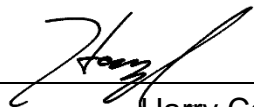


Noise Feasibility Study
Proposed Residential Development
86 Thomas Street
City of Mississauga, Ontario

Prepared for:

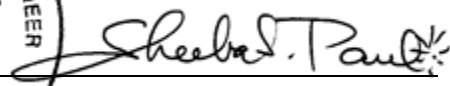

Rexell Developments Inc.
4101 Steels Avenue, Unit 201
Toronto, Ontario
M3N 1V7

Prepared by



Harry Cai, BEng

Reviewed by



Sheeba Paul, MEng, PEng

June 30, 2021

Project No. 01900058

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Figure 1: Key Plan

Figure 2: Site Plan Showing Prediction Locations

Figure 3: Terrace Level Plan Showing Rooftop Prediction Location

Appendix A: Rail Guidelines and Traffic Data

Appendix B: Road Traffic Data

Appendix C: STAMSON 5.04 Output

Appendix D: Supporting Drawings

Appendix E: City of Mississauga Comments and HGC Responses

1 Introduction & Summary

HGC Engineering was retained by Rexell Developments Inc. to conduct a noise feasibility study for a proposed townhouse development to be located at 86 Thomas Street, northeast of Hillside Drive, in Mississauga, Ontario. The proposed development will consist of a townhouse building with 10 back to back units and associated parking spaces. Lands surrounding the subject site are primarily existing residential and commercial uses to the further northeast. The study is required by the City of Mississauga as part of the planning and approvals process.

This study is an update of our previous noise feasibility study, dated June 8, 2020, to address comments from the City of Mississauga, included as Appendix E, and to include the updated site plan and architectural plans from Wes Surdyka Architect Inc. dated April 23, 2021 and May 11, 2021, respectively.

The primary source of noise impacting the site was determined to be road traffic on Thomas Street. Secondary sources of noise include Joymar Drive and rail traffic on the Canadian Pacific (CP) railway approximately 325 m to the east. Ultimate average annual daily traffic (AADT) data was obtained from the City of Mississauga. Rail traffic data was obtained from GO Transit/Metrolinx. Relevant traffic data was used to predict future traffic sound levels at the locations of the proposed residential dwelling facades. The predicted sound levels were compared to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP) and the Municipality to develop noise control recommendations.

The results of the study show that the proposed development is feasible with the noise control measures described in this report. Central air conditioning is required for the townhouse building. Upgraded glazing construction is required for the façade facing Thomas Street and for the façade facing the railway. Building construction meeting the minimum requirements of the Ontario Building Code will provide sufficient acoustical insulation for indoor spaces for other façades. Warning clauses are also recommended to inform future occupants of traffic noise impact and the presence of nearby commercial/retail facilities.



2 Site Description & Noise Sources

The proposed residential development is located north of Thomas Street and west of Joymar Drive, specifically at 86 Thomas Street, in the City of Mississauga, Ontario. Figure 1 shows a key plan of the subject site. A site plan prepared by WES SURDYKA Architect Inc. dated April 23, 2020 is shown as Figure 2. The proposed development will consist of one block of back to back three-storey townhouse units for a total of ten dwelling units and associated parking areas.

A site visit was made by HGC Engineering personnel in January 2020 to make observations of the acoustic environment, and to identify the significant noise sources in the vicinity. The acoustical environment surrounding the site is urban in nature. There are existing residences to the west, south and north. The site is currently vacant. Road traffic on Thomas Street was confirmed to be the primary source of sound impacting the site. Rail traffic on the Canadian Pacific (CP) railway and road traffic on Joymar Drive were confirmed to be the secondary sources of sound impacting the site. Thomas Street consists of two lanes in each direction, and Joymar Drive consists of one lane in each direction. The railway right of way is to be located approximately 325 m to the east of the closest proposed residential building façade.

A commercial plaza including several auto repair shops is located on the east side of Joymar Drive. It should be noted that there will be future residences closer to these commercial uses than the proposed residential development. Noise from these commercial uses were not audible at the time of the site visit, nonetheless, a noise warning clause is recommended in Section 5.4 to inform future occupants of the presence of nearby commercial uses and that sounds may be times be audible. Streetsville Secondary School is located to the further north. There are no other significant sources of stationary noise within 500 m of the subject site.

3 Noise Level Criteria

3.1 Road and Rail Traffic Noise

Guidelines for acceptable levels of road and rail traffic noise applicable to residential developments are given in the MECP publication NPC-300, “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning”, release date October 21, 2013 and are listed in Table I below. The values in Table I are energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels [dBA].

Table I: MECP Road and Rail Traffic Noise Criteria [dBA]

Space	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

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 purchase and rental agreements to the property. 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 for rail noise are 5 dBA more stringent 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 all dwellings where nighttime sound levels outside bedroom or living/dining room windows

exceed 60 dBA or daytime sound levels outside bedroom or living/dining room windows exceed 65 dBA. Forced-air ventilation with ducts sized to accommodate the future installation of air conditioning is required when nighttime sound levels at bedroom or living/dining room windows are in the range of 51 to 60 dBA or when daytime sound levels at bedroom or living/dining room windows are in the range of 56 to 65 dBA.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the plane of bedroom or living/dining room window sound level is greater than 55 dBA during nighttime and greater than 60 dBA during the daytime hours due to rail traffic noise.

Warning clauses are required to notify future residents of possible excesses when nighttime sound levels exceed 50 dBA at the plane of the bedroom or living/dining windows and daytime sound levels exceed 55 dBA in the outdoor living area and at the plane of the bedroom or living/dining room windows due to rail traffic.

4 Traffic Noise Assessment

4.1 Road Traffic Data

Road traffic information for Thomas Street was obtained from the City of Mississauga, in the form of ultimate AADT values, and is provided in Appendix B. An ultimate AADT of 21 500 vehicles per day, along with a speed limit of 50 km/h, was applied to Thomas Street. A commercial vehicle percentage of 3.0% was used in the analysis and was further split into 1.65% and 1.35% for medium and heavy trucks, respectively.

An ultimate AADT of 5 000 vehicles per day, along with a speed limit of 40 km/h, was applied to Joymar Drive. A commercial vehicle percentage of 2.0% was used in the analysis and was further split into 1.1% and 0.9% for medium and heavy trucks, respectively. Table II summarizes the traffic volume data used in this study.

Table II: Ultimate Road Traffic Data

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Thomas Street	Daytime	18 770	319	261	19 350
	Nighttime	2 086	35	29	2 150
	Total	20 856	354	290	21 500
Joymar Drive	Daytime	4 410	50	40	4 500
	Nighttime	490	5	5	500
	Total	4900	55	45	5 000

4.2 Rail Traffic

Rail traffic data for the Canadian Pacific (CP) Railway was obtained from HGC Engineering project files and originally from Canadian Pacific and GO Transit/Metrolinx personnel and is provided in Appendix A in the form of ten-year projected values. This rail line is used for both passenger trains and freight trains. The maximum train speed for passenger trains and freight trains are both 80 kph (50 mph). The data was projected to the year 2031 using a 2.5% per year growth rate. The maximum allowable speed input in STAMSON 5.04, a computer algorithm developed by the MECP, is 80 kph and was used in the analysis. Whistle signalling is prohibited approaching the public grade crossing through the study area. In conformance with GO Transit and Canadian Pacific Railway assessment requirements, the maximum speeds, maximum number of cars and locomotives per train were used in the traffic noise analysis to yield a worst case estimate of train noise. Table III summarises the rail traffic data used in the analysis.

Table III: Rail Traffic Data Projected to Year 2031

Type of Train	Number of Trains Day/ Night	Number of locomotives	Number of cars	Max Speed (KPH)
CP (Diesel)	8.1 / 9.4	4	163	80
GO (Diesel)	20.0 / 1.1	1	12	80

4.3 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. All STAMSON output is included in Appendix C.

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 and glazing requirements. Prediction locations were chosen around the residential site to obtain a representation of the future sound levels at various façades and outdoor living areas as shown in Figures 2 and 3. The results of these predictions are summarized in Tables IV and V.

The distance setback of the dwellings indicated on the site plan were used in the analysis along with the distance to the roadways and railway. The acoustic recommendations may be subject to modifications if the site plan is changed significantly.

Table IV: Daytime Predicted Future Sound Levels [dBA], Without Mitigation

Prediction Location	Description	Daytime $LEQ(16)$		Daytime - Total $LEQ(16)$
		Road	Rail	
A	Façade adjacent to Thomas Street and with some flanking exposure to railway	66	51	66
B	Façade with flanking exposure to Thomas Street	62	--	62
C	Façade facing railway and flanking exposure to Thomas Street	61	55	61
D	Façade with flanking exposure to railway	<55	51	51
E	Unit 5 elevated patio	<55	<50	<55
F	Rooftop terrace adjacent to Thomas Street	<55	<50	55*

Note: * with a minimum rooftop parapet of 1.7e m as shown on the building section drawings

Table V: Nighttime Predicted Future Sound Levels [dBA], Without Mitigation

Prediction Location	Description	Nighttime - at Façade L _{EQ(8)}		Nighttime - at Façade Total L _{EQ(8)}
		Road	Rail	
A	Façade adjacent to Thomas Street and with some flanking exposure to railway	59	54	61
B	Façade with flanking exposure to Thomas Street	56	--	56
C	Façade facing railway and flanking exposure to Thomas Street	54	57	59
D	Façade with flanking exposure to railway	<50	54	54

5 Traffic Noise Recommendations

The predictions indicate that the future traffic sound levels from Thomas Street, Joymar Drive and the railway will exceed MECP guidelines at the façade facing Thomas Street and the façade facing the railway. The following discussion outlines recommendations for ventilation requirements, upgraded building façade constructions and warning clauses to achieve the noise criteria stated in Table I.

5.1 Outdoor Living Areas

The townhouse units have rooftop terraces. The rooftop terraces of the interior units have depths of greater than 4 metres and are included in the analysis. The predicted sound level at the rooftop terraces will be up to 55 dBA with a 1.7 m parapet wall shown in the building section drawings, attached as Appendix D, and is within the MECP guideline limit of 55 dBA. No further mitigation is required.

The townhouse units also have elevated front patios. Other than unit 5, all elevated front patios are less than 4 metres in depth and are not included as OLAs under MECP guidelines. The predicted sound level at the elevated patio of Unit 5 will be up to 51 dBA and is within the MECP limit, as it is well shielded from road traffic on Thomas Street. No further mitigation is required.

5.2 Indoor Living Areas & Ventilation Requirements

Central Air Conditioning

The predicted sound levels outside the third storey windows of the façades with exposure to Thomas Street and/or the railway will be greater than 65 dBA during the daytime hours and greater than

60 dBA during nighttime hours due to road and rail traffic. Central air conditioning systems are required for all the dwelling units in the proposed development so that windows may remain closed. 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.

5.3 Building Façade Constructions

Future sound levels at the façade facing Thomas Street will exceed 65 dBA during the daytime due to road traffic noise, and the future sound levels at the façade facing the railway will exceed 55 dBA during nighttime due to rail traffic noise. MECP guidelines recommend that the windows, walls and doors be designed so that the indoor sound levels comply with MECP noise criteria.

