HGC ENGINEERING

Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203
Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044

Noise Feasibility Study
Proposed Residential Development
VIC 2 Condominiums, 150 Rutledge Road
City of Mississauga (Streetsville), Ontario

Prepared for:

Forest Green Homes
5332 Highway 7
Vaughan, Ontario
L4L 1T3

Prepared by

Sheeba Paul, MEng, PEng

March 13, 2023

Table of Contents

1 Introduction and Summary

HGC Engineering was retained by Forest Green Homes to conduct a noise feasibility study for their proposed 10-storey residential condominium development to be located at 150 Rutledge Road in The Village of Streetsville, City of Mississauga, Ontario. There is a Canadian Pacific (CP) railway line located to the east of the site. The study is required by the municipality as part of their planning and approvals process, specifically for OPA and ZBA.

Rail traffic data was obtained from HGC Engineering project files for other projects in the area, originally obtained from GO Transit (GO) and Canadian Pacific (CP) railway personnel. Road traffic data for the nearby roadways was obtained from the City of Mississauga. The data was used to predict future traffic sound levels at the locations of the proposed dwelling façades. The predicted sound levels were compared to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP), CP/GO Transit and the municipality.

The sound level predictions indicate that the future rail and road traffic sound levels will exceed MECP guidelines at the proposed building. Physical mitigation in the form of noise barriers is not required for the development. Air conditioning will be required for the proposed building. Brick veneer or a masonry equivalent exterior wall construction is required for the facades of the building with exposure to the railway. Upgraded glazing constructions are required for the proposed building. Warning clauses are recommended to inform future residents of the traffic noise impacts and the nearby commercial uses.

The site is located within 75 m from the railway right of way. Vibration measurements have been completed for this site in the past. Past vibration measurements at 150 Rutledge Road and 51 Tannery Street indicates vibration levels are below the limits. Vibration mitigation is not required for this residential development.

A commercial building is located to the east of the railway right-of-way and the potential noise impacts from stationary noise sources have been evaluated. A computer model of the area was created, using acoustical modelling software, in order to predict the sound levels at the closest façades of the proposed development. The results indicate that the sound emissions of the existing commercial site are expected to be within the applicable noise guideline limits of the MECP at the

nearest façades of the proposed development. Noise mitigation will not be required for the commercial site or at the development site. The results are summarized in this report.

Warning clauses are recommended to inform future residents of the traffic noise impacts and the nearby commercial uses.

2 Site Description

Figure 1 is a key plan showing the location of the site. The site is located at 150 Rutledge Road in the City of Mississauga (Streetsville), Ontario. Figure 2 is a proposed site plan prepared by Global Architects dated 2023/01/27 showing the prediction locations. Appendix D includes the preliminary floor plans and a 3D rendering.

The proposed residential development will include a 10-storey residential building with two levels of underground parking. A site visit was made by HGC Engineering personnel in January 2023 to make observations of the acoustical environment. During the site visit, it was observed that the railway is the dominant source of noise. Tannery Street, Joymar Drive, and Queen Street South are secondary sources of noise and have been included in the analysis.

The railway is located to the east of the site. An existing 6-storey retirement building is located to the south of the site. The closest building façade is within 75 m from the railway right-of-way. Vibration measurements have been conducted in the past for the subject site, the existing retirement building and the property to the south at 51 Tannery street and were found to be within the vibration criteria and vibration mitigation is not required for the subject site. Lands to the north, west and south are primarily residential. To the southeast, a residential development is proposed, specifically at 180 Rutledge Road. Further to the west is the Streetsville Secondary School. On the east side of the railway is a commercial site that includes stores such as Shoppers Drug Mart, LCBO, Medical Clinic, Bowling, Scotiabank and some small automotive uses. An assessment of the commercial plaza is provided in Section 7. A noise warning clause is recommended in Section 6. There are no other significant sources of stationary noise within 500 m of the subject site.

3 Criteria for Acceptable Sound Levels

Guidelines for acceptable levels of road and rail traffic noise impacting residential developments are outlined in the MECP publication NPC-300 "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning", Part C release date October 21, 2013 and are listed in Table 1 below. The values in Table 1 are energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels [dBA]. The Federation of Canadian Municipalities (FCM) and Railway Association of Canada (RAC) "Guidelines for New Development in Proximity to Railway Operations", dated May 2013 (RAC/FCM guidelines were also reviewed dated November 2006).

Table 1: Road and Rail Traffic Noise Criteria

	Daytime $L_{EQ(16\ hour)}$ Road / Rail	**Nighttime $L_{EQ(8\ hour)}$ Road / Rail**
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA / 40 dBA	45 dBA / 40 dBA
Inside Bedrooms	45 dBA / 40 dBA	40 dBA / 35 dBA

These criteria apply to road and rail traffic operating on railway rights of way, vehicular traffic, including intercity transit busses operating on Municipal Streets. Daytime refers to the period between 07:00 and 23:00, while nighttime refers to the period between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, a backyard, a terrace or other area where passive recreation is expected to occur. Balconies that are less than 4 m in depth are not considered to be outdoor living areas under MECP guidelines.

The guidelines in the MECP publication allow the sound level in an OLA to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the property and tenancy agreements and offers of purchase and sale. Where OLA sound levels exceed 60 dBA, physical mitigation is required to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible.

Indoor guidelines are 5 dBA more stringent for rail noise than for road noise, to account for the low frequency (rumbling) character of locomotive sound, and its greater potential to transmit through exterior wall/window assemblies. A central air conditioning system as an alternative means of

ventilation to open windows is required for dwellings where future nighttime sound levels outside bedroom/living/dining room windows will exceed 60 dBA and future daytime sound levels exceed 65 dBA. The provision for the future installation of central air conditioning is required when nighttime sound levels at the façade are in the range of 51 to 60 dBA or when daytime sound levels at the façade are in the range of 56 to 65 dBA. Sound attenuating building constructions and the use of warning clauses to notify future residents of possible excesses are also required when nighttime sound levels exceed 55 dBA at the façade due to rail traffic noise and exceed 60 dBA at the façade due to road traffic noise.

Warning clauses to notify future residents of possible excesses are also required when nighttime sound levels exceed 50 dBA at the façade and daytime sound levels exceed 55 dBA in the outdoor living area and at the façade due to road and rail traffic.

MECP guidelines recommend brick veneer or a masonry equivalent construction for the exterior walls from foundation to rafters as a minimum construction for any dwellings which are within 100 m of the right of way of the railway, where the 24-hour L_{EQ} is greater than 60 dBA. CP typically requires brick for the first row of dwellings regardless of setback and sound level.

The railways also provide minimum requirements for safety as well as sound and vibration for proposed residential developments located adjacent to their rights-of-way. These refer to minimum required setbacks, berms, fencing and warning clauses. The reader is referred to a copy of CP requirements for a new development adjacent to a principal main line, which is located in Appendix A.

3.1 Criteria Governing Stationary (Industrial) Noise Sources

An industrial or commercial facility is classified in MECP guidelines as a stationary source of sound (as compared to sources such as traffic or construction, for example) for noise assessment purposes. In terms of background sound, the development is located in an urban (Class 1) acoustical environment which is characterized by an acoustical environment dominated by traffic and human activity.

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 minimum sound level limit for a stationary noise source in an urban Class 1 area is 50 dBA during daytime (07:00 to 19:00) and evening (19:00 to 23:00) hours, and 45 dBA during nighttime hours (23:00 to 07:00). If the background sound levels due to road traffic exceed the exclusionary minimum limits, then the background sound level becomes the criterion. The background sound level is defined as the sound level that is present when the source under consideration is not operating, and may include traffic noise and natural sounds. To ensure a conservative analysis the exclusionary minimum criteria at all receptors will be adopted.

Commercial activities such as the occasional movement of customer vehicles, occasional deliveries, 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. Noise from safety equipment (e.g. back-up beepers) is also exempt from consideration. Frequent truck movements at a warehouse or busy shipping/receiving docks at an industry must generally be assessed. Trucking activities have been included in this assessment as observed during the site visits.

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

4 Traffic Assessment

4.1 Rail Traffic Data

Rail traffic data for typical operations of the railway was obtained from HGC Engineering project files, originally from CP and from Metrolinx personnel and are provided in Appendix B. The rail data was confirmed to be current by referencing a list of at grade crossings on the Government of Canada's Open Data Portal generated by Transport Canada from March 2021. The Galt Subdivision is used for freight and passenger operations. The maximum train speed of 80 kph (50 mph) for freight trains and GO trains was used in the analysis. In conformance with CP railway assessment

requirements, these maximum speeds, number of cars and maximum locomotives per train were used in the traffic noise analysis to yield a worst case estimate of train noise. The data was projected to the year 2033 using a 2.5% per year growth rate. Table 2 summarises the rail traffic data used in the analysis.

Table 2: Rail Traffic Data Projected to Year 2033

Type of Train	Number of Trains Day/ Night	Number of locomotives	Number of cars	Max Speed (KPH)
Freight ***projected***	16 / 17	4	163	80
GO ***forecasted***	38 / 6	1	12	80

Note: +Diesel locomotives have been used in predictions as per the direction from Metrolinx

4.2 Road Traffic Data

Traffic data for Tannery Street, Joymar Drive, Queen Street, Rutledge and Emby drive was obtained from the City of Mississauga in the form of ultimate AADT, and is provided in Appendix B.

A commercial vehicle percentage of 3% was assumed and split into 1.35% heavy trucks and 1.65% medium trucks. A day/night split of 90%/10% was used. The speed limit is 50 km/h provided in the data and this was used in the analysis for Tannery Street, Joymar Drive and Queen Street.

Traffic data for Emby Drive and Rutledge Road was obtained from the City of Mississauga in the form of ultimate AADT, and is provided in Appendix B. The traffic volumes for these two roadways are very low and therefore has not been included in the analysis. Table 3 indicates the data used in the noise analysis.

Table 3: Ultimate Road Traffic Data

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Tannery Street	Daytime	4 365	74	61	4 500
	Nighttime	485	8	7	500
	Total	**4 850**	**83**	**68**	**5 000**
Queen St S (between Main St and Thomas Street)	Daytime	12 222	208	170	12 600
	Nighttime	1 358	23	19	1 400
	Total	**13 580**	**231**	**189**	**14 000**
Joymar Drive	Daytime	4 410	50	41	4 500
	Nighttime	490	6	5	500
	Total	**4 900**	**55**	**45**	**5 000**

Note: +Emby Drive and Rutledge Road are less than 1000 vehicles and considered to be a low volume roadway.

4.3 Road and Rail Traffic Noise Predictions

To assess the levels of road and rail traffic noise which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04. A sample STAMSON output is included in Appendix C. Train whistle has not been included in the analysis since there is an anti-whistling by-law in effect at Ontario Street, Tannery Street, Thomas Street and Mississauga Road at-grade crossings.

Sound levels were predicted at the plane of the top storey bedroom and/or living/dining room windows during daytime and nighttime hours to investigate ventilation requirements. Prediction locations were chosen around the residential building to obtain a representation of the future sound levels as shown in Figure 2. The results of these predictions are summarized in Table 4.

The distance setbacks of the building indicated on the site plan were used in the analysis, along with an aerial photo to determine the distance of the building to the railway and roadways. The acoustic recommendations may be subject to modifications if the site plan is changed significantly.

Table 4: Future Traffic Sound Levels, [dBA], Without Mitigation

Prediction Location	Description	Daytime at Façade $L_{EQ-16\ hr}$	Nighttime at Façade $L_{EQ-8\ hr}$
[A]	East façade	74	76
[B]	North façade	70	73
[C]	South façade	70	73
[D]	West façade	67	69
[E]	Ground level common outdoor amenity area, west side of building	<55	NA

5 Traffic Noise Recommendations

With no mitigation, there are sound level excesses at the facades of the proposed dwellings with exposure to the railway line and roadways. Recommendations to meet MECP and CP railway guidelines are described.

5.1 Outdoor Living Areas

The dwelling units in the proposed residential building indicate balconies that are less than 4 m in depth. Balconies less than 4 m in depth are not considered to be outdoor living areas under the MECP guidelines, and therefore are exempt from traffic noise assessment.

There are no ground floor patios indicated on the site plan or the ground floor plan. Regardless, these areas are not considered as outdoor amenity areas and do not require noise assessment.

There is a common outdoor amenity area indicated on the west side of the building at the ground floor. This area is well shielded by the building itself. Predicted sound levels are expected to be 55 dBA or less and further mitigation is not required.

There are no other identified outdoor living areas on the plans provided.

5.2 Indoor Living Areas

Central Air Conditioning

The predicted sound levels outside the plane of the top storey bedroom/living/dining room windows of the proposed building with exposure to the railway and roadways will be greater than 60 dBA during nighttime hours. Central air conditioning systems are required for the building so that windows may remain closed. The guidelines also recommend warning clauses for these units. The location, installation and sound ratings of the outdoor air conditioning devices should minimize noise impacts and comply with criteria of MECP publication NPC-300, as applicable. Acceptable units are those housed in their own closest with an access door for maintenance.

5.3 Building Façade Constructions

Future traffic sound levels at the façades of the closest dwelling units with exposure to the railway and roadways will exceed 60 dBA during the day and 55 dBA at night. MECP guidelines recommend that the windows and walls be designed so that the indoor sound levels comply with MECP noise criteria.

5.3.1 Exterior Wall Construction

According to MECP and CP railway guidelines, the building will require brick veneer or a masonry equivalent construction for exterior walls from foundations to rafters.

5.3.2 Glazing Construction

The detailed floor plans and building elevation drawings were not yet available at the time of this report. Calculations have been performed to determine the building envelope constructions required to maintain indoor sound levels within MECP guidelines.

Assuming a typical window to floor area of 35% (25% fixed and 10% operable) for the living/dining rooms and 15% (10% fixed and 5% operable) for the bedrooms in the building, the minimum acoustical requirement for the basic window glazing, including glass in fixed sections, swing or sliding doors, and operable windows, is provided in Table 5. For an urban environment such as this, a minimum STC rating of 33 is recommended for all windows to noise sensitive spaces such as bedrooms and living/dining rooms.

Table 5: Minimum Preliminary STC Requirements

Prediction Location	Description	Space	Glazing STC*
[A]	East Façade	Living/Dining	STC-39
		Bedroom	STC-42
[B]	North Façade	Living/Dining	STC-35
		Bedroom	STC-39
[C]	South Facade	Living/Dining	STC-35
		Bedroom	STC-39
[D]	West Facade	Living/Dining	STC-33
		Bedroom	STC-35

The results indicate that the east façade facing the railway line has significant glazing requirements especially for the bedrooms. It is recommended that bedrooms do not include sliding patio doors and windows areas relative to the floor areas should be kept small, that is, to a maximum of 15% (10% fixed and 5% operable).

Sample window assemblies which may achieve the STC requirements are summarized in Table 6 below. Note that acoustic performance varies with manufacturer's construction details, and these are only guidelines to provide some indication of the type of glazing likely to be required. Acoustical test data for the selected assemblies should be requested from the supplier, to ensure that the stated acoustic performance levels will be achieved by their assemblies.

