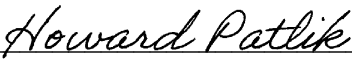


NOISE & VIBRATION IMPACT STUDY
272 INNISFIL STREET
BARRIE, ONTARIO

FOR

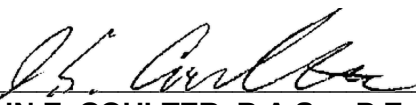
TYPHON GROUP LTD.

BY


HOWARD R. PATLIK, C.E.T.



CHECKED BY


JOHN E. COULTER, B.A.Sc., P.Eng.



J.E. COULTER ASSOCIATES LIMITED
1210 SHEPPARD AVENUE EAST, SUITE 211
TORONTO, ONTARIO
M2K 2S5

416-502-8598

APRIL 28, 2022

TABLE OF CONTENTS

INTRODUCTION	1
POTENTIAL TRANSPORTATION SOURCES	1
NOISE CRITERIA	2
Transportation Sound Sources	2
Stationary Sound Sources	3
PROJECTED TRANSPORTATION SOUND LEVELS.....	3
VENTILATION AND WARNING CLAUSE REQUIREMENTS	5
FAÇADE COMPONENTS	5
RAIL VIBRATION.....	6
STATIONARY SOURCES.....	6
Off-Site Ventilation Mechanical Systems	6
On-Site Ventilation Mechanical Systems	9
Parking Garage Exhaust	9
Emergency Generator	9
CONCLUSIONS.....	10
RECOMMENDATIONS.....	11

LIST OF TABLES

Table 1: Traffic Volume	1
Table 2: Rail Traffic Volumes	2
Table 3: Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq} , dBA) – Plane-of-Window of Noise Sensitive Spaces	3
Table 4: Projected Traffic Sound Levels.....	4
Table 5: Rail Vibration Monitoring (North Building Façade)	6
Table 6: Unmitigated Daytime Sound Levels (1 Hr. L_{eq}) at Residential Locations Off-Site Stationary Sources.....	7
Table 7: On-Site Emergency Generator Daytime (0700–2300)	10

APPENDICES

APPENDIX A: FIGURES
APPENDIX B: SOUND LEVEL CALCULATIONS
APPENDIX C: WARNING CLAUSES
APPENDIX D: CRITERIA
APPENDIX E: VIBRATION MONITORING
APPENDIX F: MECHANICAL DATA
APPENDIX G: REFERENCES

INTRODUCTION

At the request of Typhon Group Ltd., J.E. COULTER ASSOCIATES LIMITED has reviewed the plans for the proposed residential development at 272 Innisfil Street in Barrie, Ontario (see Appendix A, Figure 1). The purpose of this noise and vibration impact study is to establish the sound levels at this proposed development from transportation and stationary sound sources and to recommend, where applicable, noise mitigation measures based on achieving the requirements of the Ministry of Environment, Conservation and Parks (MECP). The report will also review the potential noise impact generated by this development on adjacent sensitive land uses and recommend measures, where required, to meet MECP's *NPC-300* noise criteria.

The site consists of a single 17-storey condominium building with integrated townhouses and rooftop terraces (amenity areas) as shown in Appendix A, Figures 2 to 7.

POTENTIAL TRANSPORTATION SOURCES

The main sources of potential transportation noise at this development are Highway 400, Tiffin Street, Essa Road, the Barrie-Collingwood Railway (BCRY), and Metrolinx GO Transit line.

Highway 400, Tiffin Street, Innisfil Street and Essa Road are expected to carry the following traffic volumes:

Table 1: Traffic Volume				
Roadway	Volume	Trucks		Posted Speed (km/hr)
		Medium	Heavy	
Highway 400 (2016)	146,500 SAWDT	1.85%	5.55%	100
Highway 400 (2032)	178,450 SAWDT	1.85%	5.55%	100
Tiffin Street (2032), west of Innisfil St.	10,250 AADT	1.65%	1.65%	50
Tiffin Street (2032), east of Innisfil St.	9,125 AADT	1.65%	1.65%	50
Innisfil Street (2032), between Tiffin Street and Essa Road	6,550 AADT	1.75%	1.75%	50
Essa Road (2032), west of Innisfil St.	14,100 AADT	2.00%	2.00%	50
Essa Road (2032), east of Innisfil St.	11,950 AADT	1.65%	1.65%	50

Notes:

1. Historically, Highway 400 has grown at an annual rate of 2.55% compounded (via regression analysis) from 1988 to 2032. SAWDT refers to the Summer Average Weekday Traffic.
2. Trucks were split 50%/50% (medium/heavy) on Tiffin Street, Innisfil Street, and Essa Road.
3. Local roads were assumed to carry 90% of the traffic during the daytime (0700–2300 hours) and 10% at night (2300–0700 hours).

To the north is the Barrie Collingwood Railway (BCRY), operated by Cando, which include freight movements during the daytime period only. GO Transit movements stop at the Allandale GO Station to the east and do not pass across this site. The sound levels from the GO trains, however, have been included in the review as there is some contribution to the overall sound levels.

Table 2: Rail Traffic Volumes					
Time	Train Type	# of Trains	# of Cars	# of Locomotives	Maximum Speed (kph)
Daytime 07:00–23:00	Freight	2	8	1	10
	Commuter (GO), Electric	67	12	1	24
	Commuter (GO), Electric	9	12	2	24
Nighttime 23:00–07:00	Freight	0	N/A	N/A	N/A
	Commuter (GO), Electric	23	12	1	24
	Commuter (GO), Electric	4	12	4	24

Notes:

1. Metrolinx has indicated that the acoustical modelling should employ diesel train parameters (not electric source parameters) as the basis for analyses.
2. The GO Transit Layover site is located east of Allandale GO Station between Mile 62.75 and 62.12 of the Newmarket subdivision. There are 4 layover tracks in total, with 3 layover tracks that can store two 12-passenger cars, and one layover track that can store one 12-passenger car. The layover is more than 800m from the proposed residential development.

NOISE CRITERIA

Transportation Sound Sources

The noise criteria for the exterior façade of the dwelling unit are 55 dB L_{eq} daytime at the living room window and 50 dB L_{eq} nighttime at the bedroom window. Excesses of up to 10 dB above these limits (i.e., 65 and 60 dB L_{eq} day and night, respectively) are permissible, if the dwelling unit is provided with a warning clause and a forced air heating system sized to accommodate air conditioning. Where the sound levels exceed the limits noted above by more than 10 dB, air conditioning must be incorporated into the building design prior to occupancy. The affected units would also require warning clauses to be incorporated into the *Occupancy Agreements*.

An outdoor living area is defined as a private recreation area such as a rear yard, patio or terrace whose depth is at least 4m. Where terraces are present, the sound level objective is 55 dB L_{eq} daytime where technically feasible. Otherwise, the maximum sound level is 60 dB L_{eq} daytime. At depths less than 4m, noise control measures are not required.

Stationary Sound Sources

MECP recommends the guidelines found in *NPC-300* as the current noise criteria for stationary sources. Stationary sources include, for example, mechanical ventilation equipment, banging, compressors, pneumatic tools, and generators. The MECP noise guideline basically states that the average sound level of the stationary source(s) should not exceed the average sound level of the total roadway noise during the same hourly period.

This study has been based on the sound level criteria for a Class 1 Area (Urban), as defined in MECP's *NPC-300*, and also refers to a Class 4 designation, which may be considered in the case of this development. This designation is stated as follows:

"Class 4 Area" means an area or specific site that would otherwise be defined as Class 1 or 2 and which:

1. is an area intended for development with new noise sensitive land use(s) not yet built;
2. is in proximity to existing, lawfully established stationary source(s); and
3. has formal confirmation from the land use planning authority with the Class 4 area classification, which is determined during the land use planning process.

The Class 4 designation would allow stationary source sound levels to reach a maximum of 60 dB daytime and 55 dB nighttime. Note that for Class 1, 2 and 3 areas, the plane-of-window limits apply to a window that is assumed to be open.

The MECP considers the higher of the quietest ambient sound level or the following minimum sound levels:

Table 3: Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA) – Plane-of-Window of Noise Sensitive Spaces				
Time of Day	Class 1 Area (Urban)	Class 2 Area (Semi-Urban)	Class 3 Area (Rural)	Class 4 Area (Urban)
07:00–19:00	50	50	45	60
19:00–23:00	50	50	40	60
23:00–07:00	45	45	40	55

For this site, the minimum MECP's exclusion limits apply for Class1 and 4. Classes 2 and 3 do not apply to this site.

PROJECTED TRANSPORTATION SOUND LEVELS

The daytime and nighttime L_{eq} sound levels were calculated using the MECP's *ORNAMENT* noise prediction procedure (*STAMSON* Version 5.04 computer program). All recommendations are based on a 10-year projection of the traffic volume on Highway 400, Tiffin Street, Innisfil Street, Essa Road, and the Railway (Cando and Go Transit) for the year 2032. Table 4, below, indicates the sound levels at various locations at the proposed building using the projected road traffic volumes (see Appendix A, Figure 8 for receiver locations).

Table 4: Projected Traffic Sound Levels												
Location	Daytime Sound Level at Exterior Façade, dB L _{eq} Top Floor						Nighttime Sound Level at Exterior Façade, dB L _{eq} Top Floor					
	Hwy 400	Tiffin Street	Essa Road	Innisfil Street	Rail	Total	Hwy 400	Tiffin Street	Essa Road	Innisfil Street	Rail	Total
Location 1: NE Façade	63	54	51	55	67	69	63	48	45	48	48	63
Location 2: NW Façade	67	54	47	51	67	70	67	48	40	45	48	67
Location 3: SE Façade	67	50	52	48	66	69	67	43	45	41	48	67
Location 4: SW Façade	63	48	53	54	62	66	63	41	46	47	48	63
Location 5: NW Façade (4 th Level)	53	51	47	60	69	69	53	44	40	54	48	57
Location 6: SE Façade (10 th Level)	65	49	55	60	59	67	65	43	47	54	47	65
Location 7: NE Façade (12 th Level)	65	50	52	60	63	68	65	43	46	53	48	65
Location 8: Townhouse (North Façade)	55	50	--	45	69	69	55	43	--	39	48	56
Location 9: Terrace (7 th Level)	52	42	--	37	49	54	--	--	--	--	--	--
Location 10: Terrace (9 th Level)	52	42	--	36	46	54	--	--	--	--	--	--
Location 11: Terrace (11 th Level)	52	41	--	36	44	53	--	--	--	--	--	--
Location 12: Terrace (13 th Level)	51	41	--	34	45	53	--	--	--	--	--	--
Location 13: Terrace (5 th Level, North)	52	41	--	39	47	53	--	--	--	--	--	--
Location 14: Terrace (5 th Level, South)	50	39	40	29	48	52	--	--	--	--	--	--

Notes:

1. The sound levels are calculated assuming "hard" ground cover between the roadway and receiver, where applicable (see Appendix B).
2. The sound levels at the façade include whistle noise as a result of the grade level crossing at Innisfil Street. Outdoor living areas do not include the whistle component as per MECP's guidelines.

The sound levels at the proposed development are typical of residential developments in the vicinity of arterial roadways. The sound levels are mostly dominated by Highway 400 at the upper floor of the building and the rail whistle. The required noise control measures include ventilation, potential upgrades to the exterior facade and warning clauses.

The sound levels at the several rooftop terraces were calculated to be 54 dB L_{eq} daytime or less using a standard height (1.1m minimum for safety) solid railing. This meets MECP's 55 dB L_{eq} daytime noise criterion without the need for additional noise control measures.

The GO Transit layover site (Allandale Station) is more than 800m to the east from this proposed development. Assuming 4 locomotives idle continuously for 1 hour (from 0400 to 0700 hours, nighttime period), this would result in a sound level of 44 dB L_{eq} at the development. This meets both the nighttime and daytime noise criteria of 45 and 50 dB L_{eq} , respectively. No further measures are needed.

VENTILATION AND WARNING CLAUSE REQUIREMENTS

The daytime sound levels at the several façades of the building are above 65 dB L_{eq} daytime or 60 dB L_{eq} nighttime and central air conditioning is required prior to occupancy. For this type of development, this is not an onerous requirement and the proponent will be installing this measure in any case.

As the sound levels exceed either 65 dB L_{eq} daytime or 60 dB L_{eq} nighttime at the exterior façades, MECP's requires that warning clauses be inserted into the *Agreements of Purchase and Sale* and/or *Occupancy Agreements* as required by the MECP. The warning clauses are provided in Appendix C (Types A and D).

FAÇADE COMPONENTS

Based on the exterior road and rail sound levels, Ontario Building Code (OBC) compatible construction with double glazing rated at STC 34 (typical for commercial glazing consisting of 6mm double glazing on a 13mm air space) will meet the MECP's noise criteria during the daytime and nighttime in all bedrooms where the window-area to floor-area ratio is 55% or less. For living/dining rooms, Ontario Building Code (OBC) compatible construction with double glazing rated at STC 34 (typical for commercial glazing consisting of 6mm double glazing on a 13mm air space) plus a standard 1.8m wide sliding door will meet the MECP's noise criteria during the daytime and nighttime in all living/dining rooms where the window/door-area to floor-area ratio is 100% or less.

Window-area to floor-area ratios greater than those noted above will require upgrades to the glazing (i.e., thicker glazing and/or wider air space between the panes or reduced window areas). Once final suite layouts, window and wall details are available, the acoustic consultant should confirm the façade requirements to meet the MECP's interior noise criteria.

RAIL VIBRATION

Rail vibration monitoring was conducted at the north building façade closest to the Railway, from April 11 to 14, 2022. The monitor was located 25m from the centreline of the rail tracks. A continuous vibration monitor (Convergence Instruments) was planted 150 to 200mm below grade to measure the ground-borne vertical vibration levels. The results of the vibration measurements are summarized in Table 5, below.

Table 5: Rail Vibration Monitoring (North Building Façade)			
Train Type	Date/Time	Vibration Level (mm/sec)	Meets Criteria (0.14 mm/sec. or less)
Freight (EB)	April 11, 9:52a	0.06	YES
Freight (WB)	April 11, 12:02p	<0.05	YES
Freight (EB)	April 14, 9:54a	<0.05	YES

The results of the rail vibration monitoring show the ground-borne vibration does not create any vibration impacts (0.06 mm/sec or less) at the proposed condominium building, meeting the railway criterion (0.14mm/sec. velocity). Vibration mitigation measures are not needed.

STATIONARY SOURCES

Off-Site Rooftop Mechanical Systems

A review of the surrounding area was also undertaken to determine if there are potential off-site stationary sources (automotive repair activities) that might impact this proposed residential development. The default MECP's designation for this site is Class 1 (Urban) for potential noise impacts. This assumes an open window criteria where central air-conditioning and upgraded windows do not satisfy the criteria unless Class 4 is accepted by the Municipality, the proponent, and the facility generating the noise.

For this development, the following off-site stationary sources have been identified (see Appendix A, Figure 9):

- a. Done Right AutoCare (4 Repair Bays) – 280 Innisfil Street (southwest of the site)
- b. Cara Panel Systems (3 Access Doors) – 17-27 Jacobs Terrace (west of the site)
- c. Peacock Automotive (3 Repair Bays) – 81 Essa Road (southeast of the site).

Done Right AutoCare, which is the closest stationary source to this development, operates from 8 a.m. to 5 p.m., Monday to Friday, and 8 a.m. to 12 p.m. Saturday. There are 4 repair bays along the east side of the building. The main source of noise from the repair facility is the use of pneumatic tools. The facility has access doors on the east and west façades. Pneumatic tools, as per MECP's criteria, include +10 dB adjustment, because of the sound characteristics of the equipment (quasi-steady impulsive). The analysis assumed that each service bay removed and replaced 4 tires on one vehicle in any given hour (i.e., the equivalent of 8 events over a period of 4 minutes per hour). This facility offers other services that include tire alignments, brake repairs, engine tune-ups, oil changes, and muffler installations. All of these sources generate

sound levels that are less than those generated by pneumatic tools.

Where exceedances are identified, noise control measures will be recommended.

The expected sound levels from the off-site equipment have been calculated and the results are summarized in Table 6, below.

Table 6: Unmitigated Daytime Sound Levels (1 Hr. L_{eq}) at Residential Locations Off-Site Stationary Sources				
	Daytime: 0700–2300 Hours (Quietest 1 Hr.)			
Source	R1 (5th OLA Level)	R2 (11th OLA Level)	R3 (13th OLA Level)	R4 (7th Level Façade)
Done Right AutoCare	48.8	43.3	40.5	58.9
Cara Panel Systems	44.7	43.6	26.4	49.7
Peacock Automotive	35.4	17.5	15.3	33.3
TOTAL SOUND LEVEL (dBA)	50	46	41	59
MECP Criteria (Daytime)	50	50	50	50
Noise Impact (dB)	0	-4	-9	9
Meets Criteria	YES	YES	YES	NO

The sound levels generated by all off-site sources (pneumatic tools) are expected to exceed MECP's *NPC-300* noise criteria (Class 1) during the quietest period of the daytime (between 0800 and 1700 hours). The noise impact is high, at R4 (+9 dB above the criterion).

To meet MECP's *NPC-300* noise criteria under Class 1, the following noise control measures are proposed:

1. Replace Done Right AutoCare pneumatic tools with a quieter version. It is recommended all service bays use silenced air wrenches such as Ingersoll Rand 2135QTiMax ½" Quiet Air Impact Wrench or its acoustical equivalent (see Appendix F for details). The wrench is rated at 91 dBA at 1m. The sound levels generated by these pneumatic tools are significantly quieter than a standard version. This will require discussions with Done Right AutoCare on implementing such as measure. Estimated cost: \$2,000. This measure will be sufficient to satisfy the current Class 1 designation.
2. Alternatively, providing additional mechanical ventilation (such as a rooftop make-up air system) to the automotive facility with sufficient air movements so that the access doors can remained closed while pneumatic tools are being utilized can be considered. Discussions with Done Right AutoCare on implementing such a measure are required. This measure will be sufficient to satisfy the current Class 1 designation.
3. Consideration was given to constructing noise barriers at the condominium building; however, because of the heights of elevated receptors at the high-rise tower and barrier

requirements (20m), it is not practical to construct a noise barrier (greater than 13m high at the 5th level) on the condominium site that would provide the required noise attenuation.

4. Where Done Right AutoCare will not allow such changes to their equipment, then consideration for applying for a Class 4 designation is suggested. The land use planning and approval process for the new noise sensitive land use may involve several authorities and levels of approval. Involvement by the owner of the stationary source in the land use planning process is highly recommended when an adjacent new noise sensitive land use is proposed. A cooperative effort on the part of the proponent of a new noise sensitive land use and the stationary source owner is desirable for both parties. For the proponent of the new noise sensitive land use, cooperation may result in more economical noise control measures. For the owner of the stationary source, cooperation may facilitate input into the design of the proposed new noise sensitive land use and the noise mitigation that may be appropriate for land use compatibility.
5. As required by MECP, agreement for noise mitigation means one or multiple legally binding agreements involving parties such as land use planning authorities, proponents of a noise sensitive land use, and owners of a stationary source. Agreement(s) may be associated with decisions made by the land use planning authority under the Planning Act or established as collateral agreements.
6. These agreements should outline the framework for cooperation among the land use planning authority, the stationary source, and the noise sensitive land use. Agreements are intended to provide protection for both the stationary source and the noise sensitive land use.
7. The need for the agreement(s) is triggered by the use of receptor-based noise control measures to ensure compliance with the applicable sound level limits. The finalized agreement(s) are to be submitted by the stationary source with any application for a MECP approval.

The agreement(s) should:

1. Provide assurance that receptor-based noise control measures are implemented and maintained.
2. Provide consistency for planning noise sensitive land use(s) in the proximity of stationary source(s).
3. Address the long-term responsibilities of all the parties to the agreement; and
4. Describe the noise control measures and provide information about how these measures will result in compliance with the applicable sound level limits. Note that source-based noise control measures may require a MECP approval.
5. The Class 4 designation would be applicable only to those dwellings with a south or west exposure to the automotive facility. Where Class 4 is granted, a warning clause (see Appendix C, Warning Clause F) is to be registered on title, included in *Agreements of Offers of Purchase and Sale*, lease/rental agreements, and condominium declarations.

On-Site Ventilation Mechanical Systems

An analysis of the projected sound levels generated by the proposed mechanical ventilation equipment (AC units, parking garage exhaust) was carried out. At this time, there are no specific details of the equipment type, number of units or location, so our review will be general in nature.

Based on the analysis of the proposed mechanical ventilation equipment (HVAC and parking garage exhaust), no noise impact is expected on or off-site and no noise control measures are required to meet MECP's *NPC-300* noise criteria during the daytime and nighttime periods. However, once final mechanical details are available, the acoustic consultant should confirm MECP's noise criteria are met for both the development itself and the surrounding neighbourhood. Measure may include but not be limited to acoustic louvres, barriers, or the selection of quieter equipment.

Parking Garage Exhaust

At this time, there are no specific parking exhaust fan selections for this project, thus our comments are general in nature. Typically, parking garage exhausts fans are setup with a CO Monitor to limit the time the fans operate. With CO Monitors, the fans typically operate 10 to 15 minutes per hour during peak a.m. or p.m. hours. Shaft silencers may be considered once the final design is available.

Emergency Generator

The sound levels from the emergency generator were projected to various points of reception. The emergency generator is to be located at the southwest part of the site at grade level. At this time, the specifications for the generator are not known. The MECP's noise criterion for the periodic testing of emergency generators is to be no more than 5 dB above the quietest ambient sound level (50 dB L_{eq} 1 hour) during the time of operation. Normally, the testing occurs during the daytime period. The minimum daytime criterion is 55 dB L_{eq} at the point of reception. It is assumed the emergency generator is periodically tested during the daytime hours only.