The required building components are selected based on the Acoustical Insulation Factor (AIF) value for road traffic. To do so, calculations were performed to determine the acoustical insulation factors to maintain indoor sound levels within MECP guidelines. The calculation methods were developed by the National Research Council (NRC). They are based on the predicted future sound levels at the building façades, and the area ratios of the façade components (windows and walls) and the floor area of the adjacent room.

Exterior Wall Construction

Any exterior wall construction meeting the Ontario Building Code (OBC) will be acceptable for all dwelling units within the development. Any insulated metal exterior door meeting OBC requirements will be sufficient to provide noise insulation. If sliding patio doors are to be used in the dwellings, they must be included in the window area.

Glazing Construction

The minimum necessary specification for the building envelope is AIF-28 and AIF-29 for living/dining rooms and bedrooms respectively for the façade facing Thomas Street, based on the possibility of sound entering the buildings through windows and walls. The minimum necessary specification for the building envelope is AIF-26 and AIF-30 for living/dining rooms and bedroom respectively for the façade facing the railway.

The window to floor area ratios were measured to be up to 18 % for living/dining rooms, and up to 12 % for bedrooms, using the architectural drawings by Wes Surdyka Architects Inc. dated May 11, 2021 attached in Appendix D. Any well sealed thermopane unit having a Sound Transmission Class (STC) rating of 30, that is two 3 mm panes and a 13 mm inter-pane gap will typically provide sufficient noise insulation for indoor spaces.

5.4 Warning Clauses

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements and offers of purchase and sale for all townhouse units. The following noise warning clauses are required for specific units as indicated in Table VI.

Suggested wording for future dwellings with sound levels exceeding 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 on occasion interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.

A suitable 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 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 nearby existing commercial uses, noise from these facilities at times be audible.

6 Summary & Recommendations

The following list and Table VII summarize the recommendations made in this report. The reader is referred to previous sections of the report where these recommendations are applied and discussed in more detail.

1. Central air conditioning is required for all the townhouse units in the proposed development. The location, installation and sound rating of the outdoor condensing units must be compliant with MECP Guideline NPC-300, as applicable.
2. Upgraded glazing constructions will be required for the façade facing Thomas Street and the façade facing the railway, as included in Section 5.3.
3. Noise warning clauses to inform the occupants of the sound level excesses should be placed in the property and tenancy agreements and offers of purchase and sale. The affected townhouse units and appropriate warning clauses are shown in Table VII.

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

Unit No.	Acoustic Barrier	Ventilation Requirements *	Type of Warning Clause	Building Glazing Construction
5-10	--	Central Air	A, B, C	LR/DR: STC-30 BR: STC-30
1-4	--	Central Air	A, B, C	OBC

Notes:

* The location, installation and sound rating of the air conditioning condensers must be compliant with MOECP Guideline NPC-300, as applicable.

LR/DR – Living Room/Dining Room

BR – Bedroom

6.1 Implementation

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

1. Prior to the issuance of building permits 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 noise control measures have been properly incorporated, installed and constructed.

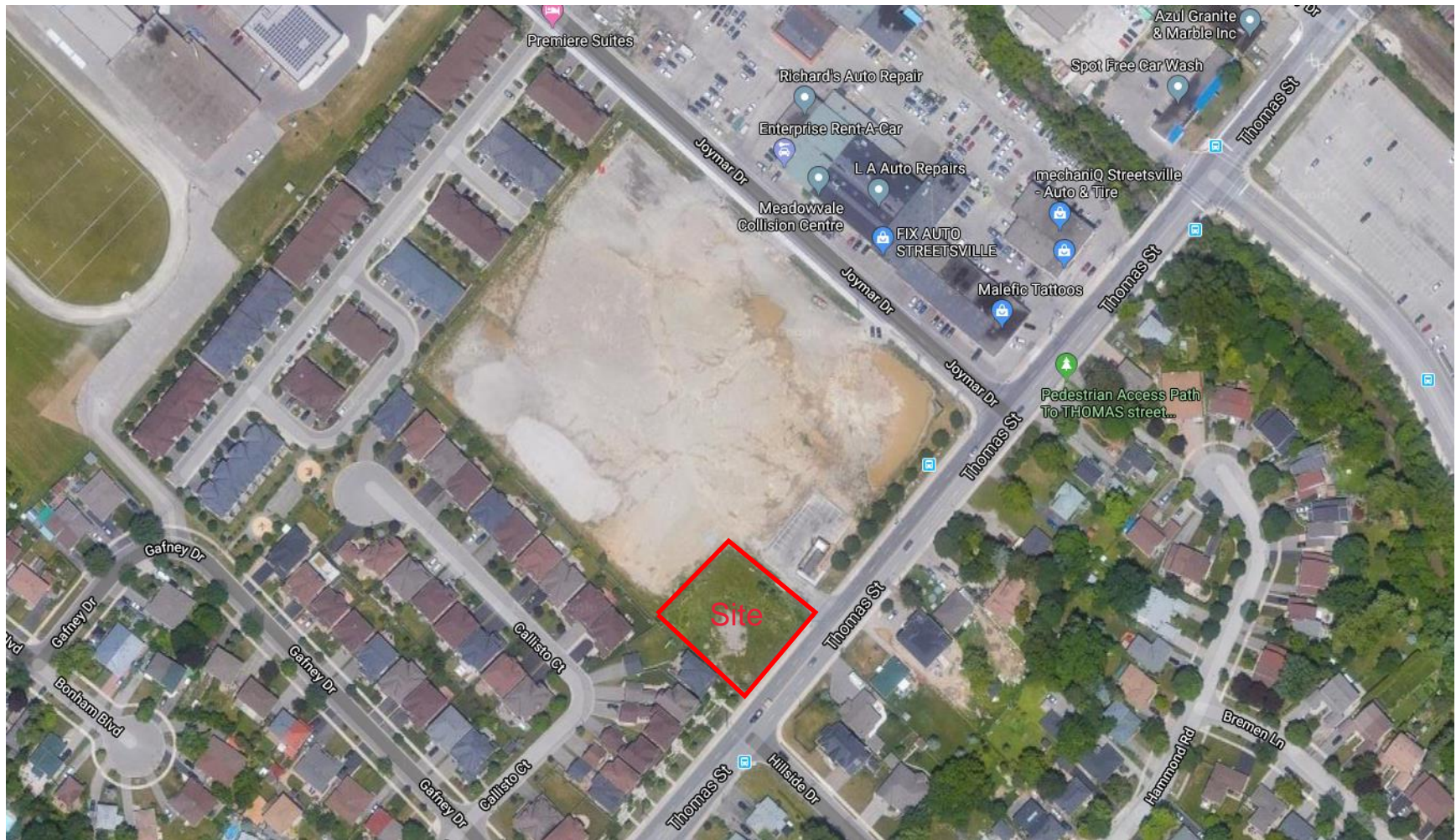


Figure 1: Key Plan



ACOUSTICS



NOISE



VIBRATION

SITE STATISTICS

ZONING REGULATIONS - From Table 4.14.1 - RM9 and RM10 Permitted Uses and Zone Regulations			
ZONE RM-10 (BACK TO BACK AND STACKED TOWNHOUSES)		REQUIRED	PROPOSED
1.	MAXIMUM DWELLING HEIGHT		REXTON DEVELOPMENT
2.	Measured to the mean height level of a flat roof on top of a sloped roof.	15.0 m. 3 Storeys.	9.86 m. 3 Storeys.
3.	MINIMUM FRONT YARD	7.50 m.	3.80 m (South)
4.	MINIMUM EXTERIOR SIDE YARD	4.5 m.	N/A
5.	MINIMUM INTERIOR SIDE YARD	4.5 m.	8.78 m (West) 1.23 m (East)
6.	MINIMUM PARKING SPACES		17 spaces
7.	2.0 spaces per 4-4 bedroom unit = 8 parking spaces. 1.5 spaces per 6-2 bedroom unit = 9 spaces.	17 spaces	18 spaces
8.	MINIMUM VISITOR PARKING SPACES		3 spaces (Includes 1 H/C space)
9.	0.25 spaces per 10 units = 2.5 spaces.	2.5 spaces	3 spaces
10.	PARKING AREAS SETBACKS		1.63 metres
11.	Minimum setback between a parking space and an interior side lot line and/or rear lot line.	3.0 metres	1.63 metres
12.	MINIMUM AMENITY AREA AND LANDSCAPE AREA		82.17 m ² (5% of the lot area)
13.	MINIMUM LANDSCAPE AREA	40% of lot area.	30.59% (502.68 m ²)
14.	MINIMUM REQUIRED LANDSCAPED SOFT AREA	50% of landscaped area	61.68% (310.04 m ²)
15.	MINIMUM LANDSCAPED BUFFER ABUTTING ANY SIDE AND REAR LOT LINE	3.0 metres	1.23 m East yard. 1.28 m West yard.
16.	MINIMUM CONTIGUOUS AMENITY AREA	82.17 m ² (5% of the lot area)	82.17 m ² outdoor.
17.	MINIMUM CONTIGUOUS PRIVATE OUTDOOR SPACE PER UNIT	6.0 m ²	7.53 m ²

LEGAL DESCRIPTION

PART OF Lot 4
Concession 5, West of Hurontario Street
City of Mississauga
Regional Municipality of Peel

SITE STATISTICS

ZONING:
RM10 (Back to back & stacked townhouse)

LOT AREA:
1,643.35 m² (17,689 Ft²) (0.406 ac)

BUILDING COVERAGE:
PERMITTED: N/A
PROPOSED: 877.76 m² (9,448.13 Ft²) 53.41%

DWELLING UNIT WIDTH:
MINIMUM PERMITTED: 4.5 m
PROPOSED: 5.73 m

LOT FRONTAGE:
REQUIRED (MIN.): 38.0 m
PROPOSED: 39.04 m

BUILDING G.F.A.:

FIRST FLOOR AREA	283.18 m ² (3,048.12 Ft ²)
SECOND FLOOR AREA	877.76 m ² (9,448.13 Ft ²)
THIRD FLOOR AREA	877.76 m ² (9,448.13 Ft ²)
TOTAL GROSS AREA	2,038.70 m ² (21,944.38 Ft ²)

SETBACKS

	REQUIRED	PROVIDED
Front Yard (South)	4.5 m	3.80 m
Rear Yard (North)	7.5 m	3.84 m
Interior Side Yard (East)	2.5 m	1.23 m
Interior Side Yard (West)	2.5 m	8.78 m

PARKING SETBACKS:
East (to a Residential Zone) 4.5 m 1.63 m

BUILDING HEIGHT: MAXIMUM PERMITTED 15.0 m 3 Storeys
PROVIDED: 9.86 m 3 Storeys

PARKING:

REQUIRED:
2.0 spaces per 4-4 bedroom unit = 8 parking spaces
1.5 spaces per 6-2 bedroom unit = 9 spaces.
0.25 visitor spaces per 10 units = 2.5 spaces
Total: 20 spaces

PROVIDED:
21 spaces
Includes 3 visitor spaces:
1-V, 20-V and 21-V (H/C space)

LANDSCAPE AREA

MINIMUM REQUIRED	40%
PROPOSED	30.59% (502.68 m ²)