Table 6: Window Constructions Satisfying STC Requirements

STC Requirement	Sample Glazing Configuration (STC)
28 – 29	Any double glazed unit
30 – 31	3(13)3
32 – 33	4(10)4
34	4(19)4
35 – 36	6(10)4, 5(16)4
37	6(13)4, 6(20)5
38	6(25)5, 6L(13)6
39	6L(13)6, 6(20)5
40	6L(24)6L, 7L(12)6, 6(25)8 (Awning window)
42	6(25)10L

In Table 6, the numbers outside the parentheses indicate minimum pane thicknesses in millimetres and the number in parentheses indicates the minimum inter-pane gap in millimetres. OBC indicates any glazing construction meeting the minimum requirements of the Ontario Building Code.

Operable sections include sliding glass doors and operable windows, and provided that they include a good seal, will not significantly affect overall performance. Operable windows and sliding glass doors must be well-fitted and weather-stripped.

Further Analysis

When detailed floor plans and elevations are available for the building, the required glazing constructions should be refined based on actual window to floor area ratios and the exterior wall should be verified to be a brick veneer or a masonry equivalent construction.

6 Warning Clauses

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements for all units with anticipated traffic sound level excess. Examples are provided below.

Suggested wording for buildings with sound level excesses the MECP criteria is given below:

Type A:

> Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road and rail traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the noise criteria of the Municipality and the Ministry of the Environment, Conservation and Parks.

A suggested wording for future dwellings requiring central air conditioning systems is given below.

Type B:

> This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.

Suggested wording for dwelling units near existing commercial facilities is as follows:

Type C:

> Purchasers/tenants are advised that due to the proximity of the adjacent existing commercial uses, noise from these facilities at times be audible.

These sample clauses are provided by the MECP as examples, and can be modified by the Municipality as required.

CP's standard warning clause for residential developments located near a principal branch line is provided below. The following sample clause is typical of those included in agreements of purchase and sale or lease on the Lands that are within 300 meters of the railway right-of-way.

Type D:

> Warning: Canadian Pacific Railways Company or its assigns or successors in interest has or have a right-of-way within 300 meters from the land subject hereof. There may be alteration

> to or expansions of the railway facilities on such rights-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings. CPR will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid rights-of-way.

GO Transit's standard warning clause for residential developments located within 300 m of a railway right-of-way (principal main line) is given below.

Type E:

> Warning: Metrolinx, carrying on business as GO Transit, and its assigns and successors in interest are the owners of lands within 300 metres from the land which is the subject hereof. In addition to the current use of the lands owned by Metrolinx, there may be alterations to or expansions of the rail and other facilities on such lands in the future including the possibility that GO Transit or any railway entering into an agreement with GO Transit to use the Metrolinx lands or Metrolinx and their respective assigns or successors as aforesaid may expand their operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings. Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under its lands.

7 Stationary Source Assessment

Predictive noise modelling was used to assess the sound impact of the commercial building to the east of the proposed residential building on the opposite side of the railway right-of-way, at the most potentially impacted façades, in accordance with MECP guidelines. The noise prediction model was based on a review of the proposed site plan, aerial photos, 3D rendering of the building, estimates of sound emission levels for mechanical equipment for the commercial building, assumed operational profiles, and established engineering methods for the prediction of outdoor sound propagation. These methods include the effects of distance, air absorption, and acoustical screening by barrier obstacles.

As observed on the site visits, there are no significant noise sources associated with the commercial building beyond the rooftop mechanical equipment. A truck delivery was included for the Shopper's Drug Mart, even through, there is no loading dock. Lennox KGA036 models (3 Tons) were assumed for the rooftop air conditioning units on the commercial building. This analysis considers multiple

rooftop units on the existing building as indicated on the aerial image.

The source level associated with the rooftop mechanical equipment is listed in Table 7 below in terms of sound power level.

Table 7: Source Sound Power Levels [dB re 10-12 W]

HVAC Unit	Octave Band Centre Frequency [Hz]							
	63	125	250	500	1k	2k	4k	8k
Lennox KGA036 (3 Tons)	--	63	66	70	71	68	62	53
Idling tractor trailer engine	96	91	88	88	91	90	91	70
Idling reefer unit	112	105	96	95	93	91	85	77
Tractor trailer passby	101	100	94	96	97	95	91	86

The above outlined sound levels were used as input to a predictive computer model. The software used for this purpose (*Cadna-A version 2022, (32 bit) build: 189.5221)* 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, and ground attenuation.

The following information and assumptions were used in the analysis.

- The height of the existing commercial building was assumed to be 4.0 m.
- The noise sources were assumed to be located as shown in Appendix D. The green crosses represent rooftop HVAC equipment. The rooftop equipment was assumed to be Lennox models, 1.2 m in height. Sound data was obtained from HGC project files which were originally from the manufacturer. Based on the size of the building it is assumed that 3 Ton units are on the roof.
- One tractor trailer was assumed to deliver to the Shopper's Drug Mart.

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

Assumed day worst-case scenario:

- All rooftop equipment operating on a 50% duty cycle.
- One tractor trailer with a reefer unit delivers to Shopper's Drug Mart.

Assumed night worst-case scenario:

- All rooftop equipment operating on a 25% duty cycle.
- No deliveries.

7.1 Results

The calculations consider the acoustical effects of distance and shielding by the buildings. The unmitigated sound levels due to noise sources associated with the existing commercial building at the façades of the proposed development are summarized in Table 8.

Table 8: Predicted Sound Levels from the Existing Commercial Site on the Proposed Residential Building Addition [dBA]

	Daytime (07:00 – 23:00)	Nighttime (23:00 – 07:00)	Criteria (Daytime / Nighttime)
East Façade	48	<35	50 / 45

The results of the calculations indicate that the predicted sound levels due to the operation of the rooftop mechanical equipment at the existing commercial building are expected to be within MECP limits at the façades of the proposed residential building during a worst case operational scenario. Mitigation is not required at the residential building or at the existing commercial building.

8 Impact of the Development on the Environment

It is expected that any increase in local traffic associated with the development will not be substantial enough to affect noise levels significantly.

Sound levels from noise sources such as rooftop air-conditioners, cooling towers, exhaust fans, etc. should not exceed the minimum one-hour L_{EQ} ambient (background) sound level from road traffic, at any potentially impacted residential point of reception. Based on the levels observed during our site visit, the typical minimum ambient sound levels in the area are expected to be above the minimum exclusionary limits of 50 dBA or more during the day and 45 dBA or more at night. Thus, any electro-mechanical equipment associated with this development (e.g. emergency generator testing, fresh-air handling equipment, etc.) should be designed such that they do not result in noise impact beyond these ranges. At the time of this study, the design of the proposed residential building was in its initial stages, and the mechanical systems had not yet been developed.

The details of the exhaust fans and mechanical equipment will be reviewed when that information is available. It is also HGC Engineering's experience with numerous developments, that typical HVAC equipment and parking garage exhaust fans can meet the applicable MECP noise criteria at neighbouring residential uses, either with low noise emission fans or relocation of the fans or through mitigation in the form of duct silencers or acoustic lining. Prior to building permit, an acoustical consultant should review the mechanical drawings and details of potential exhaust vents/fans, when available, to help ensure that the noise impact of the development on the environment, and of the development on itself, are maintained within acceptable levels.

9 Impact of the Development on Itself

Section 5.8.1.1 of the Ontario Building Code (OBC), released on January 1, 2020, specifies the minimum required sound insulation characteristics for demising partitions, in terms of Sound Transmission Class (STC) or Apparent Sound Transmission Class (ASTC) values. In order to maintain adequate acoustical privacy between separate suites in a multi-tenant building, inter-suite walls must meet or exceed STC-50 or ASTC-47. Suite separation from a refuse chute or elevator shaft must meet or exceed STC-55. In addition, it is recommended that the floor/ceiling constructions separating suites from any amenity or commercial spaces also meet or exceed STC-55. Tables 1 and 2 in Section SB-3 of the Supplementary Guideline to the OBC provide a comprehensive list of constructions that will meet the above requirements.

Tarion's Builder Bulletin B19R requires the internal design of condominium projects to integrate suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising construction and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself is maintained within acceptable levels.

10 Summary and Recommendations

The results of the study indicate that the proposed residential development is feasible. Future road and rail traffic sound levels will exceed CP railway guidelines, but feasible means exist to reduce the impact to within acceptable limits. The following recommendations are provided in regard to noise mitigation.

1. Central air conditioning is required for the proposed residential building. The location installation and sound rating of the air conditioning devices should comply with NPC-300, as applicable.

2. Upgraded glazing constructions are required for the east, north and south façades. The exterior wall construction is required to be brick veneer or a masonry equivalent construction. When detailed floor plans and building elevations are available, the glazing constructions should be refined based on actual window to floor area ratios, and the exterior wall construction should be verified. Section 5.3.2 provides recommendations for window areas along the east facade, specifically for the bedrooms which must be kept relatively small.

3. Tarion Builder's Bulletin B19R requires that the internal design of condominium projects integrates suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising constructions and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself are maintained within acceptable levels. Outdoor sound emissions should also be checked to ensure compliance with the City of Mississauga noise by-law.

Table 9, below, summarizes the recommendations for the buildings in the proposed development.

Table 9: Summary of Noise Control Requirements and Noise Warning Clauses

Prediction Location	Description	+Acoustic Barrier	Ventilation Requirements*	Type of Warning Clause	Brick Exterior Wall Construction**	Upgraded Glazing Construction+
[A]	East building façade	--	Central A/C	A, B, C, D, E	✓	LRDR: STC-39 BR: STC-42
[B]	North building façade	--			✓	LRDR: STC-35 BR: STC-39
[C]	South building façade	--			✓	LRDR: STC-35 BR: STC-39
[D]	West building façade	--			--	LRDR: STC-33 BR: STC-35

Notes:
-- no specific requirement
*The location, installation and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-300, as applicable.
** Brick veneer or a masonry equivalent construction is required.
OBC – meeting the minimum requirements of the Ontario Building Code
** When building elevations are available, an acoustical consultant should verify the exterior wall construction to be brick, masonry or an acoustical equivalent.
+When detailed floor plans are available, an acoustical consultant should provide revised glazing constructions based on actual window to floor area ratios.
OBC – meeting the minimum requirements of the Ontario Building Code

10.1 Implementation

To ensure that the sound control recommendations outlined above are properly implemented in the site design, it is recommended that:

1. Prior to the issuance of building permits for this development, the Municipality's building inspector or a Professional Engineer qualified to perform acoustical engineering services in the Province of Ontario should certify that the exterior walls of the building are in conformance to the approved noise report.

2. Prior to the issuance of building permits for this development, a Professional Engineer qualified to perform acoustical engineer services in the Province of Ontario should review the architectural plans and building elevations to refine glazing requirement based on actual window to floor areas ratios.