A typical sound level for an emergency generator with an acoustic enclosure is 73 dBA at 7m (98 dBA Sound Power). The following table summarizes the anticipated combined sound levels from the emergency generator at all on- and off-site points of reception (i.e., R1 to R6). (See Appendix A, Figure 10.) R1 to R4 are on-site points of reception. R5 and R6 are off-site receptors at the existing dwelling to the southwest of the proposed condominium development on Caroline Street and to the south of this proposed development on Innisfil Street.

Table 7: On-Site Emergency Generator Daytime (0700–2300)						
	Sound Level (1 Hour, dB L_{eq})					
	R1	R2	R3	R4	R5	R6
Emergency Generator (SW Part of Site)	38	24	24	38	50	54
Noise Criteria (0700–2300)	55	55	55	55	55	55
Excess (dB)	-17	-31	-31	-17	-5	-1
Meets Criteria?	YES	YES	YES	YES	YES	YES

As noted in the table above, the operation of the emergency generator will meet MECP's noise criteria based on a sound level of 98 dBA (Sound Power). It is expected the sound levels will be below the upper limit of the noise criteria (55 dB) without the need for additional noise control measures. It is recommended that once the final equipment selection and location are made, the acoustic consultant confirm compliance with the MECP's criteria.

CONCLUSIONS

The analysis demonstrates that the projected overall sound levels generated by traffic along Highway 400, Innisfil Street, Tiffin Street, and Essa Road will create a modest noise impact at the exterior building façade. The required noise mitigation measures proposed are typical for an apartment building, including allowance for central air conditioning and warning clauses. The sound levels at the outdoor amenity areas (6th floor terraces and rooftop OLAs) were found to meet MECP's noise criteria without the need for any additional measures.

The rooftop and grade level mechanical equipment were found not to create any noise impacts at any off-site points of reception as a result of activities on the rooftop OLAs.

The rail vibration monitoring did not find any ground-borne vibration that exceeded the criterion.

The operation of the automotive repair facility requires the need to apply for a Class 4 designation to permit windows to be closed with the provision of central air-conditioning for the affected dwellings.

RECOMMENDATIONS

To meet the requirements of the Ministry of the Environment, Conservation and Parks, the following measures are recommended:

TRANSPORTATION SOURCES

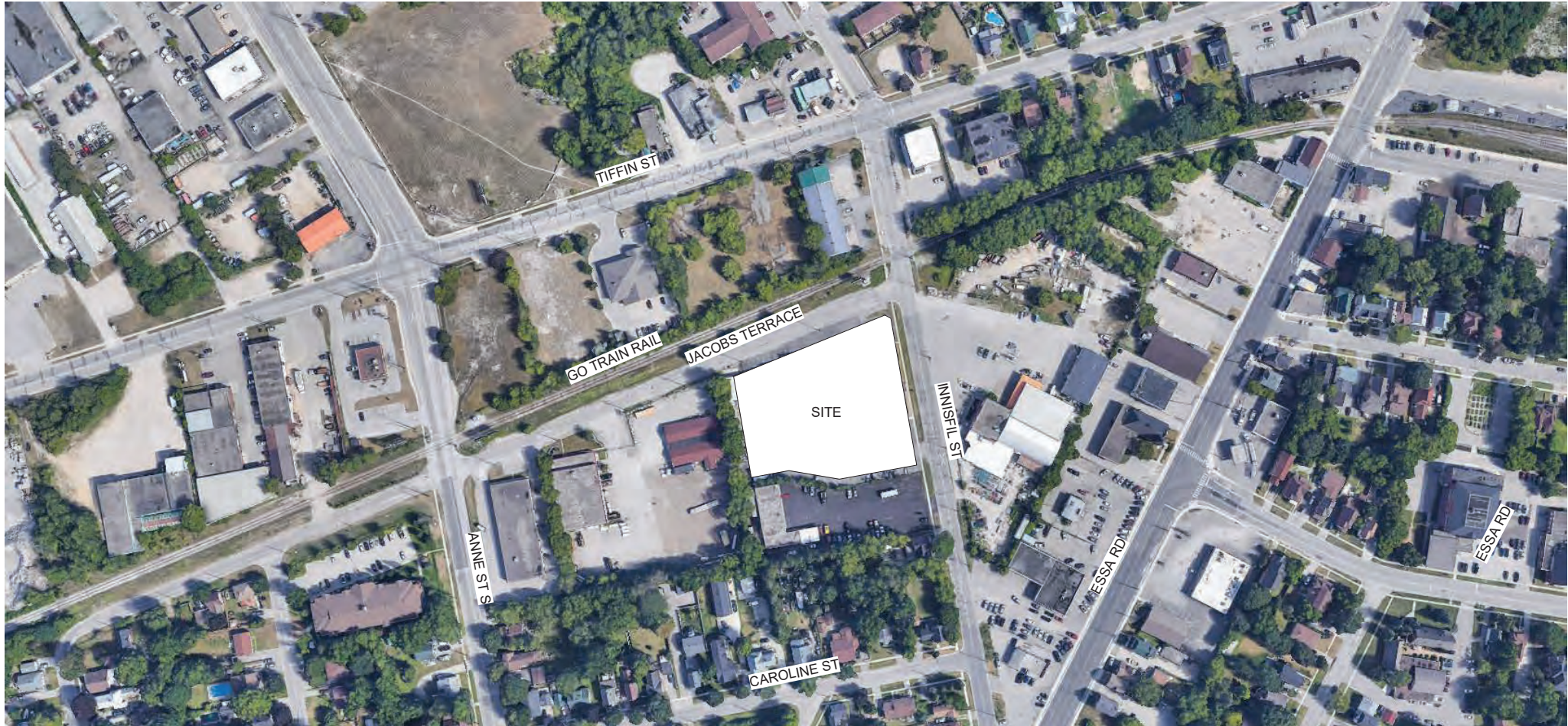
1. The proponent is planning to install air cooled condenser on each balcony to provide central air conditioning for each apartment unit. The air-cooled condenser unit is to be rated at 7.6 Bels or less, as per MECP's noise criteria (*NPC-216*).
2. Based on the exterior road and rail sound levels, Ontario Building Code (OBC) compatible construction with double glazing rated at STC 34 (typical for commercial glazing consisting of 6mm double glazing on a 13mm air space) will meet the MECP's noise criteria during the daytime and nighttime in all bedrooms where the window-area to floor-area ratio is 55% or less. For living/dining rooms, Ontario Building Code (OBC) compatible construction with double glazing rated at STC 34 (typical for commercial glazing consisting of 6mm double glazing on a 13mm air space) plus a standard 1.8m wide sliding door will meet the MECP's noise criteria during the daytime and nighttime in all living/dining rooms where the window/door-area to floor-area ratio is 100% or less.
3. Window-area to floor-area ratios greater than those noted above will require upgrades to the glazing (i.e., thicker glazing and/or wider air space between the panes or reduced window areas). Once final suite layouts, window and wall details are available, the acoustic consultant should confirm the façade requirements to meet the MECP's interior noise criteria.
4. It is recommended warning clauses be registered on title and included in *Agreements of Offers of Purchase and Sale*, lease/rental agreements, and condominium declarations, as required by the MECP. The warning clauses are provided in Appendix C (Types A and C) notifying occupants of the noise excess at the exterior façades.
5. The proposed air-cooled condenser units are to be reviewed in detail once a final equipment selection is made to ensure *NPC-300* and *NPC-216* noise criteria are met at the development itself and the adjacent neighbours to the north and south.
6. A review of the parking garage exhaust fans will be required. Typically, these fans run on a CO monitor for 10 to 15 minutes per hour at the peak times of the day. Once details of the shaft location and fan specification are known, the acoustic consultant is to review the information and provide a final recommendation, where applicable. Noise control measures may include the selection of quieter fans and/or shaft silencers.

STATIONARY SOURCES

1. Replace Done Right AutoCare pneumatic tools with a quieter version. It is recommended that all service bays use silenced air wrenches such as Ingersoll Rand 2135QTiMax ½" Quiet Air Impact Wrench or its acoustical equivalent (see Appendix F for details). The wrench is rated at 91 dBA at 1m. The sound levels generated by these pneumatic tools are significantly quieter than a standard version. This will require discussions with Done Right AutoCare on the feasibility of such as measure. Estimated cost: \$2,000. This measure will satisfy the Class 1 designation.

2. Alternatively, providing additional mechanical ventilation (such as a rooftop make-up air system) to the automotive facility with sufficient air movements so that the access doors can remain closed while pneumatic tools are being utilized can be considered. Discussions with Done Right AutoCare on implementing such a measure are required. This measure will be sufficient to satisfy the current Class 1 designation.
3. Consideration was given to constructing noise barriers at the condominium building; however, because of the heights of elevated receptors at the high-rise tower and barrier requirements (20m), it is not practical to construct any noise barriers on site to provide the required shielding.
4. Where Done Right AutoCare will not allow such changes to their equipment, then consideration for applying for a Class 4 designation is recommended. The Class 4 designation would be applicable only to those dwellings with a south or west exposure to the facility (as a minimum requirement). Where Class 4 is granted, a warning clause (see Appendix C, Warning Clause F) is to be registered on title, included in *Agreements of Offers of Purchase and Sale*, lease/rental agreements, and condominium declarations.
5. As required by MECP, agreement for noise mitigation means one or multiple legally binding agreements involving parties such as land use planning authorities, proponents of a noise sensitive land use and owners of a stationary source. Agreement(s) may be associated with decisions made by the land use planning authority under the Planning Act, or established as collateral agreements.
6. These agreements should outline the framework for cooperation among the land use planning authority, the stationary source, and the noise sensitive land use. Agreements are intended to provide protection for both the stationary source and the noise sensitive land use.
7. The need for the agreement(s) is triggered by the use of receptor-based noise control measures to ensure compliance with the applicable sound level limits. The finalized agreement(s) are to be submitted by the stationary source with any application for a MECP approval.

APPENDIX A: FIGURES



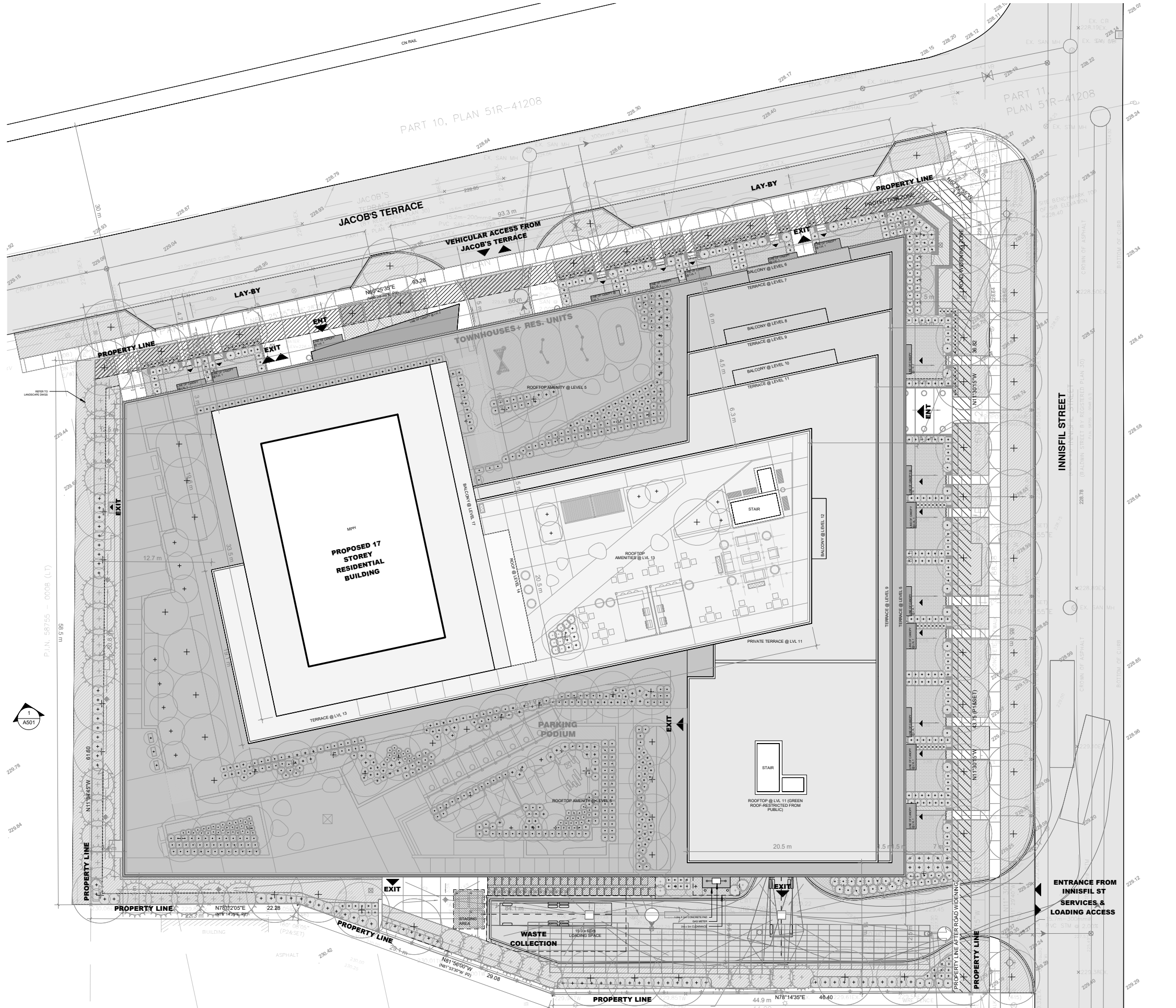
ENLARGED CONTEXT PLAN

NTS

4

A101

FIGURE 1



SITE PLAN - CONCEPT PLAN

Scale: 1 : 200

1

A103

FIGURE 2

[illegible]

	1A	FIBER REINFORCED CEMENT PANELS - WHITE SMOOTH FINISH COLOUR : WHITE MANUFACTURER : TBD STYLE : TBD
	1B	FIBER REINFORCED CEMENT PANELS - GRAY COLOUR : GRAY MANUFACTURER : TBD STYLE : TBD
	1C	FIBER REINFORCED CEMENT PANELS - DARK GRAY COLOUR : DARK GRAY MANUFACTURER : TBD STYLE : TBD
	2A	PREFINISHED WINDOW WALL SYSTEM - VISION PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2B	PREFINISHED WINDOW WALL SYSTEM - OPERABLE AWNING EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2C	PREFINISHED WINDOW WALL SYSTEM - GLASS SPANDREL PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2D	PREFINISHED WINDOW WALL SYSTEM - METAL LOUVRES EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD LOUVRES : TBD
	3A	PREFINISHED CURTAIN WALL SYSTEM - VISION PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	3B	PREFINISHED CURTAIN WALL SYSTEM - GLASS SPANDREL PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD
	3C	PREFINISHED CURTAIN WALL - METAL LOUVRES EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD METAL PANEL : TBD
	4	ARCHITECTURALLY FINISHED CONCRETE SLAB COATING EXT. COLOUR : OFF-WHITE MANUFACTURER : TBD SIZE/STYLE : TBD
	5A	PREFINISHED ALUMINUM COMPOSITE PANEL EXT. COLOUR : DARK GRAY MANUFACTURER : TBD SIZE/STYLE : TBD
	5B	PREFINISHED ALUMINUM COMPOSITE PANEL EXT. COLOUR : WHITE MANUFACTURER : TBD SIZE/STYLE : TBD
	6	MASONRY - BRICK VENEER / OR STONE FINISH EXT. COLOUR : RED MANUFACTURER : TBD SIZE/STYLE : TBD
	7	EIFS - STUCCO EXT. COLOUR : CLEAR WITH COATED PATTERN MANUFACTURER : TBD SIZE/STYLE : TBD
	8	MASONRY - BRICK VENEER / OR STONE FINISH EXT. COLOUR : GRAY MANUFACTURER : TBD SIZE/STYLE : TBD
	9	ARCHITECTURE PRECAST CONCRETE WALL BASE EXT. COLOUR : GRAY MANUFACTURER : TBD SIZE/STYLE : TBD
	R1	BIRD FRIENDLY GLASS - BALCONY RAIL EXT. COLOUR : CLEAR WITH COATED PATTERN MANUFACTURER : TBD SIZE/STYLE : TBD

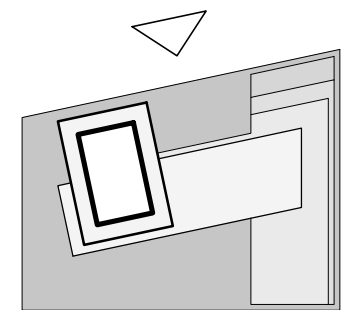
ADDITIONAL NOTES:

THE DRAWING, AS AN INSTRUMENT OF SERVICE, IS PROVIDED BY AND IS THE PROPERTY OF SRN ARCHITECTS INC. THE CONTRACTOR SHALL HAVE ACCESS TO AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS OF THE WORK AND NOT BE RESPONSIBLE FOR ANY VARIATIONS FROM THE SUPPLIED INFORMATION. SRN ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE ACCURACY OF SURVEY, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC. ENGINEERING INFORMATION SHOWN ON THIS DRAWING EXCEPT TO APPROPRIATE ENGINEERING DRAWINGS BEFORE PROCEEDING WITH ANY WORK. CONSTRUCTION MUST CONFORM TO ALL APPLICABLE CODES AND REQUIREMENTS OF THE JURISDICTION OF JURISDICTION (UNDERSTAND OTHERWISE NOTED), NO LEGAL LITIGATION HAS BEEN BROUGHT AGAINST THIS OFFICE IN REGARD TO THE ENVIRONMENTAL CONDITION OF THIS SITE.

CONDITIONS FOR ELECTRONIC INFORMATION TRANSFER:

ELECTRONIC INFORMATION IS SUPPLIED TO THE OTHER AGREED FIRMS TO ASSIST THEM IN THE EXECUTION OF THEIR WORK. WORK DONE BY ANY OTHER FIRM TO DETERMINE THE COMPLETENESS/APPROPRIATENESS/ACCURACY OF THE INFORMATION IN RESPECT TO THEIR PARTICULAR RESPONSIBILITY.

- BUILDING LEVEL 1 FTF = 229.50 GEODETIC ELEVATION
- BUILDING LEVEL 2 FTF = 229.45 GEODETIC ELEVATION

[illegible]

SRN ARCHITECTS INC SHALL NOT BE RESPONSIBLE FOR:

1. ERRORS, OMISSIONS, INCOMPLETENESS DUE TO LOSS OF INFORMATION IN WHOLE OR PART WHEN INFORMATION IS TRANSFERRED.
2. TRANSMISSIONS OF ANY VIRUS OR DAMAGE TO RECEIVING ELECTRONIC SYSTEM WHEN INFORMATION IS TRANSFERRED



8395 JANE ST, SUITE 202
VAUGHAN, ONTARIO. L4K 5Y2
PHONE: 905.417.5515 FAX: 905.417.5517

STAMP:	
--------	--

© SRN ARCHITECTS INC. 2017

TYPHON GROUP LTD.

PROJECT:
RESIDENTIAL DEVELOPMENT

272 INNISFIL STREET
BARRIE, ON, L4N 3G1

DRAWING TITLE:

NORTH ELEVATIONS

DATE:	SCALE: As indicated
DRAWN BY: AC	CHECKED BY: EM

PROJECT NUMBER: S21028	DRAWING NUMBER: A401
----------------------------------	--------------------------------

C:\Users\emadm\OneDrive - The Plus Group\Documents\S21028-272 Innisfil St - Barrie - RVT2022 emadmEZH3R.rv



	1A	FIBER REINFORCED CEMENT PANELS - WHITE SMOOTH FINISH COLOUR : WHITE MANUFACTURER : TBD STYLE : TBD
	1B	FIBER REINFORCED CEMENT PANELS - GRAY COLOUR : GRAY MANUFACTURER : TBD STYLE : TBD
	1C	FIBER REINFORCED CEMENT PANELS - DARK GRAY COLOUR : DARK GRAY MANUFACTURER : TBD STYLE : TBD
	2A	PREFINISHED WINDOW WALL SYSTEM - VISION PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2B	PREFINISHED WINDOW WALL SYSTEM - OPERABLE AWNING EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2C	PREFINISHED WINDOW WALL - GLASS SPANDREL PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	2D	PREFINISHED WINDOW WALL SYSTEM - METAL LOUVRES EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD LOUVRES : TBD
	3A	PREFINISHED CURTAIN WALL SYSTEM - VISION PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD PAINT COLOUR : TBD
	3B	PREFINISHED CURTAIN WALL SYSTEM - GLASS SPANDREL PANEL EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD GLASS : TBD
	3C	PREFINISHED CURTAIN WALL - METAL LOUVRES EXT. COLOUR : TBD INT. COLOUR : TBD MANUFACTURER : TBD METAL PANEL : TBD
	4	ARCHITECTURALLY FINISHED CONCRETE SLAB COATING EXT. COLOUR : OFF-WHITE MANUFACTURER : TBD SIZE/STYLE : TBD
	5A	PREFINISHED ALUMINUM COMPOSITE PANEL EXT. COLOUR : DARK GRAY MANUFACTURER : TBD SIZE/STYLE : TBD
	5B	PREFINISHED ALUMINUM COMPOSITE PANEL EXT. COLOUR : WHITE MANUFACTURER : TBD SIZE/STYLE : TBD
	6	MASONRY - BRICK VENEER / OR STONE FINISH EXT. COLOUR : RED MANUFACTURER : TBD SIZE/STYLE : TBD
	7	EIPS - STUCCO EXT. COLOUR : CLEAR WITH COATED PATTERN MANUFACTURER : TBD SIZE/STYLE : TBD
	8	MASONRY - BRICK VENEER / OR STONE FINISH EXT. COLOUR : TBD MANUFACTURER : TBD SIZE/STYLE : TBD
	9	ARCHITECTURE PRECAST CONCRETE WALL BASE EXT. COLOUR : GRAY MANUFACTURER : TBD SIZE/STYLE : TBD
	R1	BIRD FRIENDLY GLASS - BALCONY RAIL EXT. COLOUR : CLEAR WITH COATED PATTERN MANUFACTURER : TBD SIZE/STYLE : TBD

ADDITIONAL NOTES:

THE DRAWING, AS AN INSTRUMENT OF SERVICE, IS PROVIDED BY AND IS THE PROPERTY OF SRN ARCHITECTS INC. IT CONTAINS THE TRUSTED TIME AND ACCURACY OF RESPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS OF THE PROJECT. ANY CHANGES OR VARIATIONS OF ANY VARIATIONS FROM THE SUPPLIED INFORMATION, SRN ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE ACCURACY OF SURVEY, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC. ENGINEERING INFORMATION SHOWN ON THIS DRAWING. IT IS THE APPROPRIATE ENGINEERS DRAWINGS BEFORE PROCEEDING WITH ANY WORK. CONSTRUCTION MUST CONFORM TO ALL APPLICABLE CODES AND ORDINANCES OF THE JURISDICTION (UNDERTAKEN OTHERWISE NOTED). NO PART OF THIS DRAWING IS TO BE REPRODUCED OR USED IN OFFICE IN REGARDS TO THE ENVIRONMENTAL CONDITION OF THIS SITE.