SNOW STORAGE

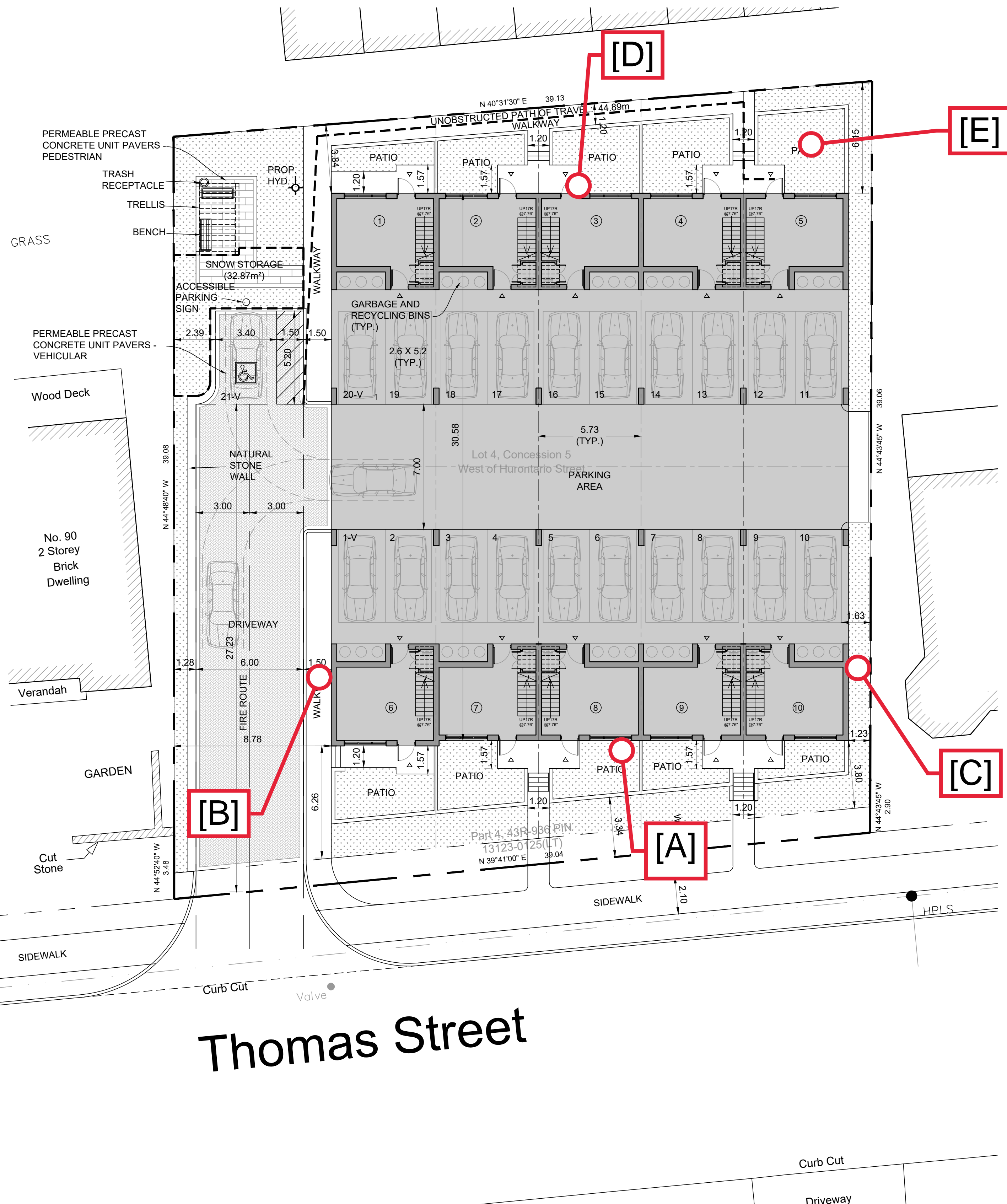
REQUIRED MIN.:	32.87 m ² (2.00% of Lot Area)
PROVIDED:	32.87 m ² (2.00% of Lot Area)

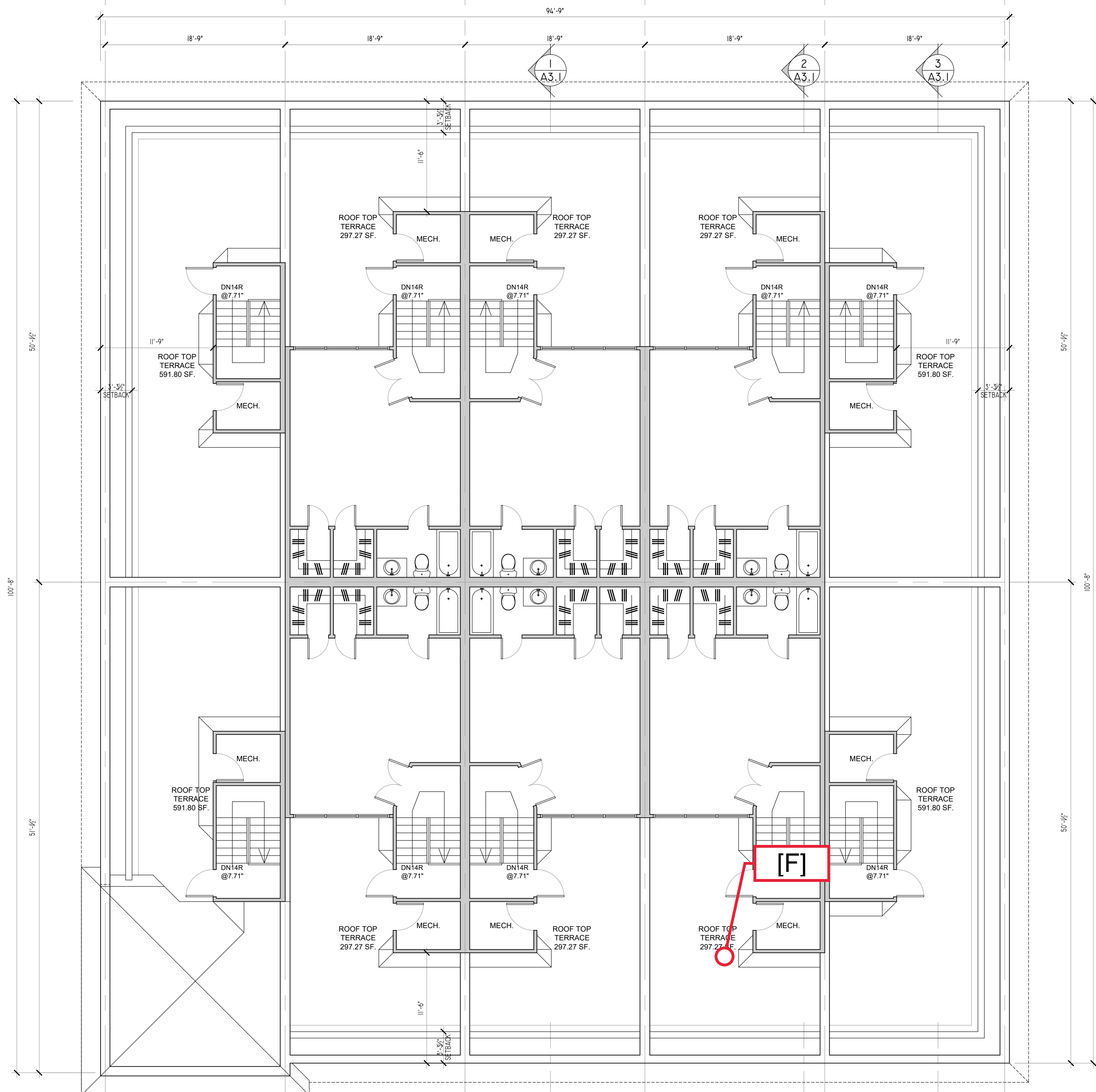
General Note:

- I hereby certify that this drawing confirms in all respects to the site development plans Architect or Engineer's Signature (if applicable) and Professional seal.
- 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.
- All exterior lighting will be directed onto the site and will not infringe upon the adjacent properties.
- All rooftop mechanical units shall be screened from view by the applicant.
- 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.
- The applicant will be responsible for ensuring that all plans conform to Transport Canada's restrictions.
- Grades will be met with a 33% maximum slope at the property lines and within the site.
- All damaged areas are to be reinstated with topsoil and sod prior to the release of securities.
- 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.
- Any fencing adjacent to municipal lands is to be located 15 cm (6.0 in.) inside the property line.
- 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.
- The Engineer Certified Lighting Plan must be signed by the consulting Engineer.
- 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.
- The applicant will be responsible for ensuring that all plans conform to Transport Canada's restrictions.
- 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 Engineer. 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
- 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.
- Continuous 15 cm high barrier type poured concrete curbing will be provided between all asphalt and landscaped areas throughout the site.
- All utility companies will be notified for locates prior to the installation of the hoarding that lies within the site and within the limited of the City boulevard area.

WES SURDYKA architect inc			
3645 KEELE STREET, 2nd FLOOR, STE 108 TORONTO, ONTARIO M3J 1M8 TEL: (416) 630-2254 FAX: (416) 630-5741 E-mail: surdykaarchitect@bellnet.ca			
NAME OF PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT			
LOCATION: 86 THOMAS ST. MISSISSAUGA, ONTARIO			
ITEM	ONTARIO BUILDING CODE DATA MATRIX	OBC REFERENCE	
1	PROJECT DESCRIPTION: <input checked="" type="checkbox"/> NEW <input type="checkbox"/> PART 11 <input checked="" type="checkbox"/> PART 3 <input type="checkbox"/> PART 9 <input type="checkbox"/> CHANGE OF USE <input type="checkbox"/> ADDITION <input type="checkbox"/> ALTERATION 1.1.1 TO 11.4 2.1.1 2.1.1	1.1.1 TO 11.4	2.1.1
2	MAJOR OCCUPANCY(S) C 3.1.2.1.(1)	3.1.2.1.(1)	9.10.2
3	BUILDING AREA (m ²) EXISTING 0 NEW 877.76 TOTAL 877.76	1.1.3.2	1.1.3.2
4	GROSS AREA (m ²) EXISTING 0 NEW 2038.70 TOTAL 2038.70	1.1.3.2	1.1.3.2
5	NUMBER OF STOREYS ABOVE GRADE: 3 BELOW GRADE: 0	3.2.1.1 & 1.1.3.2	2.1.1.3
6	NUMBER OF STREET/ACCESS ROUTES 1	3.2.2.10 & 3.2.5.5	9.10.19
7	BUILDING CLASSIFICATION 3.2.2.44	3.2.2.20-83	9.10.4
8	SPRINKLER SYSTEM PROPOSED <input type="checkbox"/> ENTIRE BUILDING <input type="checkbox"/> BASEMENT ONLY <input type="checkbox"/> IN LIEU OF ROOF RATING <input checked="" type="checkbox"/> NOT REQUIRED	3.2.2.20-83 3.2.1.5 3.2.2.17	9.10.8
9	STANDPIPE REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.9	N/A
10	FIRE ALARM REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.4	9.10.17.2
11	WATER SERVICE/SUPPLY IS ADEQUATE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	3.2.5.7	N/A
12	HIGH BUILDING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.8	N/A
13	PERMITTED CONSTRUCTION <input checked="" type="checkbox"/> COMBUSTIBLE <input type="checkbox"/> NON-COMBUSTIBLE <input type="checkbox"/> BOTH	3.2.2.20-83	9.10.6
14	ACTUAL CONSTRUCTION <input checked="" type="checkbox"/> COMBUSTIBLE <input type="checkbox"/> NON-COMBUSTIBLE <input type="checkbox"/> BOTH	3.2.1.1.(3)-(6)	9.10.4.1
15	OCCUPANT LOAD BASED ON <input type="checkbox"/> m ² /PERSON <input checked="" type="checkbox"/> DESIGN OF BUILDING	3.1.16	9.9.1.3
16	BASEMENT: OCCUPANCY LOAD PERSON 1 ST. FLOOR OCCUPANCY LOAD PERSON 2 ST. FLOOR OCCUPANCY LOAD PERSON 3 ST. FLOOR	3.8 3.1.2.1(1)&3.3.1.19(1)	9.10.1.3
17	HAZARDOUS SUBSTANCES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.2.20-83& 3.2.1.4	9.10.8 9.10.9
18	REQUIRED HORIZONTAL ASSEMBLIES FRR (HOURS) LISTED DESIGN No. OR DESCRIPTION (SG-2)		
19	SPATIAL SEPARATION-CONSTRUCTION OF EXTERIOR WALLS 3.2.3.1.0		9.10.14
	WALL AREA OF L.D. L/W PERMITTED PROPOSED FRR LISTED COMB. CONST. NON-C. CONST. COMB. CONST. NON-C. CONST.		
	NORTH 245.43 3.54 2.35:1 9.64 29.49 1		
	SOUTH 252.58 17.03 2.23:1 100.00 28.49 0		
	EAST 342.93 1.23 2.58:1 7.00 20.53 1		
	WEST 342.93 8.78 2.58:1 23.53 19.81 1		