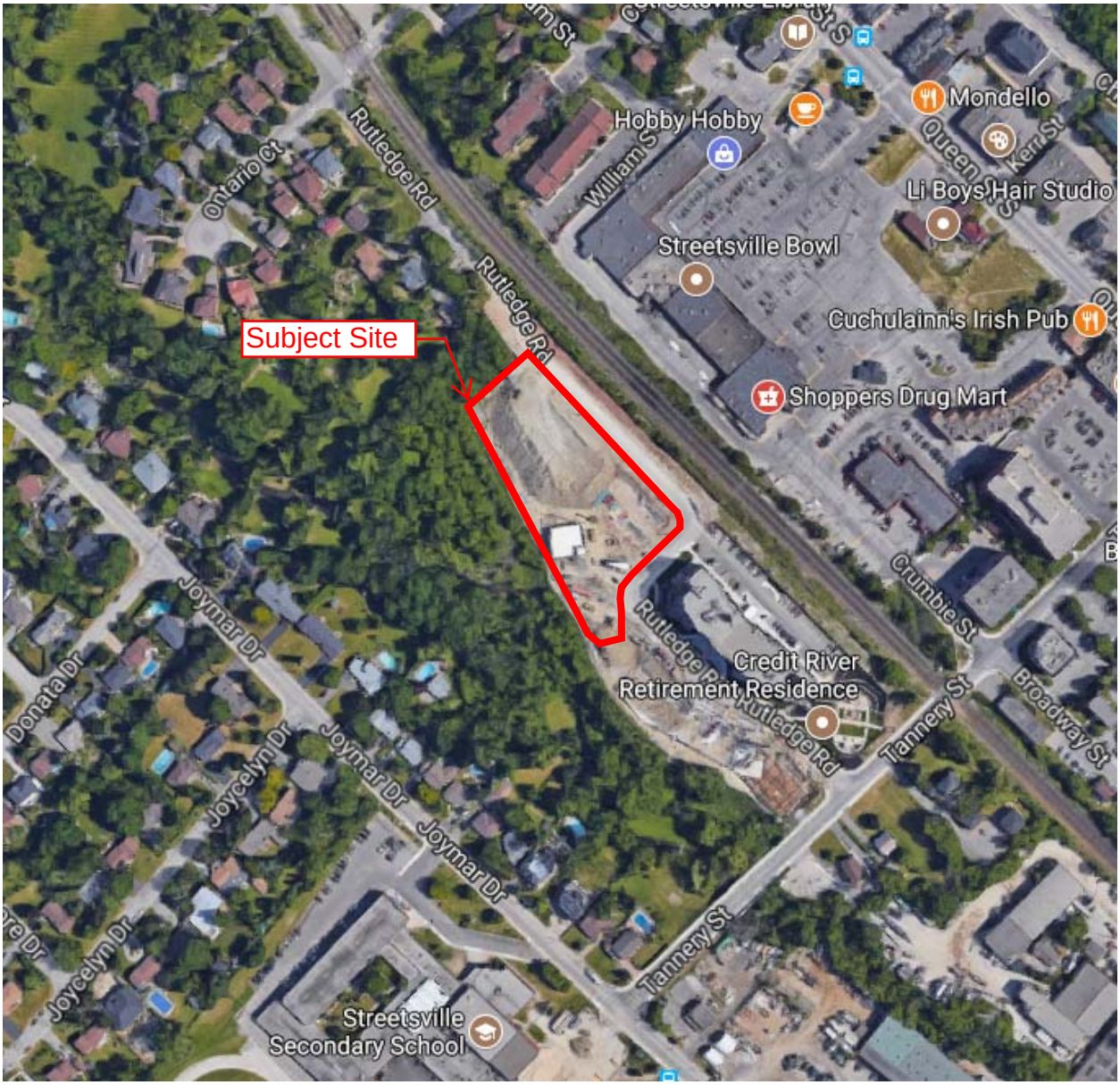


Figure 1: Key Plan

1. "I HEREBY CERTIFY THAT THIS DRAWING CONFORMS IN ALL RESPECTS TO THE SITE DEVELOPMENT PLANS AS APPROVED BY THE CITY OF MISSISSAUGA UNDER FILE NUMBER SP XXXXXXX"
ARCHITECT OR ENGINEER'S SIGNATURE (IF APPLICABLE) AND PROFESSIONAL SEAL
2. THE CITY OF MISSISSAUGA REQUIRES THAT ALL WORKING DRAWINGS SUBMITTED TO THE BUILDING DIVISION AS PART OF AN APPLICATION FOR THE ISSUANCE OF A BUILDING PERMIT SHALL BE CERTIFIED BY THE ARCHITECT OR ENGINEER AS BEING IN CONFORMITY WITH THE SITE DEVELOPMENT PLAN AS APPROVED BY THE CITY OF MISSISSAUGA.
3. ALL EXTERIOR LIGHTING WILL BE DIRECTED ONTO THE SITE AND WILL NOT INFRINGE UPON THE ADJACENT PROPERTIES.
4. ALL ROOF TOP MECHANICAL UNITS SHALL BE SCREENED FROM VIEW BY THE APPLICANT.
5. PARKING SPACES RESERVED FOR PEOPLE WITH DISABILITIES MUST BE IDENTIFIED BY A SIGN, INSTALLED AT THE APPLICANT'S EXPENSE, IN ACCORDANCE WITH THE BY-LAW REQUIREMENTS AND BUILDING CODE REQUIREMENTS
6. THE APPLICANT WILL BE RESPONSIBLE FOR ENSURING THAT ALL PLANS CONFORM TO TRANSPORT CANADA'S RESTRICTIONS.
7. ALL DAMAGED AREAS ARE TO BE REINSTATED WITH TOPSOIL AND SOD PRIOR TO THE RELEASE OF SECURITIES.
8. SIGNAGE SHOWN ON THE SITE DEVELOPMENT PLANS IS FOR INFORMATION PURPOSES ONLY. ALL SIGNS WILL BE SUBJECT TO THE PROVISIONS OF SIGN BY-LAW 0054-2002, AS AMENDED, AND A SEPARATE SIGN APPLICATION WILL BE REQUIRED THROUGH THE BUILDING DIVISION.
9. ANY FENCING ADJACENT TO MUNICIPAL LANDS IS TO BE LOCATED 15 CM (6.0 IN.) INSIDE THE PROPERTY LINE.
10. ONLY SHIELDED LIGHTING FIXTURES ARE PERMITTED FOR ALL DEVELOPMENT, EXCEPT FOR DETACHED AND SEMI-DETACHED DWELLINGS WITHIN 60 M (196.8 FT.) OF A RESIDENTIALLY ZONED PROPERTY AND MUST CONFORM TO THE ENGINEER CERTIFIED LIGHTING PLAN.
11. WHERE PLANTING IS TO BE LOCATED IN LANDSCAPED AREAS ON TOP OF AN UNDERGROUND PARKING STRUCTURE, IT IS THE RESPONSIBILITY OF THE APPLICANT TO ARRANGE THE COORDINATION OF THE DESIGN OF THE UNDERGROUND PARKING STRUCTURE WITH THE LANDSCAPE ARCHITECT AND THE CONSULTING ENGINEERING. UNDERGROUND PARKING STRUCTURES WITH LANDSCAPING AREA TO BE CAPABLE OF SUPPORTING THE FOLLOWING LOADS:- 15 CM OF DRAINAGE GRAVEL PLUS 40 CM TOPSOIL FOR SOD- 15 CM OF DRAINAGE GRAVEL PLUS 60 CM TOPSOIL FOR SHRUBS- 15 CM OF DRAINAGE GRAVEL PLUS 90 CM FOR TREES OR- PREFABRICATED SHEET DRAIN SYSTEM* WITH A COMPRESSIVE STRENGTH OF 1003 KPA PLUS 40 CM TOPSOIL FOR SOD- PREFABRICATED SHEET DRAIN SYSTEM* WITH A COMPRESSIVE STRENGTH OF 1003 KPA PLUS 60 CM TOPSOIL FOR SHRUBS- PREFABRICATED SHEET DRAIN SYSTEM* WITH A COMPRESSIVE STRENGTH OF 1003 KPA PLUS 90 CM TOPSOIL FOR TREES *TERRADRAIN 900 OR APPROVED EQUAL
12. THE STRUCTURAL DESIGN OF ANY RETAINING WALL OVER 0.6 M IN HEIGHT OR ANY RETAINING WALL LOCATED ON A PROPERTY LINE IS TO BE SHOWN ON THE SITE GRADING PLAN FOR THIS PROJECT AND IS TO BE APPROVED BY THE CONSULTING ENGINEER FOR THE PROJECT.
13. CONTINUOUS 15 CM HIGH BARRIER TYPE POURED CONCRETE CURBING WILL BE PROVIDED BETWEEN ALL ASPHALT AND LANDSCAPED AREAS THROUGHOUT THE SITE.
14. TREE PROTECTION NOTE:
    a. THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT TREE PROTECTION HOARDING (SECTION 4.8.2) IS MAINTAINED THROUGHOUT ALL PHASES OF DEMOLITION AND CONSTRUCTION IN THE LOCATION AND CONDITION AS APPROVED BY THE PLANNING AND BUILDING DEPARTMENT. NO MATERIALS (BUILDING MATERIALS, SOIL, ETC.) MAY BE STOCKPILED WITHIN THE AREA OF HOARDING. FAILURE TO MAINTAIN THE HOARDING AS ORIGINALLY APPROVED OR THE STORAGE OF MATERIALS WITHIN THE HOARDING WILL BE CAUSE FOR THE LETTER OF CREDIT TO BE HELD FOR TWO (2)YEARS FOLLOWING COMPLETION OF ALL SITE WORKS. HOARDING MUST BE INSPECTED PRIOR TO THE REMOVAL OF ANY TREE HOARDING FROM THE SITE.
    b. OWNER'S SIGNATURE: _____
    c. DATE: _____
15. ALL EXCESS EXCAVATED MATERIALS WILL BE REMOVED FROM THE SITE.
16. AT THE ENTRANCES TO THE SITE, THE MUNICIPAL CURB AND SIDEWALK WILL BE CONTINUOUS THROUGH THE DRIVEWAY AND A CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE.
17. ALL PROPOSED CURBING AT THE ENTRANCES TO THE SITE IS TO STOP AT THE PROPERTY LINE OR AT THE MUNICIPAL SIDEWALK.
18. THE PORTIONS OF THE DRIVEWAY WITHIN THE MUNICIPAL BOULEVARD WILL BE PAVED BY THE APPLICANT.
19. THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED EXCEPT WHERE NOTED.
20. ALL UTILITY COMPANIES WILL BE NOTIFIED FOR LOCATES PRIOR TO THE INSTALLATION OF THE HOARDING THAT LIES WITHIN THE LIMITS OF THE CITY BOULEVARD AREA.
21. THE APPLICANT WILL BE RESPONSIBLE FOR THE COST OF ANY UTILITIES RELOCATIONS NECESSITATED BY THE SITE PLAN.
22. SHOULD THE INSTALLATION OF BELOW GROUND SERVICES REQUIRE HOARDING TO BE REMOVED, PLANNING AND BUILDING STAFF ARE TO BE CONTACTED PRIOR TO THE COMMENCEMENT OF SUCH WORK. SHOULD AN ALTERNATIVE SERVICE ROUTE NOT BE POSSIBLE, STAFF WILL INSPECT AND DOCUMENT THE CONDITION OF THE VEGETATION AND SERVICING INSTALLATION IN ORDER TO MINIMIZE DAMAGE TO THE VEGETATION.
23. IF A WELL IS DISCOVERED IT WILL BE DECOMMISSIONED BY A LICENSED WELL CONTRACTOR OR TECHNICIAN IN ACCORDANCE WITH THE ONTARIO WATER RESOURCES ACT REGULATION 903 (FORMERLY 612/84) AND ANY OTHER APPLICABLE REGULATIONS AND GUIDELINES
24. ALL SURFACE DRAINAGE WILL BE SELF CONTAINED, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
25. ALL PROPOSED CURBING WITHIN THE MUNICIPAL BOULEVARD AREA FOR THE SITE IS TO SUIT AS FOLLOWS:
    a. FOR ALL GROUP 1 AND 2 RESIDENTIAL PROPERTIES INCLUDING ON STREET TOWNHOUSES, ALL CURBING IS TO STOP AT THE PROPERTY LIMIT OR THE BACK OF THE MUNICIPAL SIDEWALK, WHICHEVER IS APPLICABLE, OR,
    b. FOR ALL OTHER PROPOSALS INCLUDING INDUSTRIAL, COMMERCIAL AND CONDOMINIUM DEVELOPMENTS, ALL ENTRANCES TO THE SITE ARE TO BE IN ACCORDANCE WITH O.P.S.D. 350.010
26. ALL INTERNAL CURBS ARE TO BE STANDARD 2 STAGE CURB AND GUTTER AS PER O.P.S.D. 600.070.
27. PRIOR TO CONSTRUCTION TAKING PLACE, ALL REQUIRED HOARDING IN ACCORDANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS MUST BE ERECTED AND THEN MAINTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION.
28. CONFIRMATION MUST BE RECEIVED FROM THE DEVELOPMENT CONSTRUCTION SECTION THAT THEY HAVE MADE ARRANGEMENTS FOR A PRECONSTRUCTION MEETING.
29. FIRE ACCESS ROUTE WILL BE DESIGNED TO SUPPORT LOAD OF NOT LESS THAN 11,363KG. PER AXLE AND HAVE A CHANGE IN GRADIENT OR MORE THAN 1 IN 12.5 OVER 15M
30. FIRE ROUTE WILL BE DESIGNATED AS PER BYLAW 1036-81
31. DESIGN OF UPPER SUSPENDED SLAB FOR THE UNDERGROUND PARKING GARAGE PREPARED BY PROJECT STRUCTURAL CONSULTANT (P.ENG. OF ONTARIO) IN CONFORMANCE WITH PART 4 OF THE 2012 ONTARIO BUILDING CODE. WASTE COLLECTION VEHICLES WILL NOT TRAVEL ON ACCESS DRIVEWAY ON TOP OF THE SUSPENDED SLAB.
32. PRIOR TO THE ISSUANCE OF OCCUPANCY PERMITS FOR THIS DEVELOPMENT A PROFESSIONAL ENGINEER QUALIFIED TO PROVIDE ACOUSTICAL ENGINEERING SERVICES IN ONTARIO SHALL CERTIFY THAT THE NOISE MEASURES FOR THE RESIDENTIAL DWELLINGS HAVE BEEN PROPERLY INSTALLED AND CONSTRUCTED.
33. WITHIN THE VICINITY OF THE DRIVEWAY, ALL ASPHALT AND BASE MATERIALS OF THE EXISTING DRIVEWAY TO BE REMOVED ARE TO BE REINSTATED WITH TOPSOIL AND SOD.
34. NOISE WARNING CLAUSES
    a. PURCHASERS/TENANTS ARE ADVISED THAT DESPITE THE INCLUSION OF NOISE CONTROL FEATURES IN THE DEVELOPMENT AND WITHIN THE BUILDING UNITS, SOUND LEVELS DUE TO INCREASING ROAD AND AIR TRAFFIC MAY OCCASIONALLY INTERFERE WITH SOME ACTIVITIES OF THE DWELLING OCCUPANTS AS THE SOUND LEVELS EXCEED THE MUNICIPALITY'S AND THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS NOISE CRITERIA
    b. THIS DWELLING UNIT HAS BEEN SUPPLIED WITH A CENTRAL AIR CONDITIONING SYSTEM WHICH WILL ALLOW WINDOWS AND EXTERIOR DOORS TO REMAIN CLOSED, THEREBY ENSURING THAT THE INDOOR SOUND LEVELS ARE WITHIN THE SOUND LEVEL LIMITS OF THE MUNICIPALITY AND THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS.
    c. PURCHASERS ARE ADVISED THAT DUE TO THE PROXIMITY OF THE EXISTING COMMERCIAL AND INSTITUTUIONAL BUILDINGS, SOUND LEVELS FROM THE FACILITIES MAY AT SOME TIMES BE AUDIBLE
35. GRADES WILL BE MET WITH A 33% MAXIMUM SLOPE AT THE PROPERTY LINES AND WITHIN THE SITE
36. THE ENGINEER CERTIFIED LIGHTING PLAN MUST BE SIGNED BY THE CONSULTING ENGINEER
37. THE OWNER COVENANTS AND AGREES TO CONSTRUCT AND INSTALL SHIELDED LIGHTING FIXTURES ON THE SUBJECT LANDS, IN CONFORMITY WITH THE SITE PLAN AND ENGINEER CERTIFIED LIGHTING PLAN TO THE SATISFACTION OF THE CITY OF MISSISSAUGA
38. THE ACOUSTICAL CONSULTANT SHALL CERTIFY TO THE PLANNING AND BUILDING DEPARTMENT THAT THE AS CONSTRUCTED BUILDINGS, MECHANICAL EQUIPMENT AND VENTILATION SYSTEMS FOR THE BUILDINGS ON THE SITE AND THE OFF-SITE STATIONARY NOISE SOURCES ARE IN COMPLIANCE WITH THE ACOUSTICAL REPORT AS PREPARED FOR THE PARTICULAR BUILDING AND IN COMPLIANCE WITH THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE (MOECC) GUIDELINE FOR STATIONARY NOISE SOURCES.
39. TRAFFIC NOTES
    a. ALL DAMAGED OR DISTURBED AREAS WITHIN THE MUNICIPAL RIGHT-OF-WAY ARE TO BE REINSTATED AT THE OWNER'S EXPENSE
    b. ALL LANDSCAPING AND GRADING WITHIN CLOSE PROXIMITY TO THE PROPOSED ACCESS POINTS IS TO BE DESIGNED TO ENSURE THAT ADEQUATE SIGHT DISTANCES ARE AVAILABLE FOR ALL APPROACHING AND EXITING MOTORISTS AND PEDESTRIANS
    c. THE PORTION OF THE DRIVEWAY WITHIN THE MUNICIPAL BOULEVARD IS TO BE PAVED BY THE OWNER
    d. DRIVEWAY ACCESSES SHALL MAINTAIN A 1.5M SETBACK FROM ABOVEGROUND FEATURES SUCH AS UTILITIES AND TREES
    e. ANY ABOVE GROUND UTILITIES LOCATED WITHIN 1.5M OF A PROPOSED ACCESS ARE TO BE RELOCATED AT THE OWNERS EXPENSE
    f. THE COST FOR ANY/ALL ROAD IMPROVEMENTS REQUIRED IN SUPPORT OF THIS DEVELOPMENT APPLICATION WILL BE BORNE BY THE OWNER
    g. THE OWNER SHALL MAKE SATISFACTORY ARRANGEMENTS WITH THE TRANSPORTATION AND WORKS DEPARTMENTS FOR THE DESIGN, CONSTRUCTION AND PAYMENT OF ALL COSTS ASSOCIATED WITH WORKS NECESSARY TO SUPPORT ACCESS TO THIS SITE.
    h. ANY ACCESS TO INTERNAL SERVICING SHALL BE PROVIDED INTERNALLY THROUGH THE SITE
40. ONLY SHIELDED EXTERIOR LIGHTING FIXTURES WILL BE USED EXCEPT AS REQUIRED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE AND/OR THE RECOMMENDATIONS OF THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) LIGHTING HANDBOOK FOR USES AND/OR ACTIVITIES. EXTERIOR LIGHTING IS DARK SKY COMPLIANT.
41. IF FINAL LIFT OF ASPHALT PAVING IS DELAYED, INSTALL A TEMPORARY LIFT OF ASPHALT AT RAMPS OR CURB CUTS TO PROVIDE BARRIER FREE ACCESS.
42. OPEN TRENCHING - NO OPEN TRENCHING IS PERMITTED IN THE MUNICIPAL BOULEVARD WHERE ADJACENT TO CITY TREES.
43. BIRD-FRIENDLY GLAZING PROVIDED ON THE GROUND FLOOR.

