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
7198 Airport Road & 5, 7, and 9 Beverley Street (Phase 2)
Mississauga, Ontario

Prepared for:

2182402 Ontario Inc.
7198 Airport Road
Mississauga, ON
L4T 2H3

Prepared by:

Andrew Rogers, BASc

Reviewed by:

LICENSED PROFESSIONAL ENGINEER
Feb10/22
C. M. M. CHAN
100124594
MC
PROVINCE OF ONTARIO

Mandy Chan, BASc, PEng

HGC Project No.: 02100717

February 10, 2022

VERSION CONTROL

Noise Feasibility Study,
7198 Airport Road & 5, 7, and 9 Beverley Street,
Mississauga, Ontario.

Ver.	Date	Version Description / Changelog	Prepared By
0	February 10, 2022	Noise Feasibility Study in support of SPA.	A. Rogers/ M. Chan

Limitations

This document was prepared solely for the addressed party and titled project or named part thereof, and should not be relied upon or used for any other project without obtaining prior written authorization from HGC Engineering. HGC Engineering accepts no responsibility or liability for any consequence of this document being used for a purpose other than for which it was commissioned. Any person or party using or relying on the document for such other purpose agrees, and will by such use or reliance be taken to confirm their agreement to indemnify HGC Engineering for all loss or damage resulting therefrom. HGC Engineering accepts no responsibility or liability for this document to any person or party other than the party by whom it was commissioned.

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

Table of Contents

1 Introduction and Summary

HGC Engineering was retained by 2182402 Ontario Inc. to conduct a noise feasibility study for a proposed residential development in Mississauga, Ontario. The location of the proposed development site is at 7198 Airport Road & 5, 7, and 9 Beverley Street. The purpose of this study is to determine the impact of environmental noise from the surrounding area in accordance with the Ministry of Environment, Conservation, and Parks (MECP) guidelines. This study has been prepared as part of the approval process for the city.

The primary noise sources at the proposed development site were determined to the road traffic on Airport Road, rail traffic on the CP railway line, and air traffic noise from the Lester B. Pearson International Airport. The road traffic data used for this study was obtained from the Region of Peel. The rail traffic data used for this study was obtained from Metrolinx/GO Transit personnel. The predicted sound levels were evaluated with respect to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP) and the city.

The results of the study indicate that with suitable noise control measures integrated into the design of the building, it is feasible to achieve MECP guideline sound levels. Central air conditioning systems will be required for the building. Noise barriers will be required for the roof terraces. Associated acoustical requirements are specified in this report. Noise warning clauses are also required to inform future occupants of the traffic noise impacts.

2 Site Description and Noise Sources

The key plan for the development is attached as Figure 1. The site is located on the western corner of Airport Road and Beverley Street in Mississauga. A site plan prepared by Cumulus Architects Inc. dated May 18, 2021 is provided as Figure 2. Sound level prediction locations are also shown on Figure 2. The proposed development includes two blocks of 3-storey townhouses. This study only focuses on the Phase 2 building to the west.

HGC Engineering personnel visited the site during the month of September 2021 to observe the acoustical environment and note the significant noise sources. During the site visit, it was observed that road traffic on Airport Road, rail traffic on the GO Transit railway line, and air traffic from the Lester B. Pearson Airport are the dominant sources of noise. The acoustical environment surrounding the site is urban in nature. Airport Road is a 6-lane highway (three lanes in each direction). The site is currently occupied by retail buildings along Airport Road and residential homes on Beverley Street. A Metrolinx/GO Transit track runs approximately 255 m south of the development. There are existing residences northeast of the site across Airport Road and to the south. Along Airport Road there are various retail and commercial buildings. Sounds from the retail and commercial uses were not audible at the subject site over the background traffic noise, nevertheless, a noise warning clause is recommended to inform future occupants of these nearby uses as indicated in Section 5.4. There are no other significant stationary sources of noise observed within 500 m of this site.

3 Sound Level Criteria

3.1 Road and Rail Traffic Noise

Guidelines for acceptable levels of road and rail traffic noise impacting residential developments are given in the MECP 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)	Nighttime L_{EQ} (8 hour)
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA	45 dBA
Inside Bedrooms	45 dBA	40 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 and terraces 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 daytime sound levels in an Outdoor Living Area 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 practical.

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 nighttime sound levels outside bedroom or living/dining room windows exceed 60 dBA (59 dBA in the Region of Peel) 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 window nighttime sound level is greater than 60 dBA or the daytime sound level is greater than 65 dBA due to road 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/living/dining room window and daytime sound levels exceed 55 dBA in the outdoor living area and at the plane of the bedroom/living/dining room window due to road traffic.

3.2 Air Traffic Noise

Indoor sound limits due to air traffic are also defined in the MECP in publication NPC-300. The maximum allowable Noise Exposure Forecast (NEF) limits are summarized in Table II.

Table II: Air Traffic Noise Criterion

Area	Daytime NEF	Nighttime NEF
Living/Dining Room (indoor)	5	--
Bedroom (indoor)	--	0

The living/dining/family rooms, dens, and bedrooms of the proposed dwelling units are the sensitive receptor locations. Typically, washrooms and kitchens are considered noise insensitive areas. There are no outdoor noise criteria for aircraft noise because there is no effective means of mitigation.

For residential dwellings located between the NEF 25 and 30, the MECP requires that the dwelling be designed with the provision for central air conditioning. This requirement usually implies forced air heating systems with the ducts sized for future installation of central air conditioning. In addition, building components including windows, doors, walls, and ceiling/roof must be designed to achieve the indoor sound level criteria. A warning clause is also required in property and tenancy agreements.

For residential dwellings located between the NEF 30 and 35, the MECP requires that central air conditioning is mandatory with warning clauses in the property and tenancy agreements. In addition, building components including windows, doors, walls, and ceiling must be designed to achieve the indoor sound level criteria in Table II.

According to MECP guidelines, redevelopment of existing residential uses and other sensitive land uses or infilling of residential and other sensitive land uses may be considered above 30 NEF/NEP if

it has been demonstrated that there will be no negative impacts on the long-term function of the airport. This is subject to implementation of appropriate control measures including a Warning Clause.

4 Traffic Noise Assessment

4.1 Road Traffic Data

Road traffic data for Airport Road was obtained from the Region of Peel, in the form of ultimate traffic volume, provided in Appendix B. An ultimate volume of 48 100 vehicles per day at a posted speed limit of 50 km/h was applied for the analysis. A commercial vehicle percentage of 1.7% medium trucks and 8.3% heavy trucks during the daytime, and 0.9% medium trucks and 9.2% heavy trucks during the nighttime was applied. A day/night split of 83% / 17 % was used for the roadway. Table III summarizes the road traffic volume data used in this study.

Table III: Ultimate Road Traffic Data

Street	Time	Cars	Medium Trucks	Heavy Trucks	Total
Airport Road	Daytime	35 931	679	3 314	**39 924**
	Nighttime	7 351	73	752	**8 176**
	Total	**43 282**	**752**	**4 066**	**48 100**

4.2 Rail Traffic Data

Rail traffic data for the GO Transit Weston Subdivision was obtained from GO Transit personnel and is provided in Appendix C. The maximum permissible train speed in the area of the site is 80 km/h. The Weston Subdivision is used for GO trains, UP Express and passenger trains. The Weston Subdivision is considered a principal main line. There are also VIA Rail trains that run on this line; volume data was acquired from VIA Rail schedules. In conformance with GO assessment requirements, the maximum speeds, maximum number of cars and locomotives per train were used in the traffic analysis to yield worse case estimates of train noise. VIA Rail trains were assumed to be similar to the GO trains. The data was projected to the year 2032. The rail volumes used in the analysis are shown in Table IV.

Table IV: Projected Rail Traffic Data to Year 2032

Type of Train	Maximum Number of Locomotives	Maximum Number of Cars	Maximum Speed	Current Volume Day/Night	Projected Volume Day/Night
VIA Train	1	12	80	4 / 0	5 / 0
GO Train (Diesel)	1	12	80	93 / 22	119 / 28
GO Train (Diesel)	2	12	80	36 / 2	46 / 3

4.3 Air Traffic

The 2005 Composite Noise Contour Map for the Lester B. Pearson International Airport was obtained. This map indicated that the proposed site is located between the 35 and 40 NEF/NEP contours, approximately at NEF 37.

The NEF contour map was used to determine the Acoustical Insulation Factors (AIF) required for the building components for the proposed building. The MECP indoor noise criteria for aircraft noise was used as a guideline.

4.4 Traffic Noise Predictions

To assess the levels of traffic noise which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B. Train whistle noise was not included in the predictions at the building façades to determine indoor sound levels since there is a by-law in place which restricts the application of engine warning whistles.

Predictions of the traffic sound levels were chosen around the proposed residential buildings to obtain an appropriate representation of future sound levels at various façades. 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 façade construction requirements. Sound levels were also predicted in possible OLA's to investigate the need for noise barriers. Figure 2 shows the site plan with prediction locations. The results of these predictions are summarized in Table V. The direction used in the Tables is based on project north shown on Figure 2.

Table V: Traffic Sound Level Prediction at Building Façades [dBA]

Prediction Location	Description	Daytime – $L_{EQ-16\ hr}$ Road/ Rail/ Total	Nighttime – $L_{EQ-8\ hr}$ Road/ Rail/ Total
[A]	North façade	61 / 51 / 61	57 / 46 / 57
[B]	East façade	66 / 51 / 66	62 / 47 / 62
[C]	South façade	65 / 58 / 66	62 / 53 / 62
[D]	West façade	-- / 58 / 58	-- / 53 / 53
[E]	Southeast Unit OLA^{+}	65 / 59 / 66	--

Note: + with a minimum 1.07 m high solid parapet wall

5 Discussion and Recommendations

The sound level predictions indicate that the future road, rail, and air traffic sound levels will exceed MECP guidelines at some of the building façades of the proposed development. The following discussion outlines the recommendations for acoustic barrier requirements, ventilation requirements, upgraded building façade construction, and warning clauses to achieve the noise criteria stated in Table I.

5.1 Outdoor Living Areas

The dwelling units in the proposed development may have balconies that are less than 4 m in depth. These areas are not considered to be outdoor amenity areas under MECP guidelines, and therefore are exempt from traffic noise assessment.

Each dwelling unit includes a roof terrace that is greater than 4 m in depth and is therefore considered an outdoor amenity area under MECP guidelines. At the roof terrace with the most exposure to the noise sources (southeast unit), the predicted sound level is 66 dBA with a minimum 1.07 m high solid parapet around the perimeter of the area, 11 dBA in excess of the MECP limit of 55 dBA. Physical mitigation in the form of an acoustic barrier is required for this area. As required by the municipality, a Table of Barrier heights is provided below to show barrier heights required to achieve sound levels ranging from 55 dBA to 60 dBA. For the units further away from Airport Road, a lower rooftop barrier will be required.

Table VI: Required Barrier Heights to Achieve Various Sound Levels

	Prediction Location	Sound Level in OLA [dBA]					
		55	56	57	58	59	60
Barrier Height [m]	[E]	2.9	2.6	2.4	2.2	2.0	1.9

The wall component of the barrier should be of a solid construction with a surface density of no less than 20 kg/m^2. The walls may be constructed from a variety of materials such as glass, wood, brick, pre-cast concrete or other concrete/wood composite systems provided that it is free of gaps or cracks. The heights and extents of the barriers should be chosen to reduce the sound levels in the OLA's to below 60 dBA and as close to 55 dBA as is technically, administratively and economically feasible, subject to the approval of the municipality respecting any applicable fence height by-laws.