Figure 2: Site Plan Showing Prediction Locations

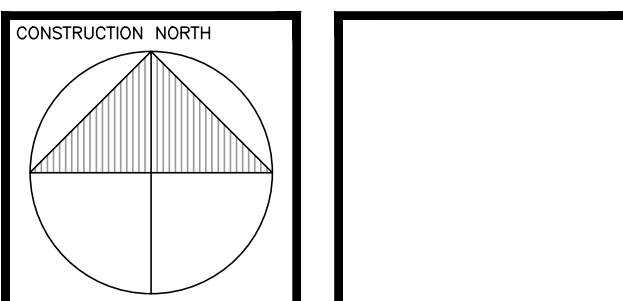




CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.

NO.	DATE	REVISION /ISSUED FOR	BY
2.	JUN. 3/20	SITE PLAN SUBMISSION	
1.	AUG. 23/19	CONCEPTUAL DRAWINGS	

PROJECT NAME
**PROPOSED RESIDENTIAL DEVELOPMENT
 86 THOMAS ST.
 MISSISSAUGA, ON**



WES SURDYKA
architect inc

3645 KEELE STREET, 2nd FLOOR, STE 108
 TORONTO, ONTARIO M3J 1M8
 TEL (416) 630-2254 FAX (416) 630-5741
 E-mail: surdykaarchitect@bellnet.ca

DRAWING TITLE
**TERRACE
 LEVEL PLAN
 (ROOF)**

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A2.3
SCALE AS SHOWN	
DATE AUG.20, 2019	
PROJECT NO.	
18-12	

1 TERRACE LEVEL (ROOF)
 A2.3 SCALE: 3/16" = 1'-0"

Figure 3: Terrace Level Plan Showing Rooftop Prediction Location

Limitations

This report was prepared by HGC Engineering solely for the client to whom it is addressed and is to be used exclusively for the purposes set out in the report. Any conclusions and/or recommendations herein reflect the judgment of HGC Engineering based on information available at the time of preparation, and has relied in good faith on information provided by others, as noted in the report, which has been assumed to be factual and accurate. Changed conditions or information occurring or becoming known after the date of this report could affect the results and conclusions presented.

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ACOUSTICS



NOISE



VIBRATION

APPENDIX A

Rail Guidelines and Rail Traffic Data



ACOUSTICS



NOISE



VIBRATION



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.
-

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

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

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 Argenta 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](#)

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Sheeba Paul

From: Rail Data Requests <RailDataRequests@metrolinx.com>
Sent: March-07-19 12:23 PM
To: Sheeba Paul
Subject: RE: rail data request/verification

Hello Sheeba,

Further to your request dated March 5, 2019 (attached below), the subject site (on Barbertown Road, Mississauga) is located within 300 metres of CPR's Galt Subdivision, which carries Milton GO Train service.

It's anticipated that GO service on this corridor will be comprised of diesel trains within (at least) a 10-year time horizon. The combined preliminary midterm weekday train volume forecast at this location, including both revenue and equipment trips is in the order of 20 trains (19 day, 1 night). Trains will be comprised of a single locomotive and up to 12 passenger cars.

The maximum design speed on this corridor is 50 mph (80 km/h).

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 CPR operates trains in this area and it would be prudent to contact them directly for rail traffic information.

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

Best Regards,

IVAN CHEUNG, M.Sc, B.URPI

Intern | Third Party Projects Review
Pre-Construction Services | Capital Projects Group
Metrolinx
20 Bay Street, Suite 600 | Toronto | Ontario | M5J 2W3
T: 416-202-5920



From: Sheeba Paul [mailto:spaul@hgcengineering.com]
Sent: March-05-19 10:28 AM
To: Rail Data Requests
Cc: Adam Snow; Brandon Gaffoor
Subject: RE: rail data request/verification

Hello

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

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](#)

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APPENDIX B

Road Traffic Data



ACOUSTICS



NOISE



VIBRATION

Date: 29-Jan-20

NOISE REPORT FOR PROPOSED DEVELOPMENT

REQUESTED BY:

Name: Sheeba Paul

Company: HGC Engineering



PREPARED BY:

Name: Bertuen Mickle

Tel#: (905) 615-3200

Location: Thomas Street - Between McFarren Blvd and Joymar Drive
Joymar Drive - Between Thomas Street and Tannery Street

ID#: 453

ON SITE TRAFFIC DATA

Specific	Street Names			
	Thomas Street	Joymar Drive		
AADT:	21,500	5,000		
# of Lanes:	4 Lanes	2 Lanes		
% Trucks:	3%	2%		
Medium/Heavy Trucks Ratio:	55/45	55/45		
Day/Night Traffic Split:	90/10	90/10		
Posted Speed Limit:	50 km/h	40 km/h		
Gradient of Road:	<2%	<2%		
Ultimate R O W:	26m	20m		

Comments: - Ultimate Traffic data Only

APPENDIX C

STAMSON Output



ACOUSTICS



NOISE



VIBRATION

Filename: a.te Time Period: Day/Night 16/8 hours
 Description: Pred. Loc. [A], Facade adjacent to Thomas St

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !	!# Cars !	! Eng ! type	!Cont !weld
1. CP	! 8.1/9.4 !	! 80.0 !	! 4.0 !	!163.0 !	!Diesel!	! Yes
2. GO	! 20.0/1.1 !	! 80.0 !	! 1.0 !	! 12.0 !	!Diesel!	! Yes

Data for Segment # 1: CP Rail (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 : 330.00 / 330.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle
 Reference angle : 0.00

Results segment # 1: CP Rail (day)

LOCOMOTIVE (0.00 + 50.90 + 0.00) = 50.90 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

 -90 0 0.41 73.76 -18.86 -4.00 0.00 0.00 0.00 50.90

WHEEL (0.00 + 42.34 + 0.00) = 42.34 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

 -90 0 0.51 66.81 -20.27 -4.20 0.00 0.00 0.00 42.34

Segment Leq : 51.47 dBA

Total Leq All Segments: 51.47 dBA

Results segment # 1: CP Rail (night)

LOCOMOTIVE (0.00 + 53.71 + 0.00) = 53.71 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq



-90 0 0.41 76.57 -18.86 -4.00 0.00 0.00 0.00 53.71

WHEEL (0.00 + 45.27 + 0.00) = 45.27 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.51 69.75 -20.27 -4.20 0.00 0.00 0.00 45.27

Segment Leq : 54.29 dBA

Total Leq All Segments: 54.29 dBA

Road data, segment # 1: Thomas St (day/night)

Car traffic volume : 18770/2086 veh/TimePeriod *
Medium truck volume : 319/35 veh/TimePeriod *
Heavy truck volume : 261/29 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 21500
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: Thomas St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 17.00 / 17.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Joymar Dr (day/night)

Car traffic volume : 4410/490 veh/TimePeriod *
Medium truck volume : 50/6 veh/TimePeriod *
Heavy truck volume : 41/5 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)



ACOUSTICS



NOISE



VIBRATION

* 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 : 1.10
Heavy Truck % of Total Volume : 0.90
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Joymar Dr (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 : 120.00 / 120.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Thomas St (day)

Source height = 1.08 m

ROAD (0.00 + 65.94 + 0.00) = 65.94 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.00 66.48 0.00 -0.54 0.00 0.00 0.00 0.00 65.94

Segment Leq : 65.94 dBA

Results segment # 2: Joymar Dr (day)

Source height = 0.98 m

ROAD (0.00 + 39.45 + 0.00) = 39.45 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.50 57.14 0.00 -13.51 -4.18 0.00 0.00 0.00 39.45

Segment Leq : 39.45 dBA

Total Leq All Segments: 65.95 dBA

Results segment # 1: Thomas St (night)

Source height = 1.08 m

ROAD (0.00 + 59.40 + 0.00) = 59.40 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.00 59.94 0.00 -0.54 0.00 0.00 0.00 0.00 59.40

Segment Leq : 59.40 dBA

Results segment # 2: Joymar Dr (night)

Source height = 1.00 m

ROAD (0.00 + 33.14 + 0.00) = 33.14 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.50 50.82 0.00 -13.50 -4.18 0.00 0.00 0.00 33.14

Segment Leq : 33.14 dBA

Total Leq All Segments: 59.41 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 66.10
(NIGHT): 60.57



ACOUSTICS



NOISE



VIBRATION

Filename: b.te Time Period: Day/Night 16/8 hours
Description: Pred. Loc. [B], Facade flanking Thomas Street

Road data, segment # 1: Thomas St (day/night)

Car traffic volume : 18770/2086 veh/TimePeriod *
Medium truck volume : 319/35 veh/TimePeriod *
Heavy truck volume : 261/29 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 21500
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: Thomas St (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 19.00 / 19.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Thomas St (day)

Source height = 1.08 m

ROAD (0.00 + 62.44 + 0.00) = 62.44 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.00 66.48 0.00 -1.03 -3.01 0.00 0.00 0.00 62.44

Segment Leq : 62.44 dBA

Total Leq All Segments: 62.44 dBA



ACOUSTICS



NOISE



VIBRATION

Results segment # 1: Thomas St (night)