LEGAL INFORMATION TAKEN FROM COMBINATION OF:

PLAN OF SURVEY OF PART OF LOT 4 CONCESSION 5 WEST OF HURONTARIO STREET (GEOGRAPHIC TOWNSHIP OF TORONTO) AND PART OF LOTS 24 AND 25 REGISTERED PLAN 43 CITY OF MISSISSAUGA REGIONAL MUNICIPALITY OF PEEL

SURVEY PREPARED BY: KRCMAR SURVEYORS LTD. 1107 CENTRE STREET THORNHILL, ON, L4H 1M6 DATED: JUNE 29, 2022

TOPOGRAPHY OF PART OF LOT 4 CONCESSION 5 WEST OF HURONTARIO STREET (GEOGRAPHIC TOWNSHIP OF TORONTO) CITY OF MISSISSAUGA REGIONAL MUNICIPALITY OF PEEL

SURVEY PREPARED BY: KRCMAR SURVEYORS LTD. 1107 CENTRE STREET THORNHILL, ON, L4H 1M6 DATED: MAY 2, 2022

PLAN OF TOPOGRAPHY OF PART OF LOTS 23, 24 & 25 REGISTERED PLAN 43 AND PART OF THE EAST HALF OF LOT 4 CONCESSION 5 WEST OF HURONTARIO STREET (GEOGRAPHIC TOWNSHIP OF TORONTO) CITY OF MISSISSAUGA REGIONAL MUNICIPALITY OF PEEL

SURVEY PREPARED BY: LAND SURVEY GROUP SPECIALISTS LTD. SURVEYORS 777 THE QUEENSWAY, UNIT 1 TORONTO, ON, M8Z1N6 DATED: MAY 28, 2015

THE ARCHITECT IS NOT RESPONSIBLE FOR ERRORS OR OMISSIONS IN THIS RESPECT. THE ARCHITECT IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS, OR DISCREPANCIES ARRISING FROM THE COMBINATION OF MULTIPLE SURVEYS AND TOPOGRAPHIES.

PARKING - PRECINCT 2

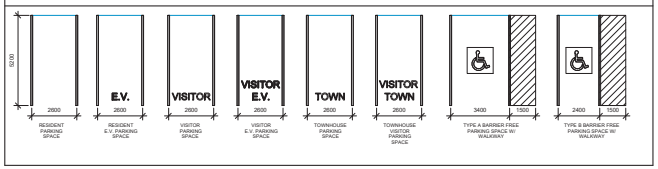
BASED ON PARKING STUDY BY WSP, MARCH 24, 2022

CONDO UNITS	REQUIRED		PROVIDED
RESIDENT	301 UNITS x 0.9sp =	271	272
VISITOR	301 UNITS x 0.2sp =	60	60
TOWNHOUSES			
RESIDENT	301 UNITS x 0.9sp =	8	9
VISITOR	301 UNITS x 0.2sp =	1	1
TOTAL		340	344

EV PARKING SPACES			
CONDO UNITS	REQUIRED		PROVIDED
RESIDENT	301 UNITS x 0.9sp =	271	272
VISITOR	10% OF TOTAL VISITOR PARKING SPACES =	6	6

BICYCLE PARKING SPACES			
CONDO/APARTMENT & TOWNS	REQUIRED		PROVIDED
CLASS A (INDOOR)	0.6 UNIT	301 UNITS x 0.6 = 181	184
CLASS B (OUTDOOR)	0.05 UNIT	301 UNITS x 0.05 = 15	15

PARKING LEGEND



SITE COVERAGE

Name	Area	Percent Coverage
BUILDING COVERAGE		
BUILDING COVERAGE	2725 m²	44%
	2725 m²	44%
LANDSCAPE AREA		
LANDSCAPE AREA	29 m²	0%
LANDSCAPE AREA	44 m²	1%
LANDSCAPE AREA	3032 m²	49%
	3105 m²	50%
PAVEMENT COVERAGE		
PAVEMENT COVERAGE	403 m²	6%
	403 m²	6%
PROPERTY AREA	6222 m²	100%
FSI	3.61	

GFA

Name	Area	Area (SF)
GFA P1	280 m²	3010 ft²
GFA 1st	2526 m²	27193 ft²
GFA 2nd	2526 m²	27193 ft²
GFA 3rd	2526 m²	27193 ft²
GFA 4th	2526 m²	27193 ft²
GFA 5th	2526 m²	27193 ft²
GFA 6th	2526 m²	27193 ft²
GFA 7th	2394 m²	25765 ft²
GFA 8th	2274 m²	24477 ft²
GFA 9th	1999 m²	21513 ft²
GFA 10th	1737 m²	18700 ft²
TOTAL	23841 m²	256619 ft²

Suite Types

Unit Type	Count
PH	
TOWNHOUSE	4
	4
Level 01 - Ground	
1B	6
1B+D	3
2B	7
2B+D	4
2B1	8
	28
Level 02	
1B	6
1B+D	5
2B	9
2B+D	4
2B1	9
	33
Level 03	
1B	6
1B+D	5
2B	9
2B+D	4
2B1	9
	33
Level 04	
1B	6
1B+D	5
2B	9
2B+D	4
2B1	9
	33
Level 05	
1B	6
1B+D	5
2B	9
2B+D	4
2B1	9
	33

Suite Types

Unit Type	Count
Level 06	
1B	6
1B+D	5
2B	9
2B+D	4
2B1	9
	33
Level 07	
1B	6
1B+D	4
2B	5
2B+D	5
2B1	9
	29
Level 08	
1B	5
1B+D	5
2B	4
2B+D	6
2B1	9
	29
Level 09	
1B	4
1B+D	4
2B	7
2B+D	2
2B1	9
	26
Level 10	
1B	3
1B+D	3
2B	4
2B+D	4
2B1	9
	22
Grand total	305

Parking

Mark	Type	Provided	Required
Resident	5200 x 2600	198	217
Resident - 1 Side Obstructed	5200 x 2750	16	
Resident - 2 side Obstructed	5200 x 2900	3	
Resident EV	5200 x 2600	54	54
Townhome	5200 x 2600	8	8
Townhome Visitor	5200 x 2600	1	1
Type A - BF	5200 x 3400	3	
Type B - BF	5200 x 2400	1	
Visitor	5200 x 2600	53	54
Visitor - 1 Side obstructed	5200 x 2750	3	
Visitor EV	5200 x 2600	6	6
Grand total		344	

GFA - APT DWELL ZONE

Level	Area	Area (SF)
Level 01 - Ground	2114 m²	22759 ft²
Level 02	2448 m²	26355 ft²
Level 03	2448 m²	26355 ft²
Level 04	2448 m²	26355 ft²
Level 05	2448 m²	26355 ft²
Level 06	2448 m²	26355 ft²
Level 07	2316 m²	24928 ft²
Level 08	2195 m²	23628 ft²
Level 09	1902 m²	20470 ft²
Level 10	1644 m²	17692 ft²
TOTAL	22433 m²	241293 ft²

Amenity Areas

Name	Area	Area (SF)
Indoor		
Amenity	125 m²	1351 ft²
Lobby/Lounge	97 m²	1043 ft²
Lobby/Lounge	55 m²	596 ft²
Rec	34 m²	363 ft²
Outdoor		
Outdoor Amenity - Courtyard	751 m²	8084 ft²
Total	1063 m²	11437 ft²

SUITE AREA RANGE

Unit Type	Count	Area
1B	56	50 m² - 61 m²
1B+D	44	53 m² - 81 m²
2B	72	53 m² - 102 m²
2B+D	41	80 m² - 102 m²
2B1	88	54 m² - 70 m²
Grand total: 301		

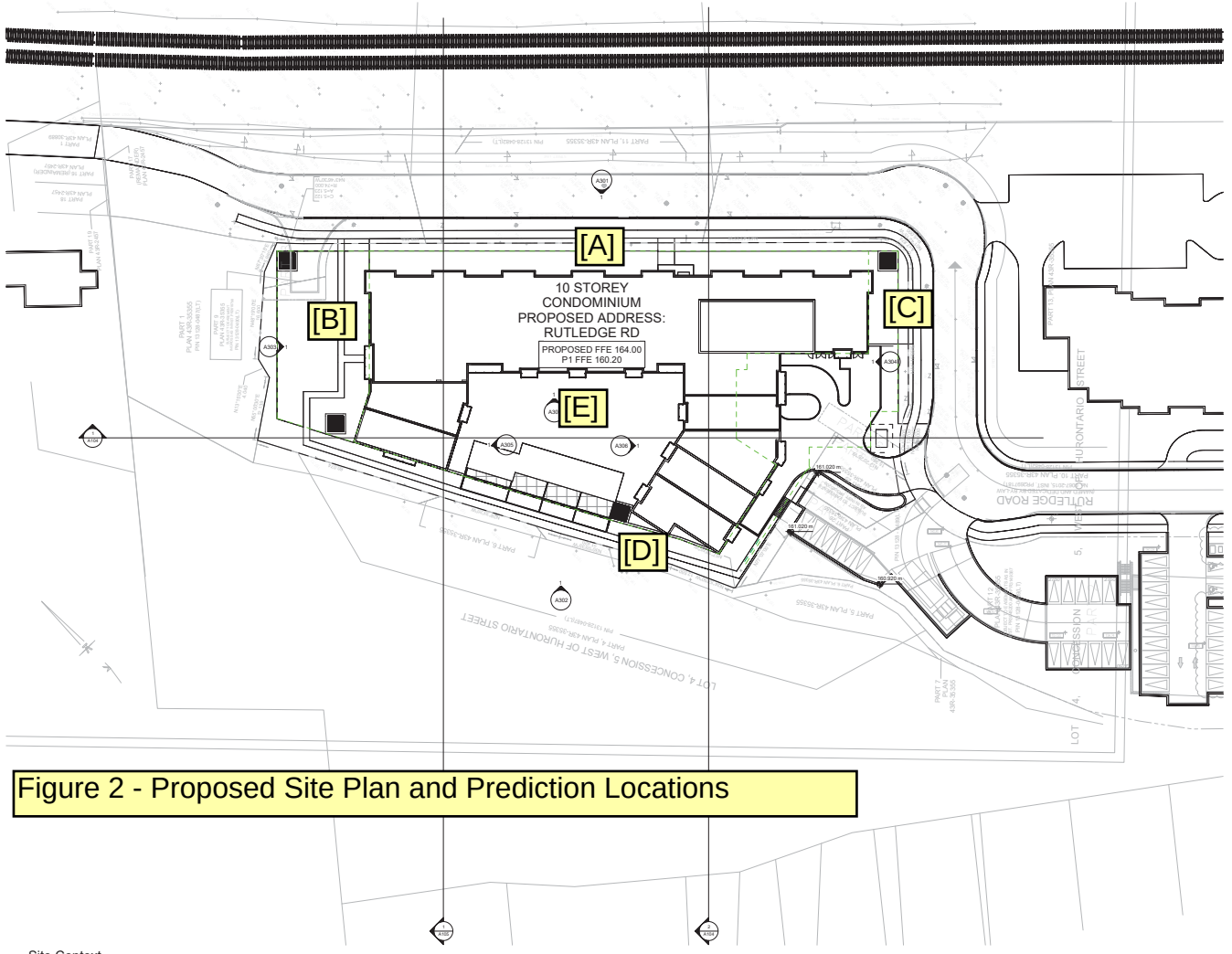


Figure 2 - Proposed Site Plan and Prediction Locations

1 Site Context
1 : 300

LEGEND

- PRIMARY BUILDING ENTRANCE
- SECONDARY BUILDING ENTRANCE
- CENTERLINE
- Room name / 101 / 150 m2 — ROOM NAME, NUMBER, AREA
- PROPOSED ELEVATION (M)
- WALL TAG
- WINDOW TAG
- DOOR TAG
- ELEVATION TAG
- ACCESSIBLE PARKING
- FIRE HYDRANT
- CATCH BASIN
- LIGHT BOLLARD
- LIGHT POST
- WALL LIGHT
- EXTENT OF UNDERGROUND
- SEVERANCE LINE
- PROPERTY LINE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

Contractor must check and verify all dimensions and be responsible for same, reporting any discrepancies to the Architect before commencing work.

All drawings, prints and specifications are the property of the Architect and must be returned to him on completion of work. Latest drawings only to be used for construction.

Prints are not to be scaled.

GLOBAL
6 Lesmyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

CLIENT	Forest Green Homes
PROJECT NAME	Vic 2 150 RUTLEDGE RD, Mississauga (Streetsville) Ont.
DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	As indicated
DWG. TITLE	SITE PLAN
PROJECT NO.	22-03
	A101

APPENDIX A

CP Principal Mainline Requirements

CANADIAN PACIFIC RAILWAY

PRINCIPAL MAIN LINE REQUIREMENTS

1. Berm, or combination berm and noise attenuation fence, having extensions or returns at the ends, to be erected on adjoining property, parallel to the railway right-of-way with construction according to the following:

   a) Minimum total height 5.5 metres above top-of-rail;
   b) Berm minimum height 2.5 metres and side slopes not steeper than 2.5 to 1.
   c) Fence, or wall, to be constructed without openings and of a durable material weighing not less than 20 kg. per square metre (4 lb/sq.ft.) of surface area.

   No part of the berm/noise barrier is to be constructed on railway property.

   A clause should be inserted in all offers of purchase and sale or lease, and be registered on title or included in the lease for each dwelling affected by any noise and vibration attenuation measures, advising that any berm, fencing, or vibration isolation features implemented are not to be tampered with or altered, and further that the owner shall have the sole responsibility for and shall maintain these features.

   Dwellings must be constructed such that the interior noise levels meet the criteria of the appropriate Ministry. A noise study should be carried out by a professional noise consultant to determine what impact, if any, railway noise would have on residents of proposed subdivisions and to recommend mitigation measures, if required. The Railway may consider other measures recommended by the study.

2. Setback of dwellings from the railway right-of-way to be a minimum of 30 metres. While no dwelling should be closer to the right-of-way than the specified setback, an unoccupied building, such as a garage, may be built closer. The 2.5 metre high earth berm adjacent to the right-of-way must be provided in all instances.

3. Ground vibration transmission to be estimated through site tests. If in excess of the acceptable levels, all dwellings within 75 metres of the nearest track should be protected. The measures employed may be:

   a) Support the building on rubber pads between the foundation and the occupied structure so that the maximum vertical natural frequency of the structure on the pads is 12 Hz;
   b) Insulate the building from the vibration originating at the railway tracks by an intervening discontinuity or by installing adequate insulation outside the building, protected from the compaction that would reduce its effectiveness so that vibration in the building became unacceptable; or
   c) Other suitable measures that will retain their effectiveness over time.

4. A clause should be inserted in all offers of purchase and sale or lease and in the title deed or lease of each dwelling within 300m of the railway right-of-way, warning prospective purchasers or tenants of the existence of the Railway's operating right-of-way; the possibility of alterations including the possibility that the Railway may expand its operations, which expansion may affect the living environment of the residents notwithstanding the inclusion of noise and vibration attenuating measures in the design of the subdivision and individual units, and that the Railway will not be responsible for complaints or claims arising from the use of its facilities and/or operations.