CONDITIONS FOR ELECTRONIC INFORMATION TRANSFER:

ELECTRONIC INFORMATION IS SUPPLIED TO THE OTHER ASSOCIATED FIRMS TO ASSIST THEM IN THE EXECUTION OF THE PROJECT. THE INFORMATION IS NOT TO BE USED TO DETERMINE THE COMPLETENESS/APPROPRIATENESS OF THE PROJECT. THE INFORMATION IS NOT TO BE REPRODUCED IN ANY MANNER WITHOUT THE PERMISSION OF THE PARTICIPANT RESPONSIBILITY.

- * BUILDING LEVEL 1 FFE = 229.50 GEODETIC ELEVATION
- * BUILDING LEVEL 1 TO 229.45 GEODETIC ELEVATION

SRN ARCHITECTS INC SHALL NOT BE RESPONSIBLE FOR:

1. ERRORS, OMISSIONS, INCOMPLETENESS DUE TO LOSS OF INFORMATION IN WHOLE OR PART WHEN INFORMATION IS TRANSFERRED.
2. TRANSMISSIONS OF ANY VIRUS OR DAMAGE TO RECEIVING ELECTRONIC SYSTEM WHEN INFORMATION IS TRANSFERRED



SRN
ARCHITECTS

8395 JANE ST, SUITE 202
VAUGHAN, ONTARIO. L4K 5Y2
PHONE: 905.417.5515 FAX: 905.417.5517

CLIENT:

TYPHON GROUP LTD.

DRAWING TITLE:

SOUTH ELEVATION

S21028	A403
--------	------

IN PROGRESS
APRIL 19TH - 2022



WEST ELEVATION

Scale: 1 : 200

1
A404

EXTERIOR FINISH LEGEND

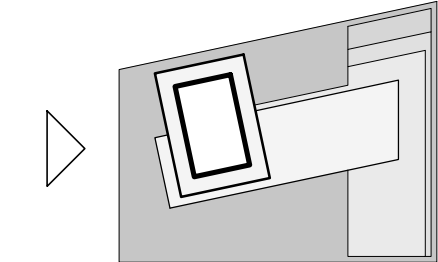
- FIBER REINFORCED CEMENT PANELS - WHITE SMOOTH FINISH**
- 1A COLOUR : WHITE
MANUFACTURER : TBD
STYLE : TBD
- FIBER REINFORCED CEMENT PANELS - GRAY**
- 1B COLOUR : GRAY
MANUFACTURER : TBD
STYLE : TBD
- FIBER REINFORCED CEMENT PANELS - DARK GRAY**
- 1C COLOUR : DARK GRAY
MANUFACTURER : TBD
STYLE : TBD
- PREFINISHED WINDOW WALL SYSTEM - VISION PANEL**
- 2A EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
GLASS : TBD
PAINT COLOUR : TBD
- PREFINISHED WINDOW WALL SYSTEM - OPERABLE AWNING**
- 2B EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
GLASS : TBD
PAINT COLOUR : TBD
- PREFINISHED WINDOW WALL - GLASS SPANDREL PANEL**
- 2C EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
GLASS : TBD
PAINT COLOUR : TBD
- PREFINISHED WINDOW WALL SYSTEM - METAL LOUVRES**
- 2D EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
LOUVRES : TBD
- PREFINISHED CURTAIN WALL SYSTEM - VISION PANEL**
- 3A EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
GLASS : TBD
PAINT COLOUR : TBD
- PREFINISHED CURTAIN WALL SYSTEM - GLASS SPANDREL PANEL**
- 3B EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
GLASS : TBD
- PREFINISHED CURTAIN WALL - METAL LOUVRES**
- 3C EXT. COLOUR : TBD
INT. COLOUR : TBD
MANUFACTURER : TBD
METAL PANEL : TBD
- ARCHITECTURALLY FINISHED CONCRETE SLAB COATING**
- 4 EXT. COLOUR : OFF-WHITE
MANUFACTURER : TBD
SIZE/STYLE : TBD
- PREFINISHED ALUMINUM COMPOSITE PANEL**
- 5A EXT. COLOUR : DARK GRAY
MANUFACTURER : TBD
SIZE/STYLE : TBD
- PREFINISHED ALUMINUM COMPOSITE PANEL**
- 5B EXT. COLOUR : WHITE
MANUFACTURER : TBD
SIZE/STYLE : TBD
- MASONRY - BRICK VENEER / OR STONE FINISH**
- 6 EXT. COLOUR : RED
MANUFACTURER : TBD
SIZE/STYLE : TBD
- EIFS - STUCCO**
- 7 EXT. COLOUR : CLEAR WITH COATED PATTERN
MANUFACTURER : TBD
SIZE/STYLE : TBD
- MASONRY - BRICK VENEER / OR STONE FINISH**
- 8 EXT. COLOUR : GRAY
MANUFACTURER : TBD
SIZE/STYLE : TBD
- ARCHITECTURE PRECAST CONCRETE WALL BASE**
- 9 EXT. COLOUR : GRAY
MANUFACTURER : TBD
SIZE/STYLE : TBD
- BIRD FRIENDLY GLASS - BALCONY RAIL**
- R1 EXT. COLOUR : CLEAR WITH COATED PATTERN
MANUFACTURER : TBD
SIZE/STYLE : TBD

THESE DRAWINGS ARE NOT TO BE SCALED:
ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR
PRIOR TO COMMENCEMENT OF ANY WORK. ANY
DISCREPANCIES MUST BE REPORTED DIRECTLY TO SRN
ARCHITECTS INC.

ADDITIONAL NOTES:
THE DRAWING, AS AN INSTRUMENT OF SERVICE, IS
PROVIDED BY AND IS THE PROPERTY OF SRN ARCHITECTS
INC. THE CONTRACTOR MUST VERIFY AND ACCEPT
RESPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS
ON SITE AND MUST NOTIFY SRN ARCHITECTS INC. OF ANY
VARIATIONS FROM THE SUPPLIED INFORMATION. SRN
ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE
ACCURACY OF SURVEY, STRUCTURAL, MECHANICAL,
ELECTRICAL, ETC. ENGINEERING INFORMATION SHOWN ON
THIS DRAWING REFER TO APPROPRIATE ENGINEERS
DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
CONSTRUCTION MUST CONFORM TO ALL APPLICABLE
CODES AND REQUIREMENTS OF THE AUTHORITIES HAVING
JURISDICTION (UNDERTAKEN OTHERWISE NOTED). NO
INVESTIGATION HAS BEEN OR REPORTED ON BY THIS
OFFICE IN REGARDS TO THE ENVIRONMENTAL CONDITION
OF THIS SITE.

CONDITIONS FOR ELECTRONIC INFORMATION TRANSFER:
ELECTRONIC INFORMATION IS SUPPLIED TO THE OTHER
ASSOCIATED FIRMS TO ASSIST THEM IN THE PRECTION OF
THEIR WORKREVIEW. THE RECIPIENT FIRMS MUST
DETERMINE THE COMPLETENESS/APPROPRIATENESS/
RELEVANCE OF THE INFORMATION IN RESPECT TO THEIR
PARTICULAR RESPONSIBILITY.

- BUILDING LEVEL 1 FFE = 229.50 GEODETIC ELEVATION
- BUILDING LEVEL 1 TOP = 229.45 GEODETIC ELEVATION



NO.	DATE	REVISION	COMMENT

SRN ARCHITECTS INC SHALL NOT BE RESPONSIBLE FOR:
1. ERRORS, OMISSIONS, INCOMPLETENESS DUE TO LOSS
OF INFORMATION IN WHOLE OR PART WHEN INFORMATION
IS TRANSFERRED
2. TRANSMISSIONS OF ANY VIRUS OR DAMAGE TO
RECEIVING ELECTRONIC SYSTEM WHEN INFORMATION IS
TRANSFERRED

SRN
ARCHITECTS
8395 JANE ST, SUITE 202
VAUGHAN, ONTARIO. L4K 5Y2
PHONE: 905.417.5515 FAX: 905.417.5517

STAMP:

© SRN ARCHITECTS INC. 2017

CLIENT:
TYPHON GROUP LTD.

PROJECT:
RESIDENTIAL DEVELOPMENT
272 INNISFIL STREET
BARRIE, ON, L4N 3G1

DRAWING TITLE:
WEST ELEVATION

DATE: SCALE: As indicated

DRAWN BY: AC CHECKED BY: EM

PROJECT NUMBER: DRAWING NUMBER:

S21028 A404

FIGURE 6



JACOB'S TERRACE & INNISFIL ST. LOOKING SOUTHWEST

4
A701



JACOB'S TERRACE LOOKING SOUTH

3
A701



INNISFIL ST. TOWNHOUSES LOOKING WEST

2
A701



JACOB'S TERRACE LOOKING SOUTHEAST

1
A701

THESE DRAWINGS ARE NOT TO BE SCALED:
ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR
PRIOR TO COMMENCEMENT OF ANY WORK. ANY
DISCREPANCIES MUST BE REPORTED DIRECTLY TO SRN
ARCHITECTS INC.

ADDITIONAL NOTES:
THE DRAWING, AS AN INSTRUMENT OF SERVICE, IS
PROVIDED BY AND IS THE PROPERTY OF SRN ARCHITECTS
INC. THE CONTRACTOR MUST VERIFY AND ACCEPT
RESPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS
ON SITE AND MUST NOTIFY SRN ARCHITECTS INC. OF ANY
VARIATIONS FROM THE SUPPLIED INFORMATION. SRN
ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE
ACCURACY OF SURVEY, STRUCTURAL, MECHANICAL,
ELECTRICAL, ETC. ENGINEERING INFORMATION SHOWN ON
THIS DRAWING REFER TO APPROPRIATE ENGINEERS
DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
CONSTRUCTION MUST CONFORM TO ALL APPLICABLE
CODES AND REQUIREMENTS OF THE AUTHORITIES HAVING
JURISDICTION (UNDERTAKEN OTHERWISE NOTED). NO
INVESTIGATION HAS BEEN OR REPORTED ON BY THIS
OFFICE IN REGARDS TO THE ENVIRONMENTAL CONDITION
OF THIS SITE.
CONDITIONS FOR ELECTRONIC INFORMATION TRANSFER:
ELECTRONIC INFORMATION IS SUPPLIED TO THE OTHER
ASSOCIATED FIRMS TO ASSIST THEM IN THE DIRECTION OF
THEIR WORK/REVIEW. THE RECIPIENT FIRMS MUST
DETERMINE THE COMPLETENESS/APPROPRIATENESS/
RELEVANCE OF THE INFORMATION IN RESPECT TO THEIR
PARTICULAR RESPONSIBILITY.
• BUILDING LEVEL 1 FFE = 229.50 GEODETIC
ELEVATION
• BUILDING LEVEL 1 TOF = 229.45 GEODETIC
ELEVATION

NO.	DATE	REVISION COMMENT

SRN ARCHITECTS INC SHALL NOT BE RESPONSIBLE FOR:
1. ERRORS, OMISSIONS, INCOMPLETENESS DUE TO LOSS
OF INFORMATION IN WHOLE OR PART WHEN INFORMATION
IS TRANSFERRED
2. TRANSMISSIONS OF ANY VIRUS OR DAMAGE TO
RECEIVING ELECTRONIC SYSTEM WHEN INFORMATION IS
TRANSFERRED

SRN
ARCHITECTS
8395 JANE ST, SUITE 202
VAUGHAN, ONTARIO. L4K 5Y2
PHONE: 905.417.5515 FAX: 905.417.5517

STAMP:

© SRN ARCHITECTS INC. 2017

CLIENT:
TYPHON GROUP LTD.

PROJECT:
RESIDENTIAL DEVELOPMENT
272 INNISFIL STREET
BARRIE, ON, L4N 3G1

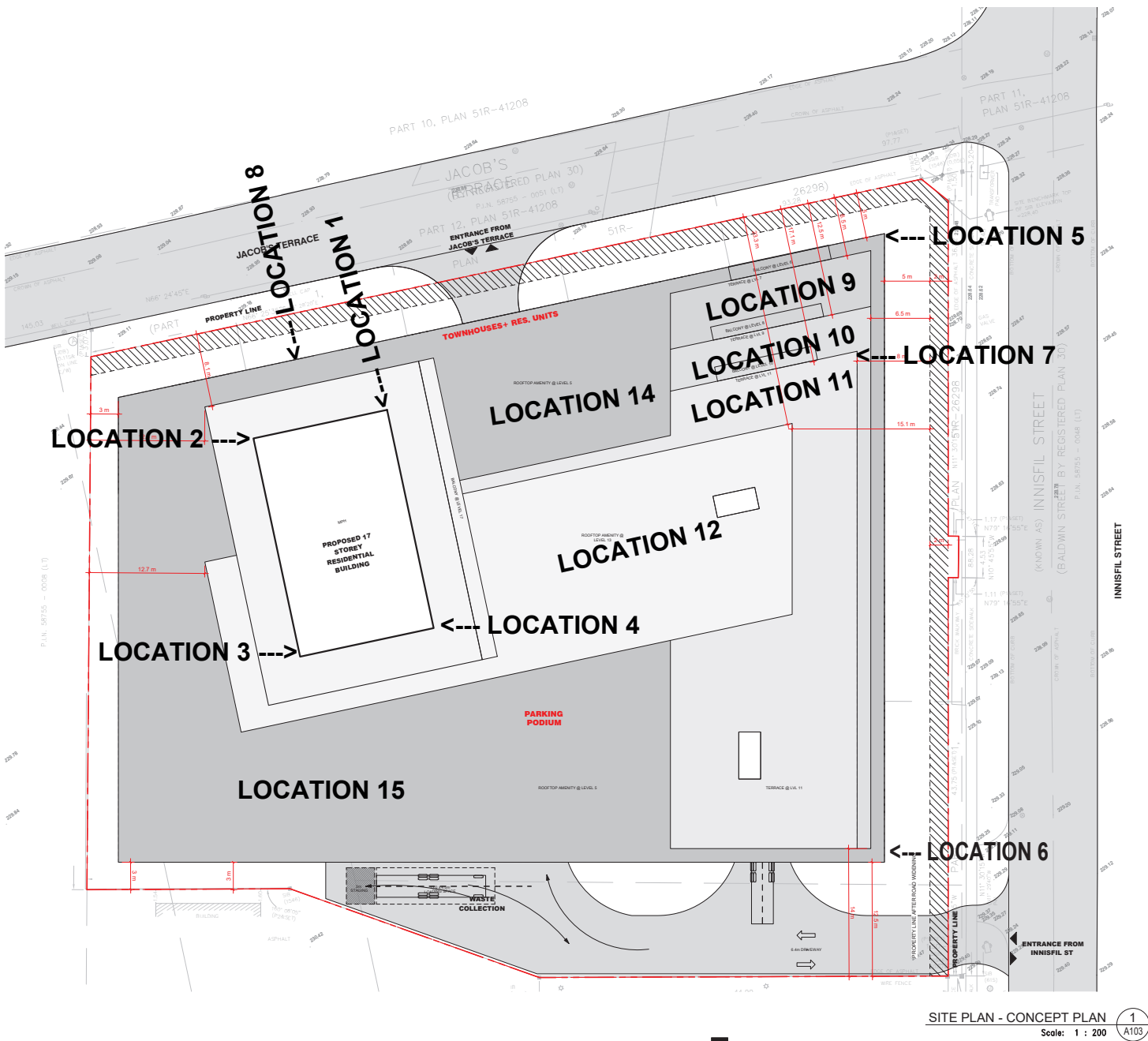
DRAWING TITLE:
PERSPECTIVES 1

DATE: 02/14/22 SCALE:

DRAWN BY: AC CHECKED BY: EM

PROJECT NUMBER: DRAWING NUMBER:

S21028 A701



RECEIVER LOCATIONS

FIGURE 8

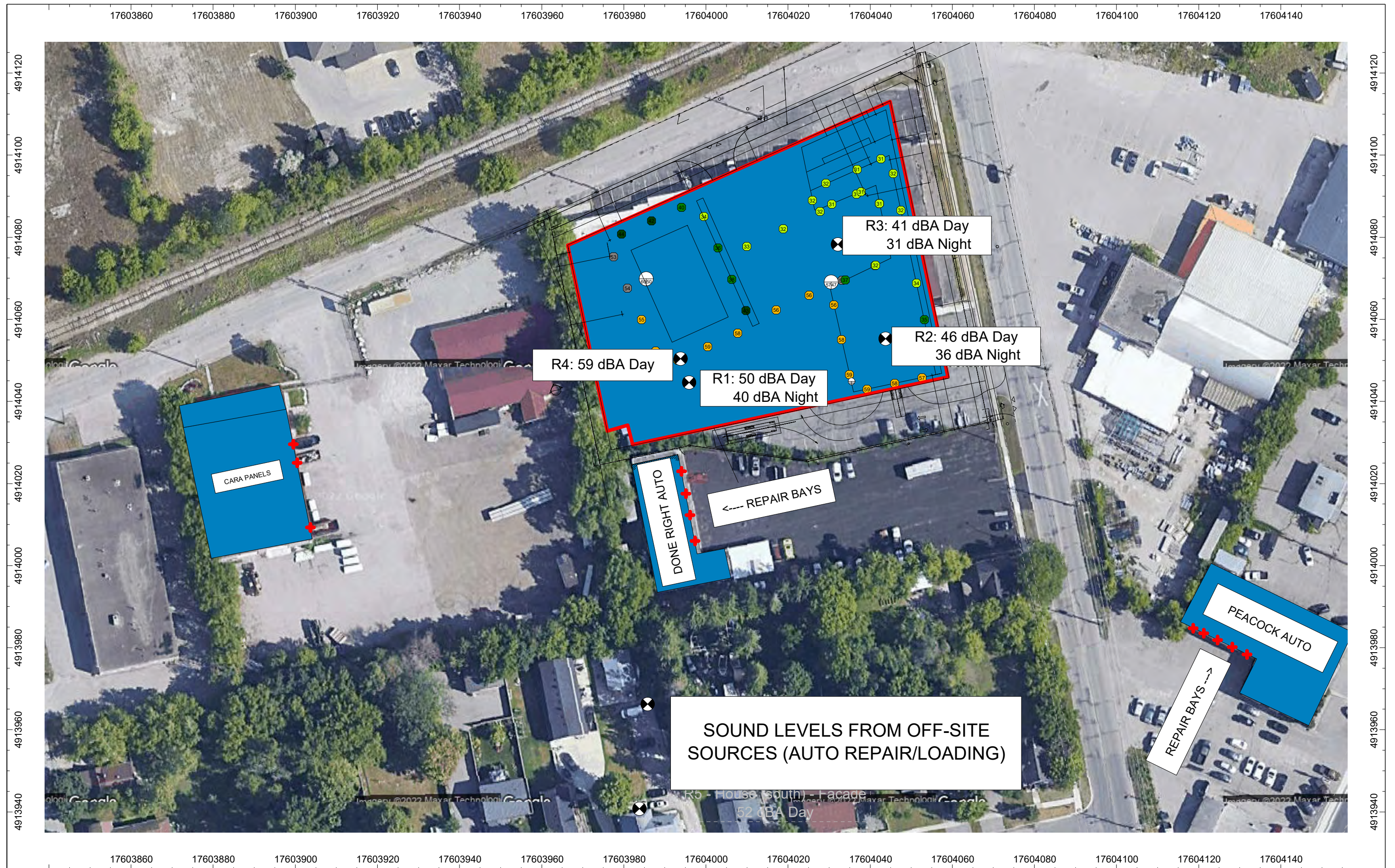


FIGURE 9

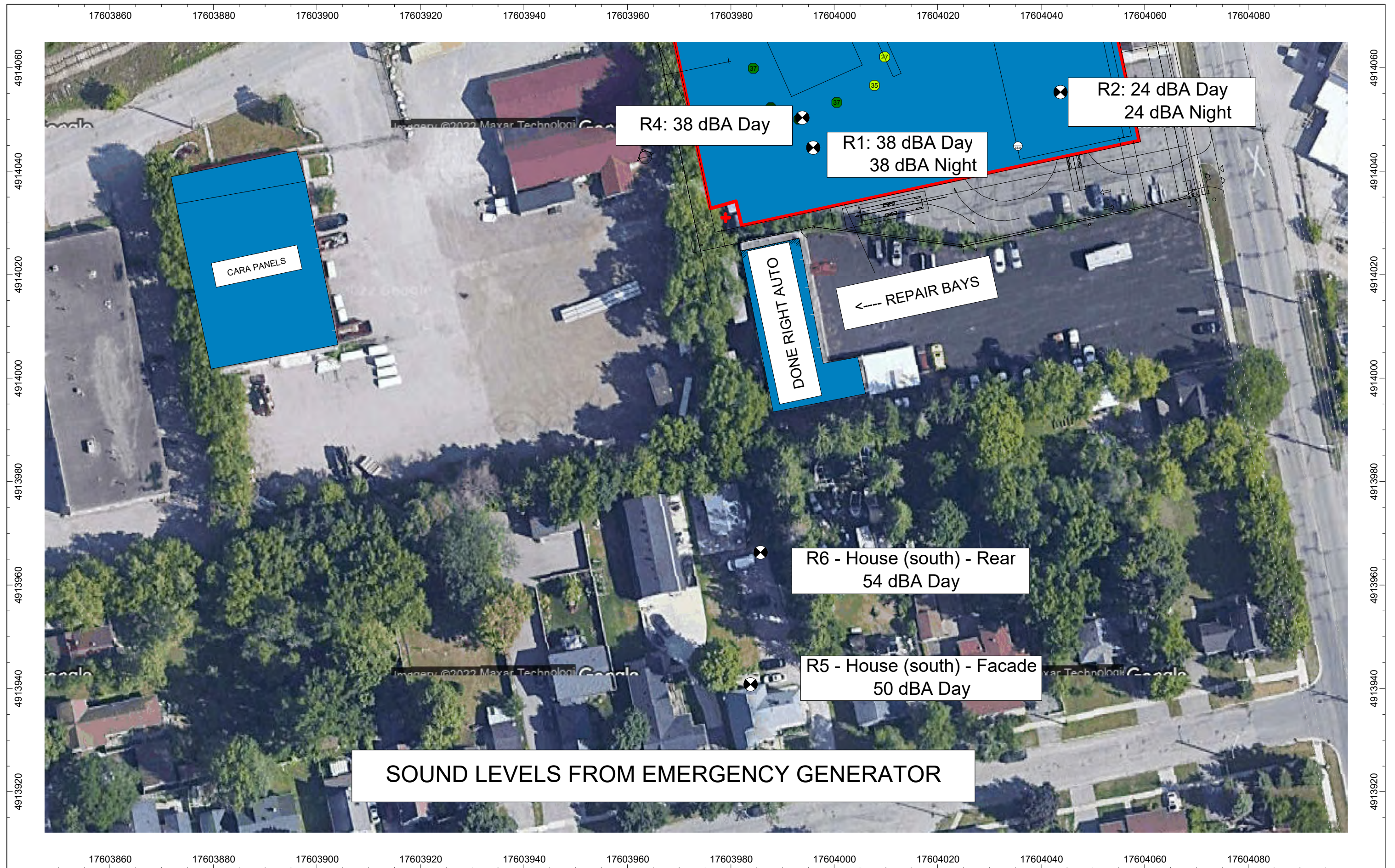


FIGURE 10

APPENDIX E: MECHANICAL DATA

APPENDIX B: SOUND LEVEL CALCULATIONS

Subject: RE: GO Traffic - Barrie
From: Rail Data Requests <RailDataRequests@metrolinx.com>
Date: 2022-03-08, 2:43 p.m.
To: Howard Patlik <hpatlik@jecoulterassoc.com>

Good afternoon Howard,

Further to your request dated February 25, 2022, Allandale GO is located adjacent to the Metrolinx Newmarket Subdivision (which carries Barrie GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of electric 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 103 trains. The planned detailed trip breakdown is listed below:

	1 Electric Locomotive	2 Electric Locomotives		1 Electric Locomotive	2 Electric Locomotives
Day (0700-2300)	67	9	Night (2300-0700)	23	4

The current track design speed near the subject lands is 15 mph (24 km/h).

There are *anti-whistling by-laws* in affect at Minet's Point Road and Little Avenue at-grade crossings.

With respect to future electrified rail service, Metrolinx is committed to finding the most sustainable solution for electrifying the GO rail network and we are currently working towards the next phase.

Options have been studied as part of the Transit Project Assessment Process (TPAP) for the GO Expansion program, currently in the procurement phase. The successful proponent team will be responsible for selecting and delivering the right trains and infrastructure to unlock the benefits of GO Expansion. The contract is in a multi-year procurement process and teams have submitted their bids to Infrastructure Ontario and Metrolinx for evaluation and contract award. GO Expansion construction will get underway in late 2022 or 2023

However, we can advise that train noise is dominated by the powertrain at lower speeds and by the wheel- track interaction at higher speeds. Hence, the noise level and spectrum of electric trains is expected to be very similar at higher speeds, if not identical, to those of equivalent diesel trains.

Given the above considerations, it would be prudent at this time, for the purposes of acoustical analyses for development in proximity to Metrolinx corridors, to assume that the acoustical characteristics of electrified and diesel trains are equivalent. In light of the aforementioned information, acoustical models should employ diesel train parameters as the basis for analyses. We anticipate that additional information regarding specific operational parameters for electrified trains will become available in the future once the proponent team is selected.

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
 20 Bay Street | Suite 600 | Toronto | Ontario | M5J 2W3



From: Howard Patlik <hpatlik@jecoulterassoc.com>
Sent: February 25, 2022 9:14 AM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Subject: Re: GO Traffic - Barrie

EXTERNAL SENDER: Do not click any links or open any attachments unless you trust the sender and know the content is safe.
EXPÉDITEUR EXTERNE: Ne cliquez sur aucun lien et n'ouvrez aucune pièce jointe à moins qu'ils ne proviennent d'un expéditeur fiable, ou que vous ayez l'assurance que le contenu provient d'une source sûre.

Subject: RE: Traffic Data - Hwy 400 - Barrie

From: "Bee, Christopher (MTO)" <Christopher.Bee@ontario.ca>

Date: 2022-02-24, 12:56 p.m.

To: "hpatlik@jecoulterassoc.com" <hpatlik@jecoulterassoc.com>

CC: "Bee, Christopher (MTO)" <Christopher.Bee@ontario.ca>

Year	H400/Essa	H400/Essa	H400/Essa	H400/Dunlop	H400/Dunlop	H400/Dunlop
	AADT	SADT	SAWDT	AADT	SADT	SAWDT
2012	99100	119900	118900	110200	122300	117900
2013	100000	119000	128000	112300	124700	123500
2014	111400	111400	106900	105600	117200	116200
2015	111100	111100	106700	106700	118400	117400
2016	119100	145300	146500	109400	133400	134500

year	H400/Essa	H400/Dunlop
	% trucks	% trucks
2012	12	10
2013	12	10
2014	12	10
2015	9.2	10
2016	7.4	8.3

To Howard Patlik, J Coulter Associates:

The above tables show the official MTO data to only 2016 and before.

You can plot the data points on a graph over time, and draw the best straight line through the data points, and extend the straight line to 2019 to get estimate for 2019.

2020-2022 cannot be trended because of COVID.

I am not sure what you mean by "SWADT" in email below. I assume it means same as "SAWDT" shown above, which means "summer average weekday traffic".

"SADT" above means "summer average daily traffic"

“% trucks” above means large long trucks, small short trucks, vans, cars with trailers, buses, and specials (tractors,.... etc), but not regular cars.

Regards.

Christopher Bee
MTO CR
STIRCS, TIMD

From: Terro, Eric (MTO) <Eric.Terro@ontario.ca>
Sent: February 23, 2022 12:16 PM
To: Bee, Christopher (MTO) <Christopher.Bee@ontario.ca>
Subject: FW: Traffic Data - Hwy 400 - Barrie

Chris,

Please provide Howard available data for request below.

Thanks,
Eric

From: Howard Patlik <hpatlik@jecoulterassoc.com>
Sent: Wednesday, February 23, 2022 12:09 PM
To: Terro, Eric (MTO) <Eric.Terro@ontario.ca>
Subject: Re: Traffic Data - Hwy 400 - Barrie

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi Eric,

I am preparing a Noise Study and requires the current SWADT/AADT including commercial truck % on Hwy 400 between Essa Rd and Dunlop in Barrie.

Regards,

--

Howard R. Patlik, C.E.T.

J.E. Coulter Associates Limited
T: 416-502-8598 ext. 222
F: 416-502-3473
hpatlik@jecoulterassoc.com

Subject: RE: Rail movements - Barrie (Follow-up)
From: Lou Lamanna <Lou.Lamanna@candorail.com>
Date: 2022-03-08, 3:21 p.m.
To: Howard Patlik <hpatlik@jecoulterassoc.com>

Hi Howard,

The BCRY operates 2 days a week from 0800 to 1500 no night switching. We have 1 Locomotive and can have up to 8 Railcars, speed does not exceed 10 MPH.

If you require additional information, please call me
416-807-0948

Thanks

Lou Lamanna
Superintendent, Ontario Rail Operations

-----Original Message-----

From: Howard Patlik <hpatlik@jecoulterassoc.com>
Sent: Tuesday, March 8, 2022 11:31 AM
To: Lou Lamanna <Lou.Lamanna@candorail.com>
Subject: Rail movements - Barrie (Follow-up)

SECURITY NOTICE: This email originated from outside Cando Rail & Terminals. Never click links or open attachments from any unknown sender. Please report suspicious emails to Helpdesk using the Outlook Phish Alert button.

Hi,

I received your name from Ollie Dev. who are looking to building a residential development south of your line near Innisfil St. I am preparing a noise and vibration report and I am looking for the current rail movements in the day and nighttime including the trips per day, approximate time in the area, number of locomotives, freight cars and operating speed in the area.

Any questions, please contact me.

Regards,

--

Howard R. Patlik, C.E.T.

J.E. Coulter Associates Limited
T: 416-502-8598 ext. 222
F: 416-502-3473
hpatlik@jecoulterassoc.com

Filename: loc1_ne.te Time Period: Day/Night 16/8 hours
 Description: Location 1 - NE Façade (17 Storey Tower)

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 37.00 / 37.00 m
 Receiver height : 50.50 / 50.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 50 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 165.00 / 165.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 50.05 + 0.00) = 50.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-3.92	0.00	0.00	0.00	0.00	50.05

WHEEL (0.00 + 33.54 + 0.00) = 33.54 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-3.92	0.00	0.00	0.00	0.00	33.54

LEFT WHISTLE (0.00 + 65.56 + 0.00) = 65.56 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	50	0.00	70.76	-3.92	-1.28	0.00	0.00	0.00	65.56

RIGHT WHISTLE (0.00 + 59.76 + 0.00) = 59.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
50	85	0.00	70.76	-3.92	-7.08	0.00	0.00	0.00	59.76

Segment Leq : 66.67 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 49.58 + 0.00) = 49.58 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.41	-7.78	0.00	0.00	0.00	49.58

WHEEL (0.00 + 38.32 + 0.00) = 38.32 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.41	-7.78	0.00	0.00	0.00	38.32

Segment Leq : 49.89 dBA

Total Leq All Segments: 66.76 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -3.92 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-3.92	0.00	0.00	0.00	0.00	-3.92

WHEEL (0.00 + -3.92 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-3.92	0.00	0.00	0.00	0.00	-3.92

LEFT WHISTLE (0.00 + 65.56 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	50	0.00	0.00	-3.92	-1.28	0.00	0.00	0.00	65.56

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

LOCOMOTIVE (0.00 + 48.17 + 0.00) = 48.17 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	66.37	-10.41	-7.78	0.00	0.00	0.00	48.17

WHEEL (0.00 + 36.85 + 0.00) = 36.85 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.41	-7.78	0.00	0.00	0.00	36.85

Segment Leq : 48.48 dBA

Total Leq All Segments: 48.48 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : 15.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 908.00 / 908.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (day/night)

Angle1 Angle2 : -90.00 deg 40.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 208.00 / 208.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Innisfil Rd (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 : 73.00 / 73.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 4: Tiffin St W (day/night)

Car traffic volume : 8921/991 veh/TimePeriod *
Medium truck volume : 152/17 veh/TimePeriod *
Heavy truck volume : 152/17 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Tiffin St W (day/night)

Angle1 Angle2 : -90.00 deg 35.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 114.00 / 114.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 5: Tiffin St E (day/night)

Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 5: Tiffin St E (day/night)

Angle1 Angle2 : 35.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 114.00 / 114.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 62.94 + 0.00) = 62.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
15	90	0.00	84.56	0.00	-17.82	-3.80	0.00	0.00	0.00	62.94

Segment Leq : 62.94 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 51.04 + 0.00) = 51.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	40	0.00	63.88	0.00	-11.42	-1.41	0.00	0.00	0.00	51.04

Segment Leq : 51.04 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 54.54 + 0.00) = 54.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.41	0.00	-6.87	0.00	0.00	0.00	0.00	54.54

Segment Leq : 54.54 dBA

Results segment # 4: Tiffin St W (day)

Source height = 1.13 m

ROAD (0.00 + 52.82 + 0.00) = 52.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	35	0.00	63.21	0.00	-8.81	-1.58	0.00	0.00	0.00	52.82

Segment Leq : 52.82 dBA

Results segment # 5: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 48.76 + 0.00) = 48.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.00	62.72	0.00	-8.81	-5.15	0.00	0.00	0.00	48.76

Segment Leq : 48.76 dBA

Total Leq All Segments: 64.23 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 62.94 + 0.00) = 62.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
15	90	0.00	84.56	0.00	-17.82	-3.80	0.00	0.00	0.00	62.94

Segment Leq : 62.94 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 44.55 + 0.00) = 44.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	40	0.00	57.39	0.00	-11.42	-1.41	0.00	0.00	0.00	44.55

Segment Leq : 44.55 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 47.91 + 0.00) = 47.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.78	0.00	-6.87	0.00	0.00	0.00	0.00	47.91

Segment Leq : 47.91 dBA

Results segment # 4: Tiffin St W (night)

Source height = 1.13 m

ROAD (0.00 + 46.30 + 0.00) = 46.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	35	0.00	56.70	0.00	-8.81	-1.58	0.00	0.00	0.00	46.30

Segment Leq : 46.30 dBA

Results segment # 5: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 42.21 + 0.00) = 42.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.00	56.17	0.00	-8.81	-5.15	0.00	0.00	0.00	42.21

Segment Leq : 42.21 dBA

Total Leq All Segments: 63.26 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.69
(NIGHT): 63.40

Filename: loc2_nw.te Time Period: Day/Night 16/8 hours
 Description: Location 1 - NW Façade (17 Storey Tower)

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 37.00 / 37.00 m
 Receiver height : 50.50 / 50.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 52 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 168.00 / 168.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 50.05 + 0.00) = 50.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-3.92	0.00	0.00	0.00	0.00	50.05

WHEEL (0.00 + 33.54 + 0.00) = 33.54 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-3.92	0.00	0.00	0.00	0.00	33.54

LEFT WHISTLE (0.00 + 65.62 + 0.00) = 65.62 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	52	0.00	70.76	-3.92	-1.22	0.00	0.00	0.00	65.62

RIGHT WHISTLE (0.00 + 59.51 + 0.00) = 59.51 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
52	85	0.00	70.76	-3.92	-7.33	0.00	0.00	0.00	59.51

Segment Leq : 66.67 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.49	-7.78	0.00	0.00	0.00	49.50

WHEEL (0.00 + 38.24 + 0.00) = 38.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.49	-7.78	0.00	0.00	0.00	38.24

Segment Leq : 49.81 dBA

Total Leq All Segments: 66.76 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -3.92 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-3.92	0.00	0.00	0.00	0.00	-3.92

WHEEL (0.00 + -3.92 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-3.92	0.00	0.00	0.00	0.00	-3.92

LEFT WHISTLE (0.00 + 65.62 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-84	52	0.00	0.00	-3.92	-1.22	0.00	0.00	0.00	65.62

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

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
60	90	0.00	66.37	-10.49	-7.78	0.00	0.00	0.00	48.09

WHEEL (0.00 + 36.77 + 0.00) = 36.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.49	-7.78	0.00	0.00	0.00	36.77

Segment Leq : 48.40 dBA

Total Leq All Segments: 48.40 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 893.00 / 893.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (day/night)

Angle1 Angle2 : 40.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 216.00 / 216.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Innisfil Rd (day/night)

Angle1 Angle2 : -90.00 deg 15.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 88.00 / 88.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 4: Tiffin St W (day/night)

Car traffic volume : 8921/991 veh/TimePeriod *
Medium truck volume : 152/17 veh/TimePeriod *
Heavy truck volume : 152/17 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Tiffin St W (day/night)

Angle1 Angle2 : -90.00 deg 38.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 114.00 / 114.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 5: Tiffin St E (day/night)

Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 5: Tiffin St E (day/night)

Angle1 Angle2 : 38.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 114.00 / 114.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 66.81 + 0.00) = 66.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	84.56	0.00	-17.75	0.00	0.00	0.00	0.00	66.81

Segment Leq : 66.81 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 46.73 + 0.00) = 46.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
40	90	0.00	63.88	0.00	-11.58	-5.56	0.00	0.00	0.00	46.73

Segment Leq : 46.73 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 51.39 + 0.00) = 51.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	15	0.00	61.41	0.00	-7.68	-2.34	0.00	0.00	0.00	51.39

Segment Leq : 51.39 dBA

Results segment # 4: Tiffin St W (day)

Source height = 1.13 m

ROAD (0.00 + 52.92 + 0.00) = 52.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	38	0.00	63.21	0.00	-8.81	-1.48	0.00	0.00	0.00	52.92

Segment Leq : 52.92 dBA

Results segment # 5: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 48.52 + 0.00) = 48.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
38	90	0.00	62.72	0.00	-8.81	-5.39	0.00	0.00	0.00	48.52

Segment Leq : 48.52 dBA

Total Leq All Segments: 67.20 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 66.81 + 0.00) = 66.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	84.56	0.00	-17.75	0.00	0.00	0.00	0.00	66.81

Segment Leq : 66.81 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 40.24 + 0.00) = 40.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
40	90	0.00	57.39	0.00	-11.58	-5.56	0.00	0.00	0.00	40.24

Segment Leq : 40.24 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 44.75 + 0.00) = 44.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	15	0.00	54.78	0.00	-7.68	-2.34	0.00	0.00	0.00	44.75

Segment Leq : 44.75 dBA

Results segment # 4: Tiffin St W (night)

Source height = 1.13 m

ROAD (0.00 + 46.41 + 0.00) = 46.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	38	0.00	56.70	0.00	-8.81	-1.48	0.00	0.00	0.00	46.41

Segment Leq : 46.41 dBA

Results segment # 5: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 41.97 + 0.00) = 41.97 dBA

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

38	90	0.00	56.17	0.00	-8.81	-5.39	0.00	0.00	0.00	41.97
----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 41.97 dBA

Total Leq All Segments: 66.90 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.00
(NIGHT): 66.96

Filename: loc3_sw.te Time Period: Day/Night 16/8 hours
 Description: Location 3 - SE Façade (17 Storey Tower)

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 25.00 / 25.00 m
 Receiver height : 50.50 / 50.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 52 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 168.00 / 168.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 48.74 + 0.00) = 48.74 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	53.97	-2.22	-3.01	0.00	0.00	0.00	48.74

WHEEL (0.00 + 32.23 + 0.00) = 32.23 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	37.46	-2.22	-3.01	0.00	0.00	0.00	32.23

LEFT WHISTLE (0.00 + 65.34 + 0.00) = 65.34 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	0	0.00	70.76	0.00	-3.20	0.00	0.00	0.00	65.34

Segment Leq : 65.44 dBA

Results segment # 2: G0 Transit (day)

LOCOMOTIVE (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.49	-7.78	0.00	0.00	0.00	49.50

WHEEL (0.00 + 38.24 + 0.00) = 38.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.49	-7.78	0.00	0.00	0.00	38.24

Segment Leq : 49.81 dBA

Total Leq All Segments: 65.56 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -5.23 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	0.00	-2.22	-3.01	0.00	0.00	0.00	-5.23

WHEEL (0.00 + -5.23 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	0.00	-2.22	-3.01	0.00	0.00	0.00	-5.23

LEFT WHISTLE (0.00 + 65.34 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	0	0.00	0.00	0.00	-3.20	0.00	0.00	0.00	65.34

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

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
60	90	0.00	66.37	-10.49	-7.78	0.00	0.00	0.00	48.09

WHEEL (0.00 + 36.77 + 0.00) = 36.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.49	-7.78	0.00	0.00	0.00	36.77

Segment Leq : 48.40 dBA

Total Leq All Segments: 48.40 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 896.00 / 896.00 m

Receiver height : 50.50 / 50.50 m

Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *

Medium truck volume : 177/20 veh/TimePeriod *

Heavy truck volume : 177/20 veh/TimePeriod *

Posted speed limit : 50 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950

Percentage of Annual Growth : 0.00

Number of Years of Growth : 10.00

Medium Truck % of Total Volume : 1.65

Heavy Truck % of Total Volume : 1.65

Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (day/night)

```

-----
Angle1   Angle2           : -50.00 deg   90.00 deg
Wood depth           :           0       (No woods.)
No of house rows     :           0 / 0
Surface              :           1       (Absorptive ground surface)
Receiver source distance : 198.00 / 198.00 m
Receiver height       :   50.50 / 50.50 m
Topography           :           1       (Flat/gentle slope; no barrier)