5.2 Indoor Living Areas and Ventilation Requirements

Central Air Conditioning

As per the results summarized in Tables III and IV, the predicted future sound level at some of the building façades will be greater than 65 dBA during the daytime hours, and/or 60 dBA during the nighttime hours. To address these excesses, the MECP guidelines recommend that the building be equipped with central air conditioning systems, so that the windows can be closed.

5.3 Building Façade Constructions

Predicted sound levels at the building facades were used to determine sound insulation requirements of the building envelope. The required acoustic insulation of the wall and window components was determined using methods developed by the National Research Council (NRC).

Exterior Wall Constructions

Due to high aircraft noise, it is recommended that all exterior walls of the building be of brick/masonry construction, which will provide adequate acoustical insulation for the interior spaces.

Ceiling/Roof System

As indicated on the preliminary elevation drawings, there is a mechanical screened area and a terrace on the roof. Typically, a ventilated attic system or a dropped ceiling system is required for the upper

floors due to aircraft noise. The ceiling and roof constructions shall be reviewed when details are available to confirm that sufficient insulation has been provided.

Exterior Doors

There may be swing doors and some glazed sliding patio doors for entry onto the balconies from living/dining/bedrooms. The glazing areas on the doors are to be counted as part of the total window glazing area. If exterior swing doors are to be used, they shall be insulated metal doors equipped with head, jamb and threshold weather seals.

Acoustical Requirements for Glazing

Preliminary elevation drawings and floor plans for the development (included in Appendix F) were reviewed by HGC Engineering. Based on the window to floor area ratios (up to 22% for living/dining rooms and up to 47% for bedrooms). The minimum acoustical requirement for the basic window glazing, including glass in fixed sections, sliding doors, and operable windows, is shown in Table VII.

Table VII: Minimum STC Requirements

Location	Space	Glazing STC[1]
Ground Floor	Corner Unit Living/Dining	STC-34
	Middle Unit Living/Dining	STC-31
2nd Floor	Bedrooms	STC-41
3rd Floor	Corner Unit Master Bedroom	STC-41
	Middle Unit Master Bedroom	STC-39

Note:
[1] STC requirement refers to installed performance, including sound transmitted through mullions in window-wall systems and seals on operable windows and doors. Test data should be provided where available. STC values may be decreased by reducing the window areas.

Note that window glazing constructions can achieve these ratings, but vendor submittals with test data for the specific units proposed will be required to verify acceptable glazing products. To reduce STC requirements for the bedrooms, reducing the size of the windows can be considered.

5.4 Warning Clauses

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

Suggested wording for future dwellings with sound level excesses.

Type A:

> Purchasers/tenants are advised that sound levels due to increasing road and rail traffic may occasionally interfere with some activities of the dwelling unit occupants as the sound levels exceed the Municipality's and the Ministry of the Environment, Conservation and Parks' noise criteria.

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 allows windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the noise criteria of the Municipality and the Ministry of the Environment, Conservation and Parks.

Suitable wording for future dwellings in proximity to a Metrolinx rail line.

Type C:

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

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

6 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 redevelopment on itself is maintained within acceptable levels.

7 Impact of the Development on the Environment

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 in the range 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. It is noted that the HVAC unit is proposed to be located within a screened mechanical area on the roof.

8 Summary of Recommendations

The following list and Table VIII summarize the recommendations made in this report.

1. Central air conditioning is required for the proposed building.

2. Recommended minimum glazing constructions to ensure adequate indoor sound levels from traffic noise are outlined in Section 5.3.

3. Acoustic barriers are required in the outdoor amenity spaces at the roof terrace for each dwelling as discussed in Section 5.1.

4. The use of warning clauses in the property and tenancy agreements is recommended to inform future residents of traffic noise issues and the proximity to the railway line.

5. A detailed noise study should be performed when detailed floor plans and building elevations are available to refine glazing requirements based on actual window to floor area ratios and noise barrier heights and confirm ceiling and roof constructions.

6. Tarion Builders 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 to be sought, 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.

The following table summarizes the noise control recommendations and noise warning clauses for the dwellings in the proposed development.

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

Prediction Locations	Description	Acoustic Barrier	Ventilation Requirements*	Type of Warning Clause	Required STC+
[A]	North façade	--	Central A/C	A, B, C	LRDR: STC-34 BR: STC-41
[B]	East façade	--			
[C]	South façade	--			
[D]	West façade	--			
[E]	OLA, Southside roof terraces	✓	--	--	--

Notes:
-- no specific requirement
✓ Noise barrier 1.9 m in height would be required to meet MECP guidelines in the outdoor amenity space
OBC – meeting the minimum requirements of the Ontario Building Code
LRDR – Living Room/Dining Room
BR – Bedroom
* The location, installation and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-300, as applicable.
+ Based on window to floor area ratios calculated from floor plans and building elevations included in Appendix F.

8.1 Implementation

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

1. When architectural plans are available, an acoustical consultant should review the window and room floor areas to refine glazing constructions and confirm noise barrier requirements.

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 exterior wall constructions, architectural plans and building elevations to ensure the noise barriers for the rooftop amenity spaces have been incorporated and that building façade and glazing constructions will provide sufficient sound insulation for the indoor spaces and provide additional recommendations, as required.

3. Prior to the issuance of occupancy permits for this development, the City's building inspector or a Professional Engineer qualified to perform acoustical engineer services in the province of Ontario should certify that the noise control measures have been properly incorporated, installed, and constructed.

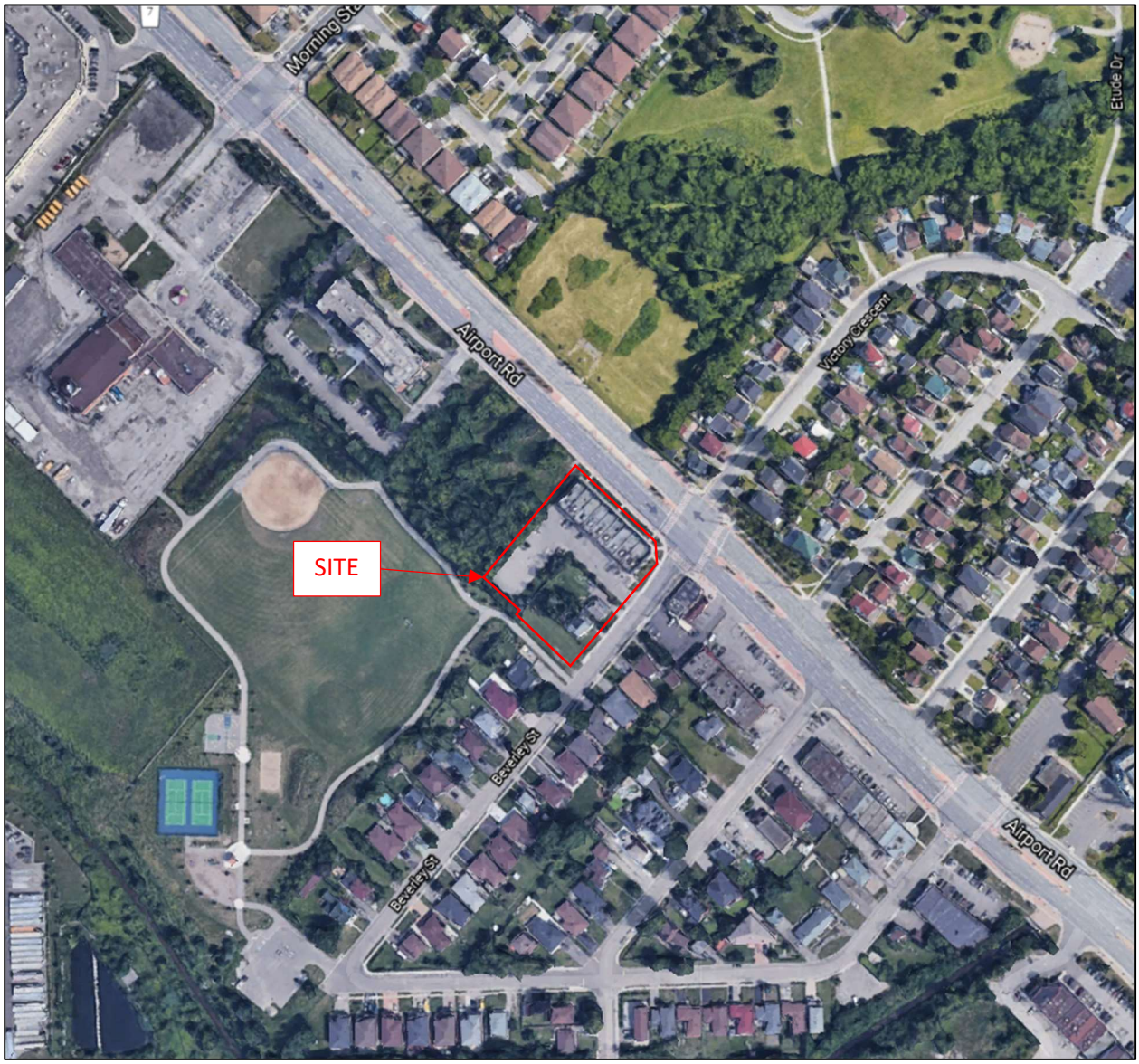
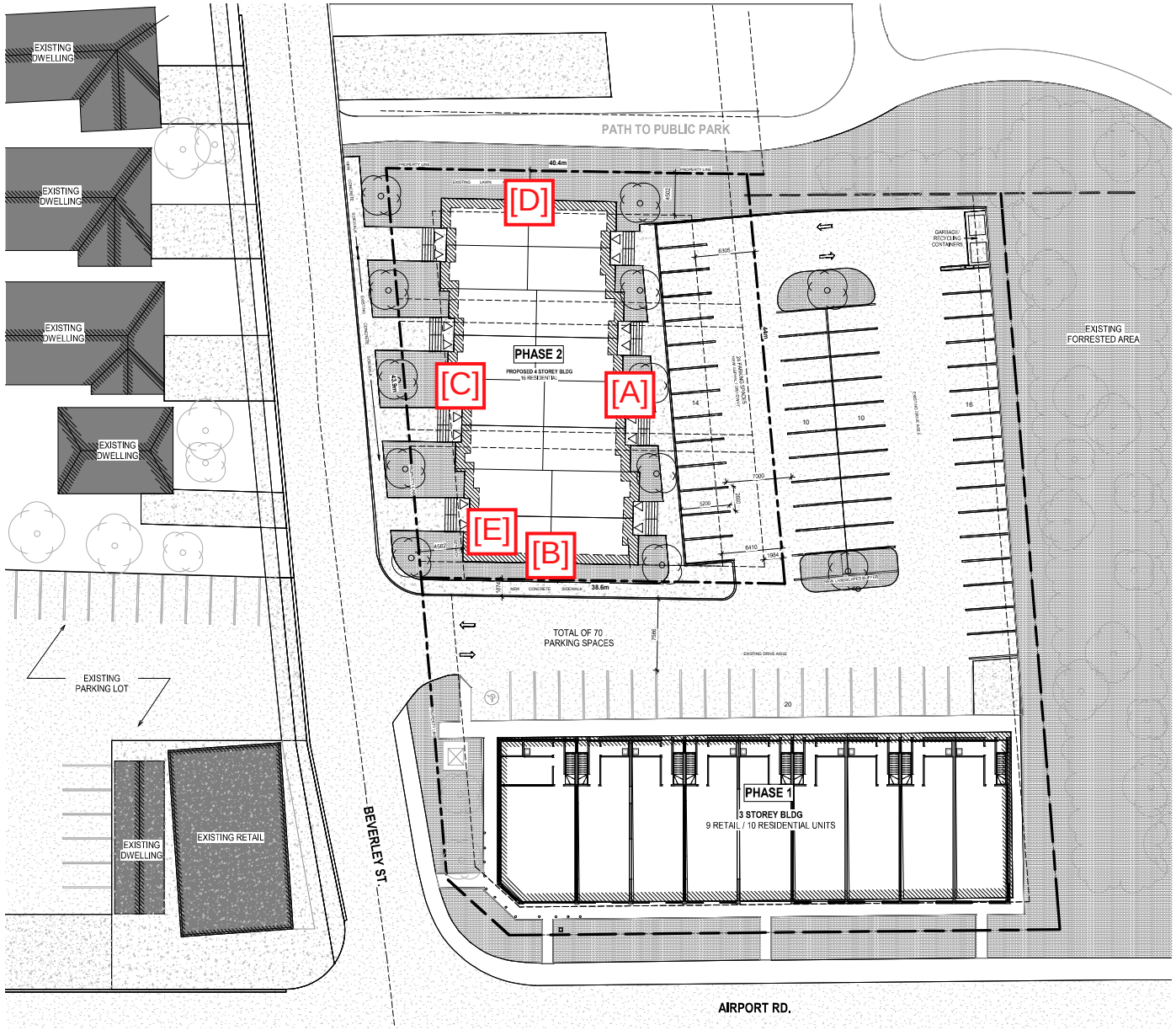


