

NOISE IMPACT STUDY
1250 GORDON STREET
GUELPH, ONTARIO

FOR

THE TRICAR GROUP

COMPLETED BY


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1.0 INTRODUCTION

At the request of the Tricar Group, J.E. COULTER ASSOCIATES LIMITED has reviewed the plans for the proposed high-density residential development at 1250 Gordon Street in Guelph, Ontario (see Appendix A, Figure 1). The proposed development is to be located along the east side of Gordon Street between Edinburgh Road South and Arkell Road.

The purpose of this report is to identify any transportation source that may have a noise impact on the proposed development. Traffic on Gordon Street and Edinburgh Road South are the main sources of transportation noise potentially affecting this proposed residential development.

The report provides recommendations on the abatement of these transportation sources where required. The noise criteria are listed in Appendix D.

2.0 DESCRIPTION OF AREA

The proposal consists of a two apartment buildings, each 12 storeys (see Appendix A, Figure 2). The west façades of the Buildings A and B are set back approximately 24m and 77m, respectively, from the centreline of Gordon Street.

A review of the existing stationary sources in the vicinity of the proposed condominium development was undertaken by this office. Directly to the south along the east side of Gordon Street are two 5-storey apartment buildings (1280 and 1284 Gordon Street). At the northwest corner of Gordon Street and Arkell Road is an existing 6-storey apartment building (1291 Gordon Street). To the north are existing single-family dwellings along Gordon Street and Valley Road. All these off-site apartment buildings include rooftop HVAC equipment.

3.0 NOISE CRITERIA

The City of Guelph's and the Ministry of the Environment, Conservation & Park's (MECP) noise criteria are as follows (see Appendix D, References 1 and 2):

3.1 Transportation Sources

Table 1: 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.

3.2 Exterior Building Façade

Where the sound levels at the exterior of the building façade exceed 55 dB L_{eq} daytime at the living room window or 50 dB L_{eq} nighttime at the bedroom window, the unit must be provided with forced air heating with provision for future air conditioning by the owner. Excesses of up to 10 dB are permissible, provided a warning clause is given. Where the sound levels exceed this limit (i.e., 65 dB L_{eq} daytime or 60 dB L_{eq} nighttime), central air conditioning must be incorporated into the building design prior to occupancy. Warning clauses are applicable as well.

3.3 Stationary Sources

The current City of Guelph's noise criteria (as per MECP's *NPC-300*) deal with stationary sound sources that are present at this proposed residential development. These criteria are based on the quietest ambient roadway traffic sound levels at the receiving point. The proposed development is located in a Class 1 Urban Area as defined by MECP when the ambient sound levels are primarily generated by road traffic. The criteria applicable to this site state that the combined stationary noise sources cannot exceed the ambient roadway sound levels or 50 dB

L_{eq} , whichever is higher, based on a 1-hour time period, during the daytime (0700–2300 hours). At night (2300–0700 hours), the limit is 45 dB L_{eq} .

The traffic sound levels used to set the stationary sound guidelines are those from current not future traffic, as they represent the worst case.

4.0 TRANSPORTATION NOISE SOURCES

The major sources of transportation noise at the site are the traffic on Gordon Street and Edinburgh Road South. Road traffic information for determining the projected sound levels was obtained from the City of Guelph's Transportation Department. Detailed traffic data are provided in Appendix B. All recommendations are based on the exterior sound levels at the various façades exposed fully or partially to Gordon Street and Edinburgh Road South.

Based on the traffic data provided by the City of Guelph, Gordon Street is expected to carry the following traffic volumes for the purposes of specifying noise control measures (see Appendix B):

Table 2: Traffic Volume Projection

Roadway	AADT (Veh/Day)	Truck Percentage		# of Lanes	Posted Speed Limit (kph)	Day/Night Split (%)
		Medium	Heavy			
Gordon Street (2019)	32,338	3.74%	2.36%	4	60	93/7
Gordon Street (2030)	38,093	3.74%	2.36%	4	60	93/7
Edinburgh Road South (2019), west of Gordon St.	9,895	7.6%	0%	2	50	93/7
Edinburgh Road South (2030), west of Gordon St.	11,656	7.6%	0%	2	50	93/7

Note: Gordon Street (2019) includes added traffic from 7 developments on Gordon Street (2,390 vehicles per day) plus base traffic (29,948). Traffic growth on all roads has been assumed to be 1.5% per annum (compounded) to the year 2030, a minimum 10-year projection.

5.0 PROJECTED EXTERIOR SOUND LEVELS (TRANSPORTATION)

The following table summarizes the exterior L_{eq} sound levels at various façade locations (see Appendix A, Figure 2 for calculation locations). Details of the sound level calculations are provided in Appendix B.

Table 3: Projected Traffic Sound Levels						
	Daytime Sound Level at Exterior Façade, dB L_{eq}			Nighttime Sound Level at Exterior Façade, dB L_{eq}		
Location	Gordon St.	Edinburgh Rd. South	Total	Gordon St.	Edinburgh Rd. South	Total
Building A: NE Façade	64	54	64	55	46	56
Building A: NW Façade	70	56	70	62	48	62
Building A: SE Façade	64	N/A	64	55	N/A	55
Building A: SW Façade	70	N/A	70	62	N/A	62
Building B: NE Façade	62	N/A	62	54	N/A	54
Building B: NW Façade	65	N/A	65	57	N/A	57
Building B: SE Façade	55	N/A	55	46	N/A	46
Building B: SW Façade	65	N/A	65	57	N/A	57
Outdoor Amenity (Grade Level)	<<55	N/A	<<55	N/A	N/A	N/A

Notes:

1. The sound levels have been calculated using 1 roadway segment for each roadway where the geometric centre of the roadway is used. This is acoustically equivalent to dividing the roadway into two separate segments.
2. An outdoor living area is defined as a private recreation area such as a rear yard or terrace whose effective depth is at least 4m. The N/A denotes the sound levels from Edinburgh Rd. South are acoustically insignificantly relative to Gordon Street.