5. Any proposed alterations to the existing drainage pattern affecting railway property must receive prior concurrence from the Railway, and be substantiated by a drainage report to be reviewed by the Railway.

6. A 1.83 metre high chain link security fence be constructed and maintained along the common property line of the Railway and the development by the developer at his expense, and the developer is made aware of the necessity of including a covenant running with the lands, in all deeds, obliging the purchasers of the land to maintain the fence in a satisfactory condition at their expense.

7. Any proposed utilities under or over railway property to serve the development must be approved prior to their installation and be covered by the Railway's standard agreement.

APPENDIX B

Rail Traffic Information

Sheeba Paul

From: Mandy Chan
Sent: December 5, 2022 11:19 AM
To: Sheeba Paul
Subject: FW: Rail Traffic Request - Queen St & Britannia Rd in Mississauga

Follow Up Flag: Follow up
Flag Status: Flagged

Regards,

Mandy Chan, PEng
Senior Engineer, Associate
HGC Engineering **NOISE | VIBRATION | ACOUSTICS**
Howe Gastmeier Chapnik Limited
t: 905.826.4044 x239

From: Rail Data Requests <RailDataRequests@metrolinx.com>
Sent: December 2, 2022 11:46 AM
To: Mandy Chan <machan@hgcengineering.com>
Subject: RE: Rail Traffic Request - Queen St & Britannia Rd in Mississauga

Good morning,
Please consider this information.

Further to your request dated December 2, 2022, the subject lands (Queen St & Britannia Rd in Mississauga) are located within 300 metres of the CP Galt Subdivision (which carries Milton GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of diesel trains. The GO rail fleet combination on this Subdivision will consist of up to 2 locomotives and 12 passenger cars. The typical GO rail weekday train volume forecast near the subject lands, including both revenue and equipment trips is in the order of 44 trains. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive	2 Diesel Locomotives		1 Diesel Locomotive	2 Diesel Locomotives
Day (0700-2300)	38	0	Night (2300-0700)	6	0

The current track design speed near the subject lands is 50 mph (80 km/h).

There are *anti-whistling by-laws* in affect near the subject lands at Ontario St, Tannery St, Thomas St, and Wolfedale Rd.
Operational information is subject to change and may be influenced by, among other factors, service planning priorities, operational considerations, funding availability and passenger demand.

It should be noted that this information only pertains to Metrolinx rail service. It would be prudent to contact other rail operators in the area directly for rail traffic information pertaining to non-Metrolinx rail service.

I trust this information is useful. Should you have any questions or concerns, please do not hesitate to contact me.
Regards,
Tara

Tara Kamal Ahmadi
Junior Analyst
Third Party Projects Review, Capital Projects Group
Metrolinx | 20 Bay Street | Suite 600 | Toronto | Ontario | M5J 2W3

From: Mandy Chan <machan@hgcengineering.com>
Sent: December 1, 2022 3:28 PM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Subject: Rail Traffic Request - Queen St & Britannia Rd in Mississauga

Good afternoon,

HGC Engineering has been retained to conduct a noise study for the development at the southwest corner of Queen St and Britannia Rd in Mississauga and would like to request rail data for the adjacent rail line. Thanks.

Google Map: https://goo.gl/maps/GhF9SsYf2ZYJkQm76

Regards,

Mandy Chan, PEng
Senior Engineer, Associate

HGC Engineering **NOISE | VIBRATION | ACOUSTICS**
Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203, Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044 x239 **e**: machan@hgcengineering.com
Visit our website: www.hgcengineering.com **Follow Us** – LinkedIn | Twitter | YouTube

Sheeba Paul

From: Josie Tomei <Josie_Tomei@cpr.ca>
Sent: March-05-19 11:00 AM
To: Sheeba Paul
Subject: RE: rail data request/verification

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Sheba,
Please use the following data prepared for HGC in January 2019 for this area of the Galt Subdivision, all information is applicable include speed and track information.

Josie Tomei SR/WA
Specialist Real Estate Sales & Acquisitions
905-803-3429
800-1290 Central Parkway West
Mississauga, ON L5C 4R3

1. Number of freight trains between 0700 & 2300: 6
   Number of freight trains between 2300 & 0700: 7
2. Maximum cars per train freight: 163
3. Number of locomotives per train: 2 (4 max.)
4. Maximum permissible train speed: 50 mph
5. The whistle signal is prohibited approaching public grade crossings through the study area, however, the whistle may be sounded if deemed necessary by the train crew for safety reasons at any time.
6. There are 2 mainline tracks with continuously welded rail at this location along with a cross connection. Train noise may increase as trains pass through the connections.
7. Please note, the information provided is for freight trains only. Metrolinx operates GO passenger service through this location. Passenger data should be obtained directly from Metrolinx.

From: Sheeba Paul <spaul@hgcengineering.com>
Sent: Tuesday, March 5, 2019 10:16 AM
To: Josie Tomei <Josie_Tomei@cpr.ca>
Subject: RE: rail data request/verification

Hi Josie,

Are you able to verify if the rail traffic data attached is still valid?

We are performing a noise study for a development north of Barbertown Road and south of the CP railway line in Mississauga.
A google map is provided in the link below.

https://www.google.com/maps/place/Barbertown+Rd,+Mississauga,+ON/@43.5747056,-79.6901811,15.37z/data=!4m5!3m4!1s0x882b41754d211307:0x4598313eb48b7b6!8m2!3d43.5737906!4d-79.6940632

We are requesting rail data or verification of the attached data for the railway line.

- Rail data including number of trains per day/night, speed, number of cars and locomotives
- classification of the railway line (spur, mainline, secondary mainline etc).
- whistle on or off

Thank you.

Ms. Sheeba Paul, MEng, PEng
Senior Associate

HGC Engineering **NOISE | VIBRATION | ACOUSTICS**
Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203, Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044 **e**: spaul@hgcengineering.com
Visit our website – www.hgcengineering.com **Follow Us** – LinkedIn | Twitter | YouTube

APPENDIX C

Sample STAMSON 5.04 Output

```
STAMSON 5.0        NORMAL REPORT        Date: 13-03-2023 23:03:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a.te                 Time Period: Day/Night 16/8 hours
Description: Daytime and nighttime sound levels at the east façade,
prediction location [A]

Rail data, segment # 1: CP (day/night)
-------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+-------+------+------+------+----
  1. Freight     !  16.0/17.0  !  80.0 !  4.0 !163.0 !Diesel!  No

Data for Segment # 1: CP (day/night)
-----------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  40.00 / 40.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
No Whistle
Elevation                 :  28.50 m
Reference angle           :   0.00

Rail data, segment # 2: GO (day/night)
-------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+-------+------+------+------+----
  1. GO          !  38.0/6.0   !  80.0 !  1.0 ! 12.0 !Diesel!  No

Data for Segment # 2: GO (day/night)
-----------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  40.00 / 40.00  m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
No Whistle
Elevation                 :  28.50 m
Reference angle           :   0.00

Results segment # 1: CP (day)
-----------------------------

LOCOMOTIVE (0.00 + 71.57 + 0.00) = 71.57 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------
   -90     90   0.00  75.83  -4.26   0.00   0.00   0.00   0.00  71.57
```

```
------------------------------------------------------------------------

WHEEL (0.00 + 67.75 + 0.00) = 67.75 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  72.01  -4.26   0.00   0.00   0.00   0.00  67.75
------------------------------------------------------------------------

Segment Leq : 73.08 dBA

Results segment # 2: GO (day)
------------------------------

LOCOMOTIVE (0.00 + 64.99 + 0.00) = 64.99 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  69.25  -4.26   0.00   0.00   0.00   0.00  64.99
------------------------------------------------------------------------

WHEEL (0.00 + 60.42 + 0.00) = 60.42 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  64.68  -4.26   0.00   0.00   0.00   0.00  60.42
------------------------------------------------------------------------

Segment Leq : 66.29 dBA

Total Leq All Segments: 73.91 dBA

Results segment # 1: CP (night)
--------------------------------

LOCOMOTIVE (0.00 + 74.84 + 0.00) = 74.84 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  79.10  -4.26   0.00   0.00   0.00   0.00  74.84
------------------------------------------------------------------------

WHEEL (0.00 + 71.02 + 0.00) = 71.02 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  75.28  -4.26   0.00   0.00   0.00   0.00  71.02
------------------------------------------------------------------------

Segment Leq : 76.35 dBA

Results segment # 2: GO (night)
--------------------------------

LOCOMOTIVE (0.00 + 59.98 + 0.00) = 59.98 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90     90   0.00  64.24  -4.26   0.00   0.00   0.00   0.00  59.98
------------------------------------------------------------------------
```

```
WHEEL (0.00 + 55.41 + 0.00) = 55.41 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  59.67  -4.26   0.00   0.00   0.00   0.00  55.41
-------------------------------------------------------------------------

Segment Leq : 61.28 dBA

Total Leq All Segments: 76.48 dBA

Road data, segment # 1: Tannery (day/night)
-------------------------------------------
Car traffic volume  :  4365/485   veh/TimePeriod  *
Medium truck volume :    74/8     veh/TimePeriod  *
Heavy truck volume  :    61/7     veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Tannery (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 208.00 / 208.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Road data, segment # 2: Queen St (day/night)
--------------------------------------------
Car traffic volume  : 12222/1358  veh/TimePeriod  *
Medium truck volume :   208/23    veh/TimePeriod  *
Heavy truck volume  :   170/19    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  14000
    Percentage of Annual Growth        :   0.00
```

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Queen St (day/night)
------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 254.00 / 254.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Results segment # 1: Tannery (day)
----------------------------------

Source height = 1.08 m

ROAD (0.00 + 45.30 + 0.00) = 45.30 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90      0   0.00  59.73   0.00 -11.42  -3.01   0.00   0.00   0.00
45.30
-------------------------------------------------------------------------
---

Segment Leq : 45.30 dBA

Results segment # 2: Queen St (day)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 49.81 + 0.00) = 49.81 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90     90   0.00  62.10   0.00 -12.29   0.00   0.00   0.00   0.00
49.81
-------------------------------------------------------------------------
---

Segment Leq : 49.81 dBA

Total Leq All Segments: 51.13 dBA
```

```
Results segment # 1: Tannery (night)
------------------------------------

Source height = 1.09 m

ROAD (0.00 + 38.81 + 0.00) = 38.81 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90      0   0.00  53.24   0.00 -11.42  -3.01   0.00   0.00   0.00
38.81
-------------------------------------------------------------------------
---

Segment Leq : 38.81 dBA

Results segment # 2: Queen St (night)
------------------------------------

Source height = 1.08 m

ROAD (0.00 + 43.29 + 0.00) = 43.29 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90     90   0.00  55.58   0.00 -12.29   0.00   0.00   0.00   0.00
43.29
-------------------------------------------------------------------------
---

Segment Leq : 43.29 dBA

Total Leq All Segments: 44.61 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 73.93
                           (NIGHT): 76.49
```

STAMSON 5.0 NORMAL REPORT Date: 13-03-2023 23:03:40
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b.te Time Period: Day/Night 16/8 hours
Description: ***Daytime and nighttime sound levels at the north façade, prediction location [B]***

Rail data, segment # 1: CP (day/night)

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1. Freight	16.0/17.0	80.0	4.0	163.0	Diesel	No

Data for Segment # 1: CP (day/night)

Angle1 Angle2	-90.00 deg	0.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	50.00 / 50.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50 m	
Reference angle	0.00	

Rail data, segment # 2: GO (day/night)

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1. GO	38.0/6.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 2: GO (day/night)

Angle1 Angle2	-90.00 deg	0.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	50.00 / 50.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50 m	
Reference angle	0.00	

Results segment # 1: CP (day)

LOCOMOTIVE (0.00 + 67.59 + 0.00) = 67.59 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	75.83	-5.23	-3.01	0.00	0.00	0.00	67.59

```
------------------------------------------------------------------------

WHEEL (0.00 + 63.77 + 0.00) = 63.77 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  72.01  -5.23  -3.01   0.00   0.00   0.00  63.77
------------------------------------------------------------------------

Segment Leq : 69.10 dBA

Results segment # 2: GO (day)
------------------------------

LOCOMOTIVE (0.00 + 61.01 + 0.00) = 61.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  69.25  -5.23  -3.01   0.00   0.00   0.00  61.01
------------------------------------------------------------------------

WHEEL (0.00 + 56.44 + 0.00) = 56.44 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  64.68  -5.23  -3.01   0.00   0.00   0.00  56.44
------------------------------------------------------------------------

Segment Leq : 62.31 dBA

Total Leq All Segments: 69.93 dBA

Results segment # 1: CP (night)
--------------------------------

LOCOMOTIVE (0.00 + 70.86 + 0.00) = 70.86 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  79.10  -5.23  -3.01   0.00   0.00   0.00  70.86
------------------------------------------------------------------------

WHEEL (0.00 + 67.04 + 0.00) = 67.04 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  75.28  -5.23  -3.01   0.00   0.00   0.00  67.04
------------------------------------------------------------------------

Segment Leq : 72.37 dBA

Results segment # 2: GO (night)
--------------------------------

LOCOMOTIVE (0.00 + 56.01 + 0.00) = 56.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90      0   0.00  64.24  -5.23  -3.01   0.00   0.00   0.00  56.01
------------------------------------------------------------------------
```

```
WHEEL (0.00 + 51.43 + 0.00) = 51.43 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90      0   0.00  59.67  -5.23  -3.01   0.00   0.00   0.00  51.43
-------------------------------------------------------------------------

Segment Leq : 57.31 dBA

Total Leq All Segments: 72.50 dBA

Road data, segment # 1: Queen St (day/night)
-------------------------------------------
Car traffic volume  : 12222/1358  veh/TimePeriod  *
Medium truck volume :   208/23    veh/TimePeriod  *
Heavy truck volume  :   170/19    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  14000
    Percentage of Annual Growth         :   0.00
    Number of Years of Growth           :   0.00
    Medium Truck % of Total Volume      :   1.65
    Heavy Truck  % of Total Volume      :   1.35
    Day (16 hrs) % of Total Volume      :  90.00

Data for Segment # 1: Queen St (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 264.00 / 264.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Results segment # 1: Queen St (day)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 46.64 + 0.00) = 46.64 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90      0   0.00  62.10   0.00 -12.46  -3.01   0.00   0.00   0.00
46.64
```

```
------------------------------------------------------------------------
---

Segment Leq : 46.64 dBA

Total Leq All Segments: 46.64 dBA

Results segment # 1: Queen St (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 40.11 + 0.00) = 40.11 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
------------------------------------------------------------------------
---
   -90      0   0.00  55.58   0.00 -12.46  -3.01   0.00   0.00   0.00
40.11
------------------------------------------------------------------------
---