Figure 1: Key Plan



1 Site Plan - Phase 2.
1 : 200

SITE PLAN LEGEND

- PROPERTY LINE
- LOT LINE
- SETBACK
- MAIN ENTRANCE - RETAIL
- SECONDARY ENTRANCE/EXIT - RETAIL
- MAIN ENTRANCE - RESIDENTIAL
- SECONDARY ENTRANCE - RESIDENTIAL
- FIRE HYDRANT
- VEHICULAR DIRECTION OF TRAVEL

SITE STATISTICS	REQUIRED	EXISTING	PROPOSED
ZONED USE	N/A	RS-69	C6-47
LOT AREA	N/A	1775m²	1775m²
LOT FRONTAGE	N/A	MIN. 15m	
LOT DEPTH	N/A	38.52m	No Change m²
GFA		N/A	1792m² GFA
BUILDING HEIGHT (FLAT ROOF)	MIN. 2 STOREYS MAX. 12.0m & 3 STOREYS	SLOPED ROOF MAX. 9.0m FLAT ROOF MAX. 7.5m	4 STOREYS/FLAT ROOF HEIGHT: 15.2m
PARKING	16	48	22 New + 48 Exist. = 70
FRONT YARD SETBACK	MIN. 0m MAX. 3m	MIN. 7.3m	4.5m
EXTERIOR SIDE SETBACK	MIN. 0m MAX. 3m	MIN. 6m	0m
INTERIOR SIDE SETBACK	Abuts Institutional: 3.0m	1.2m + 0.61m for each additional storey	3m
REAR YARD SETBACK	Abuts Institutional: 3.0m Abuts: C4 Zone: 0m	MIN. 7.5m	12.2m
LANDSCAPED BUFFER DEPTH			
ABUTS REAR LOT LINE	MIN. 1.8m	N/A	
FROM A LOT LINE THAT IS A STREET LINE	MIN. 0m	N/A	
LOT LINE ABUTS INSTITUTIONAL	MIN. 3m	N/A	3m
COMMERCIAL ZONE ABUTS ANOTHER COMMERCIAL ZONE	MIN. 0m where abuts C4 Zone	N/A	
FROM ANY OTHER LOT LINE	MIN. 4.5m	N/A	

CLIENT:
Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 990-4290
email: AKumar@live.ca

CONSULTANT:
CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-536-0763
www.cumulusarch.com

SEAL:
ONTARIO ASSOCIATION OF ARCHITECTS
SHELDON MORAO CATARINO
LICENCE
9177

KEY PLAN: NTS

Address: 5, 7, 9 Beverley St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-1 AND PEEL STANDARD CONDOMINIUM PLAN No. 920, CITY OF TORONTO (FORMERLY CITY OF YORK)

Zoning: RS-69

No.	Description	Date
2	Issued for SPA-RT	05-Nov-2021
1	Issued for SPA	15-Oct-2021

PROJECT:
7196-7214 Airport Rd
Mississauga, ON L4T 1E9

TITLE:
SITE PLAN - PHASE 2

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A101

Figure 2 - Proposed Site Plan Showing Prediction Locations

Appendix A

Railway Guidelines

PRINCIPAL MAIN LINE REQUIREMENTS FOR NEW DEVELOPMENT

A. Safety setback of dwellings from the railway rights-of-way to be a minimum of 30 metres in conjunction with a safety berm. The safety berm shall be adjoining and parallel to the railway rights-of-way with returns at the ends, 2.5 metres above grade at the property line, with side slopes not steeper than 2.5 to 1.

B. Noise attenuation barrier shall be adjoining and parallel to the railway rights-of-way, having returns at the ends, and a minimum total height of 5.5 metres above top-of-rail. Acoustic fence to be constructed without openings and of a durable material weighing not less than 20 kg. per square metre of surface area. Subject to the review of the noise report, GO Transit may consider other measures recommended by an approved Noise Consultant.

C. Ground-borne vibration transmission to be evaluated in a report through site testing to determine if dwellings within 75 metres of the railway rights-of-way will be impacted by vibration conditions in excess of 0.14 mm/sec RMS between 4 Hz and 200 Hz. The monitoring system should be capable of measuring frequencies between 4 Hz and 200 Hz, $\pm$ 3 dB with an RMS averaging time constant of 1 second. If in excess, isolation measures will be required to ensure living areas do not exceed 0.14 mm/sec RMS on and above the first floor of the dwelling.

D. The Owner shall install and maintain a chain link fence of minimum 1.83 metre height along the mutual property line.

E. The following clause should be inserted in all development agreements, offers to purchase, and agreements of Purchase and Sale or Lease of each dwelling unit within 300m of the railway right-of-way.

> **Warning:** Metrolinx, carrying on business as GO Transit, and its assigns and successors in interest has or have a right-of-way within 300 metres from the land the subject hereof. There may be alterations to or expansions of the rail facilities on such right-of-way in the future including the possibility that GO Transit or any railway entering into an agreement with GO Transit to use the right-of-way or their 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 dwelling(s). Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way.

F. Any proposed alterations to the existing drainage pattern affecting the railway right-of-way must receive prior concurrence from GO Transit and be substantiated by a drainage report to the satisfaction of GO Transit.

G. The Owner shall through restrictive covenants to be registered on title and all agreements of purchase and sale or lease provide notice to the public that the safety berm, fencing and vibration isolation measures implemented are not to be tampered with or altered and further that the Owner shall have sole responsibility for and shall maintain these measures to the satisfaction of GO Transit.

H. The Owner enter into an Agreement stipulating how GO Transit's concerns will be resolved and will pay GO Transit's reasonable costs in preparing and negotiating the agreement.

I. The Owner may be required to grant GO Transit an environmental easement for operational emissions, registered on title against the subject property in favour of GO.

Appendix B

Road Traffic Data

September 14th, 2018

Yvonne Lo,
HGC
Traffic Data Request – Airport north of Derry

Yvonne:

As per your request, we are providing the following traffic data.

Airport north of Derry

	Existing	Planned
24 Hour Traffic Volume	33,238	48,100
# of Lanes	6	6
Day/Night Split	83/17	83/17
Day Trucks (% of Total Volume)	1.7% Medium 8.3% Heavy	1.7% Medium 8.3% Heavy
Night Trucks (% of Total Volume)	0.9% Medium 9.2% Heavy	0.9% Medium 9.2% Heavy
Right-of-Way Width	45 meters	
Posted Speed Limit	50 km/h	

If you require further assistance, please contact me at (905) 791-7800 ext. 4810

Regards,

Viktoriya Zaytseva
Transportation Analyst, Infrastructure Planning & Design
Transportation Division, Public Works, Region of Peel

10 Peel Centre Drive, Suite B, 4th Floor, Brampton, ON, L6T 4B9
E: viktoriya.zaytseva@peelregion.ca • W: 905-791-7800 x4810

Appendix C

Rail Traffic Data

From: Rail Data Requests
To: Harry Cai
Cc: Andrew Rogers
Subject: RE: Rail Data Request - 7062 Airport Road - Weston Subdivision
Date: October-05-21 1:19:46 PM
Attachments: image001.png

Good afternoon Harry,

The information you provided for the 11 Wilby Crescent property would not be valid information for 7062 Airport Road.

Further to your request dated September 23, 2021, the subject lands (7062 Airport Road, Mississauga) are located within 300 metres of the Metrolinx Weston Subdivision (which carries Kitchener 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 153 trains. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive	2 Diesel Locomotives		1 Diesel Locomotive	2 Diesel Locomotives
Day (0700-2300)	93	36	Night (2300-0700)	22	2

The current track design speed near the subject lands is 80 mph (129 km/h).

There is an *anti-whistling by-law* in affect at North Alarton St. (Scarboro St.) at-grade crossing.

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.

Best regards,

Harrison Rong
Project Coordinator, Third Party Projects Review
Metrolinx
10 Bay Street | Toronto | Ontario | M5J 2W3
METROLINX

From: Harry Cai <hcai@hgcengineering.com>
Sent: September 23, 2021 10:14 AM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Cc: Andrew Rogers <arogers@hgcengineering.com>
Subject: Rail Data Request - 7062 Airport Road - Weston Subdivision

Hi Lyndsy,

HGC Engineering is conducting a noise & vibration study located near 7062 Airport Road in Mississauga (see google maps link https://goo.gl/maps/wrueJuxCK2XyZ3xu8).

We are requesting for rail traffic data on this line. We do have some existing data from 2018 for the Weston subdivision a bit west of the site (see attached, at 11 Wilby Crescent), but would like an update/confirmation to see if it's still valid or not.

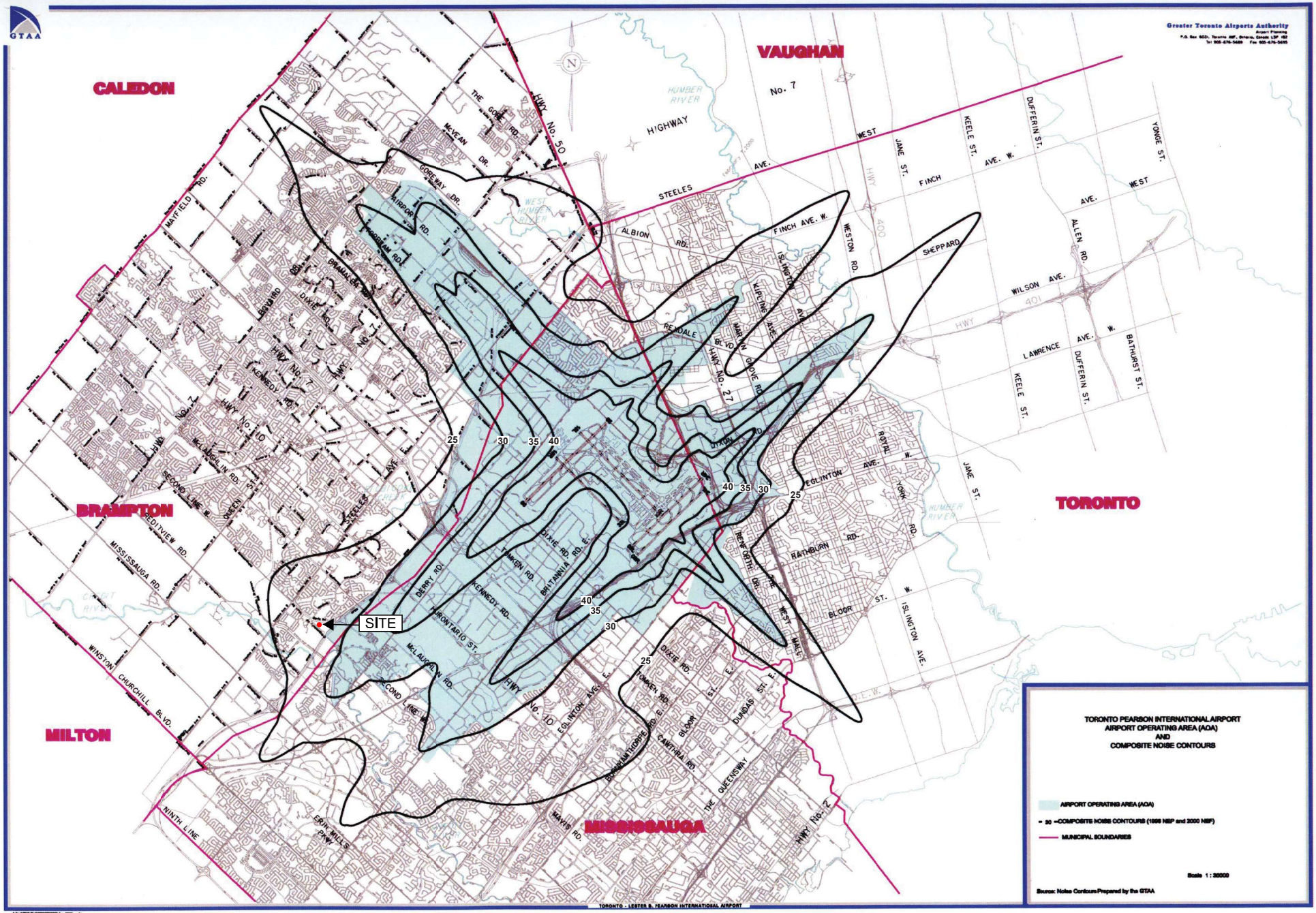
Thank you!