Source height = 1.08 m

ROAD (0.00 + 55.91 + 0.00) = 55.91 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90	0	0.00	59.94	0.00	-1.03	-3.01	0.00	0.00	0.00	55.91
-----	---	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 55.91 dBA

Total Leq All Segments: 55.91 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 62.44
(NIGHT): 55.91



ACOUSTICS



NOISE



VIBRATION

Filename: c.te Time Period: Day/Night 16/8 hours
 Description: Pred. Loc. [C], facade facing railway

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng ! type	!Cont !weld
1. CP	! 8.1/9.4 !	! 80.0 !	! 4.0 !	!163.0 !	!Diesel!	! Yes
2. GO	! 20.0/1.1 !	! 80.0 !	! 1.0 !	! 12.0 !	!Diesel!	! Yes

Data for Segment # 1: CP Rail (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 : 330.00 / 330.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle
 Reference angle : 0.00

Results segment # 1: CP Rail (day)

LOCOMOTIVE (0.00 + 53.91 + 0.00) = 53.91 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
 -90 90 0.41 73.76 -18.86 -0.99 0.00 0.00 0.00 53.91

WHEEL (0.00 + 45.35 + 0.00) = 45.35 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
 -90 90 0.51 66.81 -20.27 -1.19 0.00 0.00 0.00 45.35

Segment Leq : 54.48 dBA

Total Leq All Segments: 54.48 dBA

Results segment # 1: CP Rail (night)

LOCOMOTIVE (0.00 + 56.72 + 0.00) = 56.72 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq



-90 90 0.41 76.57 -18.86 -0.99 0.00 0.00 0.00 56.72

WHEEL (0.00 + 48.28 + 0.00) = 48.28 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.51 69.75 -20.27 -1.19 0.00 0.00 0.00 48.28

Segment Leq : 57.30 dBA

Total Leq All Segments: 57.30 dBA

Road data, segment # 1: Thomas St (day/night)

Car traffic volume : 18770/2086 veh/TimePeriod *
Medium truck volume : 319/35 veh/TimePeriod *
Heavy truck volume : 261/29 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 21500
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: Thomas 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 : 20.00 / 20.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Joymar Dr (day/night)

Car traffic volume : 4410/490 veh/TimePeriod *
Medium truck volume : 50/6 veh/TimePeriod *
Heavy truck volume : 41/5 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)



ACOUSTICS



NOISE



VIBRATION

* 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 : 1.10
Heavy Truck % of Total Volume : 0.90
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Joymar Dr (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 : 120.00 / 120.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Thomas St (day)

Source height = 1.08 m

ROAD (0.00 + 60.44 + 0.00) = 60.44 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

0 90 0.49 66.48 0.00 -1.86 -4.17 0.00 0.00 0.00 60.44

Segment Leq : 60.44 dBA

Results segment # 2: Joymar Dr (day)

Source height = 0.98 m

ROAD (0.00 + 42.46 + 0.00) = 42.46 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.50 57.14 0.00 -13.51 -1.17 0.00 0.00 0.00 42.46

Segment Leq : 42.46 dBA

Total Leq All Segments: 60.51 dBA

Results segment # 1: Thomas St (night)

Source height = 1.08 m

ROAD (0.00 + 53.91 + 0.00) = 53.91 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

0 90 0.49 59.94 0.00 -1.86 -4.17 0.00 0.00 0.00 53.91

Segment Leq : 53.91 dBA

Results segment # 2: Joymar Dr (night)

Source height = 1.00 m

ROAD (0.00 + 36.15 + 0.00) = 36.15 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.50 50.82 0.00 -13.50 -1.17 0.00 0.00 0.00 36.15

Segment Leq : 36.15 dBA

Total Leq All Segments: 53.98 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.48
(NIGHT): 58.96



ACOUSTICS



NOISE



VIBRATION

Filename: d.te Time Period: Day/Night 16/8 hours
 Description: Pred. Loc. [D], Facade flanking railway

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

Train Type	! Trains !	! Speed ! (km/h) !	!# loc !	!# Cars !	! Eng !	!Cont !
1. CP	! 8.1/9.4 !	! 80.0 !	! 4.0 !	!163.0 !	!Diesel!	! Yes
2. GO	! 20.0/1.1 !	! 80.0 !	! 1.0 !	! 12.0 !	!Diesel!	! Yes

Data for Segment # 1: CP Rail (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 : 356.00 / 356.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle
 Reference angle : 0.00

Results segment # 1: CP Rail (day)

LOCOMOTIVE (0.00 + 50.44 + 0.00) = 50.44 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
 0 90 0.41 73.76 -19.32 -4.00 0.00 0.00 0.00 50.44

WHEEL (0.00 + 41.84 + 0.00) = 41.84 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
 0 90 0.51 66.81 -20.77 -4.20 0.00 0.00 0.00 41.84

Segment Leq : 51.00 dBA

Total Leq All Segments: 51.00 dBA

Results segment # 1: CP Rail (night)

LOCOMOTIVE (0.00 + 53.25 + 0.00) = 53.25 dBA
 Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq



0 90 0.41 76.57 -19.32 -4.00 0.00 0.00 0.00 53.25

WHEEL (0.00 + 44.78 + 0.00) = 44.78 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

0 90 0.51 69.75 -20.77 -4.20 0.00 0.00 0.00 44.78

Segment Leq : 53.83 dBA

Total Leq All Segments: 53.83 dBA

Road data, segment # 1: Joymar (day/night)

Car traffic volume : 4410/490 veh/TimePeriod *
Medium truck volume : 50/6 veh/TimePeriod *
Heavy truck volume : 41/5 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
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 : 1.10
Heavy Truck % of Total Volume : 0.90
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Joymar (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 : 146.00 / 146.00 m
Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Joymar (day)

Source height = 0.98 m

ROAD (0.00 + 40.32 + 0.00) = 40.32 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

0 90 0.50 59.28 0.00 -14.78 -4.18 0.00 0.00 0.00 40.32



ACOUSTICS



NOISE



VIBRATION

Segment Leq : 40.32 dBA

Total Leq All Segments: 40.32 dBA

Results segment # 1: Joymar (night)

Source height = 1.00 m

ROAD (0.00 + 33.98 + 0.00) = 33.98 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

0 90 0.50 52.93 0.00 -14.77 -4.18 0.00 0.00 0.00 33.98

Segment Leq : 33.98 dBA

Total Leq All Segments: 33.98 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 51.36
(NIGHT): 53.87



ACOUSTICS



NOISE



VIBRATION

Filename: e.te Time Period: 16 hours
 Description: Pred. Loc. [E], Unit 5 elevated patio

Rail data, segment # 1: CP Rail

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng ! type	!Cont !weld
1. CP	! 8.1/9.4 !	! 80.0 !	! 4.0 !	!163.0 !	!Diesel!	! Yes
2. GO	! 20.0/1.1 !	! 80.0 !	! 1.0 !	! 12.0 !	!Diesel!	! Yes

Data for Segment # 1: CP Rail

Angle1 Angle2 : -90.00 deg 45.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 2
 House density : 60 %
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 330.00 m
 Receiver height : 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle
 Reference angle : 0.00

Results segment # 1: CP Rail

LOCOMOTIVE (0.00 + 45.67 + 0.00) = 45.67 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.58	73.76	-21.28	-2.20	0.00	-4.62	0.00	45.67

WHEEL (0.00 + 37.62 + 0.00) = 37.62 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.66	66.81	-22.28	-2.29	0.00	-4.62	0.00	37.62

Segment Leq : 46.30 dBA

Total Leq All Segments: 46.30 dBA

Road data, segment # 1: Thomas St

Car traffic volume : 18770 veh/TimePeriod *
 Medium truck volume : 319 veh/TimePeriod *



Heavy truck volume : 261 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Thomas St

Angle1 Angle2 : -90.00 deg -45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 47.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Joymar Dr

Car traffic volume : 4410 veh/TimePeriod *
Medium truck volume : 50 veh/TimePeriod *
Heavy truck volume : 41 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Joymar Dr

Angle1 Angle2 : -90.00 deg 45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 120.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Thomas St

Source height = 1.08 m

ROAD (0.00 + 49.20 + 0.00) = 49.20 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 -45 0.66 66.48 0.00 -8.23 -9.05 0.00 0.00 0.00 49.20

Segment Leq : 49.20 dBA

Results segment # 2: Joymar Dr



ACOUSTICS



NOISE



VIBRATION

Source height = 0.98 m

ROAD (0.00 + 39.86 + 0.00) = 39.86 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90	45	0.66	57.14	0.00	-14.99	-2.29	0.00	0.00	0.00	39.86
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Segment Leq : 39.86 dBA

Total Leq All Segments: 49.68 dBA

TOTAL Leq FROM ALL SOURCES: 51.32



ACOUSTICS



NOISE



VIBRATION

Filename: f.te Time Period: 16 hours
 Description: Pred. Loc. [F], rooftop terrace adjacent to Thomas

Rail data, segment # 1: CP Rail

Train Type	! Trains !	! Speed ! (km/h) !	! # loc !	! # Cars !	! Eng ! type	! Cont ! weld
1. CP	! 8.1/9.4 !	! 80.0 !	! 4.0 !	! 163.0 !	! Diesel !	! Yes
2. GO	! 20.0/1.1 !	! 80.0 !	! 1.0 !	! 12.0 !	! Diesel !	! Yes

Data for Segment # 1: CP Rail

Angle1 Angle2 : -90.00 deg 0.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 330.00 m
 Receiver height : 1.50 m
 Topography : 4 (Elevated; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 0.00 deg
 Barrier height : 1.70 m
 Elevation : 9.00 m
 Barrier receiver distance : 10.00 m
 Source elevation : 0.00 m
 Receiver elevation : 9.00 m
 Barrier elevation : 9.00 m
 Reference angle : 0.00

Results segment # 1: CP Rail

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m) !	! Barrier Height (m) !	! Elevation of Barrier Top (m) !
4.00 !	1.50 !	1.30 !	10.30
0.50 !	1.50 !	1.20 !	10.20

LOCOMOTIVE (0.00 + 48.64 + 0.00) = 48.64 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.21 73.76 -16.28 -3.58 0.00 0.00 -5.27 48.64

WHEEL (0.00 + 39.89 + 0.00) = 39.89 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.32 66.81 -17.69 -3.82 0.00 0.00 -5.42 39.89

Segment Leq : 49.18 dBA

Total Leq All Segments: 49.18 dBA

Road data, segment # 1: Thomas St

Car traffic volume : 18770 veh/TimePeriod *
Medium truck volume : 319 veh/TimePeriod *
Heavy truck volume : 261 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Thomas St

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 21.00 m
Receiver height : 1.50 m
Topography : 4 (Elevated; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 1.70 m
Elevation : 9.00 m
Barrier receiver distance : 4.00 m
Source elevation : 0.00 m
Receiver elevation : 9.00 m
Barrier elevation : 9.00 m
Reference angle : 0.00

Road data, segment # 2: Joymar Dr

Car traffic volume : 4410 veh/TimePeriod *
Medium truck volume : 50 veh/TimePeriod *
Heavy truck volume : 41 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Joymar Dr