```

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

```

-----
Car traffic volume : 5689/632   veh/TimePeriod *
Medium truck volume : 103/11    veh/TimePeriod *
Heavy truck volume : 103/11    veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth       : 0.00
Number of Years of Growth         : 10.00
Medium Truck % of Total Volume    : 1.75
Heavy Truck % of Total Volume     : 1.75
Day (16 hrs) % of Total Volume    : 90.00

```

Data for Segment # 3: Innisfil Rd (day/night)

```

-----
Angle1   Angle2           : -15.00 deg   25.00 deg
Wood depth           :           0       (No woods.)
No of house rows     :           0 / 0
Surface              :           1       (Absorptive ground surface)
Receiver source distance : 82.00 / 82.00 m
Receiver height       :   50.50 / 50.50 m
Topography           :           1       (Flat/gentle slope; no barrier)

```

Road data, segment # 4: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume : 152/17    veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth       : 0.00
Number of Years of Growth         : 10.00
Medium Truck % of Total Volume    : 1.65
Heavy Truck % of Total Volume     : 1.65
Day (16 hrs) % of Total Volume    : 90.00

```

Data for Segment # 4: Tiffin St W (day/night)

```

-----
Angle1   Angle2           : -90.00 deg   -15.00 deg
Wood depth           :           0       (No woods.)
No of house rows     :           0 / 0
Surface              :           1       (Absorptive ground surface)
Receiver source distance : 140.00 / 140.00 m
Receiver height       :   50.50 / 50.50 m
Topography           :           1       (Flat/gentle slope; no barrier)

```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 66.80 + 0.00) = 66.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	84.56	0.00	-17.76	0.00	0.00	0.00	0.00	66.80

Segment Leq : 66.80 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 51.58 + 0.00) = 51.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	90	0.00	63.88	0.00	-11.21	-1.09	0.00	0.00	0.00	51.58

Segment Leq : 51.58 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 47.50 + 0.00) = 47.50 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	25	0.00	61.41	0.00	-7.38	-6.53	0.00	0.00	0.00	47.50

Segment Leq : 47.50 dBA

Results segment # 4: Tiffin St W (day)

Source height = 1.13 m

ROAD (0.00 + 49.71 + 0.00) = 49.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-15	0.00	63.21	0.00	-9.70	-3.80	0.00	0.00	0.00	49.71

Segment Leq : 49.71 dBA

Total Leq All Segments: 67.06 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 66.80 + 0.00) = 66.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	84.56	0.00	-17.76	0.00	0.00	0.00	0.00	66.80

Segment Leq : 66.80 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 45.09 + 0.00) = 45.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-50	90	0.00	57.39	0.00	-11.21	-1.09	0.00	0.00	0.00	45.09

Segment Leq : 45.09 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 40.87 + 0.00) = 40.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	25	0.00	54.78	0.00	-7.38	-6.53	0.00	0.00	0.00	40.87

Segment Leq : 40.87 dBA

Results segment # 4: Tiffin St W (night)

Source height = 1.13 m

ROAD (0.00 + 43.19 + 0.00) = 43.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-15	0.00	56.70	0.00	-9.70	-3.80	0.00	0.00	0.00	43.19

Segment Leq : 43.19 dBA

Total Leq All Segments: 66.86 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.38
(NIGHT): 66.92

Filename: loc4_se.te Time Period: Day/Night 16/8 hours
 Description: Location 4 - SW Façade (17 Storey Tower)

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

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

Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 62.00 / 62.00 m
 Receiver height : 50.50 / 50.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 50 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 190.00 / 190.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 44.80 + 0.00) = 44.80 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	53.97	-6.16	-3.01	0.00	0.00	0.00	44.80

WHEEL (0.00 + 28.28 + 0.00) = 28.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	37.46	-6.16	-3.01	0.00	0.00	0.00	28.28

LEFT WHISTLE (0.00 + 59.03 + 0.00) = 59.03 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.00	70.76	-6.16	-5.56	0.00	0.00	0.00	59.03

RIGHT WHISTLE (0.00 + 57.17 + 0.00) = 57.17 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
50	83	0.00	70.76	-6.16	-7.43	0.00	0.00	0.00	57.17

Segment Leq : 61.31 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 48.97 + 0.00) = 48.97 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-11.03	-7.78	0.00	0.00	0.00	48.97

WHEEL (0.00 + 37.71 + 0.00) = 37.71 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-11.03	-7.78	0.00	0.00	0.00	37.71

Segment Leq : 49.28 dBA

Total Leq All Segments: 61.57 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -9.17 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-6.16	-3.01	0.00	0.00	0.00	-9.17

WHEEL (0.00 + -9.17 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-6.16	-3.01	0.00	0.00	0.00	-9.17

LEFT WHISTLE (0.00 + 59.03 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.00	0.00	-6.16	-5.56	0.00	0.00	0.00	59.03

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

LOCOMOTIVE (0.00 + 47.56 + 0.00) = 47.56 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	66.37	-11.03	-7.78	0.00	0.00	0.00	47.56

WHEEL (0.00 + 36.23 + 0.00) = 36.23 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-11.03	-7.78	0.00	0.00	0.00	36.23

Segment Leq : 47.87 dBA

Total Leq All Segments: 47.87 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : 15.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 908.00 / 908.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (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 : 188.00 / 188.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Innisfil Rd (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 : 88.00 / 88.00 m
Receiver height : 50.50 / 50.50 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 4: Tiffin St E (day/night)

```
-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume  : 136/15    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 10.00
Medium Truck % of Total Volume      : 1.65
Heavy Truck % of Total Volume       : 1.65
Day (16 hrs) % of Total Volume      : 90.00
```

Data for Segment # 4: Tiffin St E (day/night)

```
-----
Angle1 Angle2      : 35.00 deg  90.00 deg
Wood depth          : 0         (No woods.)
No of house rows    : 0 / 0
Surface            : 1         (Absorptive ground surface)
Receiver source distance : 138.00 / 138.00 m
Receiver height     : 50.50 / 50.50 m
Topography          : 1         (Flat/gentle slope; no barrier)
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 62.94 + 0.00) = 62.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
15	90	0.00	84.56	0.00	-17.82	-3.80	0.00	0.00	0.00	62.94

Segment Leq : 62.94 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 52.90 + 0.00) = 52.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.88	0.00	-10.98	0.00	0.00	0.00	0.00	52.90

Segment Leq : 52.90 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 53.73 + 0.00) = 53.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.41	0.00	-7.68	0.00	0.00	0.00	0.00	53.73

Segment Leq : 53.73 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 47.93 + 0.00) = 47.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.00	62.72	0.00	-9.64	-5.15	0.00	0.00	0.00	47.93

Segment Leq : 47.93 dBA

Total Leq All Segments: 63.91 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 62.94 + 0.00) = 62.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
15	90	0.00	84.56	0.00	-17.82	-3.80	0.00	0.00	0.00	62.94

Segment Leq : 62.94 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 46.41 + 0.00) = 46.41 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	57.39	0.00	-10.98	0.00	0.00	0.00	0.00	46.41

Segment Leq : 46.41 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 47.09 + 0.00) = 47.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.78	0.00	-7.68	0.00	0.00	0.00	0.00	47.09

Segment Leq : 47.09 dBA

Results segment # 4: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 41.38 + 0.00) = 41.38 dBA

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

35	90	0.00	56.17	0.00	-9.64	-5.15	0.00	0.00	0.00	41.38
----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 41.38 dBA

Total Leq All Segments: 63.17 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 65.91
(NIGHT): 63.30

Filename: loc5_ne.te Time Period: Day/Night 16/8 hours
 Description: Loc 5 - NE - 4th Level

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 25.00 / 25.00 m
 Receiver height : 10.65 / 10.65 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 35 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 168.00 / 168.00 m
 Receiver height : 10.65 / 10.65 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 51.75 + 0.00) = 51.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-2.22	0.00	0.00	0.00	0.00	51.75

WHEEL (0.00 + 35.24 + 0.00) = 35.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-2.22	0.00	0.00	0.00	0.00	35.24

LEFT WHISTLE (0.00 + 66.83 + 0.00) = 66.83 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	35	0.00	70.76	-2.22	-1.72	0.00	0.00	0.00	66.83

RIGHT WHISTLE (0.00 + 63.11 + 0.00) = 63.11 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	87	0.00	70.76	-2.22	-5.43	0.00	0.00	0.00	63.11

Segment Leq : 68.46 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.49	-7.78	0.00	0.00	0.00	49.50

WHEEL (0.00 + 38.24 + 0.00) = 38.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.49	-7.78	0.00	0.00	0.00	38.24

Segment Leq : 49.81 dBA

Total Leq All Segments: 68.52 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -2.22 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-2.22	0.00	0.00	0.00	0.00	-2.22

WHEEL (0.00 + -2.22 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-2.22	0.00	0.00	0.00	0.00	-2.22

LEFT WHISTLE (0.00 + 66.83 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	35	0.00	0.00	-2.22	-1.72	0.00	0.00	0.00	66.83

Segment Leq : 0.00 dBA

Results segment # 2: GO Transit (night)

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
60	90	0.00	66.37	-10.49	-7.78	0.00	0.00	0.00	48.09

WHEEL (0.00 + 36.77 + 0.00) = 36.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.49	-7.78	0.00	0.00	0.00	36.77

Segment Leq : 48.40 dBA

Total Leq All Segments: 48.40 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : 30.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 966.00 / 966.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (day/night)

Angle1 Angle2 : -90.00 deg 55.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 200.00 / 200.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Innisfil Rd (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 : 19.00 / 19.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 4: Tiffin St W (day/night)

Car traffic volume : 8921/991 veh/TimePeriod *
Medium truck volume : 152/17 veh/TimePeriod *
Heavy truck volume : 152/17 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Tiffin St W (day/night)

Angle1 Angle2 : -90.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 101.00 / 101.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 5: Tiffin St E (day/night)

Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 5: Tiffin St E (day/night)

Angle1 Angle2 : 20.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 101.00 / 101.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 53.28 + 0.00) = 53.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	90	0.38	84.56	0.00	-25.04	-6.23	0.00	0.00	0.00	53.28

Segment Leq : 53.28 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 46.53 + 0.00) = 46.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	55	0.40	63.88	0.00	-15.71	-1.64	0.00	0.00	0.00	46.53

Segment Leq : 46.53 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 60.38 + 0.00) = 60.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.41	0.00	-1.03	0.00	0.00	0.00	0.00	60.38

Segment Leq : 60.38 dBA

Results segment # 4: Tiffin St W (day)

Source height = 1.13 m

ROAD (0.00 + 48.72 + 0.00) = 48.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.40	63.21	0.00	-11.57	-2.93	0.00	0.00	0.00	48.72

Segment Leq : 48.72 dBA

Results segment # 5: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 45.77 + 0.00) = 45.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.40	62.72	0.00	-11.57	-5.39	0.00	0.00	0.00	45.77

Segment Leq : 45.77 dBA

Total Leq All Segments: 61.65 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 53.28 + 0.00) = 53.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	90	0.38	84.56	0.00	-25.04	-6.23	0.00	0.00	0.00	53.28

Segment Leq : 53.28 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 40.04 + 0.00) = 40.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	55	0.40	57.39	0.00	-15.71	-1.64	0.00	0.00	0.00	40.04

Segment Leq : 40.04 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 53.75 + 0.00) = 53.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.78	0.00	-1.03	0.00	0.00	0.00	0.00	53.75

Segment Leq : 53.75 dBA

Results segment # 4: Tiffin St W (night)

Source height = 1.13 m

ROAD (0.00 + 42.20 + 0.00) = 42.20 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.40	56.70	0.00	-11.57	-2.93	0.00	0.00	0.00	42.20

Segment Leq : 42.20 dBA

Results segment # 5: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 39.22 + 0.00) = 39.22 dBA

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

20	90	0.40	56.17	0.00	-11.57	-5.39	0.00	0.00	0.00	39.22
----	----	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 39.22 dBA

Total Leq All Segments: 56.86 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.33
(NIGHT): 57.44

Filename: loc6_se.te Time Period: Day/Night 16/8 hours
 Description: Loc 6 - SE Façade - 10th Level

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!/Train!	!# Cars! !/Train!	! Eng ! ! type	!Cont ! !weld
1. Freight	! 1.3/0.0	! 1.3/0.0	! 16.0	! 1.0	! 8.0	!Diesel!	! Yes

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

Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 99.00 / 99.00 m
 Receiver height : 29.25 / 29.25 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 15 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!/Train!	!# Cars! !/Train!	! Eng ! ! type	!Cont ! !weld
* 1. Passenger 1L!	67.0/23.0	! 24.0	! 1.0	! 12.0	!Diesel!	! Yes
* 2. Passenger 2L!	9.0/4.0	! 24.0	! 2.0	! 12.0	!Diesel!	! Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	! 67.0/23.0	! 0.00	! 10.00
2. Passenger 2L	! 9.0/4.0	! 0.00	! 10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 232.00 / 232.00 m
 Receiver height : 29.25 / 29.25 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 42.76 + 0.00) = 42.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	53.97	-8.20	-3.01	0.00	0.00	0.00	42.76

WHEEL (0.00 + 26.25 + 0.00) = 26.25 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	37.46	-8.20	-3.01	0.00	0.00	0.00	26.25

LEFT WHISTLE (0.00 + 51.77 + 0.00) = 51.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	15	0.00	70.76	-8.20	-10.79	0.00	0.00	0.00	51.77

RIGHT WHISTLE (0.00 + 57.93 + 0.00) = 57.93 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
15	77	0.00	70.76	-8.20	-4.63	0.00	0.00	0.00	57.93

Segment Leq : 58.98 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 48.10 + 0.00) = 48.10 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-11.89	-7.78	0.00	0.00	0.00	48.10

WHEEL (0.00 + 36.84 + 0.00) = 36.84 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-11.89	-7.78	0.00	0.00	0.00	36.84

Segment Leq : 48.41 dBA

Total Leq All Segments: 59.35 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -11.21 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-8.20	-3.01	0.00	0.00	0.00	-11.21

WHEEL (0.00 + -11.21 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-8.20	-3.01	0.00	0.00	0.00	-11.21

LEFT WHISTLE (0.00 + 51.77 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	15	0.00	0.00	-8.20	-10.79	0.00	0.00	0.00	51.77

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

LOCOMOTIVE (0.00 + 46.69 + 0.00) = 46.69 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	66.37	-11.89	-7.78	0.00	0.00	0.00	46.69

WHEEL (0.00 + 35.37 + 0.00) = 35.37 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-11.89	-7.78	0.00	0.00	0.00	35.37

Segment Leq : 47.00 dBA

Total Leq All Segments: 47.00 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : -90.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 934.00 / 934.00 m
Receiver height : 29.25 / 29.25 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd W (day/night)

Car traffic volume : 12182/1354 veh/TimePeriod *
Medium truck volume : 254/28 veh/TimePeriod *
Heavy truck volume : 254/28 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 14100
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 2.00
Heavy Truck % of Total Volume : 2.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd W (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 : 135.00 / 135.00 m
Receiver height : 29.25 / 29.25 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 3: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Essa Rd E (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 : 135.00 / 135.00 m
Receiver height : 29.25 / 29.25 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Innisfil Rd (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 : 19.00 / 19.00 m
Receiver height : 29.25 / 29.25 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 5: Tiffin St E (day/night)

Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 5: Tiffin St E (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 : 170.00 / 170.00 m
Receiver height : 29.25 / 29.25 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 64.86 + 0.00) = 64.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.00	84.56	0.00	-17.94	-1.76	0.00	0.00	0.00	64.86

Segment Leq : 64.86 dBA

Results segment # 2: Essa Rd W (day)

Source height = 1.19 m

ROAD (0.00 + 49.52 + 0.00) = 49.52 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.00	65.09	0.00	-9.54	-6.02	0.00	0.00	0.00	49.52

Segment Leq : 49.52 dBA

Results segment # 3: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 53.08 + 0.00) = 53.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	63.88	0.00	-9.54	-1.25	0.00	0.00	0.00	53.08

Segment Leq : 53.08 dBA

Results segment # 4: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 60.38 + 0.00) = 60.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.41	0.00	-1.03	0.00	0.00	0.00	0.00	60.38

Segment Leq : 60.38 dBA

Results segment # 5: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 49.17 + 0.00) = 49.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	62.72	0.00	-10.54	-3.01	0.00	0.00	0.00	49.17

Segment Leq : 49.17 dBA

Total Leq All Segments: 66.56 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 64.85 + 0.00) = 64.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.00	84.56	0.00	-17.94	-1.76	0.00	0.00	0.00	64.85

Segment Leq : 64.85 dBA

Results segment # 2: Essa Rd W (night)

Source height = 1.19 m

ROAD (0.00 + 42.97 + 0.00) = 42.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
45	90	0.00	58.53	0.00	-9.54	-6.02	0.00	0.00	0.00	42.97

Segment Leq : 42.97 dBA

Results segment # 3: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 46.59 + 0.00) = 46.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	57.39	0.00	-9.54	-1.25	0.00	0.00	0.00	46.59

Segment Leq : 46.59 dBA

Results segment # 4: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 53.75 + 0.00) = 53.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.78	0.00	-1.03	0.00	0.00	0.00	0.00	53.75

Segment Leq : 53.75 dBA

Results segment # 5: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 42.61 + 0.00) = 42.61 dBA

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

0	90	0.00	56.17	0.00	-10.54	-3.01	0.00	0.00	0.00	42.61
---	----	------	-------	------	--------	-------	------	------	------	-------

Segment Leq : 42.61 dBA

Total Leq All Segments: 65.28 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 67.31
(NIGHT): 65.35

Filename: loc7ne12.te Time Period: Day/Night 16/8 hours
 Description: Loc 7 - NE Façade - 12th Level

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont ! !weld
1. Freight	1.3/0.0	1.3/0.0	16.0	1.0	8.0	Diesel	Yes

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

Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 41.00 / 41.00 m
 Receiver height : 29.25 / 29.25 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 20 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	Eng type	!Cont ! !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	67.0/23.0	0.00	10.00
2. Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 186.00 / 186.00 m
 Receiver height : 29.25 / 29.25 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 46.59 + 0.00) = 46.59 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	53.97	-4.37	-3.01	0.00	0.00	0.00	46.59

WHEEL (0.00 + 30.08 + 0.00) = 30.08 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	37.46	-4.37	-3.01	0.00	0.00	0.00	30.08

LEFT WHISTLE (0.00 + 56.85 + 0.00) = 56.85 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	20	0.00	70.76	-4.37	-9.54	0.00	0.00	0.00	56.85

RIGHT WHISTLE (0.00 + 61.93 + 0.00) = 61.93 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	84	0.00	70.76	-4.37	-4.47	0.00	0.00	0.00	61.93

Segment Leq : 63.20 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 49.06 + 0.00) = 49.06 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.93	-7.78	0.00	0.00	0.00	49.06

WHEEL (0.00 + 37.80 + 0.00) = 37.80 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.93	-7.78	0.00	0.00	0.00	37.80

Segment Leq : 49.37 dBA

Total Leq All Segments: 63.38 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -7.38 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-4.37	-3.01	0.00	0.00	0.00	-7.38

WHEEL (0.00 + -7.38 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	0.00	-4.37	-3.01	0.00	0.00	0.00	-7.38

LEFT WHISTLE (0.00 + 56.85 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	20	0.00	0.00	-4.37	-9.54	0.00	0.00	0.00	56.85

Segment Leq : 0.00 dBA

Results segment # 2: G0 Transit (night)

LOCOMOTIVE (0.00 + 47.65 + 0.00) = 47.65 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	66.37	-10.93	-7.78	0.00	0.00	0.00	47.65

WHEEL (0.00 + 36.33 + 0.00) = 36.33 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.93	-7.78	0.00	0.00	0.00	36.33

Segment Leq : 47.96 dBA

Total Leq All Segments: 47.96 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : -90.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 934.00 / 934.00 m
Receiver height : 35.45 / 35.45 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Essa Rd E (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 : 170.00 / 170.00 m
Receiver height : 35.45 / 35.46 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Innisfil Rd (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 : 22.00 / 22.00 m
Receiver height      : 35.45 / 35.45 m
Topography           :      1      (Flat/gentle slope; no barrier)

```

Road data, segment # 4: Tiffin St E (day/night)

```

-----
Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth       : 0.00
Number of Years of Growth         : 10.00
Medium Truck % of Total Volume    : 1.65
Heavy Truck % of Total Volume     : 1.65
Day (16 hrs) % of Total Volume    : 90.00

```

Data for Segment # 4: Tiffin St E (day/night)