6.0 IMPACT OF EXTERIOR TRANSPORTATION NOISE ON BUILDINGS

From the results summarized in the above table, unmitigated, a modest noise impact would be present primarily because of the traffic on Gordon Street. Edinburgh Rd South has little or no influence on the overall sound levels at the building. Noise control measures will include central air conditioning, warning clauses, and double glazing as a result of the traffic on Gordon Street.

Balconies or patios that are less than 4m in depth are not classified as Outdoor Living Areas as per the MECP noise guideline. As this development does not have patios that meet this threshold, no further review is needed.

7.0 IMPACT OF OFF-SITE STATIONARY NOISE SOURCES ON BUILDINGS

A review of the existing stationary sources in the vicinity of the proposed condominium development was undertaken by this office. Directly to the south, along the east side of Gordon Street, are two 5-storey apartment buildings (1280 and 1284 Gordon Street). At the northwest corner of Gordon Street and Arkell Road is an existing 6-storey apartment building (1291 Gordon Street). To the north are existing single-family dwellings along Gordon Street and Valley Road. All these off-site apartment buildings include rooftop HVAC equipment (see Appendix A, Figure 3).

The points of reception considered in the analysis were as follows:

- R1: Building A, 6th Floor Level, South Façade (closest to apartment buildings at 1280 and 1284 Gordon Street)
- R2: Building B, 6th Floor Level, South Façade, west end (closest to apartment buildings at 1280 and 1284 Gordon Street)
- R3: Building B, 6th Floor Level, South Façade, east end (closest to apartment buildings at 1280 and 1284 Gordon Street).

MECP's stationary source noise criteria were based on the quietest hourly sound levels of 50 dB minimum during the daytime (0700–2300 hours) and 45 dB minimum nighttime (2300–0700 hours). This represents the worst-case scenario.

The calculated sound levels from the off-site mechanical ventilation equipment at the proposed condominium are as follows during the daytime (Table 4) and nighttime (Table 5):

Table 4: Daytime Sound Level from Off-Site HVAC Equipment

Off-site Sources	R1	R2	R3
Apartment Building 1 (1280 Gordon) – Rooftop HVAC	41	40	36
Apartment Building 2 (1284 Gordon) – Rooftop HVAC	34	37	41
Apartment Building 3 (1291 Gordon) – Rooftop HVAC	34	34	32
Total (dB L_{eq})	43	43	43
Noise Criteria (dB), Class 1	50	50	50
Noise Impact (dB)	-7	-7	-7

Table 5: Nighttime Sound Level from Off-Site HVAC Equipment

Off-site Sources	R1	R2	R3
Apartment Building 1 (1280 Gordon) – Rooftop HVAC	41	40	36
Apartment Building 2 (1284 Gordon) – Rooftop HVAC	34	37	41
Apartment Building 3 (1291 Gordon) – Rooftop HVAC	34	34	32
Total (dB L_{eq})	43	43	43
Noise Criteria (dB), Class 1	45	45	45
Noise Impact (dB)	-2	-2	-2

The overall projected sound levels from all off-site mechanical equipment (operating at 100% duty cycle, 24 hours per day) is expected to be 7 and 2 dB below MECP's noise criteria during the day and night times. As a result, no additional noise control measures are required and no further review is needed.

8.0 IMPACT OF PROPOSED DEVELOPMENT ON SURROUNDING AREA

A review of the proposed rooftop HVAC equipment at 1250 Gordon Street was undertaken by this office. At this time, no details of the rooftop HVAC is known, thus our comments are general in nature (see Appendix A, Figure 4).

The points of reception considered in the analysis were as follows:

- R1: Single family dwelling at 1236 Gordon Street directly north of Building A
- R2: Outdoor Living Area of R1
- R3 to R7: Single family dwellings along Valley Road, north of Buildings A and B
- R8: 1280 Gordon Street, North Façade, Top Floor (5th)
- R9: 1284 Gordon Street, South Leg, North Façade, Top Floor (5th)
- R10: 1284 Gordon Street, north Leg, North Façade, Top Floor (5th).

MECP's stationary source noise criteria were based on the quietest hourly sound levels of 50 dB minimum during the daytime (0700–2300 hours) and 45 dB minimum nighttime (2300–0700 hours). This represents the worst-case scenario.