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 130.00 m



ACOUSTICS



NOISE



VIBRATION

Receiver height : 1.50 m
 Topography : 4 (Elevated; with barrier)
 Barrier angle1 : -90.00 deg Angle2 : 0.00 deg
 Barrier height : 1.70 m
 Elevation : 9.00 m
 Barrier receiver distance : 10.00 m
 Source elevation : 0.00 m
 Receiver elevation : 9.00 m
 Barrier elevation : 9.00 m
 Reference angle : 0.00

Results segment # 1: Thomas St

Source height = 1.08 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.08	1.50	-0.29	8.71

ROAD (0.00 + 53.50 + 0.00) = 53.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	66.48	0.00	-1.46	0.00	0.00	0.00	-11.52	53.50

Segment Leq : 53.50 dBA

Results segment # 2: Joymar Dr

Source height = 0.98 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.98	1.50	0.77	9.77

ROAD (0.00 + 34.79 + 0.00) = 34.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.30	57.14	0.00	-12.23	-3.79	0.00	0.00	-6.33	34.79

Segment Leq : 34.79 dBA

Total Leq All Segments: 53.56 dBA



TOTAL Leq FROM ALL SOURCES: 54.91



ACOUSTICS



NOISE



VIBRATION

APPENDIX D

Supporting Drawing



ACOUSTICS

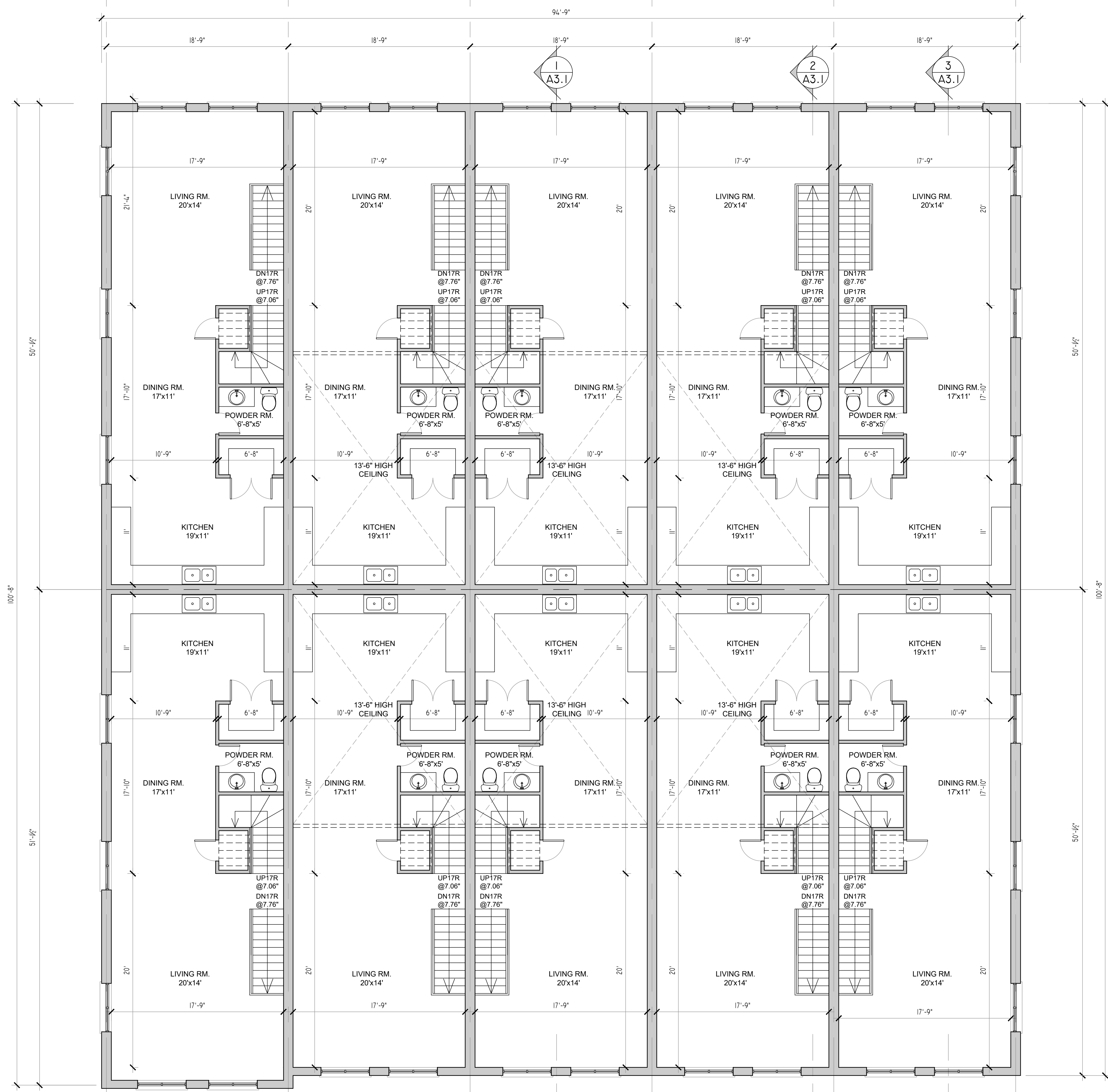


NOISE



VIBRATION

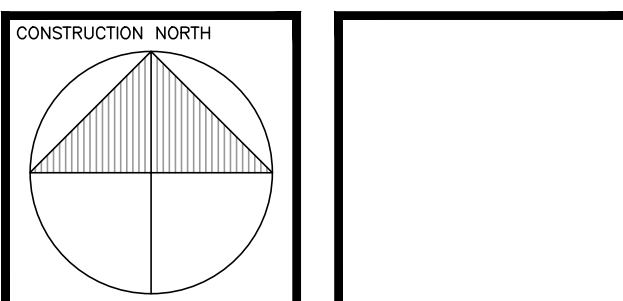
CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.



1 MAIN FLOOR (SECOND FLOOR)
A2.1 SCALE: 3/16" = 1'-0"

NO.	DATE	REVISION / ISSUED FOR	BY
2.	JUN. 3/20	SITE PLAN SUBMISSION	
1.	AUG. 23/19	CONCEPTUAL DRAWINGS	

PROJECT NAME
**PROPOSED
 RESIDENTIAL DEVELOPMENT
 86 THOMAS ST.
 MISSISSAUGA, ON**



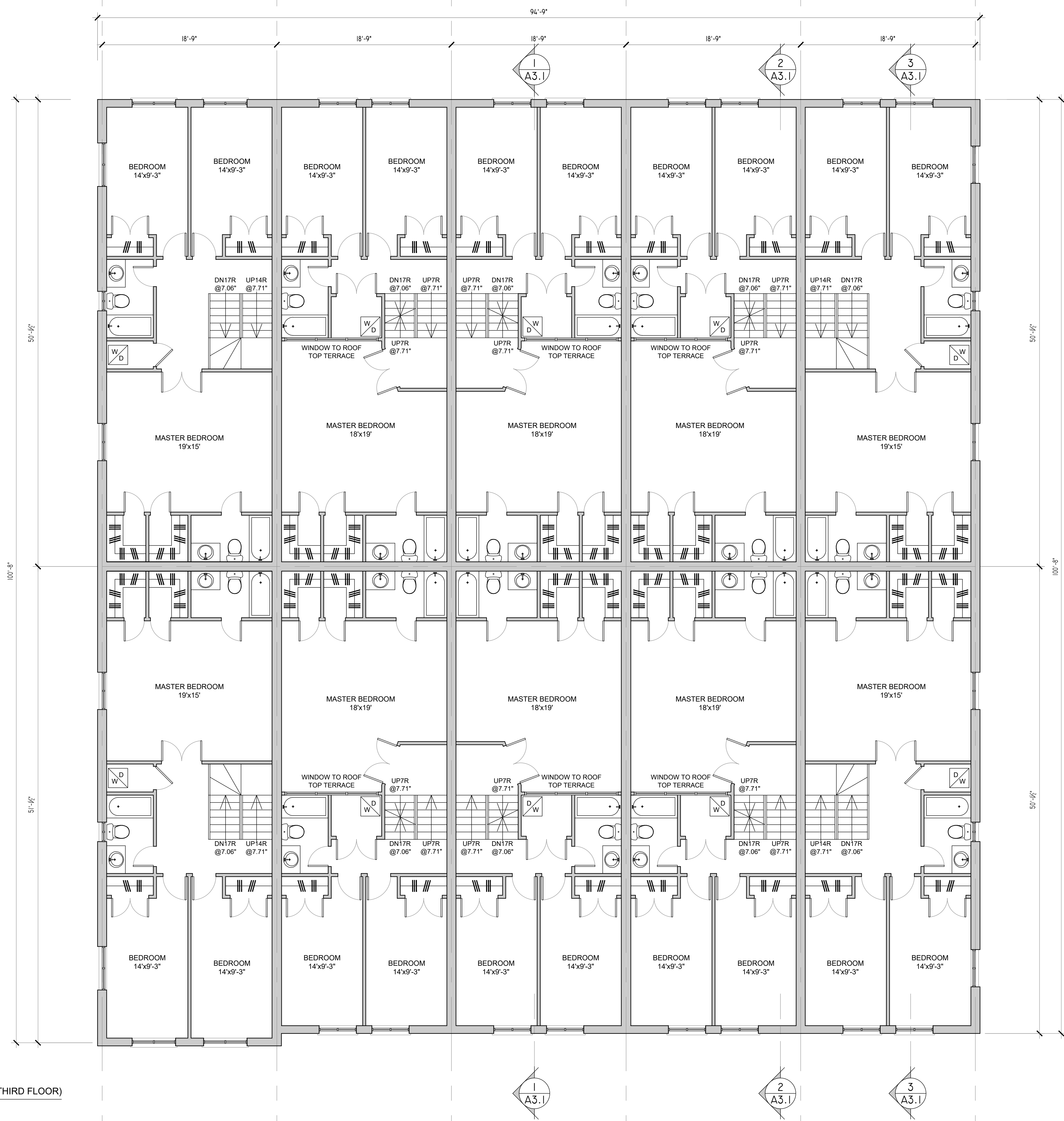
WES SURDYKA
architect inc

3645 KEELE STREET, 2nd FLOOR, STE 108
 TORONTO, ONTARIO M3J 1M8
 TEL (416) 630-2254 FAX (416) 630-5741
 E-mail: surdykaarchitect@bellnet.ca

DRAWING TITLE
**MAIN FLOOR PLAN
 (SECOND FLOOR)**

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A2.1
SCALE AS SHOWN	OF
DATE AUG. 20, 2019	
PROJECT NO. 18-12	

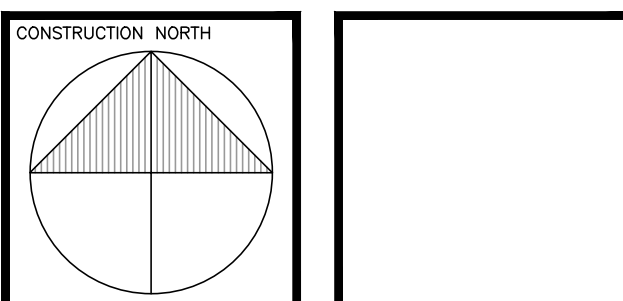
CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.