```

-----
Angle1   Angle2           : 20.00 deg   90.00 deg
Wood depth           :      0      (No woods.)
No of house rows     :      0 / 0
Surface              :      1      (Absorptive ground surface)
Receiver source distance : 113.00 / 113.00 m
Receiver height      : 35.45 / 35.45 m
Topography           :      1      (Flat/gentle slope; no barrier)

```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 64.86 + 0.00) = 64.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.00	84.56	0.00	-17.94	-1.76	0.00	0.00	0.00	64.86

Segment Leq : 64.86 dBA

Results segment # 2: Essa Rd E (day)

Source height = 1.13 m

ROAD (0.00 + 52.08 + 0.00) = 52.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	63.88	0.00	-10.54	-1.25	0.00	0.00	0.00	52.08

Segment Leq : 52.08 dBA

Results segment # 3: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 59.75 + 0.00) = 59.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	61.41	0.00	-1.66	0.00	0.00	0.00	0.00	59.75

Segment Leq : 59.75 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 49.85 + 0.00) = 49.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.00	62.72	0.00	-8.77	-4.10	0.00	0.00	0.00	49.85

Segment Leq : 49.85 dBA

Total Leq All Segments: 66.30 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 64.85 + 0.00) = 64.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.00	84.56	0.00	-17.94	-1.76	0.00	0.00	0.00	64.85

Segment Leq : 64.85 dBA

Results segment # 2: Essa Rd E (night)

Source height = 1.14 m

ROAD (0.00 + 45.59 + 0.00) = 45.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	45	0.00	57.39	0.00	-10.54	-1.25	0.00	0.00	0.00	45.59

Segment Leq : 45.59 dBA

Results segment # 3: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 53.12 + 0.00) = 53.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.78	0.00	-1.66	0.00	0.00	0.00	0.00	53.12

Segment Leq : 53.12 dBA

Results segment # 4: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 43.30 + 0.00) = 43.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.00	56.17	0.00	-8.77	-4.10	0.00	0.00	0.00	43.30

Segment Leq : 43.30 dBA

Total Leq All Segments: 65.21 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.09
(NIGHT): 65.29

Filename: loc8_nw.te Time Period: Day/Night 16/8 hours
 Description: Location 8 - North façade (Townhouses - 4th Level)

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

Train Type	! Trains ! ! (Left)	! Trains ! ! (Right)	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	! Eng ! ! type	!Cont ! !weld
1. Freight	! 1.3/0.0	! 1.3/0.0	! 16.0	! 1.0	! 8.0	!Diesel!	! Yes

Data for Segment # 1: Cando (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 : 25.00 / 25.00 m
 Receiver height : 10.65 / 10.65 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Whistle Angle : 58 deg Track 1

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

Train Type	! Trains !	! Speed ! !(km/h)	!# loc ! !/Train!	!# Cars! !/Train!	! Eng ! ! type	!Cont ! !weld
* 1. Passenger 1L!	67.0/23.0	! 24.0	! 1.0	! 12.0	!Diesel!	! Yes
* 2. Passenger 2L!	9.0/4.0	! 24.0	! 2.0	! 12.0	!Diesel!	! Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train type: No Name	! Unadj. ! ! Trains	! Annual % ! ! Increase	! Years of ! ! Growth
1. Passenger 1L	! 67.0/23.0	! 0.00	! 10.00
2. Passenger 2L	! 9.0/4.0	! 0.00	! 10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 168.00 / 168.00 m
 Receiver height : 10.65 / 10.65 m
 Topography : 1 (Flat/gentle slope; no barrier)
 No Whistle

Results segment # 1: Cando (day)

LOCOMOTIVE (0.00 + 51.75 + 0.00) = 51.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-2.22	0.00	0.00	0.00	0.00	51.75

WHEEL (0.00 + 35.24 + 0.00) = 35.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-2.22	0.00	0.00	0.00	0.00	35.24

LEFT WHISTLE (0.00 + 67.57 + 0.00) = 67.57 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	58	0.00	70.76	-2.22	-0.97	0.00	0.00	0.00	67.57

RIGHT WHISTLE (0.00 + 60.57 + 0.00) = 60.57 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
58	87	0.00	70.76	-2.22	-7.97	0.00	0.00	0.00	60.57

Segment Leq : 68.46 dBA

Results segment # 2: GO Transit (day)

LOCOMOTIVE (0.00 + 49.50 + 0.00) = 49.50 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.49	-7.78	0.00	0.00	0.00	49.50

WHEEL (0.00 + 38.24 + 0.00) = 38.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.49	-7.78	0.00	0.00	0.00	38.24

Segment Leq : 49.81 dBA

Total Leq All Segments: 68.52 dBA

Results segment # 1: Cando (night)

LOCOMOTIVE (0.00 + -2.22 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-2.22	0.00	0.00	0.00	0.00	-2.22

WHEEL (0.00 + -2.22 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	0.00	-2.22	0.00	0.00	0.00	0.00	-2.22

LEFT WHISTLE (0.00 + 67.57 + 0.00) = 0.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-86	58	0.00	0.00	-2.22	-0.97	0.00	0.00	0.00	67.57

Segment Leq : 0.00 dBA

Results segment # 2: GO Transit (night)

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
60	90	0.00	66.37	-10.49	-7.78	0.00	0.00	0.00	48.09

WHEEL (0.00 + 36.77 + 0.00) = 36.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	55.04	-10.49	-7.78	0.00	0.00	0.00	36.77

Segment Leq : 48.40 dBA

Total Leq All Segments: 48.40 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *

Medium truck volume : 2983/1491 veh/TimePeriod *

Heavy truck volume : 8950/4474 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500

Percentage of Annual Growth : 3.23

Number of Years of Growth : 16.00

Medium Truck % of Total Volume : 1.85

Heavy Truck % of Total Volume : 5.55

Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (day/night)

Angle1 Angle2 : 20.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 898.00 / 898.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (day/night)

Angle1 Angle2 : -90.00 deg -20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 90.00 / 90.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 3: Tiffin St W (day/night)

Car traffic volume : 8921/991 veh/TimePeriod *
Medium truck volume : 152/17 veh/TimePeriod *
Heavy truck volume : 152/17 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 3: Tiffin St W (day/night)

Angle1 Angle2 : 40.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 108.00 / 108.00 m
Receiver height : 10.65 / 10.65 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 4: Tiffin St E (day/night)

```

-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume  : 136/15    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement      : 1 (Typical asphalt or concrete)
  
```

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

```

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth       : 0.00
Number of Years of Growth         : 10.00
Medium Truck % of Total Volume    : 1.65
Heavy Truck % of Total Volume     : 1.65
Day (16 hrs) % of Total Volume    : 90.00
  
```

Data for Segment # 4: Tiffin St E (day/night)

```

-----
Angle1 Angle2      : -90.00 deg  40.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface            : 1          (Absorptive ground surface)
Receiver source distance : 108.00 / 108.00 m
Receiver height     : 10.65 / 10.65 m
Topography          : 1          (Flat/gentle slope; no barrier)
  
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.38	84.56	0.00	-24.60	-5.35	0.00	0.00	0.00	54.60

Segment Leq : 54.60 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

ROAD (0.00 + 45.16 + 0.00) = 45.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.40	61.41	0.00	-10.86	-5.39	0.00	0.00	0.00	45.16

Segment Leq : 45.16 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

ROAD (0.00 + 43.90 + 0.00) = 43.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
40	90	0.40	63.21	0.00	-11.97	-7.34	0.00	0.00	0.00	43.90

Segment Leq : 43.90 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

ROAD (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	40	0.40	62.72	0.00	-11.97	-2.11	0.00	0.00	0.00	48.63

Segment Leq : 48.63 dBA

Total Leq All Segments: 56.22 dBA

Results segment # 1: Hwy 400 (night)

Source height = 1.53 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.38	84.56	0.00	-24.60	-5.35	0.00	0.00	0.00	54.60

Segment Leq : 54.60 dBA

Results segment # 2: Innisfil Rd (night)

Source height = 1.14 m

ROAD (0.00 + 38.53 + 0.00) = 38.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.40	54.78	0.00	-10.87	-5.39	0.00	0.00	0.00	38.53

Segment Leq : 38.53 dBA

Results segment # 3: Tiffin St W (night)

Source height = 1.13 m

ROAD (0.00 + 37.39 + 0.00) = 37.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
40	90	0.40	56.70	0.00	-11.97	-7.34	0.00	0.00	0.00	37.39

Segment Leq : 37.39 dBA

Results segment # 4: Tiffin St E (night)

Source height = 1.13 m

ROAD (0.00 + 42.08 + 0.00) = 42.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	40	0.40	56.17	0.00	-11.97	-2.12	0.00	0.00	0.00	42.08

Segment Leq : 42.08 dBA

Total Leq All Segments: 55.01 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.77
(NIGHT): 55.87

Filename: loc9_7t.te Time Period: Day/Night 16/8 hours
 Description: Loc 9 - N Facade (7th level Terrace)

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 44.00 / 30.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 3.00 m
 Barrier receiver distance : 10.00 / 15.00 m
 Source elevation : 0.00 m
 Receiver elevation : 18.60 m
 Barrier elevation : 18.60 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. !	! Annual % !	! Years of !
		! Trains !	! Increase !	! Growth !
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 187.00 / 187.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 / 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 18.60 m
 Barrier elevation : 18.60 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-2.16 !	16.44
0.50 !	1.50 !	-2.95 !	15.65

LOCOMOTIVE (0.00 + 34.20 + 0.00) = 34.20 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-4.67	0.00	0.00	0.00	-15.09	34.20

WHEEL (0.00 + 17.02 + 0.00) = 17.02 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-4.67	0.00	0.00	0.00	-15.76	17.02

Segment Leq : 34.28 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	1.24 !	19.84
0.50 !	1.50 !	1.19 !	19.79

LOCOMOTIVE (0.00 + 49.04 + 0.00) = 49.04 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.96	-7.78	0.00	0.00	-4.95	44.08*
60	90	0.00	67.78	-10.96	-7.78	0.00	0.00	0.00	49.04

* Bright Zone !

WHEEL (0.00 + 37.78 + 0.00) = 37.78 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.96	-7.78	0.00	0.00	-4.98	32.79*
60	90	0.00	56.52	-10.96	-7.78	0.00	0.00	0.00	37.78

* Bright Zone !

Segment Leq : 49.35 dBA

Total Leq All Segments: 49.48 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 947.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -5.00 deg Angle2 : 30.00 deg
Barrier height : 32.00 m
Barrier receiver distance : 45.00 m
Source elevation : 0.00 m
Receiver elevation : 18.60 m
Barrier elevation : 18.60 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (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 : 36.00 m
Receiver height  :    1.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 90.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 17.00 m
Source elevation :    0.00 m
Receiver elevation : 18.60 m
Barrier elevation : 18.60 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume  : 152/17    veh/TimePeriod *
Posted speed limit  :    50 km/h
Road gradient       :    0 %
Road pavement       :    1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth      :    0.00
Number of Years of Growth        :   10.00
Medium Truck % of Total Volume   :    1.65
Heavy Truck % of Total Volume    :    1.65
Day (16 hrs) % of Total Volume   :   90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   20.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 117.00 m
Receiver height  :    1.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 20.00 deg
Barrier height   :    1.10 m
Barrier receiver distance :    3.00 m
Source elevation :    0.00 m
Receiver elevation : 18.60 m
Barrier elevation : 18.60 m

```

Road data, segment # 4: Tiffin St E (day/night)

```
-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume  : 136/15    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 10.00
Medium Truck % of Total Volume      : 1.65
Heavy Truck % of Total Volume       : 1.65
Day (16 hrs) % of Total Volume      : 90.00
```

Data for Segment # 4: Tiffin St E (day/night)

```
-----
Angle1  Angle2      : 20.00 deg  90.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 117.00 / 117.00 m
Receiver height      : 1.50 / 4.50 m
Topography           : 2          (Flat/gentle slope; with barrier)
Barrier angle1       : 20.00 deg  Angle2 : 90.00 deg
Barrier height        : 1.10 m
Barrier receiver distance : 3.00 / 3.00 m
Source elevation      : 0.00 m
Receiver elevation    : 18.60 m
Barrier elevation     : 18.60 m
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

```
-----
Source      ! Receiver ! Barrier   ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.53 ! 1.50 ! 0.62 ! 19.22
```

ROAD (49.88 + 39.44 + 47.62) = 52.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.66	84.56	0.00	-29.87	-4.82	0.00	0.00	0.00	49.88
-5	30	0.00	84.56	0.00	-18.00	-7.11	0.00	0.00	-20.00	39.44
30	90	0.66	84.56	0.00	-29.87	-7.08	0.00	0.00	0.00	47.62

Segment Leq : 52.14 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-7.45	11.15

ROAD (0.00 + 37.19 + 0.00) = 37.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.60	61.41	0.00	-6.10	-1.36	0.00	0.00	-16.76	37.19

Segment Leq : 37.19 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	1.01	19.61

ROAD (0.00 + 40.62 + 0.00) = 40.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.61	63.21	0.00	-14.32	-3.23	0.00	0.00	-5.05	40.62

Segment Leq : 40.62 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	1.01	19.61

ROAD (0.00 + 37.44 + 0.00) = 37.44 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.60	62.72	0.00	-14.32	-5.93	0.00	0.00	-5.03	37.44

Segment Leq : 37.44 dBA

Total Leq All Segments: 52.70 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.39

Filename: loc10_9t.te Time Period: Day/Night 16/8 hours
 Description: Loc 10 - N Facade (9th level Terrace)

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 50.00 m
 Receiver height : 1.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 3.00 m
 Barrier receiver distance : 10.00 m
 Source elevation : 0.00 m
 Receiver elevation : 24.80 m
 Barrier elevation : 24.80 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. !	! Annual % !	! Years of !
		! Trains !	! Increase !	! Growth !
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 193.00 / 193.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 / 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 24.80 m
 Barrier elevation : 24.80 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-2.96 !	21.84
0.50 !	1.50 !	-3.66 !	21.14

LOCOMOTIVE (0.00 + 33.05 + 0.00) = 33.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-5.23	0.00	0.00	0.00	-15.69	33.05

WHEEL (0.00 + 16.05 + 0.00) = 16.05 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-5.23	0.00	0.00	0.00	-16.18	16.05

Segment Leq : 33.14 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	1.15 !	25.95
0.50 !	1.50 !	1.10 !	25.90

LOCOMOTIVE (0.00 + 48.90 + 0.00) = 48.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-11.09	-7.78	0.00	0.00	-4.99	43.91*
60	90	0.00	67.78	-11.09	-7.78	0.00	0.00	0.00	48.90

* Bright Zone !

WHEEL (0.00 + 32.64 + 0.00) = 32.64 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-11.09	-7.78	0.00	0.00	-5.00	32.64

Segment Leq : 49.00 dBA

Total Leq All Segments: 49.11 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 947.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -5.00 deg Angle2 : 30.00 deg
Barrier height : 32.00 m
Barrier receiver distance : 45.00 m
Source elevation : 0.00 m
Receiver elevation : 24.80 m
Barrier elevation : 24.80 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (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 : 36.00 / 15.00 m
Receiver height  :      1.50 / 4.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 90.00 deg
Barrier height   :      1.10 m
Barrier receiver distance : 17.00 / 10.00 m
Source elevation :      0.00 m
Receiver elevation : 24.80 m
Barrier elevation : 24.80 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume  : 152/17    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 10.00
Medium Truck % of Total Volume   : 1.65
Heavy Truck % of Total Volume    : 1.65
Day (16 hrs) % of Total Volume   : 90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   20.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 123.00 m
Receiver height  :      1.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 20.00 deg
Barrier height   :      1.10 m
Barrier receiver distance : 3.00 m
Source elevation :      0.00 m
Receiver elevation : 24.80 m
Barrier elevation : 24.80 m

```

Road data, segment # 4: Tiffin St E (day/night)

```
-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume  : 136/15    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 10.00
Medium Truck % of Total Volume      : 1.65
Heavy Truck % of Total Volume       : 1.65
Day (16 hrs) % of Total Volume      : 90.00
```

Data for Segment # 4: Tiffin St E (day/night)

```
-----
Angle1  Angle2      : 20.00 deg  90.00 deg
Wood depth      : 0          (No woods.)
No of house rows : 0 / 0
Surface         : 1          (Absorptive ground surface)
Receiver source distance : 123.00 m
Receiver height  : 1.50 m
Topography       : 2          (Flat/gentle slope; with barrier)
Barrier angle1   : 20.00 deg  Angle2 : 90.00 deg
Barrier height    : 1.10 m
Barrier receiver distance : 3.00 m
Source elevation  : 0.00 m
Receiver elevation : 24.80 m
Barrier elevation  : 24.80 m
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

```
-----
Source      ! Receiver ! Barrier   ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.53 !      1.50 !      0.32 !      25.12
```

ROAD (49.88 + 39.44 + 47.62) = 52.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.66	84.56	0.00	-29.87	-4.82	0.00	0.00	0.00	49.88
-5	30	0.00	84.56	0.00	-18.00	-7.11	0.00	0.00	-20.00	39.44
30	90	0.66	84.56	0.00	-29.87	-7.08	0.00	0.00	0.00	47.62

Segment Leq : 52.14 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-10.38	14.42

ROAD (0.00 + 36.35 + 0.00) = 36.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.60	61.41	0.00	-6.10	-1.36	0.00	0.00	-17.60	36.35

Segment Leq : 36.35 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.89	25.69

ROAD (0.00 + 40.05 + 0.00) = 40.05 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.61	63.21	0.00	-14.67	-3.23	0.00	0.00	-5.27	40.05

Segment Leq : 40.05 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.89	25.69

ROAD (0.00 + 36.92 + 0.00) = 36.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.60	62.72	0.00	-14.67	-5.93	0.00	0.00	-5.21	36.92

Segment Leq : 36.92 dBA

Total Leq All Segments: 52.63 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.22

Filename: loc11t11.te Time Period: Day/Night 16/8 hours
 Description: Loc 11 - N Facade (11th level Terrace)

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 44.00 m
 Receiver height : 1.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 3.00 m
 Barrier receiver distance : 10.00 m
 Source elevation : 0.00 m
 Receiver elevation : 31.00 m
 Barrier elevation : 31.00 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. ! Trains	! Annual % ! Increase	! Years of ! Growth
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 187.00 / 187.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 / 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 31.00 m
 Barrier elevation : 31.00 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-4.98 !	26.02
0.50 !	1.50 !	-5.77 !	25.23

LOCOMOTIVE (0.00 + 32.41 + 0.00) = 32.41 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-4.67	0.00	0.00	0.00	-16.88	32.41

WHEEL (0.00 + 15.63 + 0.00) = 15.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-4.67	0.00	0.00	0.00	-17.16	15.63

Segment Leq : 32.50 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	1.04 !	32.04
0.50 !	1.50 !	0.99 !	31.99

LOCOMOTIVE (0.00 + 44.03 + 0.00) = 44.03 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.96	-7.78	0.00	0.00	-5.01	44.03

WHEEL (0.00 + 32.75 + 0.00) = 32.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.96	-7.78	0.00	0.00	-5.03	32.75

Segment Leq : 44.34 dBA

Total Leq All Segments: 44.62 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 947.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -5.00 deg Angle2 : 30.00 deg
Barrier height : 32.00 m
Barrier receiver distance : 45.00 m
Source elevation : 0.00 m
Receiver elevation : 31.00 m
Barrier elevation : 31.00 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (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 : 36.00 / 15.00 m
Receiver height  :    1.50 / 4.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 90.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 17.00 / -4.00 m
Source elevation :    0.00 m
Receiver elevation :   31.00 m
Barrier elevation :   31.00 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume  : 152/17    veh/TimePeriod *
Posted speed limit  :    50 km/h
Road gradient       :    0 %
Road pavement       :    1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth      :    0.00
Number of Years of Growth        :   10.00
Medium Truck % of Total Volume   :    1.65
Heavy Truck % of Total Volume    :    1.65
Day (16 hrs) % of Total Volume   :   90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   20.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 130.00 / 130.00 m
Receiver height  :    1.50 / 4.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 20.00 deg
Barrier height   :    1.10 m
Barrier receiver distance :  3.00 /  3.00 m
Source elevation :    0.00 m
Receiver elevation :   31.00 m
Barrier elevation :   31.00 m

```

Road data, segment # 4: Tiffin St E (day/night)

```

-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume  : 136/15    veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
  
```

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

```

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 10.00
Medium Truck % of Total Volume       : 1.65
Heavy Truck % of Total Volume        : 1.65
Day (16 hrs) % of Total Volume       : 90.00
  
```

Data for Segment # 4: Tiffin St E (day/night)

```

-----
Angle1  Angle2      : 20.00 deg  90.00 deg
Wood depth          : 0          (No woods.)
No of house rows    : 0 / 0
Surface             : 1          (Absorptive ground surface)
Receiver source distance : 130.00 m
Receiver height      : 1.50 m
Topography          : 2          (Flat/gentle slope; with barrier)
Barrier angle1      : 20.00 deg  Angle2 : 90.00 deg
Barrier height       : 1.10 m
Barrier receiver distance : 3.00 m
Source elevation     : 0.00 m
Receiver elevation   : 31.00 m
Barrier elevation    : 31.00 m
  
