TO CONTRACTOR'S FACILITY)	BY-LAW	PROVIDED
FRONT YARD	9.5 M	66 M
REAR YARD	1.5	N/A
EXTERIOR SIDE YARD	7.5 M	44.2 M
INTERIOR SIDE YARD	1.2M	2.9 M
LANDSCAPE REQUIREMENTS	REQUIRED 10 %	PROVIDED 16.00 %

BARN

Name of Project: PROPOSED MIXED USE DEVELOPMENT
Location: 12423 COLERAINE DRIVE, TOWN OF BOLTON, ONTARIO

FCA FAUSTO CORTESE ARCHITECTS 3590 RUTHERFORD RD. UNIT 7 VAUGHAN, ONTARIO, L4H 3T8 416-806-7000 FCORTESE@FCARCHITECTS.CA

ITEM	Ontario Building Code Data Matrix - Part 3 & 9	OBC Reference (References are to Division B unless noted [A] for Division A or [C] for Division C)
1	Project Description: ☐ New ☐ Addition ☒ Change of Use ☐ Alteration ☐ Part 11 11.1 to 11.4 ☒ Part 3 1.1.2. [A] ☐ Part 9 1.1.2. 9.10.1.3.	
2	Major Occupancy(s): Group F1	3.1.2.1.(1) / 9.10.2.
3	Building Area (m^2): EXISTING_113.43 NEW__0 TOTAL__113.43	1.4.1.2 [A] 1 / 1.4.1.2 [A]
4	Gross Area (m^2): EXISTING_113.43 NEW__0 TOTAL__113.43	1.4.1.2 [A] / 1.4.1.2 [A]
5	Number of Storeys: Above Grade: 1	1.4.1.2 [A] & 3.2.1.1. / 1.4.1.2 [A] 9.10.4.
6	Number of Streets/Fire Fighter Access: 2	3.2.2.10 & 3.2.5. / 9.10.20.
7	Building Classification: GROUP F1	3.2.2.24 & 3.2.2.54 / 9.10.2.
8	Sprinkler System Proposed: ☐ entire building ☐ selected compartments ☐ selected floor areas ☐ basement ☐ in lieu of roof rating ☐ not required ☒ EXISTING NO CHANGE	3.2.2.67 / 3.2.1.5 / 3.2.2.17 / 9.10.8.2. INDEX
9	Standpipe required: ☐ Yes ☒ No	3.2.9. / N/A
10	Fire Alarm required: ☐ Yes ☒ No	3.2.4. / 9.10.18.
11	Water Service/Supply is Adequate: ☒ Yes ☐ No	3.2.5.7. / N/A
12	High Building: ☐ Yes ☒ No	3.2.6 / N/A
13	Construction Restrictions: ☒ Combustible Permitted ☐ Non-combustible Required ☐ Both. Actual Construction: ☒ Combustible ☐ Non-combustible ☐ Both	3.2.2.71 / 9.10.6.
14	Second floor(s) Area (m^2): N/A Third Floor Area (m^2): N/A	3.2.1.1.(3)-(8) / 9.10.4.1.
15	Occupant load based on ☒ m^2/person ☐ design of building. Occupancy: GROUP F1 Load: 5 persons	3.1.17 / 9.9.1.3.
16	Barrier-free Design: ☒ Yes ☐ No (Explain):	3.8 / 9.5.2.
17	Hazardous Substances: ☐ Yes ☒ No	3.3.1.2. & 3.3.1.19 / 9.10.1.3.(4)
18	Required Fire Resistance Rating (FRR): Horizontal Assemblies FRR (Hours) — Floor: N/A Hours; Roof: 0 Hours. Listed Design No. or Description (SB-3). FRR of Supporting Members — Floor: N/A Hours; Roof: 0 Hours. Listed Design No. or Description (SB-3).	3.2.2.20.-83 & 3.2.1.4 / 9.10.8. 9.10.9.
19	Spatial Separation - Construction of Exterior Walls - Existing Building	3.2.3 / 9.10.14.