1 BEDROOMS LEVEL (THIRD FLOOR)
A2.2 SCALE: 3/16" = 1'-0"

2.	JUN. 3/20	SITE PLAN SUBMISSION	
1.	AUG. 23/19	CONCEPTUAL DRAWINGS	
NO.	DATE	REVISION /ISSUED FOR	BY

PROJECT NAME
**PROPOSED
RESIDENTIAL DEVELOPMENT
86 THOMAS ST.
MISSISSAUGA, ON**

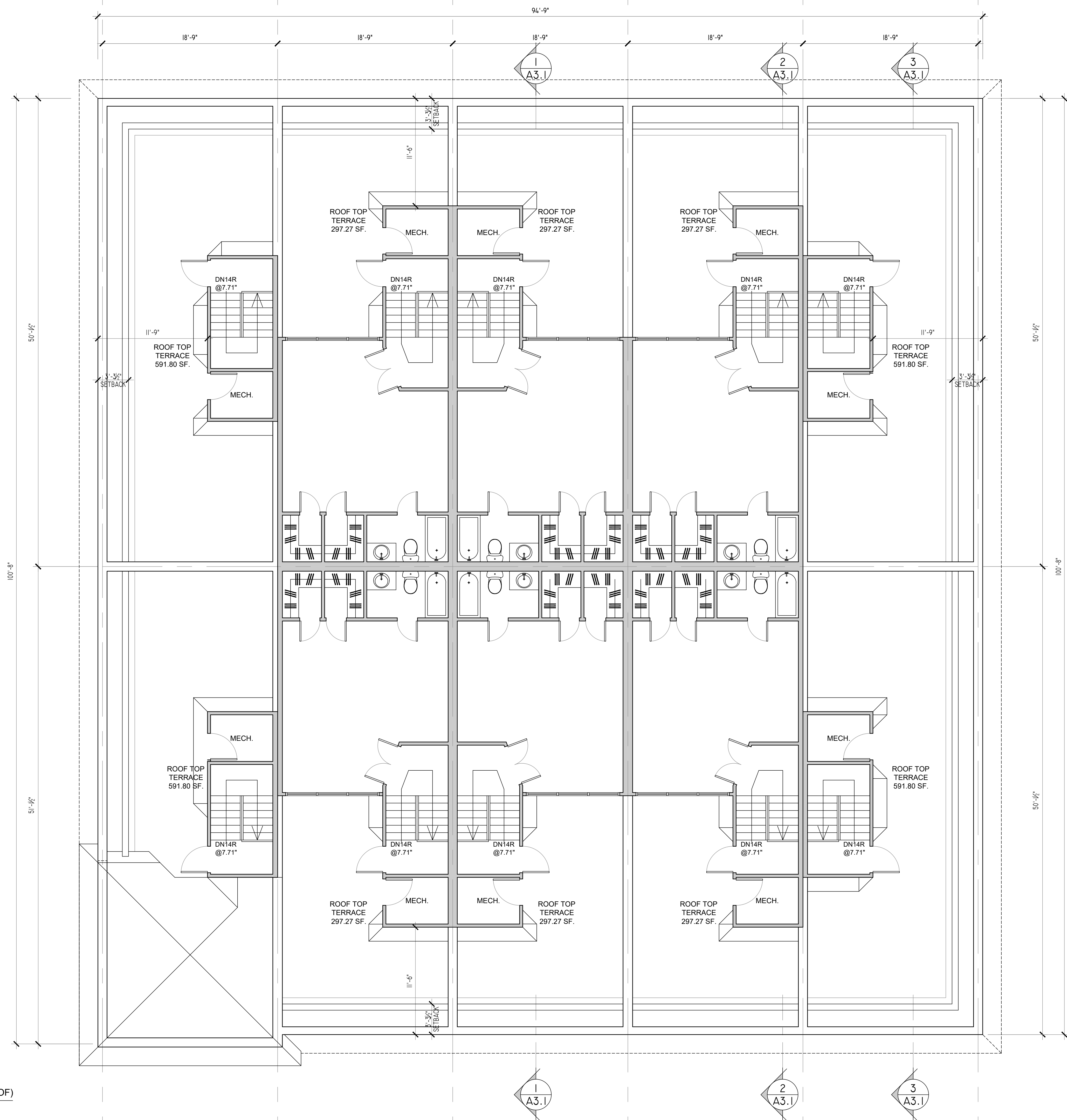


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TEL (416) 630-2254 FAX (416) 630-5741
E-mail: surdykaarchitect@bellnet.ca

DRAWING TITLE
**BEDROOMS
LEVEL PLAN
(THIRD FLOOR)**

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A2.2
SCALE AS SHOWN	OF
DATE AUG. 20, 2019	
PROJECT NO.	18-12

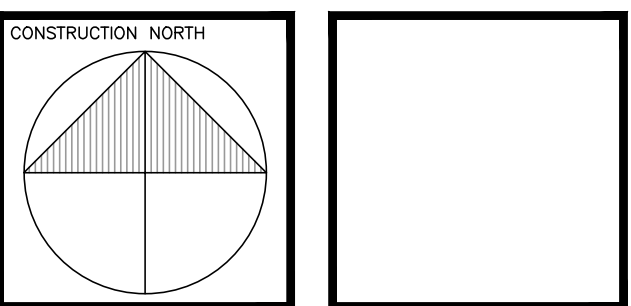


1 TERRACE LEVEL (ROOF)
A2.3 SCALE: 3/16" = 1'-0"

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NO.	DATE	REVISION /ISSUED FOR	BY
2.	JUN. 3/20	SITE PLAN SUBMISSION	
1.	AUG. 23/19	CONCEPTUAL DRAWINGS	

PROJECT NAME
**PROPOSED
RESIDENTIAL DEVELOPMENT
86 THOMAS ST.
MISSISSAUGA, ON**



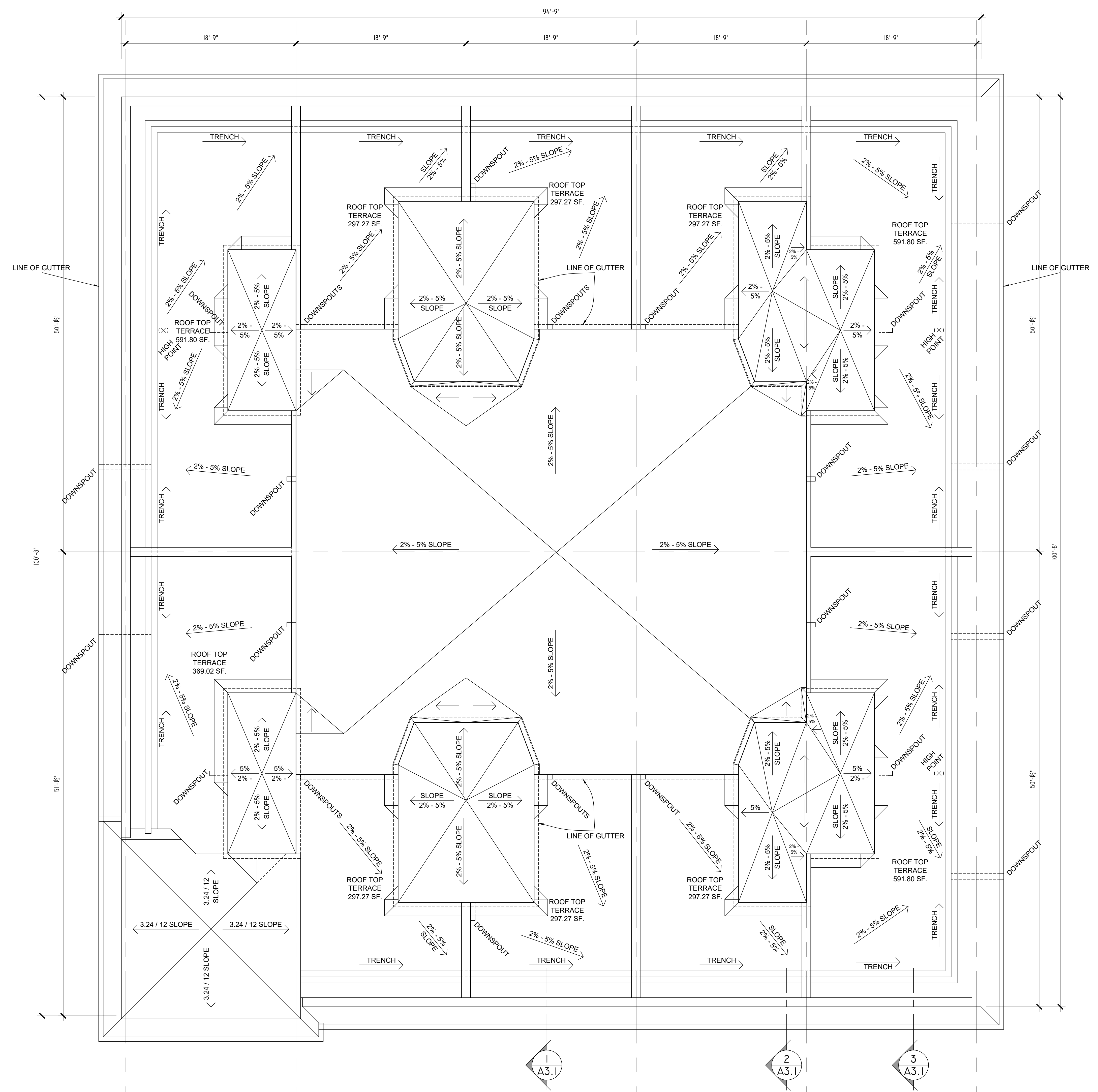
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DRAWING TITLE
**TERRACE
LEVEL PLAN
(ROOF)**

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A2.3
SCALE AS SHOWN	OF
DATE AUG.20, 2019	
PROJECT NO.	18-12

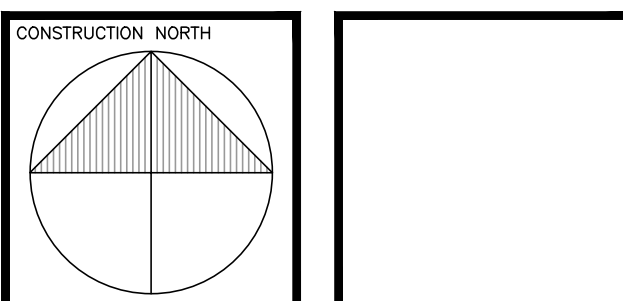
CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.