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver ! Barrier   ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.53 !      1.50 !      0.03 !      31.03
  
```

ROAD (49.88 + 39.44 + 47.62) = 52.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-5	0.66	84.56	0.00	-29.87	-4.82	0.00	0.00	0.00	49.88
-5	30	0.00	84.56	0.00	-18.00	-7.11	0.00	0.00	-20.00	39.44
30	90	0.66	84.56	0.00	-29.87	-7.08	0.00	0.00	0.00	47.62

Segment Leq : 52.14 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-13.30	17.70

ROAD (0.00 + 35.90 + 0.00) = 35.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.60	61.41	0.00	-6.10	-1.36	0.00	0.00	-18.05	35.90

Segment Leq : 35.90 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.78	31.78

ROAD (0.00 + 39.35 + 0.00) = 39.35 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.61	63.21	0.00	-15.05	-3.23	0.00	0.00	-5.58	39.35

Segment Leq : 39.35 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.78	31.78

ROAD (0.00 + 36.29 + 0.00) = 36.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.60	62.72	0.00	-15.05	-5.93	0.00	0.00	-5.45	36.29

Segment Leq : 36.29 dBA

Total Leq All Segments: 52.56 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.21

Filename: loc12_13.te Time Period: Day/Night 16/8 hours
 Description: Loc 12 - 13th Terrace

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 50.00 m
 Receiver height : 1.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 37.20 m
 Barrier elevation : 37.20 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. ! Trains	! Annual % ! Increase	! Years of ! Growth
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 193.00 / 193.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 / 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 37.20 m
 Barrier elevation : 37.20 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-0.58 !	36.62
0.50 !	1.50 !	-0.79 !	36.41

LOCOMOTIVE (0.00 + 38.39 + 0.00) = 38.39 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-5.23	0.00	0.00	0.00	-10.35	38.39

WHEEL (0.00 + 21.37 + 0.00) = 21.37 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-5.23	0.00	0.00	0.00	-10.86	21.37

Segment Leq : 38.48 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	0.96 !	38.16
0.50 !	1.50 !	0.91 !	38.11

LOCOMOTIVE (0.00 + 43.86 + 0.00) = 43.86 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-11.09	-7.78	0.00	0.00	-5.04	43.86

WHEEL (0.00 + 32.56 + 0.00) = 32.56 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-11.09	-7.78	0.00	0.00	-5.08	32.56

Segment Leq : 44.17 dBA

Total Leq All Segments: 45.21 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 929.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -10.00 deg Angle2 : 55.00 deg
Barrier height : 27.00 m
Barrier receiver distance : 45.00 m
Source elevation : 0.00 m
Receiver elevation : 37.20 m
Barrier elevation : 37.20 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (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 : 51.00 / 15.00 m
Receiver height  :    1.50 / 4.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 90.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 17.00 / -4.00 m
Source elevation :    0.00 m
Receiver elevation : 37.20 m
Barrier elevation : 37.20 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume  : 152/17    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 10.00
Medium Truck % of Total Volume   : 1.65
Heavy Truck % of Total Volume    : 1.65
Day (16 hrs) % of Total Volume   : 90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   25.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 126.00 m
Receiver height  :    1.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 25.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 3.00 m
Source elevation :    0.00 m
Receiver elevation : 37.20 m
Barrier elevation : 37.20 m

```

Road data, segment # 4: Tiffin St E (day/night)

```
-----
Car traffic volume : 7941/882 veh/TimePeriod *
Medium truck volume : 136/15 veh/TimePeriod *
Heavy truck volume : 136/15 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)
```

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

```
24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00
```

Data for Segment # 4: Tiffin St E (day/night)

```
-----
Angle1 Angle2 : 25.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 126.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 25.00 deg Angle2 : 90.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 3.00 / 3.00 m
Source elevation : 0.00 m
Receiver elevation : 37.20 m
Barrier elevation : 37.20 m
```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

```
-----
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.53 ! 1.50 ! -0.30 ! 36.90
```

ROAD (49.64 + 42.22 + 44.03) = 51.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-10	0.66	84.56	0.00	-29.73	-5.20	0.00	0.00	0.00	49.64
-10	55	0.00	84.56	0.00	-17.92	-4.42	0.00	0.00	-20.00	42.22
55	90	0.66	84.56	0.00	-29.73	-10.80	0.00	0.00	0.00	44.03

Segment Leq : 51.27 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-11.02	26.18

ROAD (0.00 + 34.04 + 0.00) = 34.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.60	61.41	0.00	-8.53	-1.36	0.00	0.00	-17.48	34.04

Segment Leq : 34.04 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.61	37.81

ROAD (0.00 + 39.14 + 0.00) = 39.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	25	0.61	63.21	0.00	-14.83	-3.00	0.00	0.00	-6.24	39.14

Segment Leq : 39.14 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.61	37.81

ROAD (0.00 + 35.58 + 0.00) = 35.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
25	90	0.60	62.72	0.00	-14.83	-6.40	0.00	0.00	-5.91	35.58

Segment Leq : 35.58 dBA

Total Leq All Segments: 51.71 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 52.59

Filename: loc13_5n.te Time Period: Day/Night 16/8 hours
 Description: Loc 13 - 5th Level Terrace (North side)

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 38.00 m
 Receiver height : 1.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 3.00 m
 Source elevation : 0.00 m
 Receiver elevation : 12.40 m
 Barrier elevation : 12.40 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	Eng type	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. ! Trains	! Annual % ! Increase	! Years of ! Growth
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 178.00 / 178.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 4 (Elevated; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Elevation : 0.00 m
 Barrier receiver distance : 8.00 / 8.00 m
 Source elevation : 0.00 m
 Receiver elevation : 12.40 m
 Barrier elevation : 12.40 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	0.72 !	13.12
0.50 !	1.50 !	0.44 !	12.84

LOCOMOTIVE (0.00 + 44.18 + 0.00) = 44.18 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	53.97	-4.04	0.00	0.00	0.00	-5.75	44.18

WHEEL (0.00 + 26.59 + 0.00) = 26.59 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	37.46	-4.04	0.00	0.00	0.00	-6.83	26.59

Segment Leq : 44.25 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	1.06 !	13.46
0.50 !	1.50 !	0.90 !	13.30

LOCOMOTIVE (0.00 + 44.25 + 0.00) = 44.25 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-10.74	-7.78	0.00	0.00	-5.00	44.25

WHEEL (0.00 + 32.96 + 0.00) = 32.96 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-10.74	-7.78	0.00	0.00	-5.04	32.96

Segment Leq : 44.56 dBA

Total Leq All Segments: 47.42 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 929.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -35.00 deg Angle2 : 20.00 deg
Barrier height : 40.00 m
Barrier receiver distance : 25.00 / 25.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   -20.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 55.00 / 55.00 m
Receiver height  :    1.50 / 4.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : -20.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 8.00 / 8.00 m
Source elevation :    0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991   veh/TimePeriod *
Medium truck volume : 152/17    veh/TimePeriod *
Heavy truck volume  : 152/17    veh/TimePeriod *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 10.00
Medium Truck % of Total Volume   : 1.65
Heavy Truck % of Total Volume    : 1.65
Day (16 hrs) % of Total Volume   : 90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   25.00 deg
Wood depth      :      0           (No woods.)
No of house rows :      0 / 0
Surface         :      1           (Absorptive ground surface)
Receiver source distance : 112.00 m
Receiver height  :    1.50 m
Topography      :      2           (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 25.00 deg
Barrier height   :    1.10 m
Barrier receiver distance : 8.00 m
Source elevation :    0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

```

Road data, segment # 4: Tiffin St E (day/night)

```

-----
Car traffic volume : 7941/882   veh/TimePeriod  *
Medium truck volume : 136/15    veh/TimePeriod  *
Heavy truck volume : 136/15    veh/TimePeriod  *
Posted speed limit : 50 km/h
Road gradient      : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth         : 0.00
Number of Years of Growth           : 10.00
Medium Truck % of Total Volume      : 1.65
Heavy Truck % of Total Volume       : 1.65
Day (16 hrs) % of Total Volume      : 90.00

```

Data for Segment # 4: Tiffin St E (day/night)

```

-----
Angle1  Angle2      : 25.00 deg  90.00 deg
Wood depth      : 0          (No woods.)
No of house rows : 0 / 0
Surface         : 1          (Absorptive ground surface)
Receiver source distance : 112.00 m
Receiver height  : 1.50 m
Topography      : 2          (Flat/gentle slope; with barrier)
Barrier angle1   : 25.00 deg  Angle2 : 90.00 deg
Barrier height   : 1.10 m
Barrier receiver distance : 8.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver ! Barrier   ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.53 ! 1.50 ! 1.17 ! 13.57

```

ROAD (47.17 + 41.49 + 48.78) = 51.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-35	0.66	84.56	0.00	-29.73	-7.67	0.00	0.00	0.00	47.17
-35	20	0.00	84.56	0.00	-17.92	-5.15	0.00	0.00	-20.00	41.49
20	90	0.66	84.56	0.00	-29.73	-6.06	0.00	0.00	0.00	48.78

Segment Leq : 51.51 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-0.35	12.05

ROAD (0.00 + 38.63 + 0.00) = 38.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.60	61.41	0.00	-9.05	-5.93	0.00	0.00	-7.80	38.63

Segment Leq : 38.63 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.59	12.99

ROAD (0.00 + 40.59 + 0.00) = 40.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	25	0.61	63.21	0.00	-14.01	-3.00	0.00	0.00	-5.61	40.59

Segment Leq : 40.59 dBA

Results segment # 4: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.59	12.99

ROAD (0.00 + 36.86 + 0.00) = 36.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
25	90	0.60	62.72	0.00	-14.01	-6.40	0.00	0.00	-5.44	36.86

Segment Leq : 36.86 dBA

Total Leq All Segments: 52.18 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 53.43

Filename: loc14_5s.te Time Period: Day/Night 16/8 hours
 Description: Loc 14 - 5th Level Terrace (South side)

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
1. Freight	2.6/0.0	16.0	1.0	8.0	Diesel	Yes

Data for Segment # 1: Cando (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 : 68.00 m
 Receiver height : 1.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : -35.00 deg Angle2 : 35.00 deg
 Barrier height : 40.00 m
 Barrier receiver distance : 18.00 m
 Source elevation : 0.00 m
 Receiver elevation : 12.40 m
 Barrier elevation : 12.40 m

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

Train Type	! Trains !	! Speed ! (km/h)	!# loc !/Train!	!# Cars !/Train!	! Eng type !	!Cont !weld
* 1. Passenger 1L	67.0/23.0	24.0	1.0	12.0	Diesel	Yes
* 2. Passenger 2L	9.0/4.0	24.0	2.0	12.0	Diesel	Yes

* The identified number of trains have been adjusted for future growth using the following parameters:

Train No	Name	! Unadj. !	! Annual % !	! Years of !
		! Trains !	! Increase !	! Growth !
1.	Passenger 1L	67.0/23.0	0.00	10.00
2.	Passenger 2L	9.0/4.0	0.00	10.00

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

Angle1 Angle2 : 60.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 2 (Reflective ground surface)
 Receiver source distance : 202.00 / 202.00 m
 Receiver height : 1.50 / 4.50 m
 Topography : 2 (Flat/gentle slope; with barrier)
 No Whistle
 Barrier angle1 : 60.00 deg Angle2 : 90.00 deg
 Barrier height : 1.10 m
 Barrier receiver distance : 40.00 / 40.00 m
 Source elevation : 0.00 m
 Receiver elevation : 12.40 m
 Barrier elevation : 12.40 m

Results segment # 1: Cando (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-1.12 !	11.28
0.50 !	1.50 !	-2.05 !	10.35

LOCOMOTIVE (42.26 + 23.30 + 42.26) = 45.29 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-35	0.00	53.97	-6.56	-5.15	0.00	0.00	0.00	42.26
-35	35	0.00	53.97	-6.56	-4.10	0.00	0.00	-20.00	23.30
35	90	0.00	53.97	-6.56	-5.15	0.00	0.00	0.00	42.26

WHEEL (25.74 + 6.79 + 25.74) = 28.78 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-35	0.00	37.46	-6.56	-5.15	0.00	0.00	0.00	25.74
-35	35	0.00	37.46	-6.56	-4.10	0.00	0.00	-20.00	6.79
35	90	0.00	37.46	-6.56	-5.15	0.00	0.00	0.00	25.74

Segment Leq : 45.39 dBA

Results segment # 2: GO Transit (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	-0.46 !	11.94
0.50 !	1.50 !	-1.15 !	11.25

LOCOMOTIVE (0.00 + 43.22 + 0.00) = 43.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	67.78	-11.29	-7.78	0.00	0.00	-5.48	43.22

WHEEL (0.00 + 31.51 + 0.00) = 31.51 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
60	90	0.00	56.52	-11.29	-7.78	0.00	0.00	-5.93	31.51

Segment Leq : 43.50 dBA

Total Leq All Segments: 47.56 dBA

Road data, segment # 1: Hwy 400 (day/night)

Car traffic volume : 149327/74652 veh/TimePeriod *
Medium truck volume : 2983/1491 veh/TimePeriod *
Heavy truck volume : 8950/4474 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 145500
Percentage of Annual Growth : 3.23
Number of Years of Growth : 16.00
Medium Truck % of Total Volume : 1.85
Heavy Truck % of Total Volume : 5.55
Day (16 hrs) % of Total Volume : 66.67

Data for Segment # 1: Hwy 400 (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 : 896.00 / 896.00 m
Receiver height : 1.50 / 31.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 29.00 / 29.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

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

Car traffic volume : 5689/632 veh/TimePeriod *
Medium truck volume : 103/11 veh/TimePeriod *
Heavy truck volume : 103/11 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 6550
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.75
Heavy Truck % of Total Volume : 1.75
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Innisfil Rd (day/night)

```

-----
Angle1   Angle2       : 20.00 deg   90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 69.00 / 69.00 m
Receiver height : 1.50 / 4.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 20.00 deg   Angle2 : 90.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 50.00 / 50.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

```

Road data, segment # 3: Tiffin St W (day/night)

```

-----
Car traffic volume : 8921/991 veh/TimePeriod *
Medium truck volume : 152/17 veh/TimePeriod *
Heavy truck volume : 152/17 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 10250
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

```

Data for Segment # 3: Tiffin St W (day/night)

```

-----
Angle1   Angle2       : -90.00 deg   30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 150.00 m
Receiver height : 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg   Angle2 : 30.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 24.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

```

Road data, segment # 4: Essa Rd E (day/night)

Car traffic volume : 10400/1156 veh/TimePeriod *
Medium truck volume : 177/20 veh/TimePeriod *
Heavy truck volume : 177/20 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 11950
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 1.65
Heavy Truck % of Total Volume : 1.65
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 4: Essa Rd E (day/night)

Angle1 Angle2 : -90.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 182.00 / 182.00 m
Receiver height : 1.50 / 50.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 30.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 14.00 / 14.00 m
Source elevation : 0.00 m
Receiver elevation : 12.40 m
Barrier elevation : 12.40 m

Road data, segment # 5: Essa Rd W (day/night)

Car traffic volume : 12182/1354 veh/TimePeriod *
Medium truck volume : 254/28 veh/TimePeriod *
Heavy truck volume : 254/28 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 14100
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 2.00
Heavy Truck % of Total Volume : 2.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 5: Essa Rd W (day/night)

```

-----
Angle1   Angle2       :   30.00 deg   90.00 deg
Wood depth      :           0       (No woods.)
No of house rows :           0 / 0
Surface         :           1       (Absorptive ground surface)
Receiver source distance : 185.00 / 185.00 m
Receiver height  :           1.50 / 29.25 m
Topography      :           2       (Flat/gentle slope; with barrier)
Barrier angle1   :   30.00 deg   Angle2 : 90.00 deg
Barrier height   :           1.10 m
Barrier receiver distance : 14.00 / 14.00 m
Source elevation :           0.00 m
Receiver elevation :          12.40 m
Barrier elevation :          12.40 m

```

Road data, segment # 6: Tiffin St E (day/night)

```

-----
Car traffic volume : 7941/882   veh/TimePeriod *
Medium truck volume : 136/15    veh/TimePeriod *
Heavy truck volume : 136/15    veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient      : 0 %
Road pavement      : 1 (Typical asphalt or concrete)

```

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

```

24 hr Traffic Volume (AADT or SADT): 9125
Percentage of Annual Growth      : 0.00
Number of Years of Growth        : 10.00
Medium Truck % of Total Volume   : 1.65
Heavy Truck % of Total Volume    : 1.65
Day (16 hrs) % of Total Volume   : 90.00

```

Data for Segment # 6: Tiffin St E (day/night)