Wall	Area of EBF (m^2)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding	Non-comb Const
North	0	35.20 m	1:10<	100 %	0 %					
South	4.26	3.80 m	1:10<	96 %	7 %					
East	7	–	1:10<	100 %	6 %					
West	7	92.08 m	1:10<	100 %	6 %					

DWELLING

Name of Project: PROPOSED MIXED USE DEVELOPMENT
Location: 12423 COLERAINE DRIVE, TOWN OF BOLTON, ONTARIO

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1	Project Description: ☐ New ☐ Addition ☒ Alteration ☐ Change of Use ☐ Part 11 11.1 to 11.4 ☒ Part 3 1.1.2. [A] ☐ Part 9 1.1.2. 9.10.1.3.	
2	Major Occupancy(s): Group A2 / D	3.1.2.1.(1) / 9.10.2.
3	Building Area (m^2): EXISTING_8,122.87 NEW__26.9 TOTAL__8,149.77	1.4.1.2 [A] 1 / 1.4.1.2 [A]
4	Gross Area (m^2): EXISTING_8,122.87 NEW__26.9 TOTAL__8,149.77	1.4.1.2 [A] / 1.4.1.2 [A]
5	Number of Storeys: Above Grade: 1	1.4.1.2 [A] & 3.2.1.1. / 1.4.1.2 [A] 9.10.4.
6	Number of Streets/Fire Fighter Access: 4	3.2.2.10 & 3.2.5. / 9.10.20.
7	Building Classification: GROUP A2 / D	3.2.2.24 & 3.2.2.54 / 9.10.2.
8	Sprinkler System Proposed: ☒ entire building ☐ selected compartments ☐ selected floor areas ☐ basement ☐ in lieu of roof rating ☐ not required ☐ EXISTING NO CHANGE	3.2.2.67 / 3.2.1.5 / 3.2.2.17 / 9.10.8.2. INDEX
9	Standpipe required: ☐ Yes ☒ No	3.2.9. / N/A
10	Fire Alarm required: ☒ Yes ☐ No	3.2.4. / 9.10.18.
11	Water Service/Supply is Adequate: ☒ Yes ☐ No	3.2.5.7. / N/A
12	High Building: ☐ Yes ☒ No	3.2.6 / N/A
13	Construction Restrictions: ☐ Combustible Permitted ☒ Non-combustible Required ☐ Both. Actual Construction: ☐ Combustible ☒ Non-combustible ☐ Both	3.2.2.71 / 9.10.6.
14	Second floor(s) Area (m^2): N/A Third Floor Area (m^2): N/A	3.2.1.1.(3)-(8) / 9.10.4.1.
15	Occupant load based on ☒ m^2/person ☐ design of building. Occupancy: GROUP D/E Load: 1146 persons	3.1.17 / 9.9.1.3.
16	Barrier-free Design: ☒ Yes ☐ No (Explain):	3.8 / 9.5.2.
17	Hazardous Substances: ☐ Yes ☒ No	3.3.1.2. & 3.3.1.19 / 9.10.1.3.(4)
18	Required Fire Resistance Rating (FRR): Horizontal Assemblies FRR (Hours) — Floor: N/A Hours; Roof: 0 Hours. Listed Design No. or Description (SB-3). FRR of Supporting Members — Floor: N/A Hours; Roof: 0 Hours. Listed Design No. or Description (SB-3).	3.2.2.20.-83 & 3.2.1.4 / 9.10.8. 9.10.9.
19	Spatial Separation - Construction of Exterior Walls - Existing Building	3.2.3 / 9.10.14.

Wall	Area of EBF (m^2)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding	Non-comb Const
North	3.9	41.99 m	1:10<	100 %	7.5 %					
South	9.9	2.42 m	1:10<	100 %	13 %					
East	10	–	1:10<	100 %	13%					
West	6	30 m	1:10<	100 %	34.50 %					

LEGEND

+179.00	PROPOSED FIN. GRADE
179.00 OR x179.00	EXISTING GRADE
(179.00) T/C	TOP OF CURB
(179.00) C/B	TOP OF CATCH BASIN
	MAN DOOR LOCATIONS
	DRIVE-IN DR LOCATIONS
C.B.	CATCH BASIN
C.B.M.H.	CATCH BASIN MANHOLE
M.H.	SANITARY MANHOLE
M.H.	STORM SEWER MANHOLE
	FIRE HYDRANT
G	GAS
R.D.	ROOF DRAIN
	PEDESTRIAN WALKWAYS
	DENOTES FINISHED FLOOR
MH	DENOTES MANHOLE
CB	DENOTES CATCH BASIN
WV	DENOTES WATER VALVE
	DENOTES EXISTING GRADE ELEVATION
	DENOTES LIGHT POST
	DENOTES BOREHOLE
	STAMPED CONRETE
	HEAVY DUTY ASPHALT
	LIGHT DUTY ASPHALT
	HEAVY DUTY ROADWAY