Segment Leq : 40.11 dBA

Total Leq All Segments: 40.11 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.95
                           (NIGHT): 72.51
```

STAMSON 5.0 NORMAL REPORT Date: 13-03-2023 23:03:49
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: c.te Time Period: Day/Night 16/8 hours
Description: ***Daytime and nighttime sound levels at South façade, prediction location [C]***

Rail data, segment # 1: CP (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1. Freight	16.0/17.0	80.0	4.0	163.0	Diesel	No

Data for Segment # 1: CP (day/night)

Angle1 Angle2	0.00 deg	90.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	50.00 / 50.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50 m	
Reference angle	0.00	

Rail data, segment # 2: GO (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1. GO	38.0/6.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 2: GO (day/night)

Angle1 Angle2	0.00 deg	90.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	50.00 / 50.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50 m	
Reference angle	0.00	

Results segment # 1: CP (day)

LOCOMOTIVE (0.00 + 67.59 + 0.00) = 67.59 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	75.83	-5.23	-3.01	0.00	0.00	0.00	67.59

```
------------------------------------------------------------------------

WHEEL (0.00 + 63.77 + 0.00) = 63.77 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  72.01  -5.23  -3.01   0.00   0.00   0.00  63.77
------------------------------------------------------------------------

Segment Leq : 69.10 dBA

Results segment # 2: GO (day)
------------------------------

LOCOMOTIVE (0.00 + 61.01 + 0.00) = 61.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  69.25  -5.23  -3.01   0.00   0.00   0.00  61.01
------------------------------------------------------------------------

WHEEL (0.00 + 56.44 + 0.00) = 56.44 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  64.68  -5.23  -3.01   0.00   0.00   0.00  56.44
------------------------------------------------------------------------

Segment Leq : 62.31 dBA

Total Leq All Segments: 69.93 dBA

Results segment # 1: CP (night)
--------------------------------

LOCOMOTIVE (0.00 + 70.86 + 0.00) = 70.86 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  79.10  -5.23  -3.01   0.00   0.00   0.00  70.86
------------------------------------------------------------------------

WHEEL (0.00 + 67.04 + 0.00) = 67.04 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  75.28  -5.23  -3.01   0.00   0.00   0.00  67.04
------------------------------------------------------------------------

Segment Leq : 72.37 dBA

Results segment # 2: GO (night)
--------------------------------

LOCOMOTIVE (0.00 + 56.01 + 0.00) = 56.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
     0     90   0.00  64.24  -5.23  -3.01   0.00   0.00   0.00  56.01
------------------------------------------------------------------------
```

```
WHEEL (0.00 + 51.43 + 0.00) = 51.43 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
     0     90   0.00  59.67  -5.23  -3.01   0.00   0.00   0.00  51.43
-------------------------------------------------------------------------

Segment Leq : 57.31 dBA

Total Leq All Segments: 72.50 dBA

Road data, segment # 1: Tannery (day/night)
-------------------------------------------
Car traffic volume  :  4365/485   veh/TimePeriod  *
Medium truck volume :    74/8     veh/TimePeriod  *
Heavy truck volume  :    61/7     veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Tannery (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 180.00 / 180.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Road data, segment # 2: Queen St (day/night)
--------------------------------------------
Car traffic volume  : 12222/1358  veh/TimePeriod  *
Medium truck volume :   208/23    veh/TimePeriod  *
Heavy truck volume  :   170/19    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  14000
    Percentage of Annual Growth        :   0.00
```

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Queen St (day/night)
-----------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 264.00 / 264.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Results segment # 1: Tannery (day)
----------------------------------

Source height = 1.08 m

ROAD (0.00 + 48.94 + 0.00) = 48.94 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90     90   0.00  59.73   0.00 -10.79   0.00   0.00   0.00   0.00
48.94
-------------------------------------------------------------------------
---

Segment Leq : 48.94 dBA

Results segment # 2: Queen St (day)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 46.64 + 0.00) = 46.64 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
     0     90   0.00  62.10   0.00 -12.46  -3.01   0.00   0.00   0.00
46.64
-------------------------------------------------------------------------
---

Segment Leq : 46.64 dBA

Total Leq All Segments: 50.95 dBA
```

```
Results segment # 1: Tannery (night)
------------------------------------

Source height = 1.09 m

ROAD (0.00 + 42.45 + 0.00) = 42.45 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90     90   0.00  53.24   0.00 -10.79   0.00   0.00   0.00   0.00
42.45
-------------------------------------------------------------------------
---

Segment Leq : 42.45 dBA

Results segment # 2: Queen St (night)
------------------------------------

Source height = 1.08 m

ROAD (0.00 + 40.11 + 0.00) = 40.11 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
     0     90   0.00  55.58   0.00 -12.46  -3.01   0.00   0.00   0.00
40.11
-------------------------------------------------------------------------
---

Segment Leq : 40.11 dBA

Total Leq All Segments: 44.45 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.98
                           (NIGHT): 72.51
```

STAMSON 5.0 NORMAL REPORT Date: 13-03-2023 23:04:09
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: d.te Time Period: Day/Night 16/8 hours
Description: ***Daytime and nighttime sound levels at the west façade, prediction location [D]***

Rail data, segment # 1: CP (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1. Freight	16.0/17.0	80.0	4.0	163.0	Diesel	No

Data for Segment # 1: CP (day/night)

Angle1 Angle2	-90.00 deg	-45.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	55.00 / 55.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50	m
Reference angle	0.00	

Rail data, segment # 2: GO (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1. GO	38.0/6.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 2: GO (day/night)

Angle1 Angle2	-90.00 deg	-45.00 deg
Wood depth	0	(No woods.)
No of house rows	0 / 0	
Surface	1	(Absorptive ground surface)
Receiver source distance	55.00 / 55.00	m
Receiver height	1.50 / 1.50	m
Topography	3	(Elevated; no barrier)
No Whistle		
Elevation	28.50	m
Reference angle	0.00	

Results segment # 1: CP (day)

LOCOMOTIVE (0.00 + 64.16 + 0.00) = 64.16 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	75.83	-5.64	-6.02	0.00	0.00	0.00	64.16

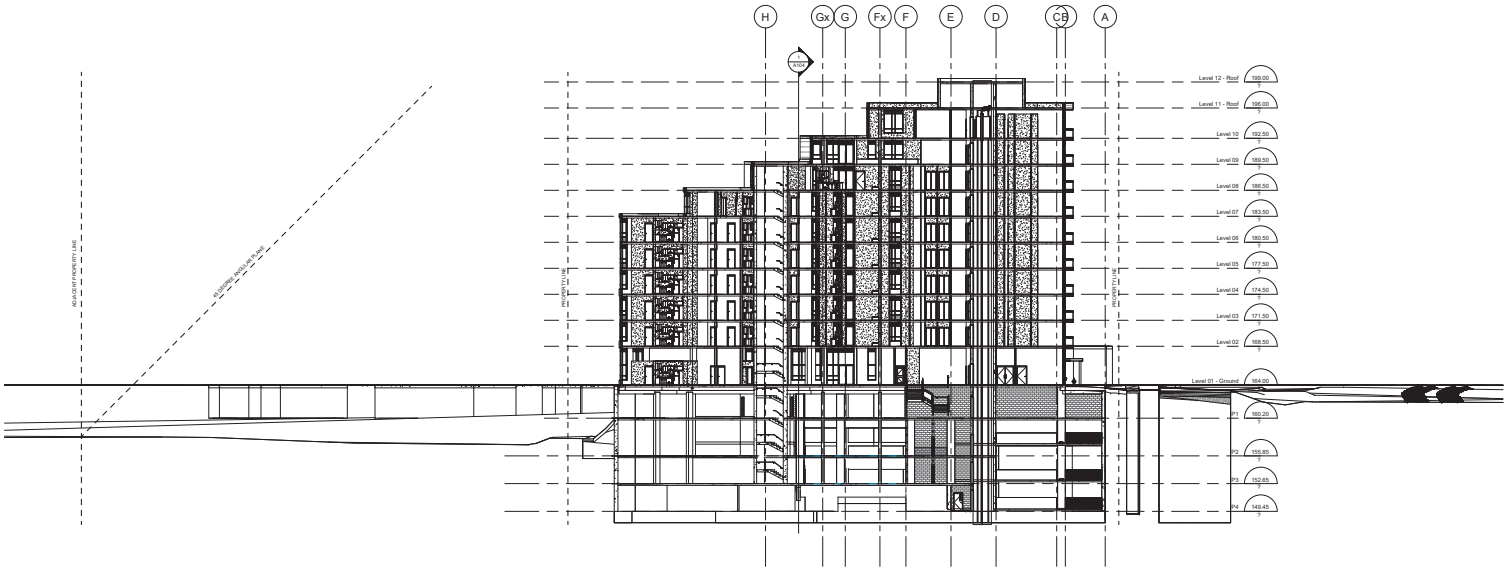
```
------------------------------------------------------------------------

WHEEL (0.00 + 60.34 + 0.00) = 60.34 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  72.01  -5.64  -6.02   0.00   0.00   0.00  60.34
------------------------------------------------------------------------

Segment Leq : 65.67 dBA

Results segment # 2: GO (day)
------------------------------

LOCOMOTIVE (0.00 + 57.59 + 0.00) = 57.59 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  69.25  -5.64  -6.02   0.00   0.00   0.00  57.59
------------------------------------------------------------------------

WHEEL (0.00 + 53.01 + 0.00) = 53.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  64.68  -5.64  -6.02   0.00   0.00   0.00  53.01
------------------------------------------------------------------------

Segment Leq : 58.89 dBA

Total Leq All Segments: 66.50 dBA

Results segment # 1: CP (night)
--------------------------------

LOCOMOTIVE (0.00 + 67.44 + 0.00) = 67.44 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  79.10  -5.64  -6.02   0.00   0.00   0.00  67.44
------------------------------------------------------------------------

WHEEL (0.00 + 63.62 + 0.00) = 63.62 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  75.28  -5.64  -6.02   0.00   0.00   0.00  63.62
------------------------------------------------------------------------

Segment Leq : 68.95 dBA

Results segment # 2: GO (night)
--------------------------------

LOCOMOTIVE (0.00 + 52.58 + 0.00) = 52.58 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
------------------------------------------------------------------------
   -90    -45   0.00  64.24  -5.64  -6.02   0.00   0.00   0.00  52.58
------------------------------------------------------------------------
```

```
WHEEL (0.00 + 48.01 + 0.00) = 48.01 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90    -45   0.00  59.67  -5.64  -6.02   0.00   0.00   0.00  48.01
-------------------------------------------------------------------------

Segment Leq : 53.88 dBA

Total Leq All Segments: 69.08 dBA

Road data, segment # 1: Tannery (day/night)
-------------------------------------------
Car traffic volume  :  4365/485   veh/TimePeriod  *
Medium truck volume :    74/8     veh/TimePeriod  *
Heavy truck volume  :    61/7     veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Tannery (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 208.00 / 208.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  28.50 m
Reference angle           :   0.00

Results segment # 1: Tannery (day)
----------------------------------

Source height = 1.08 m

ROAD (0.00 + 45.30 + 0.00) = 45.30 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
---
   -90      0   0.00  59.73   0.00 -11.42  -3.01   0.00   0.00   0.00
45.30
```

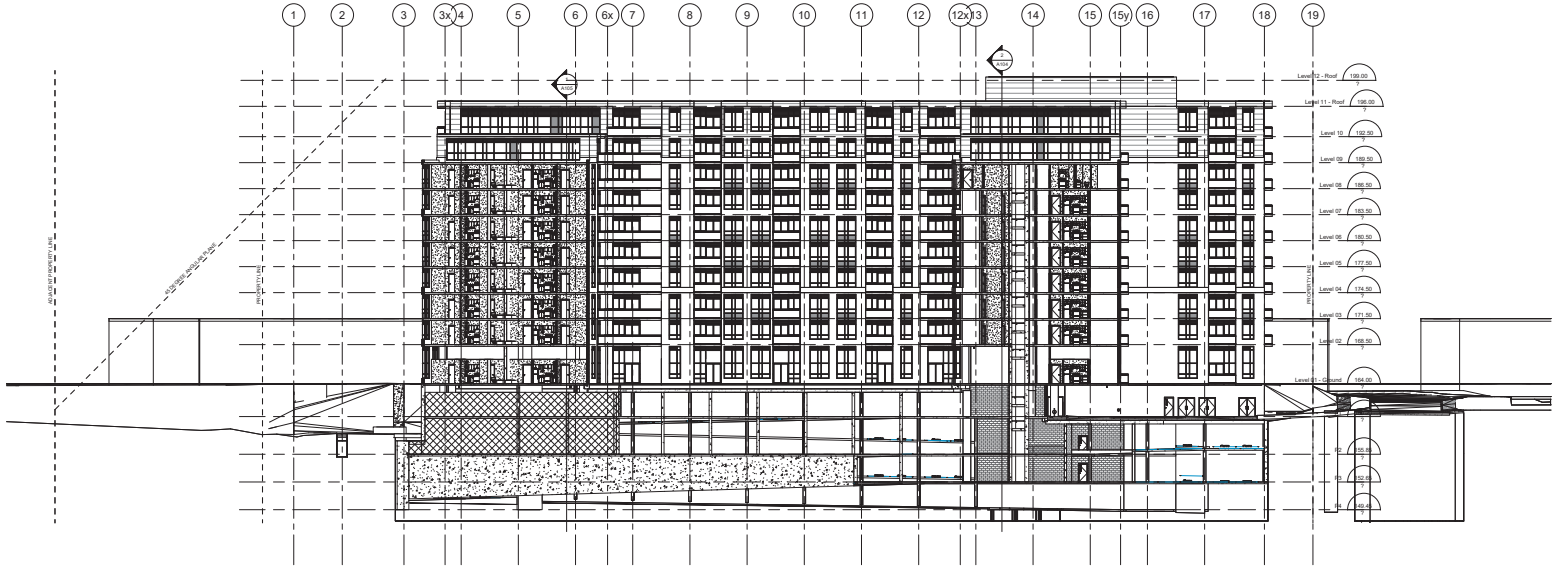
```
--------------------------------------------------------------------------
---

Segment Leq : 45.30 dBA

Total Leq All Segments: 45.30 dBA

Results segment # 1: Tannery (night)
-----------------------------------

Source height = 1.09 m

ROAD (0.00 + 38.81 + 0.00) = 38.81 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
--------------------------------------------------------------------------
---
   -90      0   0.00  53.24   0.00 -11.42  -3.01   0.00   0.00   0.00
38.81
--------------------------------------------------------------------------
---

Segment Leq : 38.81 dBA

Total Leq All Segments: 38.81 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.53
                           (NIGHT): 69.09
```