```

-----
Angle1   Angle2       :   30.00 deg   90.00 deg
Wood depth      :           0       (No woods.)
No of house rows :           0 / 0
Surface         :           1       (Absorptive ground surface)
Receiver source distance : 114.00 m
Receiver height  :           1.50 m
Topography      :           2       (Flat/gentle slope; with barrier)
Barrier angle1   :   30.00 deg   Angle2 : 90.00 deg
Barrier height   :           1.10 m
Barrier receiver distance : 24.00 m
Source elevation :           0.00 m
Receiver elevation :          12.40 m
Barrier elevation :          12.40 m

```

Results segment # 1: Hwy 400 (day)

Source height = 1.53 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.53	1.50	1.10	13.50

ROAD (0.00 + 49.92 + 0.00) = 49.92 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.59	84.56	0.00	-28.29	-1.34	0.00	0.00	-5.00	49.92

Segment Leq : 49.92 dBA

Results segment # 2: Innisfil Rd (day)

Source height = 1.15 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.15	1.50	-7.74	4.66

ROAD (0.00 + 29.08 + 0.00) = 29.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.60	61.41	0.00	-10.63	-5.93	0.00	0.00	-15.77	29.08

Segment Leq : 29.08 dBA

Results segment # 3: Tiffin St W (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	-0.54	11.86

ROAD (0.00 + 37.40 + 0.00) = 37.40 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.61	63.21	0.00	-16.05	-2.78	0.00	0.00	-6.98	37.40

Segment Leq : 37.40 dBA

Results segment # 4: Essa Rd E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	0.52	12.92

ROAD (0.00 + 38.23 + 0.00) = 38.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	30	0.61	63.88	0.00	-17.40	-2.78	0.00	0.00	-5.47	38.23

Segment Leq : 38.23 dBA

Results segment # 5: Essa Rd W (day)

Source height = 1.19 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.19	1.50	0.54	12.94

ROAD (0.00 + 35.38 + 0.00) = 35.38 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	90	0.60	65.09	0.00	-17.49	-6.92	0.00	0.00	-5.30	35.38

Segment Leq : 35.38 dBA

Results segment # 6: Tiffin St E (day)

Source height = 1.13 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.13	1.50	-1.19	11.21

ROAD (0.00 + 34.24 + 0.00) = 34.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
30	90	0.60	62.72	0.00	-14.14	-6.92	0.00	0.00	-7.42	34.24

Segment Leq : 34.24 dBA

Total Leq All Segments: 50.69 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 52.41

DAYTIME OFF-SITE MECHANICAL SOURCES

Daytime - Off-site Stationary Sources

Receiver

Name: R1 - 5th Floor Amenity

ID: R1_5TH_OLA

X: 17603995.94 m

Y: 4914044.59 m

Z: 13.90 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	38.9	0.0	-2.6	0.0	0.0	18.5	0.0	0.0	40.5

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	40.4	0.1	-2.6	0.0	0.0	16.4	0.0	0.0	40.9

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	41.7	0.1	-2.6	0.0	0.0	14.7	0.0	0.0	41.4
12	17603996.09	4914012.34	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	45.4	0.1	-2.6	0.0	0.0	10.3	0.0	1.0	41.0

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
14	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	43.1	0.1	-2.6	0.0	0.0	12.9	0.0	0.0	41.7
21	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	44.3	0.1	-2.6	0.0	0.0	11.5	0.0	1.0	40.9

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
28	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	50.8	0.2	-2.5	0.0	0.0	7.8	0.0	0.0	38.9

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
39	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	50.9	0.2	-2.5	0.0	0.0	7.8	0.0	0.0	38.9

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
41	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.0	0.2	-2.5	0.0	0.0	7.7	0.0	0.0	38.9
52	17603903.64	4914009.27	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.0	0.2	-2.5	0.0	0.0	7.7	0.0	1.0	37.8

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
58	17604118.69	4913984.75	2.00	0	D	500	95.2	0.0	0.0	0.0	12.4	53.7	0.3	-2.5	0.0	0.0	5.6	0.0	0.0	25.8
65	17604118.69	4913984.75	2.00	1	D	500	95.2	0.0	0.0	0.0	10.8	55.7	0.3	-2.5	0.0	0.0	5.0	0.0	1.0	25.0

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
73	17604121.25	4913983.51	2.00	0	D	500	95.2	0.0	0.0	0.0	12.4	53.9	0.3	-2.5	0.0	0.0	5.5	0.0	0.0	25.7
75	17604121.25	4913983.51	2.00	1	D	500	95.2	0.0	0.0	0.0	10.8	55.5	0.3	-2.5	0.0	0.0	5.0	0.0	1.0	25.1

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
77	17604124.61	4913981.86	2.00	0	D	500	95.2	0.0	0.0	0.0	12.4	54.1	0.3	-2.5	0.0	0.0	5.4	0.0	0.0	25.5
78	17604124.61	4913981.86	2.00	1	D	500	95.2	0.0	0.0	0.0	10.7	55.3	0.3	-2.5	0.0	0.0	5.1	0.0	1.0	25.3

Daytime - Off-site Stationary Sources

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
80	17604128.17	4913980.12	2.00	0	D	500	95.2	0.0	0.0	0.0	12.4	54.4	0.3	-2.5	0.0	0.0	5.3	0.0	0.0	25.3
96	17604128.17	4913980.12	2.00	1	D	500	95.2	0.0	0.0	0.0	10.7	55.1	0.3	-2.5	0.0	0.0	5.1	0.0	1.0	25.5

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
97	17604131.73	4913978.38	2.00	0	D	500	95.2	0.0	0.0	0.0	12.4	54.6	0.3	-2.5	0.0	0.0	5.2	0.0	0.0	25.2
99	17604131.73	4913978.38	2.00	1	D	500	95.2	0.0	0.0	0.0	10.7	54.9	0.3	-2.5	0.0	0.0	5.2	0.0	1.0	25.6

Receiver

Name: R2 - 11th OLA

ID: R2_11_OLA

X: 17604043.73 m

Y: 4914055.30 m

Z: 32.50 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	47.5	0.1	-2.5	0.0	0.0	13.4	0.0	0.0	36.7

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
19	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	47.7	0.1	-2.5	0.0	0.0	13.3	0.0	0.0	36.6

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
31	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	48.0	0.1	-2.5	0.0	0.0	13.0	0.0	0.0	36.6

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
34	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	48.4	0.1	-2.5	0.0	0.0	12.8	0.0	0.0	36.4
38	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	48.8	0.2	-2.5	0.0	0.0	13.2	0.0	1.0	34.6

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
71	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.5	0.3	-2.5	0.0	0.0	5.1	0.0	0.0	37.9

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
79	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.5	0.3	-2.5	0.0	0.0	5.1	0.0	0.0	37.9

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
84	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.6	0.3	-2.5	0.0	0.0	5.1	0.0	0.0	37.8
86	17603903.64	4914009.27	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	54.6	0.3	-2.5	0.0	0.0	5.1	0.0	1.0	36.8

Receiver

Name: R3 - 13th OLA

ID: R3_13_OLA

X: 17604032.18 m

Y: 4914078.23 m

Z: 38.50 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	48.7	0.1	-2.5	0.0	0.0	20.9	0.0	0.0	28.0

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
15	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	49.1	0.2	-2.5	0.0	0.0	14.8	0.0	0.0	33.8

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
23	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	49.4	0.2	-2.5	0.0	0.0	13.9	0.0	0.0	34.3

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
29	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	49.9	0.2	-2.5	0.0	0.0	12.9	0.0	0.0	34.8
36	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	50.4	0.2	-2.5	0.0	0.0	12.4	0.0	1.0	33.8

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
66	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.3	0.3	-2.5	0.0	0.0	22.0	0.0	0.0	21.1

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
68	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.3	0.3	-2.5	0.0	0.0	22.0	0.0	0.0	21.1

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
70	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	54.5	0.3	-2.5	0.0	0.0	21.7	0.0	0.0	21.2

Receiver

Name: R4 - Tower 7th

ID: R4

X: 17603993.83 m

Y: 4914050.37 m

Z: 31.90 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	43.2	0.1	-2.6	0.0	0.0	6.4	0.0	0.0	48.2

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
8	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	44.0	0.1	-2.6	0.0	0.0	0.0	0.0	0.0	53.8

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
10	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	44.7	0.1	-2.6	0.0	0.0	0.0	0.0	0.0	53.0

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
16	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	45.6	0.1	-2.6	0.0	0.0	0.0	0.0	0.0	52.1
22	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	46.4	0.1	-2.6	0.0	0.0	0.0	0.0	1.0	50.3

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
25	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.1	0.2	-2.5	0.0	0.0	7.4	0.0	0.0	39.1

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
27	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.1	0.2	-2.5	0.0	0.0	6.4	0.0	0.0	40.0

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
33	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.3	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	46.2
35	17603903.64	4914009.27	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.3	0.2	-2.5	0.0	0.0	0.0	0.0	1.0	45.2

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
37	17604118.69	4913984.75	2.00	0	D	500	95.2	0.0	0.0	0.0	12.0	54.2	0.3	-2.5	0.0	0.0	4.5	0.0	0.0	26.7

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
43	17604121.25	4913983.51	2.00	0	D	500	95.2	0.0	0.0	0.0	12.1	54.3	0.3	-2.5	0.0	0.0	4.5	0.0	0.0	26.5

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
55	17604124.61	4913981.86	2.00	0	D	500	95.2	0.0	0.0	0.0	12.1	54.6	0.3	-2.5	0.0	0.0	4.6	0.0	0.0	26.2

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
61	17604128.17	4913980.12	2.00	0	D	500	95.2	0.0	0.0	0.0	12.1	54.8	0.3	-2.5	0.0	0.0	4.6	0.0	0.0	25.9

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
63	17604131.73	4913978.38	2.00	0	D	500	95.2	0.0	0.0	0.0	12.1	55.0	0.3	-2.5	0.0	0.0	4.7	0.0	0.0	25.6

Receiver

Name: R5 - House (south) - Facade

ID: R5_Facade

X: 17603983.81 m

Y: 4913940.79 m

Z: 4.50 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	47.5	0.1	-2.5	0.0	0.0	21.7	0.0	0.0	28.5
17	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	52.3	0.2	-2.5	0.0	0.0	23.8	0.0	0.0	21.4

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
24	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	48.2	0.1	-2.5	0.0	0.0	21.6	0.0	0.0	27.8
30	17603996.09	4914012.34	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.8	0.2	-2.5	0.0	0.0	23.8	0.0	0.0	21.9

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
44	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	48.8	0.1	-2.5	0.0	0.0	21.5	0.0	0.0	27.3
46	17603995.10	4914017.50	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.4	0.2	-2.5	0.0	0.0	23.8	0.0	0.0	22.3

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
48	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	49.4	0.2	-2.5	0.0	0.0	21.3	0.0	0.0	26.9
54	17603994.05	4914023.00	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.0	0.2	-2.5	0.0	0.0	23.8	0.0	0.0	22.8

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
60	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.5	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	46.1
62	17603903.64	4914009.27	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	51.5	0.2	-2.5	0.0	0.0	0.0	0.0	1.0	45.1

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
67	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	52.5	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	45.0

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
81	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	52.8	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	44.7

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
83	17604118.69	4913984.75	2.00	0	D	500	95.2	0.0	0.0	0.0	-8.7	54.0	0.3	-2.5	0.0	0.0	0.0	0.0	0.0	34.7

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
90	17604121.25	4913983.51	2.00	0	D	500	95.2	0.0	0.0	0.0	-8.8	54.2	0.3	-2.5	0.0	0.0	0.0	0.0	0.0	34.5

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
101	17604124.61	4913981.86	2.00	0	D	500	95.2	0.0	0.0	0.0	-8.9	54.3	0.3	-2.5	0.0	0.0	0.0	0.0	0.0	34.3
105	17604124.61	4913981.86	2.00	1	D	500	95.2	0.0	0.0	0.0	-7.6	55.2	0.3	-2.5	0.0	0.0	0.0	0.0	1.0	33.5

Daytime - Off-site Stationary Sources

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
107	17604128.17	4913980.12	2.00	0	D	500	95.2	0.0	0.0	0.0	-9.0	54.5	0.3	-2.5	0.0	0.0	0.0	0.0	0.0	34.0
111	17604128.17	4913980.12	2.00	1	D	500	95.2	0.0	0.0	0.0	-7.6	55.1	0.3	-2.5	0.0	0.0	0.0	0.0	1.0	33.8

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
113	17604131.73	4913978.38	2.00	0	D	500	95.2	0.0	0.0	0.0	-9.0	54.7	0.3	-2.5	0.0	0.0	0.0	0.0	0.0	33.7
115	17604131.73	4913978.38	2.00	1	D	500	95.2	0.0	0.0	0.0	-7.5	54.9	0.3	-2.5	0.0	0.0	0.0	0.0	1.0	34.0

Receiver

Name: R6 - House (south) - Rear

ID: R6_Facade

X: 17603985.79 m

Y: 4913966.28 m

Z: 1.50 m

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
9	17603997.31	4914005.99	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	43.3	0.1	-2.3	0.0	0.0	22.2	0.0	0.0	31.9
11	17603997.31	4914005.99	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	50.2	0.2	-2.1	0.0	0.0	24.1	0.0	0.0	22.9

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
13	17603996.09	4914012.34	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	44.5	0.1	-2.3	0.0	0.0	22.2	0.0	0.0	30.7
18	17603996.09	4914012.34	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	49.5	0.2	-2.1	0.0	0.0	24.1	0.0	0.0	23.5

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
20	17603995.10	4914017.50	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	45.3	0.1	-2.2	0.0	0.0	22.1	0.0	0.0	29.9
26	17603995.10	4914017.50	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	49.0	0.2	-2.1	0.0	0.0	24.2	0.0	0.0	24.1

Point Source, ISO 9613, Name: "Pneumatc #1", ID: "AUTOMOTIVE"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
32	17603994.05	4914023.00	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	46.2	0.1	-2.2	0.0	0.0	21.9	0.0	0.0	29.2
51	17603994.05	4914023.00	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	48.4	0.1	-2.1	0.0	0.0	24.2	0.0	0.0	24.6

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
53	17603903.64	4914009.27	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	50.3	0.2	-2.1	0.0	0.0	0.0	0.0	0.0	46.8
64	17603903.64	4914009.27	2.00	1	D	500	95.2	0.0	0.0	0.0	0.0	50.4	0.2	-2.1	0.0	0.0	0.0	0.0	1.0	45.8

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
72	17603900.42	4914025.06	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.3	0.2	-2.1	0.0	0.0	0.0	0.0	0.0	45.8

Point Source, ISO 9613, Name: "Cara Panels", ID: "CARA"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
74	17603899.53	4914029.53	2.00	0	D	500	95.2	0.0	0.0	0.0	0.0	51.6	0.2	-2.1	0.0	0.0	0.0	0.0	0.0	45.6

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
82	17604118.69	4913984.75	2.00	0	D	500	95.2	0.0	0.0	0.0	-9.8	53.6	0.3	-2.6	0.0	0.0	0.0	0.0	0.0	34.3
89	17604118.69	4913984.75	2.00	1	D	500	95.2	0.0	0.0	0.0	-8.6	55.3	0.3	-3.0	0.0	0.0	0.0	0.0	1.0	33.0

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
91	17604121.25	4913983.51	2.00	0	D	500	95.2	0.0	0.0	0.0	-9.8	53.7	0.3	-2.7	0.0	0.0	0.0	0.0	0.0	34.1
93	17604121.25	4913983.51	2.00	1	D	500	95.2	0.0	0.0	0.0	-8.5	55.1	0.3	-2.9	0.0	0.0	0.0	0.0	1.0	33.2

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
95	17604124.61	4913981.86	2.00	0	D	500	95.2	0.0	0.0	0.0	-9.9	53.9	0.3	-2.7	0.0	0.0	0.0	0.0	0.0	33.8
100	17604124.61	4913981.86	2.00	1	D	500	95.2	0.0	0.0	0.0	-8.5	55.0	0.3	-2.9	0.0	0.0	0.0	0.0	1.0	33.4

Daytime - Off-site Stationary Sources

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
102	17604128.17	4913980.12	2.00	0	D	500	95.2	0.0	0.0	0.0	10.0	54.1	0.3	-2.7	0.0	0.0	0.0	0.0	0.0	33.6
106	17604128.17	4913980.12	2.00	1	D	500	95.2	0.0	0.0	0.0	-8.4	54.8	0.3	-2.9	0.0	0.0	0.0	0.0	1.0	33.6

Point Source, ISO 9613, Name: "Peacock", ID: "P_AUTO"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
108	17604131.73	4913978.38	2.00	0	D	500	95.2	0.0	0.0	0.0	-10.1	54.3	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	33.3
112	17604131.73	4913978.38	2.00	1	D	500	95.2	0.0	0.0	0.0	-8.4	54.6	0.3	-2.8	0.0	0.0	0.0	0.0	1.0	33.9

EMERGENCY GENERATOR

Daytime - On-Site Diesel Generator

Receiver

Name: R1 - 5th Floor Amenity
ID: R1_5TH_OLA
X: 17603995.94 m
Y: 4914044.59 m
Z: 13.90 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	38.9	0.0	-2.6	0.0	0.0	19.7	0.0	0.0	38.0

Receiver

Name: R2 - 11th OLA

ID: R2_11_OLA

X: 17604043.73 m

Y: 4914055.30 m

Z: 32.50 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	48.6	0.1	-2.5	0.0	0.0	23.5	0.0	0.0	24.4

Receiver

Name: R3 - 13th OLA

ID: R3_13_OLA

X: 17604032.18 m

Y: 4914078.23 m

Z: 38.50 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	49.1	0.2	-2.5	0.0	0.0	23.5	0.0	0.0	23.8

Receiver
Name: R4 - Tower 7th
ID: R4
X: 17603993.83 m
Y: 4914050.37 m
Z: 31.90 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	42.7	0.1	-2.6	0.0	0.0	15.7	0.0	0.0	38.1

Receiver
Name: R5 - House (south) - Facade
ID: R5_Facade
X: 17603983.81 m
Y: 4913940.79 m
Z: 4.50 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	50.1	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	46.2
6	17603978.98	4914031.06	2.00	1	DEN	500	94.0	0.0	0.0	0.0	0.0	50.6	0.2	-2.5	0.0	0.0	0.0	0.0	0.0	45.7
8	17603978.98	4914031.06	2.00	1	DEN	500	94.0	0.0	0.0	0.0	0.0	50.2	0.2	-2.5	0.0	0.0	0.0	0.0	1.0	45.2

Receiver

Name: R6 - House (south) - Rear

ID: R6_Facade

X: 17603985.79 m

Y: 4913966.28 m

Z: 1.50 m

Point Source, ISO 9613, Name: "DGS", ID: "DGS"																				
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7	17603978.98	4914031.06	2.00	0	DEN	500	94.0	0.0	0.0	0.0	0.0	47.3	0.1	-2.2	0.0	0.0	0.0	0.0	0.0	48.8
9	17603978.98	4914031.06	2.00	1	DEN	500	94.0	0.0	0.0	0.0	0.0	47.9	0.1	-2.2	0.0	0.0	0.0	0.0	0.0	48.1
10	17603978.98	4914031.06	2.00	1	DEN	500	94.0	0.0	0.0	0.0	0.0	47.3	0.1	-2.2	0.0	0.0	0.0	0.0	1.0	47.7
11	17603978.98	4914031.06	2.00	2	DEN	500	94.0	0.0	0.0	0.0	0.0	47.9	0.1	-2.2	0.0	0.0	0.0	0.0	1.0	47.1

APPENDIX C: WARNING CLAUSES

TYPE A:

“Occupants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality’s and the Ministry of the Environment, Conservation and Parks’ noise criteria.”

TYPE B:

“Occupants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality’s and the Ministry of the Environment, Conservation and Parks’ noise criteria.”

TYPE C:

“This dwelling unit has been designed with the provision for adding central air conditioning at the occupant’s discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.”

TYPE D:

“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 Municipality’s and the Ministry of the Environment, Conservation and Park’s noise criteria.”

TYPE E: (Industry/Facility/Utility)

“Purchasers are advised that due to the proximity of the adjacent industry (automotive repair), noise from the industry (automotive repair) may at times be audible.”

TYPE F: (Class 4)

“Purchasers/tenants are advised that sound levels due to the adjacent industry (automotive repair) are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed.”

APPENDIX D: CRITERIA

The noise study will be based on the following criteria for residential units as required by the Ministry of Environment, Conservation and Parks:

SOUND LEVEL LIMITS ROAD AND RAIL			
Type of Space	Time Period	L _{eq} (dBA)	
		Road	Rail
INDOOR LIMITS			
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00–23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00–07:00	45	40
Sleeping quarters	07:00–23:00	45	40
	23:00–07:00	40	35
OUTDOOR LIMITS			
Outdoor recreation areas ¹	07:00–23:00	55	55
Outside bedroom window	23:00–07:00	50	50
Outside living room window	07:00–23:00	55	55

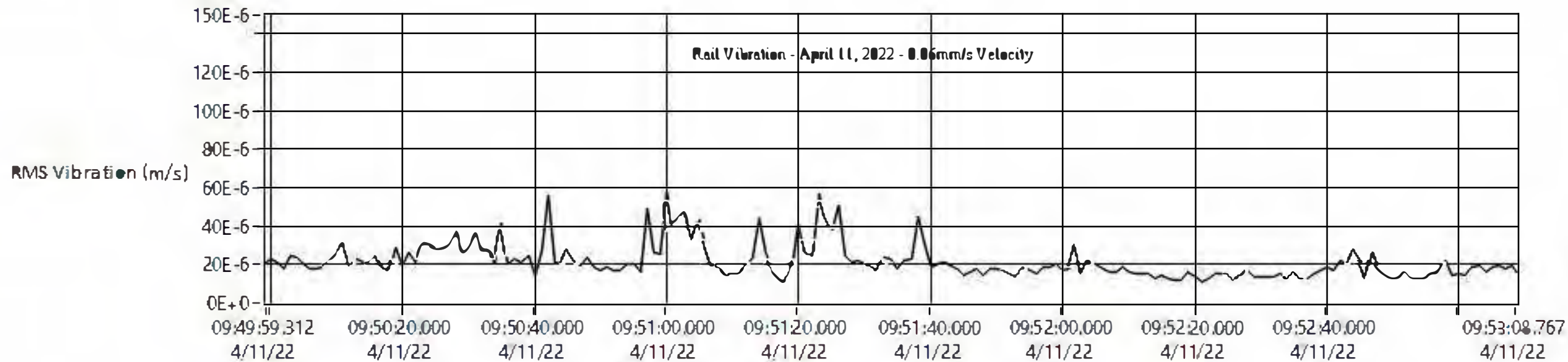
¹ Up to 5 dB excess above criteria is allowed, provided a warning clause is given. Above 60 dB L_{eq}, exterior noise mitigation measures (i.e., noise barriers, intervening structures, additional setback from source) are required.

All calculations are based on the architectural drawings provided by SRN Architects Inc., April 2022.

L_{eq} Definition

The L_{eq} is defined as the mean energy of the sound level averaged over the measurement period. It can be considered as the continuous steady sound level which would have the same acoustic energy as the real fluctuating noise measured over the same period of time.

APPENDIX E: VIBRATION MONITORING



APPENDIX F: MECHANICAL DATA

2135QTiMAX

Specifications at 6.2 bar (90 PSI)

Models	2135QTiMAX 2135QTiMAX	2135QTi-2MAX
Drive	1/2"	1/2" - 50 mm ext.
Forward Torque Range	68–746 Nm	68–746 Nm
Maximum Torque (reverse)	1054 Nm	1054 Nm
Nut Busting Torque	1486 Nm	1486 Nm
Blows Per Minute	1250	1250
Free speed	9800 rpm	9800 rpm
Sound Pressure (free speed)	86 dBA	86 dBA
Net Weight	1.84 kg	2.05 kg
Overall Length	187 mm	240.5 mm
Average Air Consumption	142 l/min	142 l/min
Air Inlet	1/4" NPTF	1/4" NPTF
Min. Hose Size	10 mm	10 mm

Use Ingersoll Rand Impact Sockets
for MAX efficiency

NEW
RANGE



SK4M14 socket set – Contains 14 impact sockets (10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23 and 24 mm hex. size).

SK4M5L socket set – Contains 5 deep length impact sockets (17, 19, 21, 22 and 24 mm hex. size).

SK4M3L socket set for automotive applications – Contains 3 insulated deep length impact sockets (17, 19, 21 mm hex. size).



* Lifetime warranty on all Ingersoll Rand sockets from manufacturing and material defects.

www.irtools.com/2135TiMAX

Distributed by:

Nothing contained within this brochure is intended to extend any warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other items or conditions of sale of products shall be in accordance with Ingersoll Rand's standard terms and conditions of sale for such products, which are available upon request. Product improvement is a continuing goal at Ingersoll Rand. Designs and specifications are subject to change without notice or obligation.

© 2007 Ingersoll-Rand Company — Printed in France — Form No. E32542 — CPN: 24930216



Protect your 2135QTiMAX
with **FREE** limited
warranty protection

Tool registration required at
irtools.com/warranty.

Available for the entire 2135QTiMAX family only.
Warranty terms may vary by country, see web site
for details.

IR Ingersoll Rand
Industrial Technologies

IR Ingersoll Rand

2135QTiMAX 1/2" Air Impactool
Maximum Impact



Max.
Nm

1054 Nm
maximum torque !

Maximum impact

As if the Ingersoll Rand 2135QTi wasn't already the best 1/2" air Impactool™ you can buy, we decided to make it even better.

Perfect for tackling any job in the service bay, the new 2135QTiMAX delivers maximum power and control, along with unmatched reliability that comes from more than a century of proven engineering and innovation.

MAX Power

1054 Nm maximum reverse torque from a tool weighing only 1,8 kg — that is the best power-to-weight ratio in its class.

MAX Control

Feather-touch trigger, wider range of power regulator settings in forward, always max. power in reverse, patented one-hand forward / reverse control.

MAX Reliability

Free two-year limited warranty with tool registration.



The original, perfected TwinHammer™ mechanism utilizes proprietary advanced metallurgy.

Titanium hammer case is lightweight with unparalleled durability.

Hard-coat anodized end plate stands up to the toughest jobs.

Unique 7-vane motor for MAX power.

Tool shown at actual size

Available in three different anvil configurations



Model 2135QTiMAX

With standard anvil and hog ring socket retainer.

Model 2135QTi-2MAX

With 50 mm extended anvil and hog ring socket retainer.

Model 2135QPTiMAX

With standard anvil and socket pin retainer for industrial applications.

Improved grease fitting for easy maintenance.

Feather-touch trigger enables impressive control.

Patented four-position power regulator dial for MAX control.

Patented one-hand forward / reverse for easy operation.

Optimized air flow ensures maximum performance.

All the power, without all the noise

The 2135QTiMAX Series feature our patented Quiet Tool technology, which reduces sound levels caused by air pulsating through the impact motor, without compromising our best-in-class torque levels.

- Muffler utilising the reflective method of noise reduction.
- Does not restrict air flow or create back pressure.

2135QTiMAX

APPENDIX G: REFERENCES

1. Ministry of the Environment, "Publication NPC-300, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning", August 2013.
2. Ministry of Environment's *STAMSON* Computer Programme (Version 5.04) for the IBM PC.
3. Ministry of Environment, *ORNAMENT*, "Ontario Road Noise Analysis Method for Environment and Transportation", November 1988.