Figure 2b - Site Plan, East of Simpson Road

No.	DESCRIPTION	DATE
1	ISSUED FOR REVIEW	09/30/19
	REVISIONS	
	ISSUED FOR CONSTRUCTION	
	ISSUED FOR BID	
	ISSUED FOR BUILDING PERMIT	
	ISSUED FOR SITE PLAN APPROVAL	DATE
	SUBMITTALS	

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PROJECT: 0 Simpson Rd, TOWN OF BOLTON

DRAWING: SITE PLAN

PLOTTED:
DATE: Feb 2 2021
SCALE: AS NOTED
DRAWN BY:
REVIEWED BY:
PROJECT No. 2020-42
DRAWING No. A1.0

PLOT SCALE: 1:1
FILENAME:

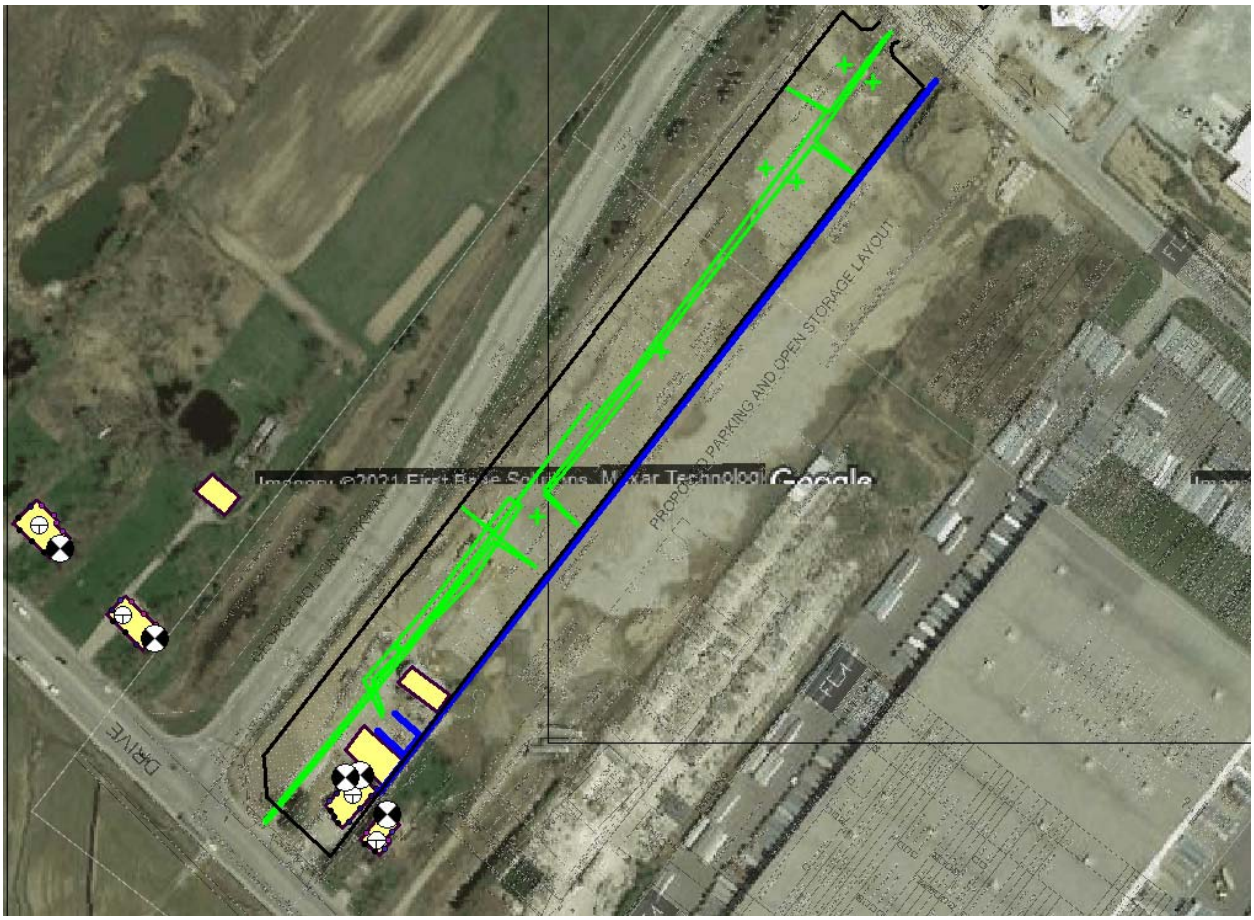

Figure 3 - Noise Sources on Site

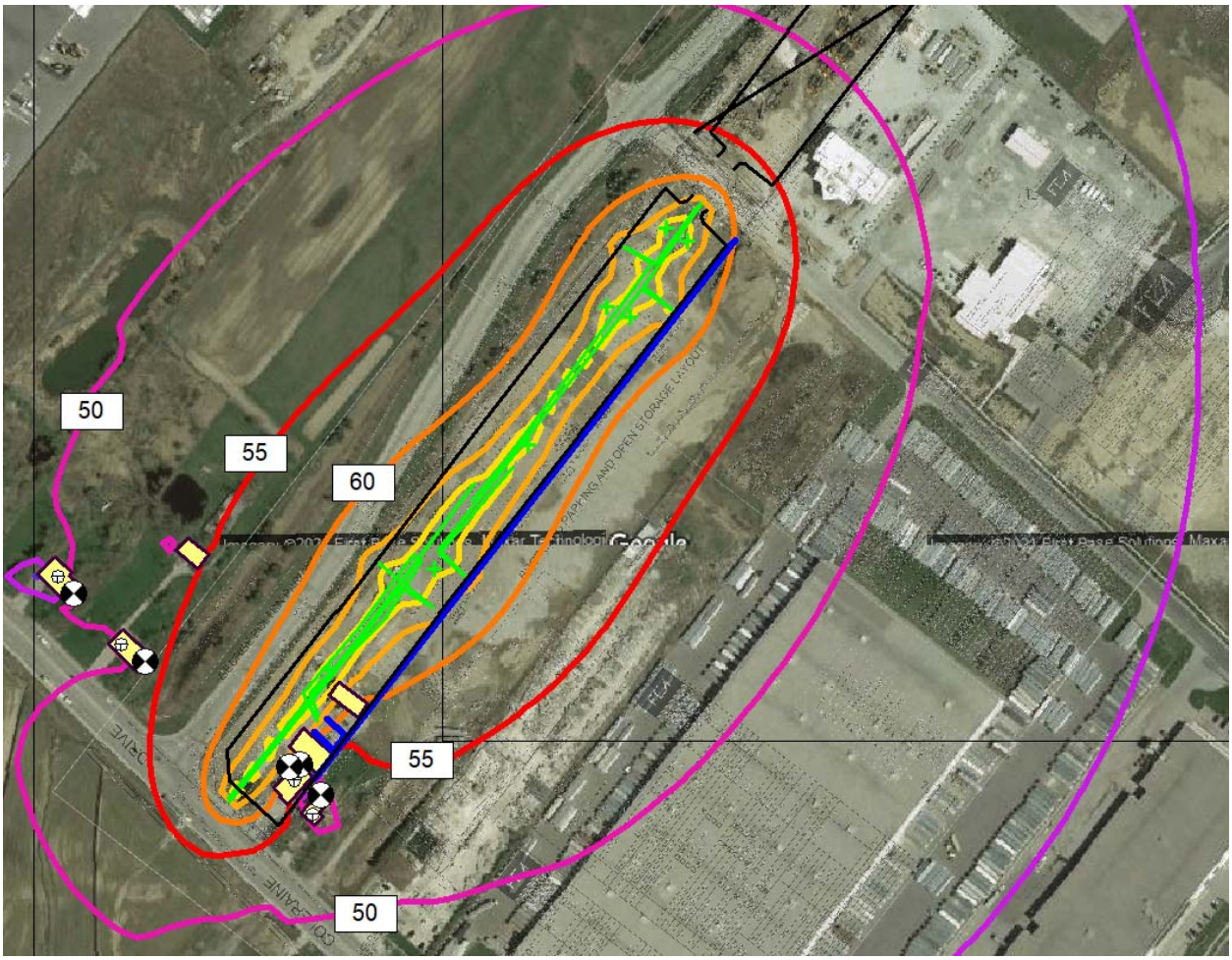

Figure 4 - Daytime Sound Level Contours At 4.5 m height