The calculated sound levels from the on-site mechanical ventilation equipment at the proposed condominium are as follows during the daytime (Table 6) and nighttime (Table 7):

Table 6: Daytime Sound Levels at Off-Site Receptors
Source: Rooftop HVAC at 1250 Gordon Street

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Building A – Rooftop HVAC	31	32	33	34	33	23	25	27	35	22
Building B – Rooftop HVAC	36	34	26	26	25	34	36	36	39	33
Total (dB L_{eq})	38	37	36	36	36	35	36	36	41	34
Noise Criteria (dB), Class 1	50	50	50	50	50	50	50	50	50	50
Noise Impact (dB)	-12	-13	-14	-14	-14	-15	-14	-14	-9	-16

Table 7: Nighttime Sound Levels at Off-Site Receptors
Source: Rooftop HVAC at 1250 Gordon Street

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Building A – Rooftop HVAC	31	32	33	34	33	23	25	27	35	22
Building B – Rooftop HVAC	36	34	26	26	25	34	36	36	39	33
Total (dB L_{eq})	38	37	36	36	36	35	36	36	41	34
Noise Criteria (dB), Class 1	45	45	45	45	45	45	45	45	45	45
Noise Impact (dB)	-7	-8	-9	-9	-9	-10	-9	-9	-4	-11

The overall projected sound levels from the projected rooftop mechanical equipment at 1250 Gordon Street (operating at 100% duty cycle, 24 hours per day) is expected to range between 9 and 16 dB below MECP's noise criteria during the day. At night, the sound levels are expected to range between 4 and 11 dB below MECP's noise criteria. As a result, no additional noise control measures are not expected. Once the mechanical details are known, the acoustic consultant should confirm the equipment meets MECP's NCPC-300 noise criteria.

9.0 NOISE MITIGATION MEASURES

The exterior sound levels at some parts of the development are greater than 65 dB L_{eq} daytime and/or 60 dB L_{eq} nighttime. As a result, central air conditioning prior to occupancy is required. It is our understanding that central air conditioning will be supplied for the entire development, in any case. It is recommended that a warning clause be incorporated into all *Agreements of*

Purchase of Sale or Lease and Sale and Deeds (see Appendix C, Warning Clauses A and D) notifying owners of the noise excess above the Provincial noise criteria.

At this time, there are no details regarding the proposed mechanical ventilation systems to be used at Buildings A and B. A general review of the anticipated sound levels from the rooftop ventilation equipment and location did not result in noise impacts at any point of reception off-site. Prior to building permit, the acoustic consultant should review the equipment selection and locations and confirm whether additional noise control measures (for example, silencers, barriers, enclosures, parapets or the selection of quieter equipment) are required to meet MECP's *NPC-300* criteria.

10.0 FAÇADE COMPONENTS

A general review of the floor plans and building elevations was conducted to determine if upgrades from the minimum Ontario Building Code (OBC) requirement were needed to meet MECP's interior sound level criterion for bedrooms and living rooms. The review concluded that no special building components (windows, walls or ceiling) were required for living/dining rooms with a window/door-area-to-floor-area ratio of 100% or less. For bedrooms, the maximum window/door-area-to-floor-area ratio is 125%, an extraordinarily large area of glazing. Based on the review of the architectural drawings, Ontario Building Code (OBC) compatible construction with double glazing (operable or fixed) will meet the noise requirements.

11.0 SUMMARY

In summary, the analysis showed that the sound levels generated by Gordon Street will be modest, requiring noise control measures typical of such sites to meet the provincial requirements (i.e., central air conditioning, warning clauses, and double glazing). These measures are found at many new residential developments adjacent to a main arterial roadway and are not considered onerous requirements.

The existing stationary sources (i.e., rooftop HVAC equipment from the adjacent apartment buildings) were found not to generate a noise impact at this proposed residential development.

12.0 RECOMMENDATIONS

To meet the noise requirements of the City of Guelph and MECP's noise guidelines, the following recommendations are proposed:

1. The exterior sound levels are greater than 65 dB L_{eq} daytime and/or 60 dB L_{eq} nighttime. As a result, central air conditioning prior to occupancy is required. It is our understanding that central air conditioning will be supplied for each dwelling unit for the entire development in any case, thus meeting the requirement.
2. It is recommended that a warning clause be incorporated into all *Agreements of Purchase of Sale or Lease and Sale and Deeds* (see Appendix C, Warning Clauses A and D) notifying owners of the noise excess above the Provincial noise criteria.
3. The review has concluded that no special building components (windows, walls or ceiling) are required for living/dining rooms with a window/door-area-to-floor-area ratio of 100% or less. For bedrooms, the maximum window/door-area-to-floor-area ratio for the present layout is 125%, an extraordinarily large area of glazing. Ontario Building Code (OBC) compatible construction with double glazing (operable or fixed) will meet the noise requirements based on the window-area-to-floor-area ratios noted above.
4. At this time, there are no details regarding the proposed mechanical ventilation systems to be used at Buildings A and B. A general review of the anticipated sound levels from the rooftop ventilation equipment and location did not result in noise impacts at any point of reception off-site. Prior to building permit, the acoustic consultant should review the equipment selection and locations and confirm whether additional noise control measures are required to meet MECP's *NPC-300* criteria.