1 ROOF PLAN
A2.4 SCALE: 3/16" = 1'-0"

NO.	DATE	REVISION / ISSUED FOR	BY
2	JUN. 3/20	SITE PLAN SUBMISSION	
1	AUG. 23/19	CONCEPTUAL DRAWINGS	

PROJECT NAME
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DRAWING TITLE
ROOF PLAN

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A2.4
SCALE AS SHOWN	OF
DATE AUG. 20, 2019	
PROJECT NO.	18-12

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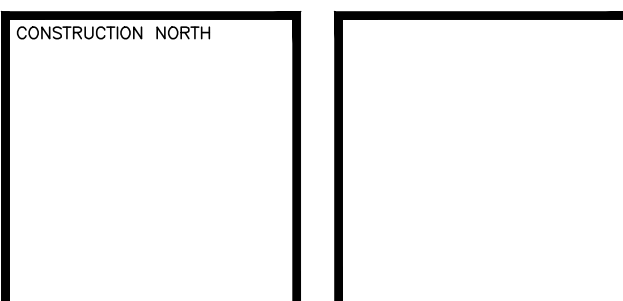
1 SOUTH ELEVATION
A3.0 SCALE: 3/16" = 1'-0"



2 WEST ELEVATION
A3.0 SCALE: 3/16" = 1'-0"

2.	JUN. 3/20	SITE PLAN SUBMISSION	
1.	AUG. 23/19	CONCEPTUAL DRAWINGS	
NO.	DATE	REVISION /ISSUED FOR	BY

PROJECT NAME
**PROPOSED
 RESIDENTIAL DEVELOPMENT
 86 THOMAS ST.
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DRAWING TITLE
ELEVATIONS

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A3.0
SCALE AS SHOWN	OF
DATE AUG.20, 2019	
PROJECT NO.	
18-12	

CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.

MATERIAL AND COLOUR LEGEND

- 1 BRICK VENEER
COLOUR: RED
- 2 ASPHALT SHINGLES
COLOUR: DARK GREY
- 3 SIDING
COLOUR: WHITE
- 4 PRECAST MOULDING
COLOUR: WHITE
- 5 DOUBLE-HUNG WINDOW
FRAME COLOUR: WHITE
- 6 LOUVER
COLOUR: WHITE
- 7 PRECAST LINTEL AND SILL
COLOUR: WHITE
- 8 PRECAST FINISH
COLOUR: BEIGE
- 9 WOOD DOOR WITH GLASS
FRAME COLOUR: WHITE
- 10 WROUGHT IRON GUARD
COLOUR: BLACK



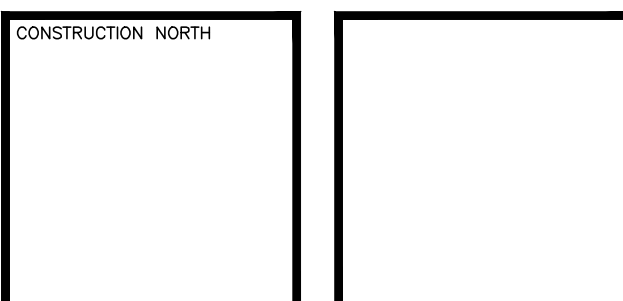
1 NORTH ELEVATION
A3.1 SCALE: 3/16" = 1'-0"



2 EAST ELEVATION
A3.1 SCALE: 3/16" = 1'-0"

1.	AUG. 23/19	CONCEPTUAL DRAWINGS	
NO.	DATE	REVISION /ISSUED FOR	BY

PROJECT NAME
**PROPOSED
RESIDENTIAL DEVELOPMENT
86 THOMAS ST.
MISSISSAUGA, ON**



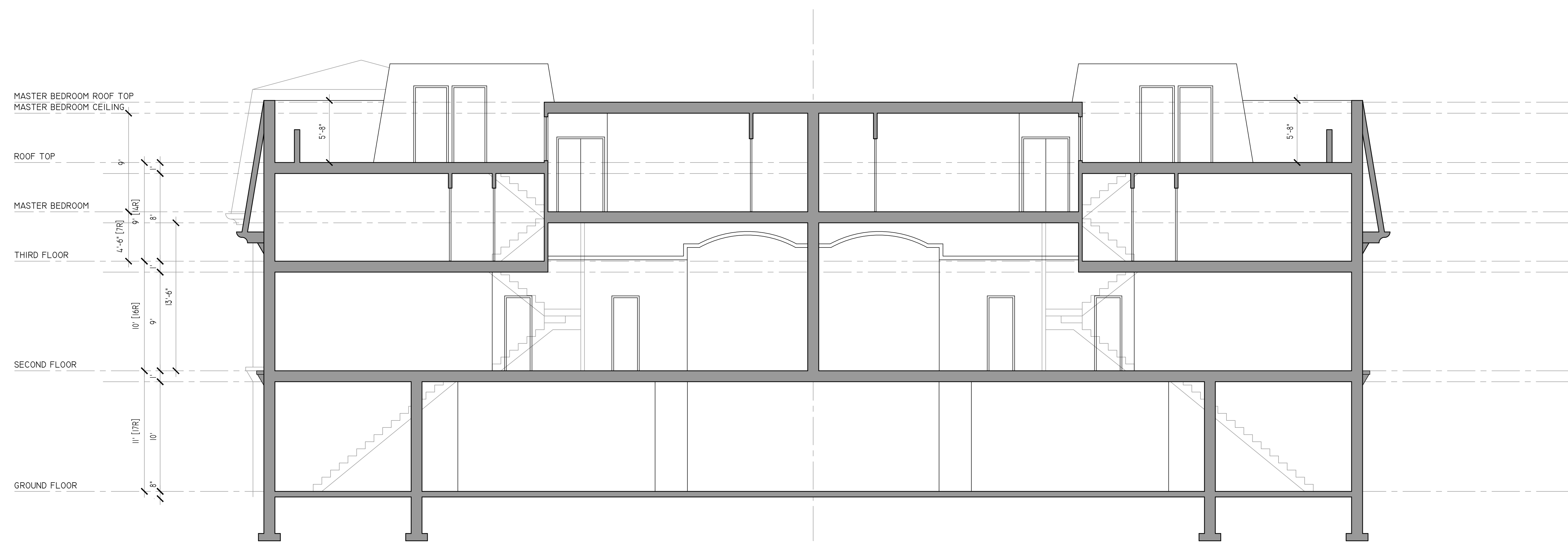
WES SURDYKA
architect inc

3645 KEELE STREET, 2nd FLOOR, STE 108
TORONTO, ONTARIO M3J 1M8
TEL (416) 630-2254 FAX (416) 630-5741
E-mail: surdykaarchitect@bellnet.ca

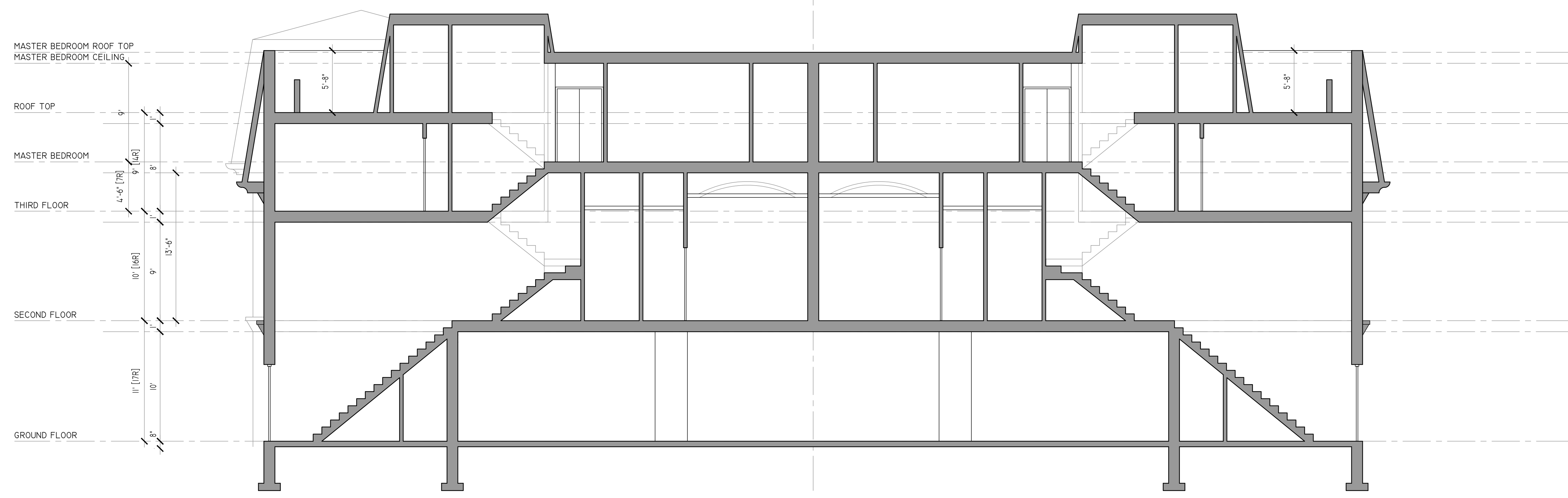
DRAWING TITLE
ELEVATIONS

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A3.1
SCALE AS SHOWN	OF
DATE AUG.20, 2019	
PROJECT NO.	18-12

CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. ALL DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED WITHOUT HIS PERMISSION. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED BY THE ARCHITECT. DRAWINGS ARE NOT TO BE SCALED.



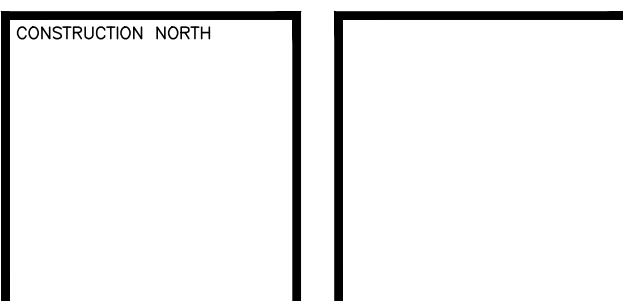
1 SECTION
A3.2 SCALE: 3/16" = 1'-0"



2 SECTION
A3.2 SCALE: 3/16" = 1'-0"

2. JUN. 3/20	SITE PLAN SUBMISSION	
1. AUG. 23/19	CONCEPTUAL DRAWINGS	
NO.	DATE	REVISION /ISSUED FOR

PROJECT NAME
**PROPOSED
RESIDENTIAL DEVELOPMENT
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MISSISSAUGA, ON**



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DRAWING TITLE
SECTIONS

DRAWN BY	DRAWING NO.
PLOTTED MAY 11, 2021	A3.2
SCALE AS SHOWN	
DATE AUG.20, 2019	
PROJECT NO.	OF
18-12	

APPENDIX E

City of Mississauga Comments and HGC Responses



ACOUSTICS



NOISE



VIBRATION

City of Mississauga Comments

HGC responses in blue.

(i) The drawings received in support of this application show patios larger than 4 m for units 1,2, 6, 7 and 8. As such, the Noise Feasibility Study is to be updated to assess noise on those OLA's and update the report findings, recommendations and warning clauses as applicable. Further, if mitigation is required on those OLA's, the report is to provide a table depicting unmitigated sound levels and another separate table showing mitigated sound levels.

Noted. Patio areas are assessed using the latest site plan by Wes Surdyka Architect Inc. dated April 23, 2021. The elevated patio areas are less than 4 m in depth with the exception of the patio area of Unit 5, which was included in the analysis. Rooftop terrace OLAs were also assessed, as they were found to be greater than 4 m in depth.

(ii) Provide cross-sections for any fence (including fence returns) to be implemented at this site to control noise levels;

Noted. No acoustic barriers are required.

(iii) Provide all STAMSON outputs,

Noted. All STAMSON output included in Appendix C.

Further comments could be provided in a following submission upon the proposal being subject to further refinement while addressing Sections/Departments/Agencies requirements.