APPENDIX D

Supporting Drawings



2 Site Section 2
1 : 200



1 Site Section 1
1 : 200

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

GLOBAL
6 Lesway Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

CLIENT: Forest Green Homes

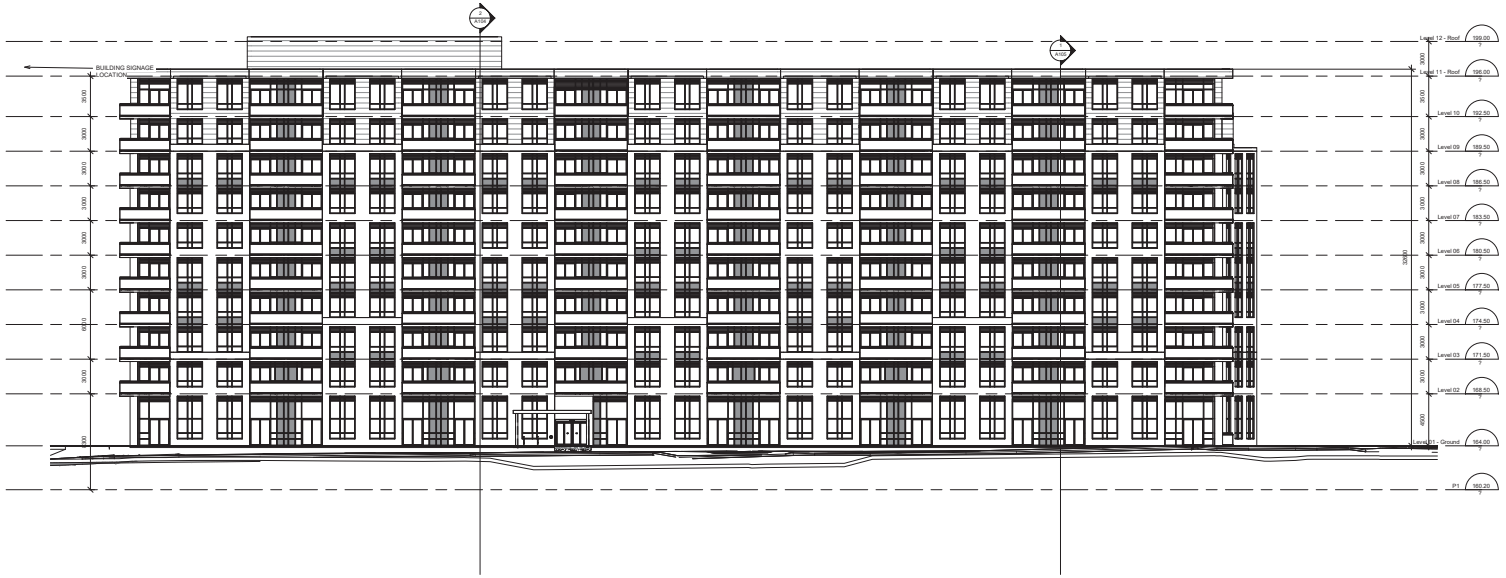
PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 200

DWG. TITLE: SITE SECTIONS

PROJECT NO.: 22-03

A104



1 North
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish

6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

6 Lesmyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

CLIENT: Forest Green Homes
1550 Bayview Ave.
Toronto, ON M4G 3A1
Phone: 416.932.6000
Fax: 416.932.6001
Email:info@forestgreenhomes.com

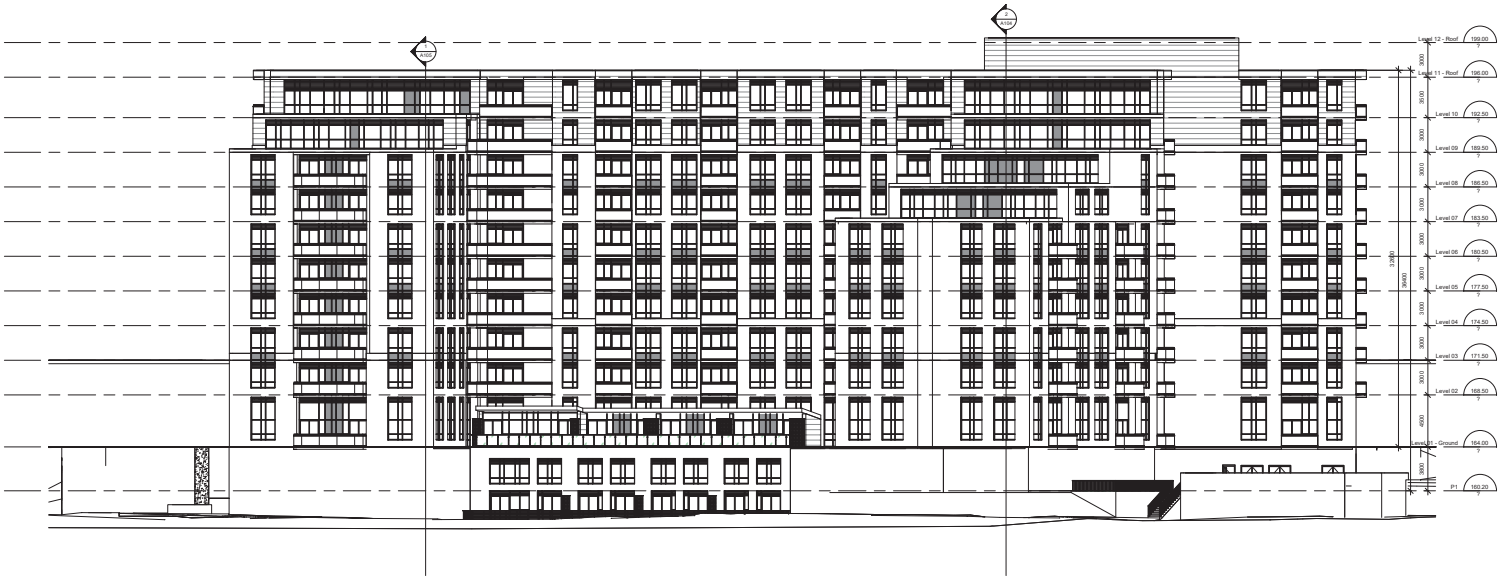
PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE
NORTH ELEVATION

PROJECT NO.
22-03

A301



1 South
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish

6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

GLOBAL
6 Lesavyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

CLIENT: Forest Green Homes

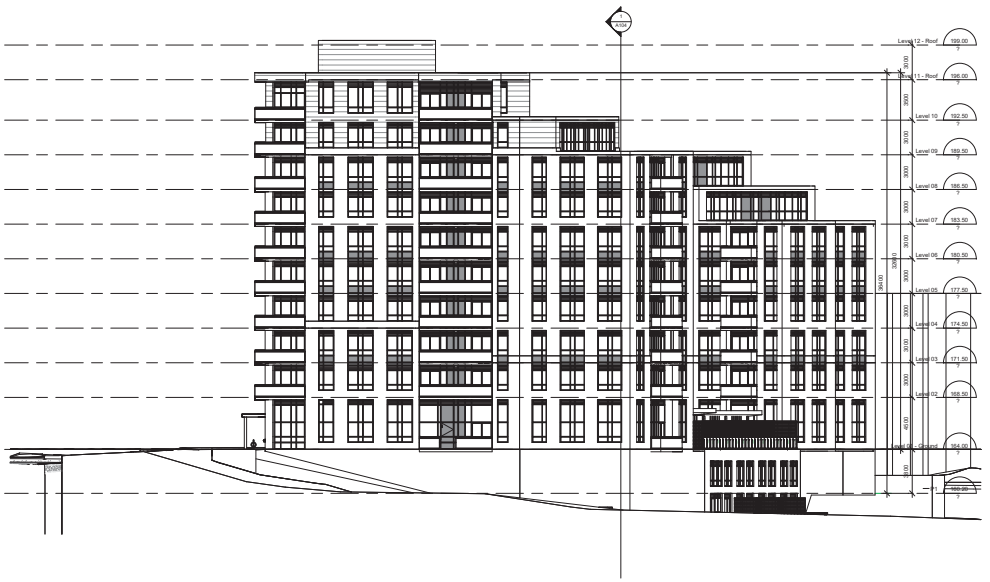
PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE
SOUTH ELEVATION

PROJECT NO. 22-03

A302



1 West
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish	
6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

6 Lesmyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

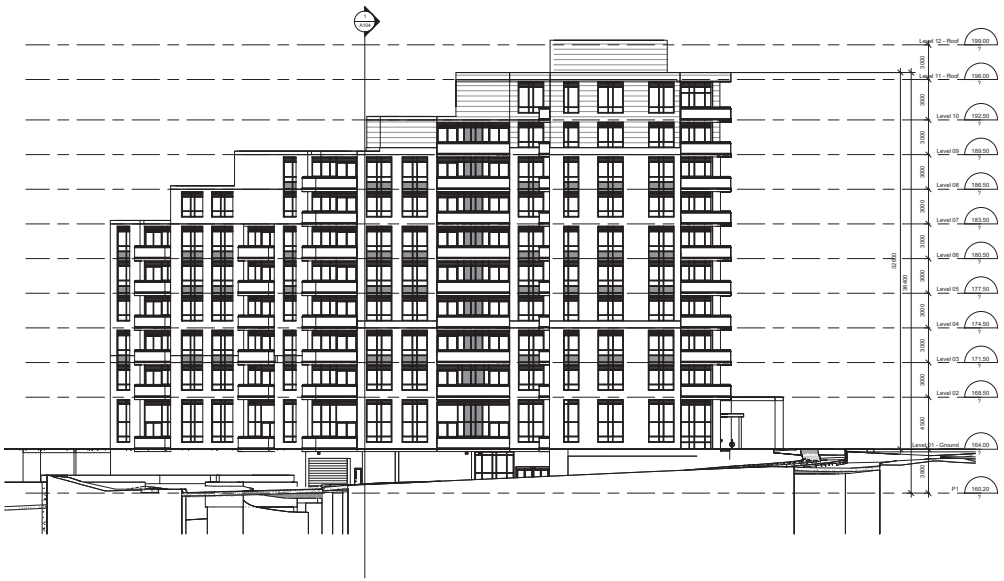
CLIENT: Forest Green Homes

PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE
WEST ELEVATION

PROJECT NO.	
22-03	A303



1 East
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish	
6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

GLOBAL
6 Lesmyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

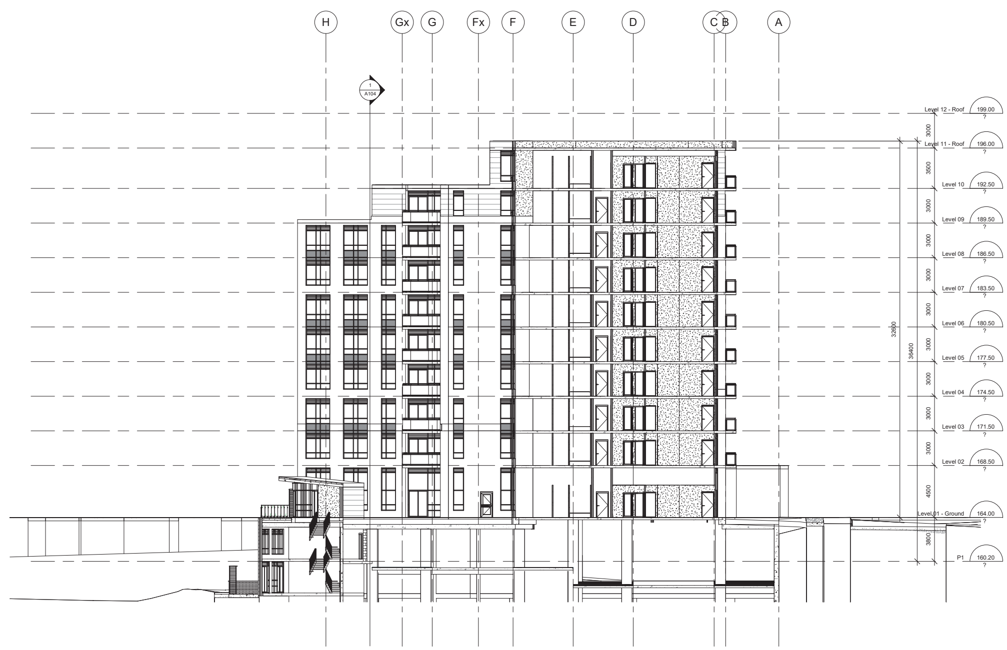
CLIENT: Forest Green Homes

PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE
EAST ELEVATION

PROJECT NO.	
22-03	A304



1 Courtyard East
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish

6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

GLOBAL
6 Leswyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

CLIENT

Forest Green Homes
5332 Highway 7
Woodbridge ON L4L 1T3
Phone: 905.850.8500
Fax: 905.850.8503
Email:info@forestgreenhomes.com

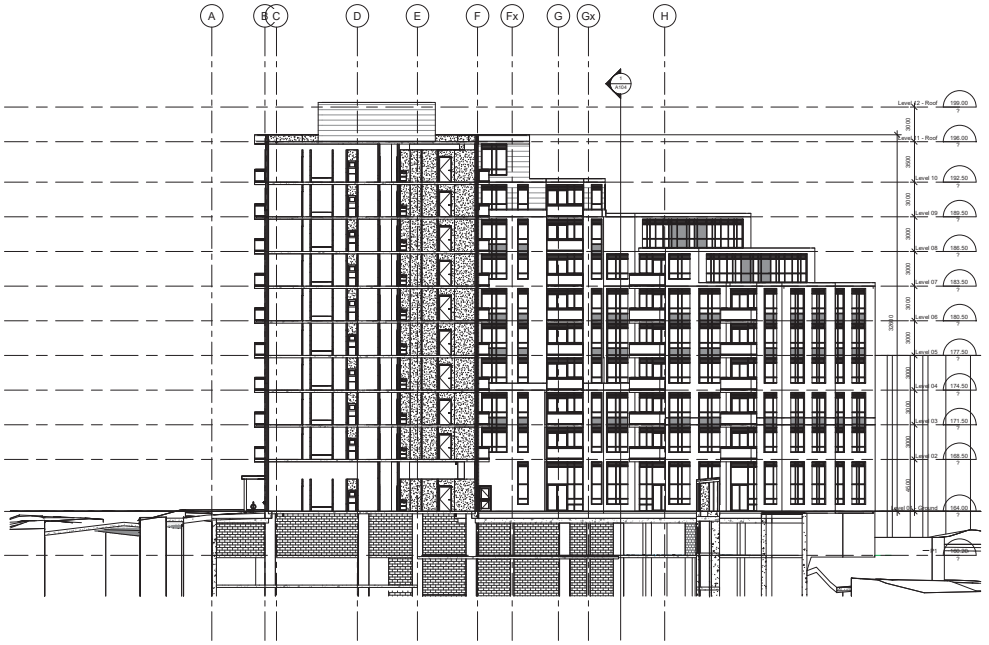
PROJECT NAME
Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DQ
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE
EAST COURT ELEVATION