Harry Cai, EIT
Project Consultant

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 ext. 297 **e**: hcai@hgcengineering.com
Visit our website: www.hgcengineering.com Follow Us – LinkedIn | Twitter | YouTube

Appendix D

NEF Contours


Greater Toronto Airports Authority
Airport Planning
P.O. Box 6031, Toronto AMF, Ontario, Canada L5P 1B2
Tel 905-676-5689 Fax 905-676-5695
CALEDON
VAUGHAN
BRAMPTON
TORONTO
MILTON
MISSISSAUGA
HIGHWAY No. 50
No. 7
HUMBER RIVER
THE GORE RD.
McEWAN DR.
GOREWAY DR.
MAYFIELD RD.
AIRPORT RD.
BRAMALEA RD.
DIXIE RD.
HWY No. 7
KENNEDY RD.
HWY No. 10
McLAUGHLIN RD.
QUEEN ST.
SECOND LINE W.
CREDITVIEW RD.
MISSISSAUGA RD.
WINSTON CHURCHILL BLVD.
NINTH LINE
STEELES AVE.
STEELES AVE. W.
ALBION RD.
FINCH AVE. W.
WESTON RD.
SHEPPARD AVE. W.
ISLINGTON AVE.
KIPLING AVE.
REXDALE BLVD.
MARTIN GROVE RD.
HWY No. 27
DIXIE RD.
WILSON AVE.
401
HWY
LAWRENCE AVE. W.
KEELE ST.
DUFFERIN ST.
BATHURST ST.
YONGE ST.
ALLEN RD.
JANE ST.
FINCH AVE. WEST
STEELES AVE. WEST
DERRY RD.
TOMKEN RD.
BRITANNIA RD. E.
HURONTARIO ST.
SITE
EGLINTON AVE. E.
BRAMALEA RD.
CAMILLA RD.
BLOOR ST. E.
DUNDAS ST. E.
THE QUEENSWAY
MAVIS RD.
ERIN MILLS PKWY
EGLINTON
ROYAL YORK RD.
RATHBURN RD.
RENFORTH DR.
BLOOR ST. W.
ISLINGTON AVE.
25
30
35
40
TORONTO - LESTER B. PEARSON INTERNATIONAL AIRPORT
TORONTO PEARSON INTERNATIONAL AIRPORT
AIRPORT OPERATING AREA (AOA)
AND
COMPOSITE NOISE CONTOURS
AIRPORT OPERATING AREA (AOA)
= 30 =COMPOSITE NOISE CONTOURS (1996 NEP and 2000 NEF)
MUNICIPAL BOUNDARIES
Scale 1 : 35000
Source: Noise Contours Prepared by the GTAA

Appendix E

Sample Stamson Output

STAMSON 5.0 NORMAL REPORT Date: 10-02-2022 15:13:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 2n_tot.te Time Period: Day/Night 16/8 hours
Description: North Facade

Rail data, segment # 1: GO_1 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	119.0/28.2	80.0	1.0	12.0	Diesel	No

Data for Segment # 1: GO_1 (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	: 305.00 / 305.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 2: GO_2 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	46.1/2.6	80.0	2.0	12.0	Diesel	No

Data for Segment # 2: GO_2 (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	: 305.00 / 305.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 3: VIA (day/night)

A

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1.	5.1/0.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 3: VIA (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	: 305.00 / 305.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Results segment # 1: GO_1 (day)

LOCOMOTIVE (0.00 + 48.09 + 0.00) = 48.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	74.21	-18.18	-7.93	0.00	0.00	0.00	48.09

WHEEL (0.00 + 41.70 + 0.00) = 41.70 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	69.63	-19.56	-8.38	0.00	0.00	0.00	41.70

Segment Leq : 48.99 dBA

Results segment # 2: GO_2 (day)

LOCOMOTIVE (0.00 + 46.08 + 0.00) = 46.08 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	72.20	-18.18	-7.93	0.00	0.00	0.00	46.08

WHEEL (0.00 + 37.90 + 0.00) = 37.90 dBA

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

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	65.84	-19.56	-8.38	0.00	0.00	0.00	37.90

Segment Leq : 46.69 dBA

Results segment # 3: VIA (day)

LOCOMOTIVE (0.00 + 34.41 + 0.00) = 34.41 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	60.53	-18.18	-7.93	0.00	0.00	0.00	34.41

WHEEL (0.00 + 28.02 + 0.00) = 28.02 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	55.95	-19.56	-8.38	0.00	0.00	0.00	28.02

Segment Leq : 35.31 dBA

Total Leq All Segments: 51.12 dBA

Results segment # 1: GO_1 (night)

LOCOMOTIVE (0.00 + 44.85 + 0.00) = 44.85 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	70.97	-18.18	-7.93	0.00	0.00	0.00	44.85

WHEEL (0.00 + 38.45 + 0.00) = 38.45 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	66.39	-19.56	-8.38	0.00	0.00	0.00	38.45

Segment Leq : 45.75 dBA

Results segment # 2: GO_2 (night)

A

LOCOMOTIVE (0.00 + 36.61 + 0.00) = 36.61 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	62.72	-18.18	-7.93	0.00	0.00	0.00	36.61

WHEEL (0.00 + 28.42 + 0.00) = 28.42 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	56.36	-19.56	-8.38	0.00	0.00	0.00	28.42

Segment Leq : 37.22 dBA

↟

Results segment # 3: VIA (night)

LOCOMOTIVE (0.00 + -26.12 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.39	0.00	-18.18	-7.93	0.00	0.00	0.00	-26.12

WHEEL (0.00 + -27.94 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.50	0.00	-19.56	-8.38	0.00	0.00	0.00	-27.94

Segment Leq : 0.00 dBA

Total Leq All Segments: 46.32 dBA

↟

Road data, segment # 1: Airport1 (day/night)

```
Car traffic volume  : 17965/3676  veh/TimePeriod
Medium truck volume :   339/37    veh/TimePeriod
Heavy truck volume  :  1657/376   veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 1: Airport1 (day/night)

```
Angle1   Angle2           :   0.00 deg   24.00 deg
Wood depth                :      0       (No woods.)
```

A

No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height : 8.00 / 8.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟

Road data, segment # 2: Airport2 (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Airport2 (day/night)

Angle1 Angle2 : 0.00 deg 24.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 66.30 / 66.30 m
Receiver height : 8.00 / 8.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↟

Road data, segment # 3: Airport1Bar (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 3: Airport1Bar (day/night)

Angle1 Angle2 : 24.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height : 8.00 / 8.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 24.00 deg Angle2 : 90.00 deg

A

Barrier height : 8.90 m
Barrier receiver distance : 18.50 / 18.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 4: Airport2Bar (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Airport2Bar (day/night)

Angle1 Angle2 : 24.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 66.30 / 66.30 m
Receiver height : 8.00 / 8.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 24.00 deg Angle2 : 90.00 deg
Barrier height : 8.90 m
Barrier receiver distance : 18.50 / 18.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Airport1 (day)

Source height = 1.70 m

ROAD (0.00 + 57.11 + 0.00) = 57.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	24	0.00	71.09	0.00	-5.23	-8.75	0.00	0.00	0.00	57.11

Segment Leq : 57.11 dBA

Results segment # 2: Airport2 (day)

Source height = 1.70 m

ROAD (0.00 + 55.88 + 0.00) = 55.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	24	0.00	71.09	0.00	-6.45	-8.75	0.00	0.00	0.00	55.88

Segment Leq : 55.88 dBA

Results segment # 3: Airport1Bar (day)

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	8.00	5.67	5.67

ROAD (0.00 + 51.23 + 0.00) = 51.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
24	90	0.00	71.09	0.00	-5.23	-4.36	0.00	0.00	-10.27	51.23

Segment Leq : 51.23 dBA

Results segment # 4: Airport2Bar (day)

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	8.00	6.24	6.24

ROAD (0.00 + 51.32 + 0.00) = 51.32 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
24	90	0.00	71.09	0.00	-6.45	-4.36	0.00	0.00	-8.95	51.32

Segment Leq : 51.32 dBA

Total Leq All Segments: 60.68 dBA

Results segment # 1: Airport1 (night)

Source height = 1.74 m

ROAD (0.00 + 53.52 + 0.00) = 53.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	24	0.00	67.50	0.00	-5.23	-8.75	0.00	0.00	0.00	53.52

Segment Leq : 53.52 dBA

Results segment # 2: Airport2 (night)

Source height = 1.74 m

ROAD (0.00 + 52.30 + 0.00) = 52.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	24	0.00	67.50	0.00	-6.45	-8.75	0.00	0.00	0.00	52.30

Segment Leq : 52.30 dBA

Results segment # 3: Airport1Bar (night)

Source height = 1.74 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)

```
                                        A
------------+-------------+-------------+--------------
       1.74 !        8.00 !        5.68 !         5.68

ROAD (0.00 + 47.67 + 0.00) = 47.67 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    24     90   0.00  67.50   0.00  -5.23  -4.36   0.00   0.00 -10.25  47.67
-------------------------------------------------------------------------------

Segment Leq : 47.67 dBA

↟
Results segment # 4: Airport2Bar (night)
----------------------------------------

Source height = 1.74 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.74 !        8.00 !        6.25 !         6.25

ROAD (0.00 + 47.76 + 0.00) = 47.76 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
    24     90   0.00  67.50   0.00  -6.45  -4.36   0.00   0.00  -8.93  47.76
-------------------------------------------------------------------------------

Segment Leq : 47.76 dBA

Total Leq All Segments: 57.10 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 61.14
                           (NIGHT): 57.45
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 10-02-2022 15:15:26
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 2e_tot.te Time Period: Day/Night 16/8 hours
Description: East Facade

Rail data, segment # 1: GO_1 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	119.0/28.2	80.0	1.0	12.0	Diesel	No

Data for Segment # 1: GO_1 (day/night)

Angle1 Angle2	: 45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 2: GO_2 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	46.1/2.6	80.0	2.0	12.0	Diesel	No

Data for Segment # 2: GO_2 (day/night)

Angle1 Angle2	: 45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 3: VIA (day/night)