APPENDIX A: FIGURES

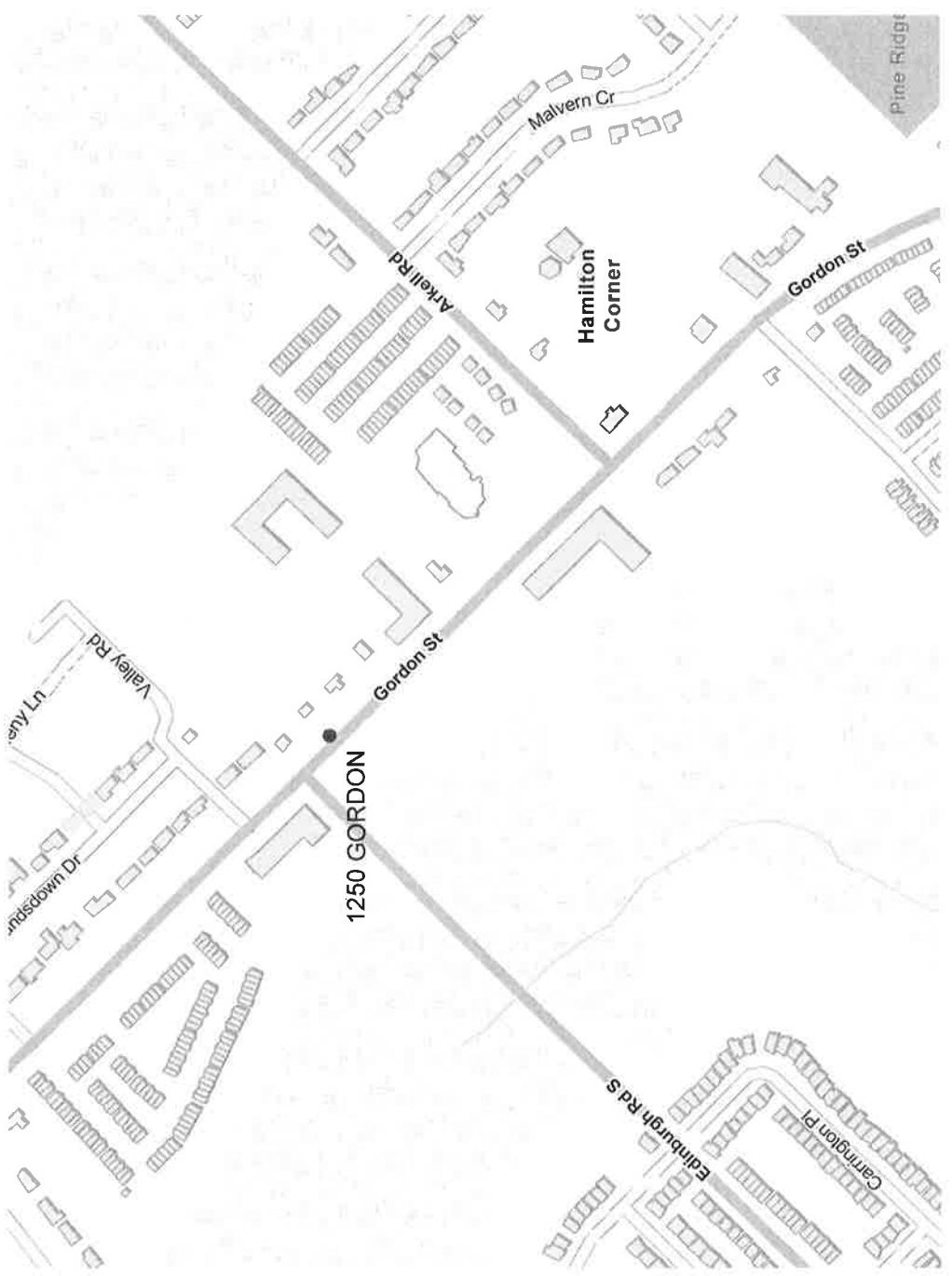


FIGURE 1

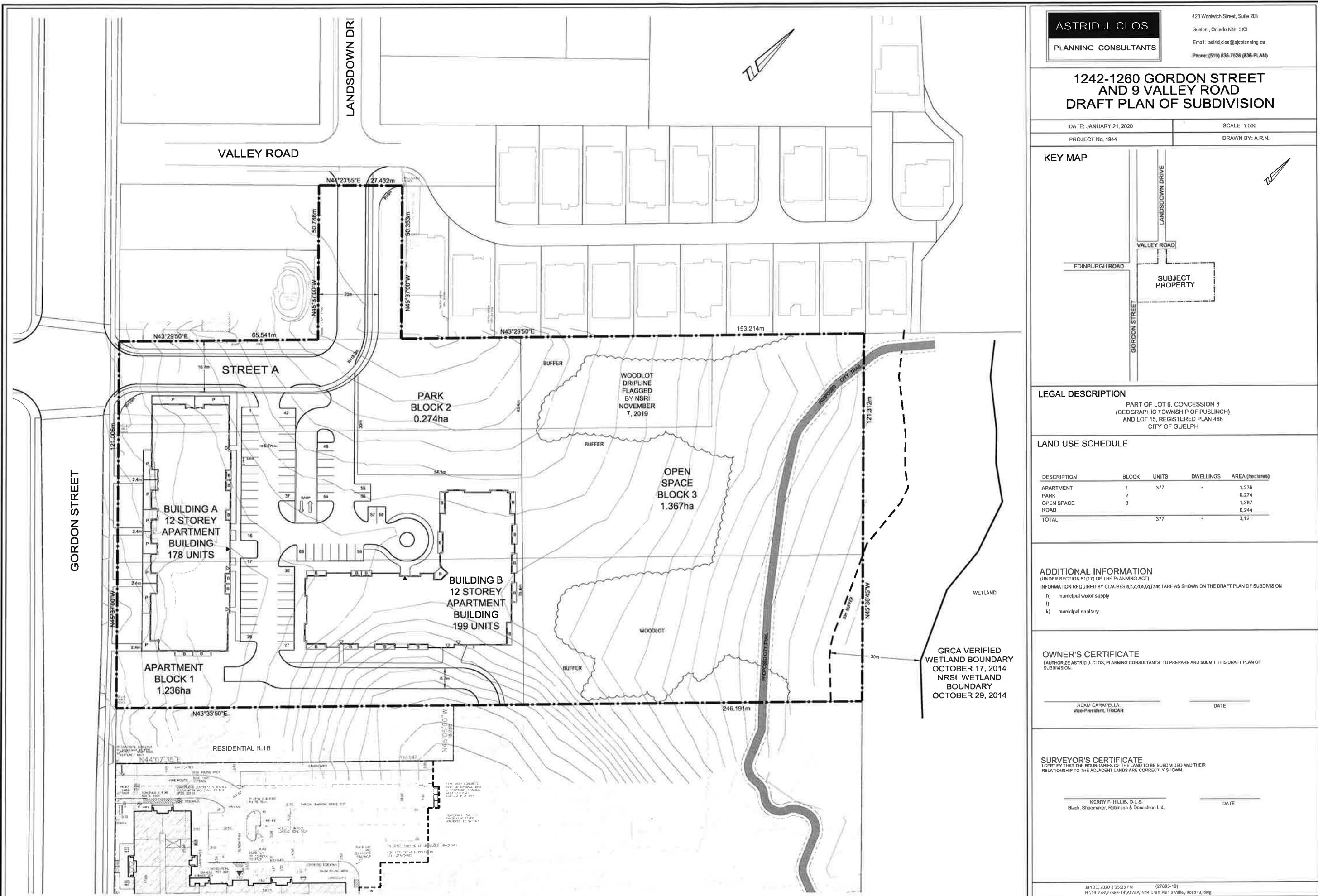


FIGURE 2

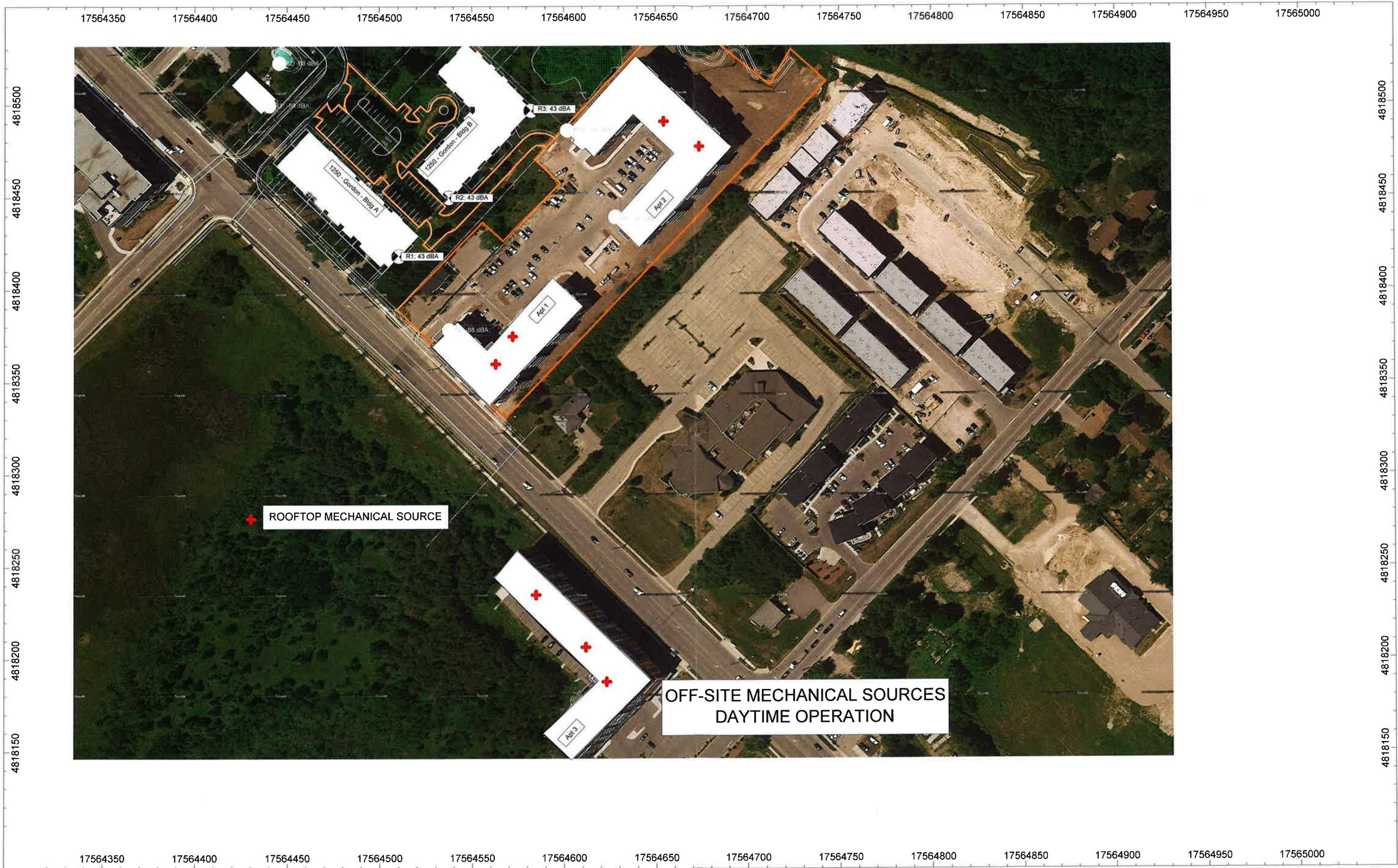


FIGURE 3

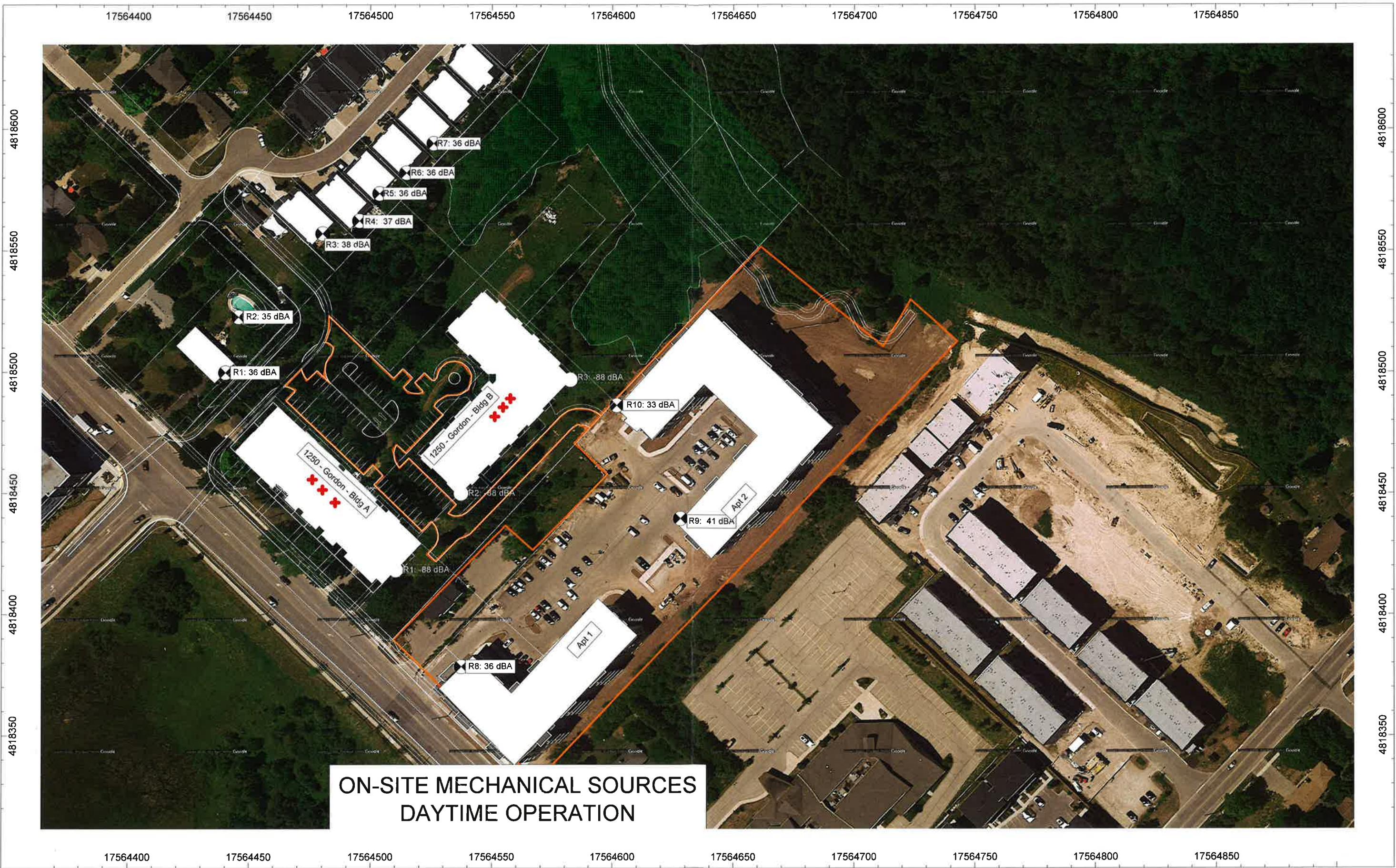


FIGURE 4

APPENDIX B: SOUND LEVEL CALCULATIONS

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:45:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_ne.te Time Period: Day/Night 16/8 hours
Description: Bldg A - NE Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 50.50 / 50.50 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 10016/754 veh/TimePeriod *
Medium truck volume : 824/62 veh/TimePeriod *
Heavy truck volume : 0/0 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): 11656
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.60
Heavy Truck % of Total Volume : 0.00
Day (16 hrs) % of Total Volume : 93.00

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