PROJECT NO.
22-03

A305



1 Courtyard West
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish

6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

6 Lesmyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

CLIENT: Forest Green Homes

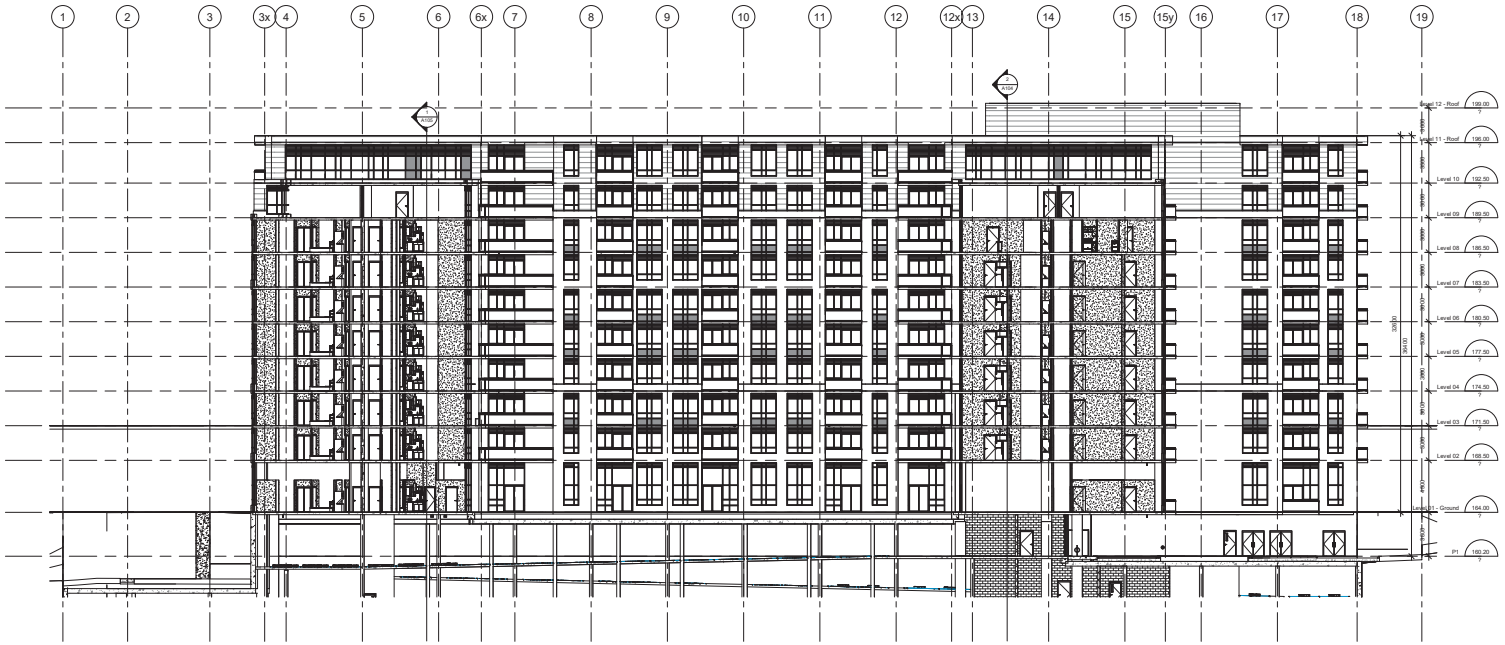
PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE: WEST COURT ELEVATION

PROJECT NO.: 22-03

A306



1 Courtyard South
1 : 150

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

Exterior Finish	
6	Window Wall Vision Panel
7	Window Wall Spandrel Panel

NOTE:
BUILDING MATERIALS/CLADDING SELECTIONS ARE REPRESENTATIVE OF SIZE AND COLOR OF MATERIALS TO BE CHOSEN AT A LATER DATE

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

6 Lesavyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

CLIENT: Forest Green Homes

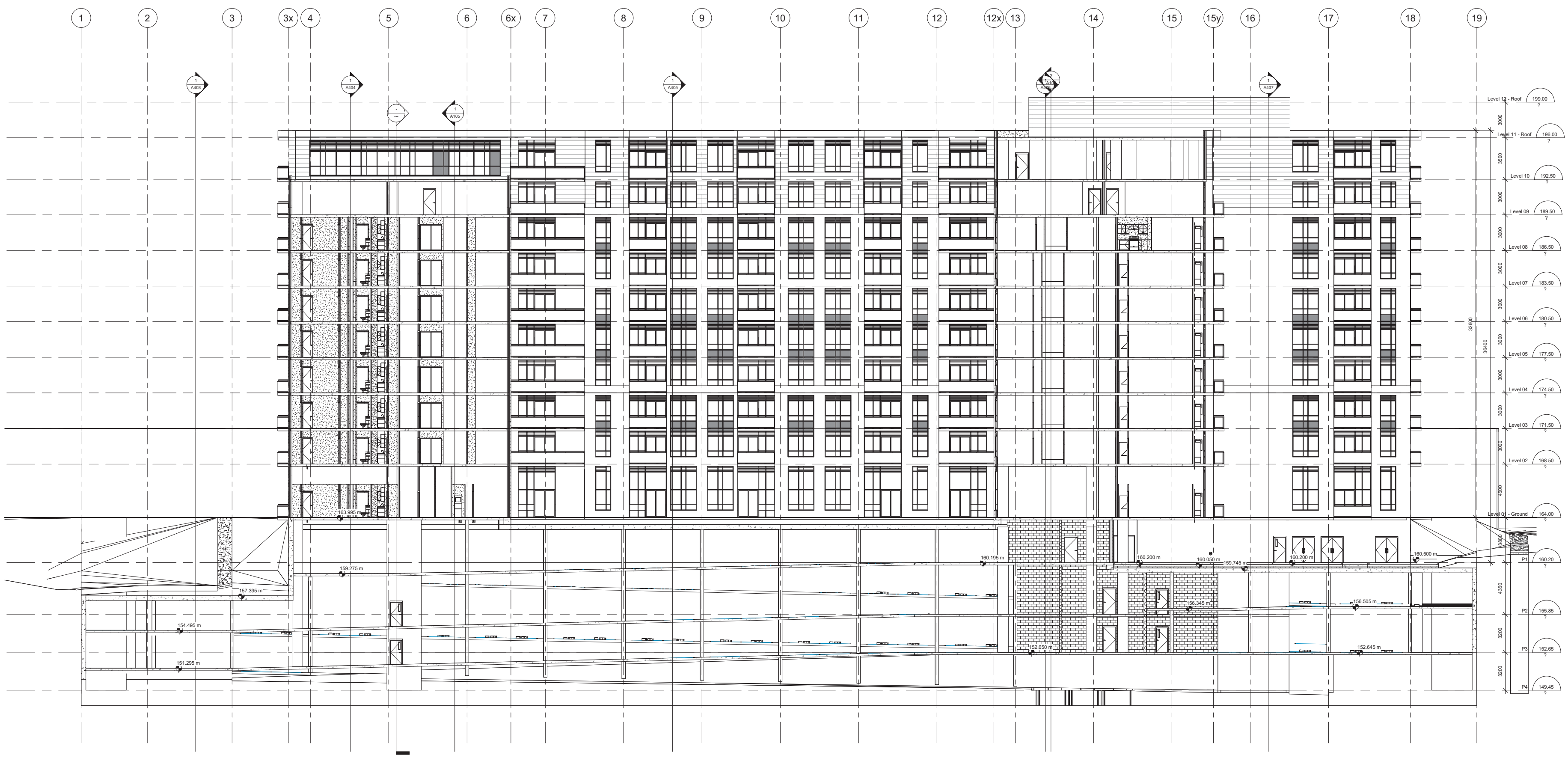
PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 150

DWG. TITLE: SOUTH COURT ELEVATION

PROJECT NO.: 22-03

A307



1 Section 1
1 : 125

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

Contractor must check and verify all dimensions and be responsible for same; reporting any discrepancies to the Architect before commencing work.

All drawings, prints and specifications are the property of the Architect and must be returned to him on completion of work. Latest drawings only to be used for construction.

Prints are not to be scaled.

GLOBAL
6 Leswyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

CLIENT: Forest Green Homes
5332 Highway 7
Woodbridge ON L4L 1T3
Phone: 905.850.8500
Fax: 905.850.8503
Email:info@forestgreenhomes.com

PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

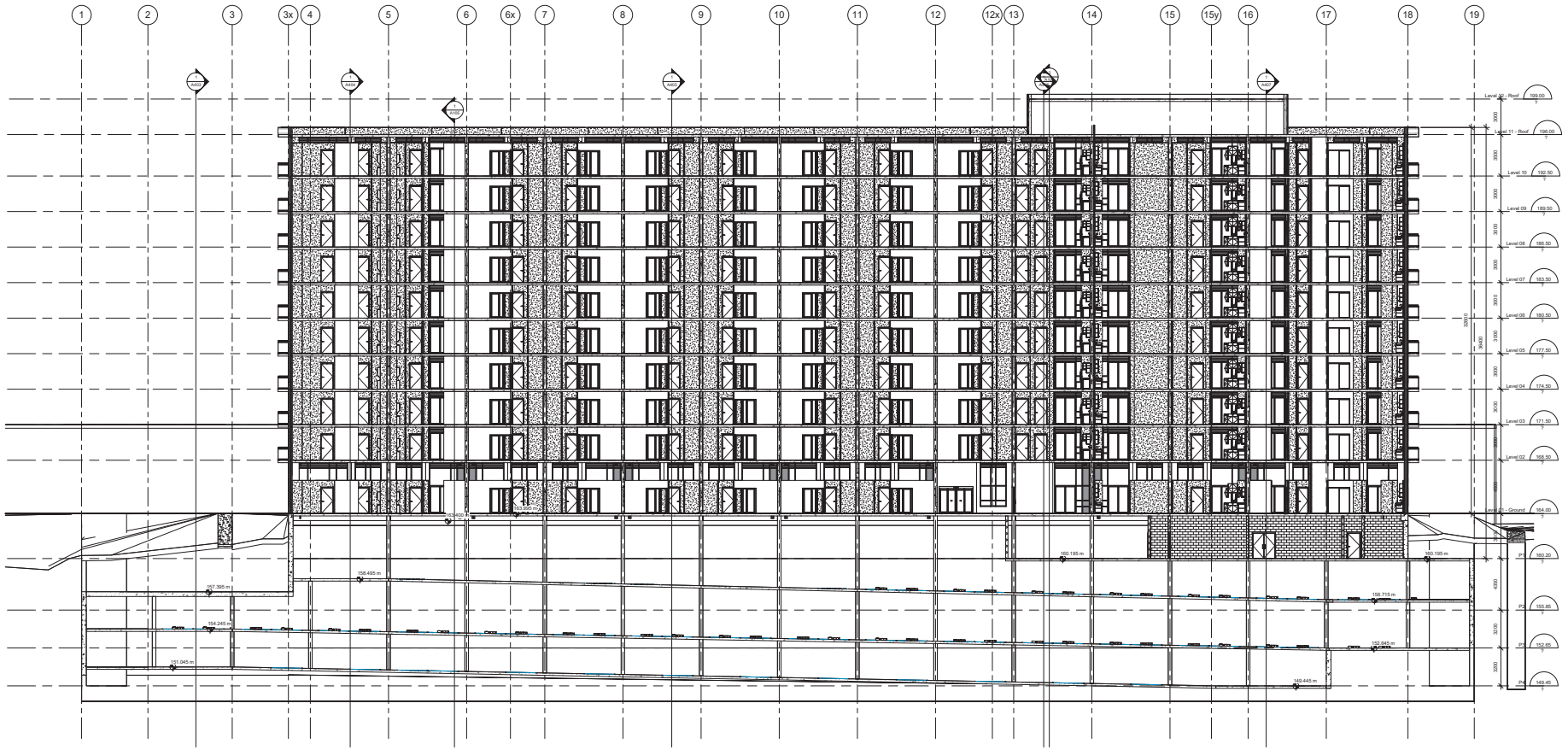
DRAWN BY	CM, DQ
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 125

DWG. TITLE

BUILDING SECTION 1

PROJECT NO. 22-03

A401



1 Section 2
1 : 125

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

Contractor must check and verify all dimensions and be responsible for same, reporting any discrepancies to the Architect before commencing work.

All drawings, prints and specifications are the property of the Architect and must be returned to him on completion of work. Latest drawings only to be used for construction.

Prints are not to be scaled.

GLOBAL
6 Lesway Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

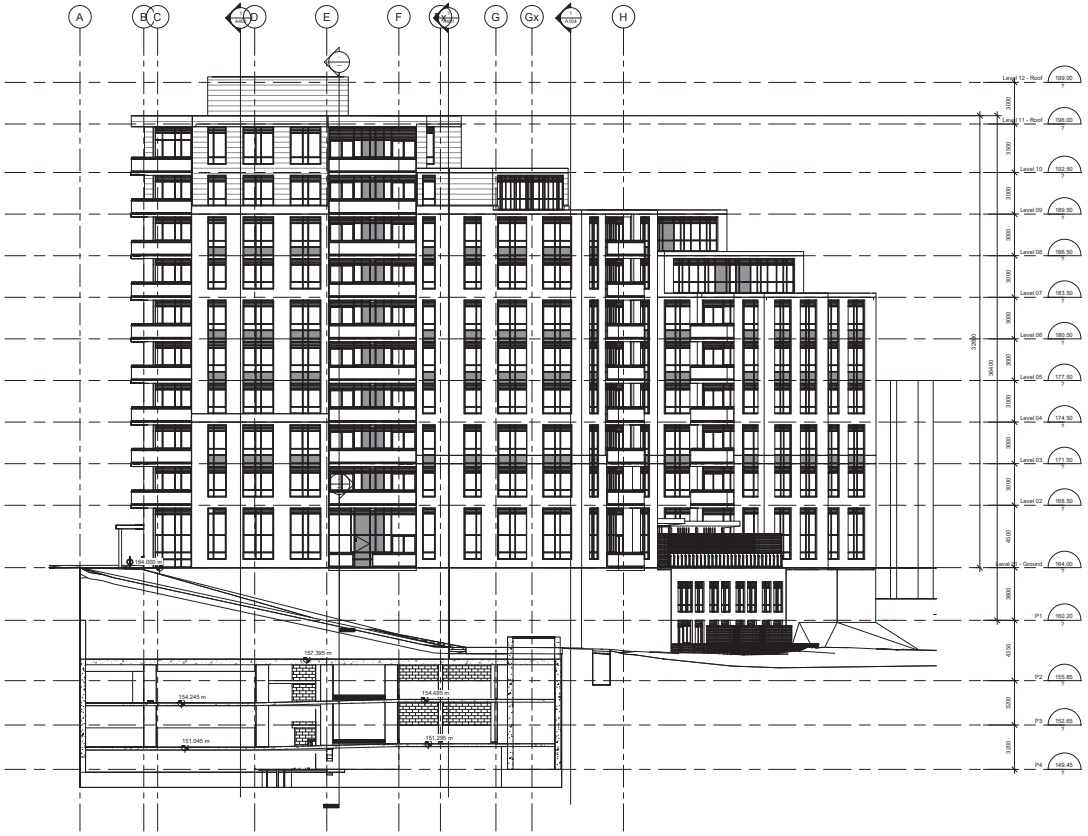
CLIENT: Forest Green Homes

PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 125

DWG. TITLE
BUILDING SECTION 2

PROJECT NO.	
22-03	A402



1 Section 3
1 : 125

DATE	ISSUED FOR
2023/01/27	ISSUED FOR REZONING

NO.	DATE	DESCRIPTION
1	2023/01/27	ISSUED FOR REZONING

REVISIONS

Contractor must check and verify all dimensions and be responsible for same, reporting any discrepancies to the Architect before commencing work.

All drawings, prints and specifications are the property of the Architect and must be returned to him on completion of work. Latest drawings only to be used for construction.

Prints are not to be scaled.

GLOBAL
6 Lesavyn Road, Toronto, Ontario M6A 1K2
ph: 416 256 4440 fx: 416 256 4449

FOREST GREEN HOMES

CLIENT: Forest Green Homes

PROJECT NAME: Vic 2
150 RUTLEDGE RD.
Mississauga (Streetsville)
Ont.

DRAWN BY	CM, DO
CHECKED BY	RP, PP
DATE	06/29/21
SCALE	1 : 125

DWG. TITLE
BUILDING SECTION 3

PROJECT NO.	
22-03	A403