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1.	5.1/0.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 3: VIA (day/night)

Angle1 Angle2	: 45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Results segment # 1: GO_1 (day)

LOCOMOTIVE (0.00 + 48.40 + 0.00) = 48.40 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	74.21	-17.88	-7.93	0.00	0.00	0.00	48.40

WHEEL (0.00 + 42.02 + 0.00) = 42.02 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	69.63	-19.23	-8.38	0.00	0.00	0.00	42.02

Segment Leq : 49.30 dBA

Results segment # 2: GO_2 (day)

LOCOMOTIVE (0.00 + 46.39 + 0.00) = 46.39 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	72.20	-17.88	-7.93	0.00	0.00	0.00	46.39

WHEEL (0.00 + 38.23 + 0.00) = 38.23 dBA

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

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	65.84	-19.23	-8.38	0.00	0.00	0.00	38.23

Segment Leq : 47.01 dBA

Results segment # 3: VIA (day)

LOCOMOTIVE (0.00 + 34.72 + 0.00) = 34.72 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	60.53	-17.88	-7.93	0.00	0.00	0.00	34.72

WHEEL (0.00 + 28.34 + 0.00) = 28.34 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	55.95	-19.23	-8.38	0.00	0.00	0.00	28.34

Segment Leq : 35.62 dBA

Total Leq All Segments: 51.43 dBA

Results segment # 1: GO_1 (night)

LOCOMOTIVE (0.00 + 45.15 + 0.00) = 45.15 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	70.97	-17.88	-7.93	0.00	0.00	0.00	45.15

WHEEL (0.00 + 38.78 + 0.00) = 38.78 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	66.39	-19.23	-8.38	0.00	0.00	0.00	38.78

Segment Leq : 46.05 dBA

Results segment # 2: GO_2 (night)

B

LOCOMOTIVE (0.00 + 36.91 + 0.00) = 36.91 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	62.72	-17.88	-7.93	0.00	0.00	0.00	36.91

WHEEL (0.00 + 28.75 + 0.00) = 28.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	56.36	-19.23	-8.38	0.00	0.00	0.00	28.75

Segment Leq : 37.53 dBA

↟

Results segment # 3: VIA (night)

LOCOMOTIVE (0.00 + -25.81 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.39	0.00	-17.88	-7.93	0.00	0.00	0.00	-25.81

WHEEL (0.00 + -27.61 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.50	0.00	-19.23	-8.38	0.00	0.00	0.00	-27.61

Segment Leq : 0.00 dBA

Total Leq All Segments: 46.62 dBA

↟

Road data, segment # 1: Airport1N (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Airport1N (day/night)

Angle1 Angle2 : -90.00 deg -72.00 deg
Wood depth : 0 (No woods.)

```
                                        B
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  50.00 / 50.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```



```
Road data, segment # 2: Airport2N (day/night)
-----------------------------------------------
Car traffic volume  : 17965/3676  veh/TimePeriod
Medium truck volume :   339/37    veh/TimePeriod
Heavy truck volume  :  1657/376   veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 2: Airport2N (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   -72.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  66.30 / 66.30  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```



```
Road data, segment # 3: Airport1Bar (day/night)
-----------------------------------------------
Car traffic volume  : 17965/3676  veh/TimePeriod
Medium truck volume :   339/37    veh/TimePeriod
Heavy truck volume  :  1657/376   veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 3: Airport1Bar (day/night)
-----------------------------------------------
Angle1   Angle2           : -72.00 deg   16.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  50.00 / 50.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -72.00 deg   Angle2 : 16.00 deg
```

B

Barrier height : 8.90 m
Barrier receiver distance : 18.50 / 18.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 4: Airport2Bar (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 4: Airport2Bar (day/night)

Angle1 Angle2 : -72.00 deg 16.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 66.30 / 66.30 m
Receiver height : 8.00 / 8.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -72.00 deg Angle2 : 16.00 deg
Barrier height : 8.90 m
Barrier receiver distance : 18.50 / 18.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Road data, segment # 5: Airport1S (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 5: Airport1S (day/night)

Angle1 Angle2 : 16.00 deg 90.00 deg
Wood depth : 0 (No woods.)

```
                                        B
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  50.00 / 50.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↑

```
Road data, segment # 6: Airport2S (day/night)
-----------------------------------------------
Car traffic volume  : 17965/3676  veh/TimePeriod
Medium truck volume :   339/37    veh/TimePeriod
Heavy truck volume  :  1657/376   veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

Data for Segment # 6: Airport2S (day/night)
-----------------------------------------------
Angle1   Angle2           :  16.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  66.30 / 66.30  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↑

```
Results segment # 1: Airport1N (day)
-----------------------------------

Source height = 1.70 m

ROAD (0.00 + 55.86 + 0.00) = 55.86 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -72   0.00  71.09   0.00  -5.23 -10.00   0.00   0.00   0.00  55.86
-------------------------------------------------------------------------------

Segment Leq : 55.86 dBA
```

↑

```
Results segment # 2: Airport2N (day)
-----------------------------------

Source height = 1.70 m
```

B

ROAD (0.00 + 54.63 + 0.00) = 54.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-72	0.00	71.09	0.00	-6.45	-10.00	0.00	0.00	0.00	54.63

Segment Leq : 54.63 dBA

Results segment # 3: Airport1Bar (day)

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	8.00	5.67	5.67

ROAD (0.00 + 49.90 + 0.00) = 49.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-72	16	0.00	71.09	0.00	-5.23	-3.11	0.00	0.00	-12.85	49.90

Segment Leq : 49.90 dBA

Results segment # 4: Airport2Bar (day)

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	8.00	6.24	6.24

ROAD (0.00 + 50.58 + 0.00) = 50.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-72	16	0.00	71.09	0.00	-6.45	-3.11	0.00	0.00	-10.94	50.58

Segment Leq : 50.58 dBA

↟

Results segment # 5: Airport1S (day)

Source height = 1.70 m

ROAD (0.00 + 62.00 + 0.00) = 62.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.00	71.09	0.00	-5.23	-3.86	0.00	0.00	0.00	62.00

Segment Leq : 62.00 dBA

↟

Results segment # 6: Airport2S (day)

Source height = 1.70 m

ROAD (0.00 + 60.77 + 0.00) = 60.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.00	71.09	0.00	-6.45	-3.86	0.00	0.00	0.00	60.77

Segment Leq : 60.77 dBA

Total Leq All Segments: 65.64 dBA

↟

Results segment # 1: Airport1N (night)

Source height = 1.74 m

ROAD (0.00 + 52.27 + 0.00) = 52.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-72	0.00	67.50	0.00	-5.23	-10.00	0.00	0.00	0.00	52.27

Segment Leq : 52.27 dBA

↟

Results segment # 2: Airport2N (night)

B

Source height = 1.74 m

ROAD (0.00 + 51.05 + 0.00) = 51.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-72	0.00	67.50	0.00	-6.45	-10.00	0.00	0.00	0.00	51.05

Segment Leq : 51.05 dBA

↑

Results segment # 3: Airport1Bar (night)

Source height = 1.74 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.74	8.00	5.68	5.68

ROAD (0.00 + 46.35 + 0.00) = 46.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-72	16	0.00	67.50	0.00	-5.23	-3.11	0.00	0.00	-12.81	46.35

Segment Leq : 46.35 dBA

↑

Results segment # 4: Airport2Bar (night)

Source height = 1.74 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.74	8.00	6.25	6.25

ROAD (0.00 + 47.03 + 0.00) = 47.03 dBA

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

B

-72	16	0.00	67.50	0.00	-6.45	-3.11	0.00	0.00	-10.91	47.03

Segment Leq : 47.03 dBA

↟

Results segment # 5: Airport1S (night)

Source height = 1.74 m

ROAD (0.00 + 58.41 + 0.00) = 58.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.00	67.50	0.00	-5.23	-3.86	0.00	0.00	0.00	58.41

Segment Leq : 58.41 dBA

↟

Results segment # 6: Airport2S (night)

Source height = 1.74 m

ROAD (0.00 + 57.19 + 0.00) = 57.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
16	90	0.00	67.50	0.00	-6.45	-3.86	0.00	0.00	0.00	57.19

Segment Leq : 57.19 dBA

Total Leq All Segments: 62.06 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 65.80
(NIGHT): 62.18

↟
↟

Filename: 2s_tot.te Time Period: Day/Night 16/8 hours
Description: South Facade

Rail data, segment # 1: GO_1 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	119.0/28.2	80.0	1.0	12.0	Diesel	No

Data for Segment # 1: GO_1 (day/night)

Angle1 Angle2	: -45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 2: GO_2 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	46.1/2.6	80.0	2.0	12.0	Diesel	No

Data for Segment # 2: GO_2 (day/night)

Angle1 Angle2	: -45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Rail data, segment # 3: VIA (day/night)

C

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1.	5.1/0.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 3: VIA (day/night)

Angle1 Angle2	: -45.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 290.00 / 290.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Results segment # 1: GO_1 (day)

LOCOMOTIVE (0.00 + 54.39 + 0.00) = 54.39 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	74.21	-17.88	-1.93	0.00	0.00	0.00	54.39

WHEEL (0.00 + 48.32 + 0.00) = 48.32 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	69.63	-19.23	-2.08	0.00	0.00	0.00	48.32

Segment Leq : 55.35 dBA

Results segment # 2: GO_2 (day)

LOCOMOTIVE (0.00 + 52.39 + 0.00) = 52.39 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	72.20	-17.88	-1.93	0.00	0.00	0.00	52.39

WHEEL (0.00 + 44.53 + 0.00) = 44.53 dBA

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

C

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	65.84	-19.23	-2.08	0.00	0.00	0.00	44.53

Segment Leq : 53.05 dBA

Results segment # 3: VIA (day)

LOCOMOTIVE (0.00 + 40.71 + 0.00) = 40.71 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	60.53	-17.88	-1.93	0.00	0.00	0.00	40.71

WHEEL (0.00 + 34.64 + 0.00) = 34.64 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	55.95	-19.23	-2.08	0.00	0.00	0.00	34.64

Segment Leq : 41.67 dBA

Total Leq All Segments: 57.48 dBA

Results segment # 1: GO_1 (night)

LOCOMOTIVE (0.00 + 51.15 + 0.00) = 51.15 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	70.97	-17.88	-1.93	0.00	0.00	0.00	51.15

WHEEL (0.00 + 45.08 + 0.00) = 45.08 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	66.39	-19.23	-2.08	0.00	0.00	0.00	45.08

Segment Leq : 52.11 dBA

Results segment # 2: GO_2 (night)

C

LOCOMOTIVE (0.00 + 42.91 + 0.00) = 42.91 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	62.72	-17.88	-1.93	0.00	0.00	0.00	42.91

WHEEL (0.00 + 35.05 + 0.00) = 35.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	56.36	-19.23	-2.08	0.00	0.00	0.00	35.05

Segment Leq : 43.57 dBA

↟

Results segment # 3: VIA (night)

LOCOMOTIVE (0.00 + -19.81 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.39	0.00	-17.88	-1.93	0.00	0.00	0.00	-19.81

WHEEL (0.00 + -21.31 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.50	0.00	-19.23	-2.08	0.00	0.00	0.00	-21.31

Segment Leq : 0.00 dBA

Total Leq All Segments: 52.68 dBA

↟

Road data, segment # 1: Airport1 (day/night)

```
Car traffic volume  : 17965/3676  veh/TimePeriod
Medium truck volume :   339/37    veh/TimePeriod
Heavy truck volume  :  1657/376   veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 1: Airport1 (day/night)