Angle1 Angle2 : -90.00 deg -69.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Gordon St (day)

Source height = 1.24 m

ROAD	(0.00 + 63.65 + 0.00) = 63.65 dBA									
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	71.93	0.00	-5.27	-3.01	0.00	0.00	0.00	63.65

Segment Leq : 63.65 dBA

Results segment # 2: Edinburgh (day)

Source height = 0.50 m

ROAD	(0.00 + 54.17 + 0.00) = 54.17 dBA									
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-69	0.00	63.51	0.00	0.00	-9.33	0.00	0.00	0.00	54.17

Segment Leq : 54.17 dBA

Total Leq All Segments: 64.11 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

ROAD	(0.00 + 55.43 + 0.00) = 55.43 dBA									
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	63.71	0.00	-5.27	-3.01	0.00	0.00	0.00	55.43

Segment Leq : 55.43 dBA

Results segment # 2: Edinburgh (night)

Source height = 0.50 m

ROAD	(0.00 + 45.95 + 0.00) = 45.95 dBA									
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-69	0.00	55.28	0.00	0.00	-9.33	0.00	0.00	0.00	45.95

Segment Leq : 45.95 dBA

Total Leq All Segments: 55.89 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.11
(NIGHT): 55.89

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:45:44
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_nw.te Time Period: Day/Night 16/8 hours
Description: Bldg A - NW Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 23.70 / 23.70 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)

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

Car traffic volume : 10016/754 veh/TimePeriod *
Medium truck volume : 824/62 veh/TimePeriod *
Heavy truck volume : 0/0 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): 11656
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.60
Heavy Truck % of Total Volume : 0.00
Day (16 hrs) % of Total Volume : 93.00