```
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
```

C
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height : 8.00 / 8.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Airport2 (day/night)

Car traffic volume : 17965/3676 veh/TimePeriod
Medium truck volume : 339/37 veh/TimePeriod
Heavy truck volume : 1657/376 veh/TimePeriod
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Airport2 (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 : 66.30 / 66.30 m
Receiver height : 8.00 / 8.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Airport1 (day)

Source height = 1.70 m

ROAD (0.00 + 62.85 + 0.00) = 62.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	71.09	0.00	-5.23	-3.01	0.00	0.00	0.00	62.85

Segment Leq : 62.85 dBA

Results segment # 2: Airport2 (day)

Source height = 1.70 m

C

ROAD (0.00 + 61.62 + 0.00) = 61.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	71.09	0.00	-6.45	-3.01	0.00	0.00	0.00	61.62

Segment Leq : 61.62 dBA

Total Leq All Segments: 65.29 dBA

↑

Results segment # 1: Airport1 (night)

Source height = 1.74 m

ROAD (0.00 + 59.26 + 0.00) = 59.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.50	0.00	-5.23	-3.01	0.00	0.00	0.00	59.26

Segment Leq : 59.26 dBA

↑

Results segment # 2: Airport2 (night)

Source height = 1.74 m

ROAD (0.00 + 58.04 + 0.00) = 58.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	67.50	0.00	-6.45	-3.01	0.00	0.00	0.00	58.04

Segment Leq : 58.04 dBA

Total Leq All Segments: 61.70 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.95
(NIGHT): 62.22

↑
↑

Filename: rail_w.te Time Period: Day/Night 16/8 hours
Description: West Facade

Rail data, segment # 1: GO_1 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	119.0/28.2	80.0	1.0	12.0	Diesel	No

Data for Segment # 1: GO_1 (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	260.00 / 260.00 m	
Receiver height	8.00 / 8.00 m	
Topography	1	(Flat/gentle slope; no barrier)
No Whistle		
Reference angle	0.00	

Rail data, segment # 2: GO_2 (day/night)

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	46.1/2.6	80.0	2.0	12.0	Diesel	No

Data for Segment # 2: GO_2 (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	260.00 / 260.00 m	
Receiver height	8.00 / 8.00 m	
Topography	1	(Flat/gentle slope; no barrier)
No Whistle		
Reference angle	0.00	

Rail data, segment # 3: VIA (day/night)

D

Train Type	Trains	Speed (km/h)	# loc / Train	# Cars / Train	Eng type	Cont weld
1.	5.1/0.0	80.0	1.0	12.0	Diesel	No

Data for Segment # 3: VIA (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	: 260.00 / 260.00 m	
Receiver height	: 8.00 / 8.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

No Whistle
Reference angle : 0.00

Results segment # 1: GO_1 (day)

LOCOMOTIVE (0.00 + 55.05 + 0.00) = 55.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	74.21	-17.22	-1.93	0.00	0.00	0.00	55.05

WHEEL (0.00 + 49.03 + 0.00) = 49.03 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	69.63	-18.52	-2.08	0.00	0.00	0.00	49.03

Segment Leq : 56.02 dBA

Results segment # 2: GO_2 (day)

LOCOMOTIVE (0.00 + 53.04 + 0.00) = 53.04 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	72.20	-17.22	-1.93	0.00	0.00	0.00	53.04

WHEEL (0.00 + 45.24 + 0.00) = 45.24 dBA

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

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	65.84	-18.52	-2.08	0.00	0.00	0.00	45.24

Segment Leq : 53.71 dBA

↟
Results segment # 3: VIA (day)

LOCOMOTIVE (0.00 + 41.37 + 0.00) = 41.37 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	60.53	-17.22	-1.93	0.00	0.00	0.00	41.37

WHEEL (0.00 + 35.35 + 0.00) = 35.35 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	55.95	-18.52	-2.08	0.00	0.00	0.00	35.35

Segment Leq : 42.34 dBA

Total Leq All Segments: 58.14 dBA

↟
Results segment # 1: GO_1 (night)

LOCOMOTIVE (0.00 + 51.81 + 0.00) = 51.81 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	70.97	-17.22	-1.93	0.00	0.00	0.00	51.81

WHEEL (0.00 + 45.79 + 0.00) = 45.79 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	66.39	-18.52	-2.08	0.00	0.00	0.00	45.79

Segment Leq : 52.78 dBA

↟
Results segment # 2: GO_2 (night)

D

LOCOMOTIVE (0.00 + 43.57 + 0.00) = 43.57 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	62.72	-17.22	-1.93	0.00	0.00	0.00	43.57

WHEEL (0.00 + 35.76 + 0.00) = 35.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	56.36	-18.52	-2.08	0.00	0.00	0.00	35.76

Segment Leq : 44.24 dBA

Results segment # 3: VIA (night)

LOCOMOTIVE (0.00 + -19.16 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.39	0.00	-17.22	-1.93	0.00	0.00	0.00	-19.16

WHEEL (0.00 + -20.60 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.50	0.00	-18.52	-2.08	0.00	0.00	0.00	-20.60

Segment Leq : 0.00 dBA

Total Leq All Segments: 53.35 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.14
(NIGHT): 53.35

E
STAMSON 5.0 NORMAL REPORT Date: 08-02-2022 09:46:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 2ola_s.te Time Period: 16 hours
Description: Outdoor Living Area.

Rail data, segment # 1: GO_1

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	119.0/28.2	80.0	1.0	12.0	Diesel	No

Data for Segment # 1: GO_1

Angle1 Angle2	: -45.00 deg	90.00 deg	
Wood depth	: 0	(No woods.)	
No of house rows	: 0		
Surface	: 1	(Absorptive ground surface)	
Receiver source distance	: 290.00 m		
Receiver height	: 10.75 m		
Topography	: 2	(Flat/gentle slope; with barrier)	
No Whistle			
Barrier angle1	: -45.00 deg	Angle2 : 90.00 deg	
Barrier height	: 10.32 m		
Barrier receiver distance	: 2.00 m		
Source elevation	: 0.00 m		
Receiver elevation	: 0.00 m		
Barrier elevation	: 0.00 m		
Reference angle	: 0.00		

↟
Rail data, segment # 2: GO_2

Train Type	Trains	Speed (km/h)	# loc /Train	# Cars /Train	Eng type	Cont weld
1.	46.1/2.6	80.0	2.0	12.0	Diesel	No

Data for Segment # 2: GO_2

Angle1 Angle2	: -45.00 deg	90.00 deg	
Wood depth	: 0	(No woods.)	
No of house rows	: 0		
Surface	: 1	(Absorptive ground surface)	
Receiver source distance	: 290.00 m		
Receiver height	: 10.75 m		

```
                                        E
Topography                :      2       (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1            : -45.00 deg   Angle2 : 90.00 deg
Barrier height            :  10.32 m
Barrier receiver distance :   2.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Rail data, segment # 3: VIA
---------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+-------+------+------+------+----
  1.             !   5.1/0.0   !  80.0 !  1.0 ! 12.0 !Diesel!  No

Data for Segment # 3: VIA
-------------------------
Angle1   Angle2           : -45.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 290.00 m
Receiver height           :  10.75 m
Topography                :      2       (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1            : -45.00 deg   Angle2 : 90.00 deg
Barrier height            :  10.32 m
Barrier receiver distance :   2.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```



```
Results segment # 1: GO_1
-------------------------

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       4.00 !       10.75 !       10.70 !        10.70
       0.50 !       10.75 !       10.68 !        10.68
```

E

LOCOMOTIVE (0.00 + 55.58 + 0.00) = 55.58 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	74.21	-12.86	-1.25	0.00	0.00	-3.33	56.77*
-45	90	0.31	74.21	-16.82	-1.81	0.00	0.00	0.00	55.58

* Bright Zone !

WHEEL (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	69.63	-12.86	-1.25	0.00	0.00	-3.57	51.95*
-45	90	0.41	69.63	-18.17	-1.97	0.00	0.00	0.00	49.50

* Bright Zone !

Segment Leq : 56.54 dBA

Results segment # 2: GO_2

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	10.75	10.70	10.70
0.50	10.75	10.68	10.68

LOCOMOTIVE (0.00 + 53.57 + 0.00) = 53.57 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	72.20	-12.86	-1.25	0.00	0.00	-3.33	54.76*
-45	90	0.31	72.20	-16.82	-1.81	0.00	0.00	0.00	53.57

* Bright Zone !

WHEEL (0.00 + 45.70 + 0.00) = 45.70 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	65.84	-12.86	-1.25	0.00	0.00	-3.57	48.15*
-45	90	0.41	65.84	-18.17	-1.97	0.00	0.00	0.00	45.70

 * Bright Zone !

Segment Leq : 54.23 dBA

↟
Results segment # 3: VIA

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	10.75	10.70	10.70
0.50	10.75	10.68	10.68

LOCOMOTIVE (0.00 + 41.90 + 0.00) = 41.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	60.53	-12.86	-1.25	0.00	0.00	-3.33	43.09*
-45	90	0.31	60.53	-16.82	-1.81	0.00	0.00	0.00	41.90

 * Bright Zone !

WHEEL (0.00 + 35.82 + 0.00) = 35.82 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	90	0.00	55.95	-12.86	-1.25	0.00	0.00	-3.57	38.27*
-45	90	0.41	55.95	-18.17	-1.97	0.00	0.00	0.00	35.82

 * Bright Zone !

Segment Leq : 42.86 dBA

Total Leq All Segments: 58.66 dBA

↟
Road data, segment # 1: Airport1

Car traffic volume : 17965 veh/TimePeriod
Medium truck volume :   339 veh/TimePeriod
Heavy truck volume : 1657 veh/TimePeriod
Posted speed limit :   50 km/h
Road gradient   :   0 %
Road pavement   :   1 (Typical asphalt or concrete)

E

Data for Segment # 1: Airport1

```
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  52.00 m
Receiver height           :  10.75 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 0.00 deg
Barrier height            :  10.32 m
Barrier receiver distance :   2.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

Road data, segment # 2: Airport2

```
Car traffic volume  : 17965 veh/TimePeriod
Medium truck volume :   339 veh/TimePeriod
Heavy truck volume  :  1657 veh/TimePeriod
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)
```

Data for Segment # 2: Airport2

```
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  68.30 m
Receiver height           :  10.75 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 0.00 deg
Barrier height            :  10.32 m
Barrier receiver distance :   2.00 m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

Results segment # 1: Airport1

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	10.75	10.40	10.40

ROAD (0.00 + 62.68 + 0.00) = 62.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	71.09	0.00	-5.40	-3.01	0.00	0.00	-4.94	57.73*
-90	0	0.00	71.09	0.00	-5.40	-3.01	0.00	0.00	0.00	62.68

* Bright Zone !

Segment Leq : 62.68 dBA

Results segment # 2: Airport2

Source height = 1.70 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.70	10.75	10.48	10.48

ROAD (0.00 + 61.49 + 0.00) = 61.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	71.09	0.00	-6.58	-3.01	0.00	0.00	-4.77	56.73*
-90	0	0.00	71.09	0.00	-6.58	-3.01	0.00	0.00	0.00	61.49

* Bright Zone !

Segment Leq : 61.49 dBA

Total Leq All Segments: 65.14 dBA

E

TOTAL Leq FROM ALL SOURCES: 66.02

Appendix F

Supporting Drawings

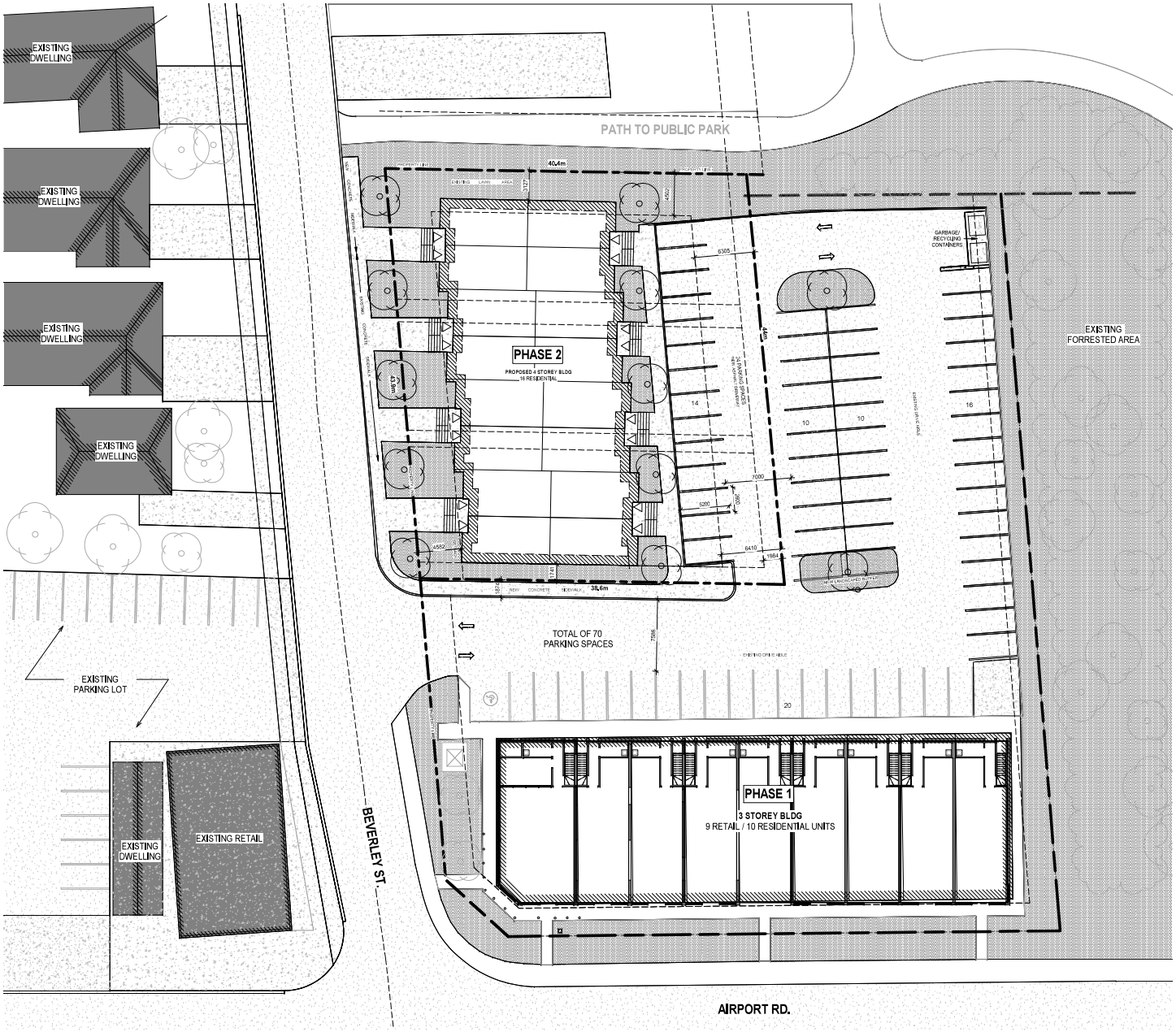
7198 AIRPORT RD.

CONTEXT PLAN

N

CUMULUS ARCHITECTS INC.

Cumulus Architects Inc.
Suite 412 - 160 Pears Avenue
Toronto, ON M5R 3P8
(416) 539-0763
cumulusarch.com



1 Site Plan - Phase 2.
1 : 200

SITE PLAN LEGEND

- PROPERTY LINE
- LOT LINE
- SETBACK
- MAIN ENTRANCE - RETAIL
- SECONDARY ENTRANCE/EXIT - RETAIL
- MAIN ENTRANCE - RESIDENTIAL
- SECONDARY ENTRANCE - RESIDENTIAL
- FIRE HYDRANT
- VEHICULAR DIRECTION OF TRAVEL

SITE STATISTICS	REQUIRED	EXISTING	PROPOSED
ZONED USE	N/A	R3-49	C4-47
LOT AREA	N/A	1775m²	1775m²
LOT FRONTAGE	N/A	MIN. 15m	
LOT DEPTH	N/A	38.62m	No Change m²
GFA		N/A	1782m² GFA
BUILDING HEIGHT (FLAT ROOF)	MIN. 2 STOREYS MAX. 12.4m & 3 STOREYS	SLOPED ROOF MAX. 9.2m FLAT ROOF MAX. 7.2m	4 STOREY (SPLIT ROOF HEIGHT 13.2m)
PARKING	18	48	22 New + 48 Exist. = 70
FRONT YARD SETBACK	MIN. 0m MAX. 3m	MIN. 7.5m	4.3m
EXTERIOR SIDE SETBACK	MIN. 0m MAX. 3m	MIN. 6m	0m
INTERIOR SIDE SETBACK	Abuts Institutional 7.2m	1.2m + 0.2 m for each additional storey	3m
REAR YARD SETBACK	Abuts Institutional 7.5m Abuts C4 Zone 6m	MIN. 7.5m	12.5m
LANDSCAPED BUFFER DEPTH			
ABUTS REAR LOT LINE	MIN. 1.2m	N/A	
FROM C LOT LINE THAT IS A STREET LINE	MIN. 0m	N/A	
LOT LINE ABUTS INSTITUTIONAL	MIN. 3m	N/A	3m
COMMERCIAL ZONE ABUTS ANOTHER COMMERCIAL ZONE	MIN. 0m where abuts C4 Zone	N/A	
FROM ANY OTHER LOT LINE	MIN. 4.5m	N/A	

CLIENT:
Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 880-4200
email: AKumar@live.ca

CONSULTANT:
CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:
ONTARIO ASSOCIATION OF ARCHITECTS
SYDNEY MONRO CATARINO
LICENCE 9177

KEY PLAN NTS

Address: 5, 7, 9 Beverley St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONCON(Mult.PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

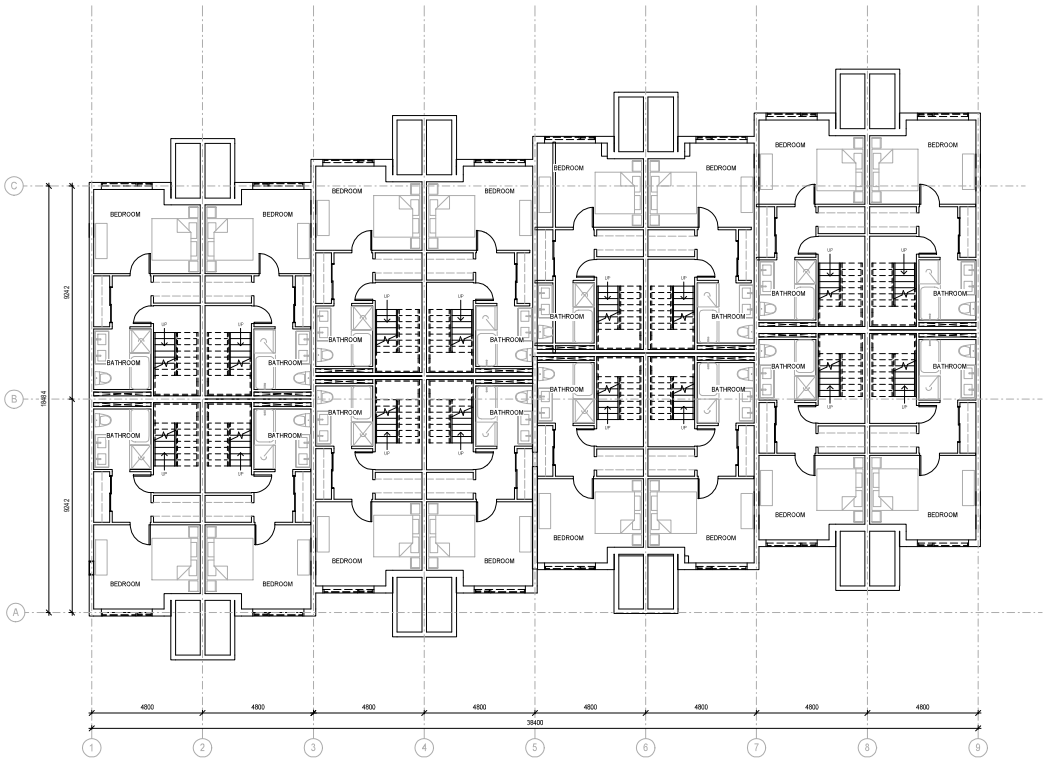
Zoning: R3-49

No.	Description	Date
2.	Issued for SPA-R1	03-12-2021
1.	Issued for SPA	03-03-2021

PROJECT:
7196-7214 Airport Rd
Mississauga, ON L4T 1E9

TITLE:
SITE PLAN - PHASE 2

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A101



1 Floor Plan - Basement
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 890-4200
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SYLVANA NORO CATARINO
LICENCE
8177

Address: 5, 7, 9 Beverly St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONCORDIA(sic) PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

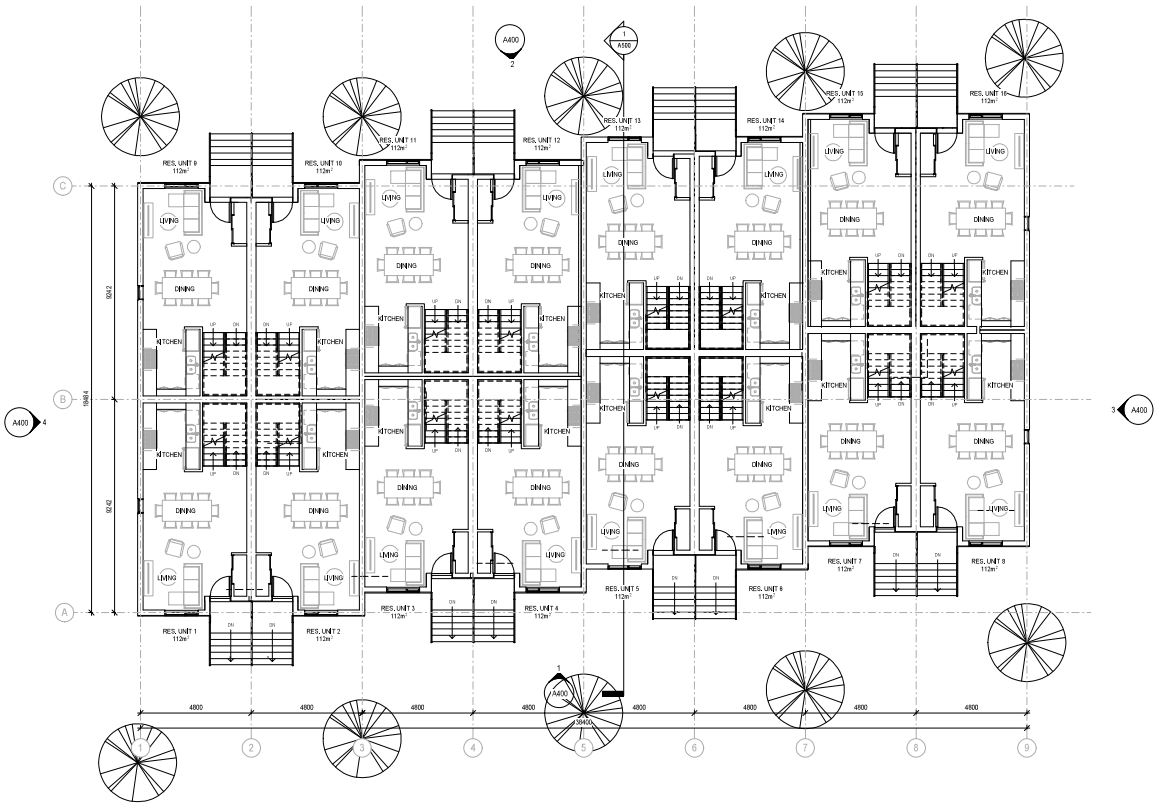
Zoning: R3-H8

No.	Description	Date
2	Issued for SPA-R1	03-12-2021
1	Issued for SPA	03-03-2021

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
FLOOR PLAN - BASEMENT

PROJECT NO: 21001
CHECKED: JM
DRAWING NO: A200



1 Floor Plan - Ground Floor
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel (647) 880-4200
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
ASSOCIATION DES ARCHITECTES DE L'ONTARIO
LICENCE 11777