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

Angle1 Angle2 : -90.00 deg -60.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Gordon St (day)

Source height = 1.24 m

ROAD (0.00 + 69.94 + 0.00) = 69.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	71.93	0.00	-1.99	0.00	0.00	0.00	0.00	69.94

Segment Leq : 69.94 dBA

Results segment # 2: Edinburgh (day)

Source height = 0.50 m

ROAD (0.00 + 55.72 + 0.00) = 55.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-60	0.00	63.51	0.00	0.00	-7.78	0.00	0.00	0.00	55.72

Segment Leq : 55.72 dBA

Total Leq All Segments: 70.10 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

ROAD (0.00 + 61.73 + 0.00) = 61.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.71	0.00	-1.99	0.00	0.00	0.00	0.00	61.73

Segment Leq : 61.73 dBA

Results segment # 2: Edinburgh (night)

Source height = 0.50 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
-90	-60	0.00	55.28	0.00	0.00	-7.78	0.00	0.00	0.00	47.50

Segment Leq : 47.50 dBA

Total Leq All Segments: 61.89 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.10
(NIGHT): 61.89

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:45:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_se.te Time Period: Day/Night 16/8 hours
Description: Bldg A - SE Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 50.50 / 50.50 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 0.00 deg
Barrier height : 15.00 m
Barrier receiver distance : 12.50 / 12.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Gordon St (day)

Source height = 1.24 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.24 ! 36.00 ! 27.40 ! 27.40

ROAD (0.00 + 63.65 + 0.00) = 63.65 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.00 71.93 0.00 -5.27 -3.01 0.00 0.00 -0.02 63.63*
-90 0 0.00 71.93 0.00 -5.27 -3.01 0.00 0.00 0.00 63.65

* Bright Zone !

Segment Leq : 63.65 dBA

Total Leq All Segments: 63.65 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Barrier Top (m)	Elevation of
1.24	36.00	27.40	27.40	

ROAD (0.00 + 55.43 + 0.00) = 55.43 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	63.71	0.00	-5.27	-3.01	0.00	0.00	-0.02	55.41*
-90	0	0.00	63.71	0.00	-5.27	-3.01	0.00	0.00	0.00	55.43

* Bright Zone !

Segment Leq : 55.43 dBA

Total Leq All Segments: 55.43 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 63.65
(NIGHT): 55.43

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:46:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a_sw.te Time Period: Day/Night 16/8 hours
Description: Bldg A - SW Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 23.70 / 23.70 m
Receiver height : 36.00 / 36.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Gordon St (day)

Source height = 1.24 m

ROAD (0.00 + 69.94 + 0.00) = 69.94 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.00 71.93 0.00 -1.99 0.00 0.00 0.00 0.00 69.94

Segment Leq : 69.94 dBA

Total Leq All Segments: 69.94 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

ROAD (0.00 + 61.73 + 0.00) = 61.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.71	0.00	-1.99	0.00	0.00	0.00	0.00	61.73

Segment Leq : 61.73 dBA

Total Leq All Segments: 61.73 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.94

(NIGHT): 61.73

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:46:23
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b_ne.te Time Period: Day/Night 16/8 hours
Description: Bldg B - NE Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 142.60 / 142.60 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 17.00 deg
Barrier height : 36.00 m
Barrier receiver distance : 104.00 / 104.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Gordon St (day)

Source height = 1.24 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.24 ! 36.00 ! 10.65 ! 10.65

ROAD (59.14 + 31.90 + 58.23) = 61.72 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 0 0.00 71.93 0.00 -9.78 -3.01 0.00 0.00 0.00 59.14

0 17 0.00 71.93 0.00 -9.78 -10.25 0.00 0.00 -20.00 31.90

17 90 0.00 71.93 0.00 -9.78 -3.92 0.00 0.00 0.00 58.23

Segment Leq : 61.72 dBA

Total Leq All Segments: 61.72 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
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1.24 !	36.00 !	10.65 !	10.65
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ROAD (50.92 + 23.68 + 50.01) = 53.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
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-90	0	0.00	63.71	0.00	-9.78	-3.01	0.00	0.00	0.00	50.92
-----	---	------	-------	------	-------	-------	------	------	------	-------

0	17	0.00	63.71	0.00	-9.78	-10.25	0.00	0.00	-20.00	23.68
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17	90	0.00	63.71	0.00	-9.78	-3.92	0.00	0.00	0.00	50.01
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Segment Leq : 53.51 dBA

Total Leq All Segments: 53.51 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.72

(NIGHT): 53.51

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:46:35
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b_nw.te Time Period: Day/Night 16/8 hours
Description: Bldg B - NW Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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) : 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 76.50 / 76.50 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -45.00 deg Angle2 : 65.00 deg
Barrier height : 15.00 m
Barrier receiver distance : 38.50 / 38.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Gordon St (day)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
1.24 !	36.00 !	18.51 !	18.51

ROAD (58.84 + 62.72 + 56.28) = 64.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	71.93	0.00	-7.08	-6.02	0.00	0.00	0.00	58.84
-45	65	0.00	71.93	0.00	-7.08	-2.14	0.00	0.00	0.00	62.72*
-45	65	0.00	71.93	0.00	-7.08	-2.14	0.00	0.00	0.00	62.72
65	90	0.00	71.93	0.00	-7.08	-8.57	0.00	0.00	0.00	56.28

* Bright Zone !