KEY PLAN NTS

Address: 5, 7, 9 Beverly St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

Zoning: R3-48

No.	Description	Date

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
FLOOR PLAN - GROUND FLOOR

PROJECT NO: 21001
CHECKED: Checker

DRAWING NO: A201

1 Floor Plan - Level 2
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 890-4200
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
ASSOCIATION DES ARCHITECTES DE L'ONTARIO
LICENCE
6177

KEY PLAN NTS

Address: 5, 7, 9 Beverley St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

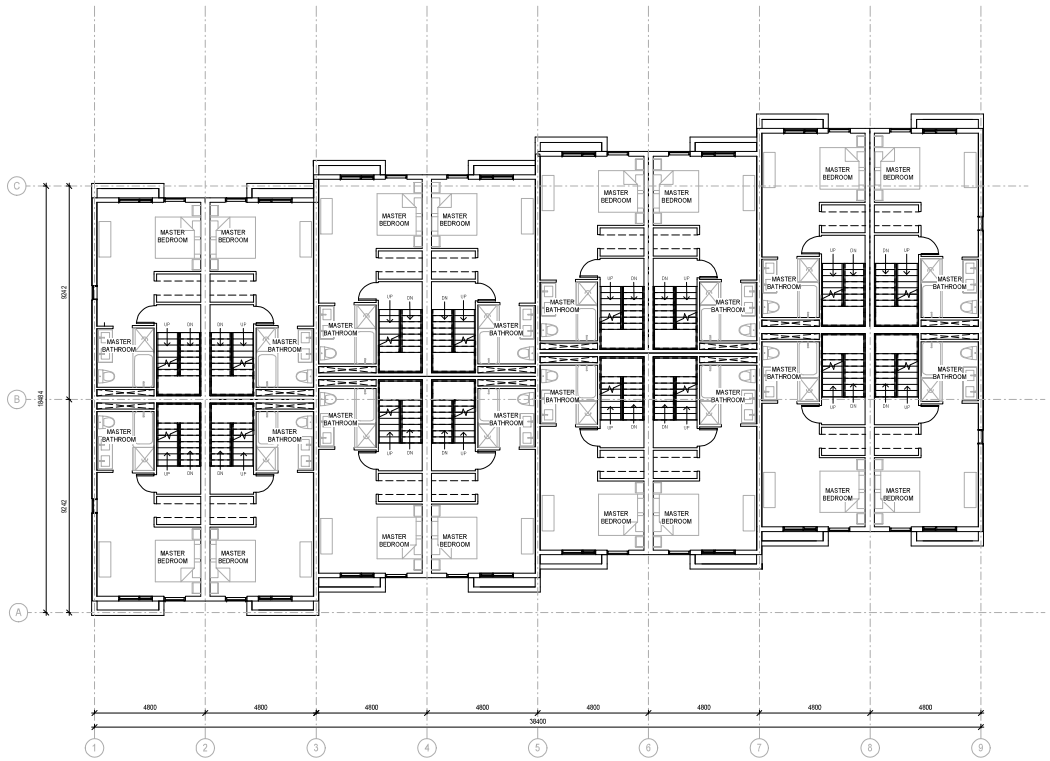
Zoning: R3-H8

No.	Description	Date
2	Issued for SPA-R1	03-12-2021
1	Issued for SPA	03-03-2021

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
FLOOR PLAN - LEVEL 2

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A202



1 Floor Plan - Level 3
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel (647) 880-4200
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SYLVAIN NADEAU CATARINO
LICENCE
6177

KEY PLAN NTS

Address: 5, 7, 9 Beverly St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

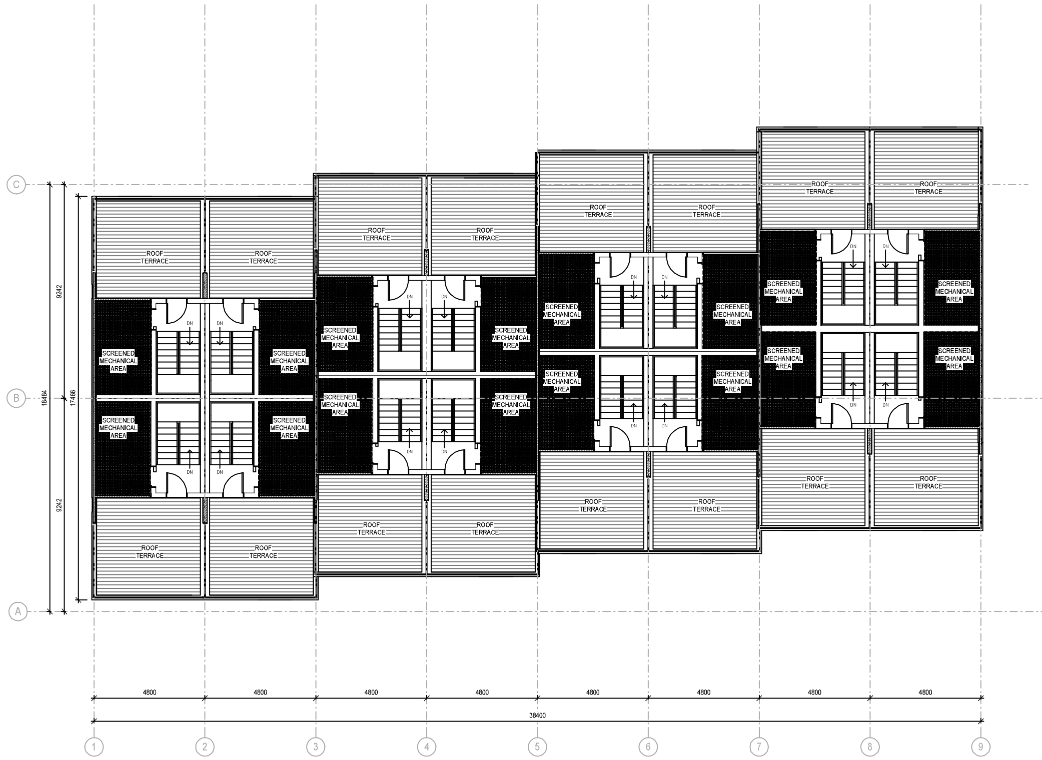
Zoning: R3-H8

No.	Description	Date
2.	Issued for SPA-R1	03-12-2021
1.	Issued for SPA	03-03-2021

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
FLOOR PLAN - LEVEL 3

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A203



1 Floor Plan - Roof
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 990-4290
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0763
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SHELDON MORAO CATARINO
LICENCE
6177

KEY PLAN
NTS

Address: 5, 7, 9 Beverley St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

Zoning: R3-69

No.	Description	Date
2	Issued for SPA-R1	05-18-2021
1	Issued for SPA	03-09-2021

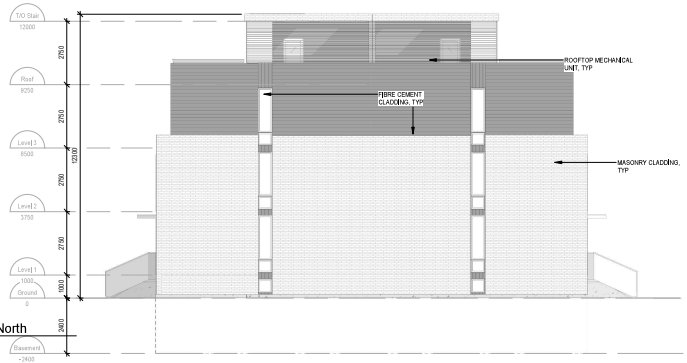
PROJECT:
Phase 2
7198 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
FLOOR PLANS - ROOF

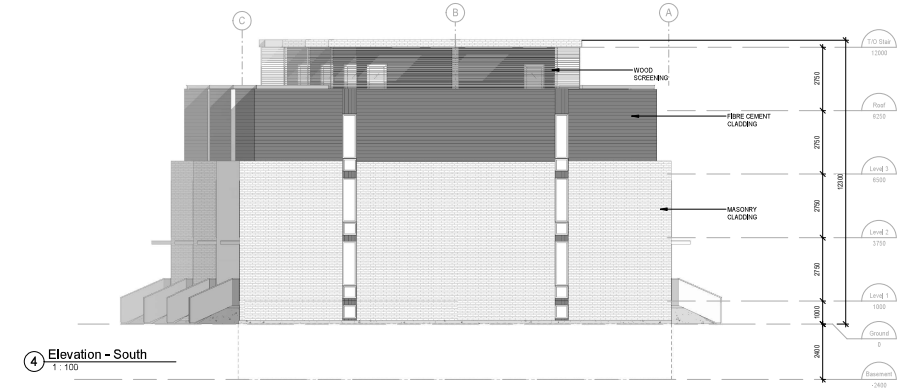
PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A204

1 Elevation - East
1 : 100

2 Elevation - West
1 : 100



3 Elevation - North
1 : 100



4 Elevation - South
1 : 100

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel: (647) 890-4200
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SYLVANA NORO CATARINO
LICENCE
6177

Address:	5, 7, 9 Beverley St.
Legal Description:	ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)
Zoning:	R3-H8

No.	Description	Date

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
BUILDING ELEVATIONS - PHASE 2

PROJECT NO.: 21001
CHECKED: Checker
DRAWING NO.: A400

1 Building Section
1 : 50

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.
28 Pinewood Trail, Mississauga ON
tel (647) 880-4330
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-539-0703
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SYCHANNORAD CATARIRO
LICENCE
6177

KEY PLAN NTS

Address:	5, 7, 9 Beverly St.
Legal Description:	ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-4 AND PEEL STANDARD CONCESSION/1st PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)
Zoning:	R3-48

No.	Description	Date

PROJECT:
Phase 2
7188 Airport Rd.
Mississauga, ON L4T 1E9

TITLE:
BUILDING SECTION

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A500

PHASE 2 / S-W VIEW

PHASE 2 / N-E VIEW

CLIENT:

Arjun Kumar / 2182402 Ontario Inc.

28 Pinewood Trail, Mississauga ON
tel. (647) 866-4280
email: AKumar@live.ca

CONSULTANT:

CUMULUS ARCHITECTS INC.
160 Pears Ave. - Suite 300
Toronto, ON M5R 3P8
416-538-8783
www.cumulusarch.com

SEAL:

ONTARIO ASSOCIATION OF ARCHITECTS
SYGILLUM NOMINIS OATARINO LICENCE
6177

KEY PLAN NTS

Address: 5, 7, 9 Beverley St.

Legal Description: ALL OF LOTS 439, 440 AND 441, REGISTERED PLAN TOR-A AND PEEL STANDARD CONDOMINIUM PLAN No. 830, CITY OF TORONTO (FORMERLY CITY OF YORK)

Zoning: R3-69

No.	Description	Date

PROJECT:
7195-7214 Airport Rd
Mississauga, ON L4T 1E9

TITLE:
AXONOMETRIC VIEWS - PHASE 2

PROJECT NO: 21001
CHECKED: Checker
DRAWING NO: A600