Segment Leq : 64.86 dBA

Total Leq All Segments: 64.86 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
1.24 !	36.00 !	18.51 !	18.51

ROAD (50.62 + 54.50 + 48.06) = 56.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.00	63.71	0.00	-7.08	-6.02	0.00	0.00	0.00	50.62
-45	65	0.00	63.71	0.00	-7.08	-2.14	0.00	0.00	0.00	54.50*
-45	65	0.00	63.71	0.00	-7.08	-2.14	0.00	0.00	0.00	54.50
65	90	0.00	63.71	0.00	-7.08	-8.57	0.00	0.00	0.00	48.06

* Bright Zone !

Segment Leq : 56.64 dBA

Total Leq All Segments: 56.64 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.86
(NIGHT): 56.64

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:46:48
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b_se.te Time Period: Day/Night 16/8 hours
Description: Bldg B - SE Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 142.50 / 142.50 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -24.00 deg
Barrier height : 15.00 m
Barrier receiver distance : 104.00 / 104.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Gordon St (day)

Source height = 1.24 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----+-----
1.24 ! 36.00 ! 10.63 ! 10.63

ROAD (0.00 + 48.47 + 53.40) = 54.61 dBA

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

-90 -24 0.00 71.93 0.00 -9.78 -4.36 0.00 0.00 -9.33 48.47

-24 0 0.00 71.93 0.00 -9.78 -8.75 0.00 0.00 0.00 53.40

Segment Leq : 54.61 dBA

Total Leq All Segments: 54.61 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
1.24	36.00	10.63	10.63

ROAD (0.00 + 40.25 + 45.18) = 46.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-24	0.00	63.71	0.00	-9.78	-4.36	0.00	0.00	-9.33	40.25
-24	0	0.00	63.71	0.00	-9.78	-8.75	0.00	0.00	0.00	45.18

Segment Leq : 46.39 dBA

Total Leq All Segments: 46.39 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 54.61
(NIGHT): 46.39

STAMSON 5.0 NORMAL REPORT Date: 12-02-2020 13:47:00
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b_sw.te Time Period: Day/Night 16/8 hours
Description: Bldg B - SW Facade - Top Floor

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

Car traffic volume : 33265/2504 veh/TimePeriod *
Medium truck volume : 1325/100 veh/TimePeriod *
Heavy truck volume : 836/63 veh/TimePeriod *
Posted speed limit : 60 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): 32338
Percentage of Annual Growth : 1.50
Number of Years of Growth : 11.00
Medium Truck % of Total Volume : 3.74
Heavy Truck % of Total Volume : 2.36
Day (16 hrs) % of Total Volume : 93.00

Data for Segment # 1: Gordon St (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 76.50 / 76.50 m
Receiver height : 36.00 / 36.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 72.00 deg
Barrier height : 15.00 m
Barrier receiver distance : 38.50 / 38.50 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Gordon St (day)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
1.24 !	36.00 !	18.51 !	18.51

ROAD (61.85 + 60.88 + 54.86) = 64.86 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	71.93	0.00	-7.08	-3.01	0.00	0.00	0.00	61.85
0	72	0.00	71.93	0.00	-7.08	-3.98	0.00	0.00	0.00	60.88*
0	72	0.00	71.93	0.00	-7.08	-3.98	0.00	0.00	0.00	60.88
72	90	0.00	71.93	0.00	-7.08	-10.00	0.00	0.00	0.00	54.86

* Bright Zone !

Segment Leq : 64.86 dBA

Total Leq All Segments: 64.86 dBA

Results segment # 1: Gordon St (night)

Source height = 1.24 m

Barrier height for grazing incidence

Source Height (m)	! Receiver Height (m)	! Barrier Height (m)	! Elevation of Barrier Top (m)
1.24 !	36.00 !	18.51 !	18.51

ROAD (53.63 + 52.66 + 46.64) = 56.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	63.71	0.00	-7.08	-3.01	0.00	0.00	0.00	53.63
0	72	0.00	63.71	0.00	-7.08	-3.98	0.00	0.00	0.00	52.66*
0	72	0.00	63.71	0.00	-7.08	-3.98	0.00	0.00	0.00	52.66
72	90	0.00	63.71	0.00	-7.08	-10.00	0.00	0.00	0.00	46.64

* Bright Zone !

Segment Leq : 56.64 dBA

Total Leq All Segments: 56.64 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.86
(NIGHT): 56.64

TRAFFIC DATA

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	24-May-19	NB	SB	Combined Total	
12:00 AM		145	108	253	
01:00		63	55	118	
02:00		48	49	97	
03:00		25	31	56	
04:00		42	57	99	
05:00		124	196	320	
06:00		386	400	786	
07:00		775	672	1447	
08:00		1284	863	2147	
09:00		904	816	1720	
10:00		949	806	1755	
11:00		979	987	1966	
12:00 PM		991	1098	2089	
01:00		1042	1078	2120	
02:00		1056	1127	2183	
03:00		1110	1251	2361	
04:00		1223	1525	2748	
05:00		1290	1467	2757	
06:00		1125	1214	2339	
07:00		873	836	1709	
08:00		706	594	1300	
09:00		654	433	1087	
10:00		521	356	877	
11:00		349	255	604	
Total		16664	16274		
Percent		50.6%	49.4%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	25-May-19 Sat	NB	SB	Combined Total	
12:00 AM		245	130	375	
01:00		121	43	164	
02:00		92	30	122	
03:00		42	16	58	
04:00		57	43	100	
05:00		63	135	198	
06:00		155	371	526	
07:00		296	754	1050	
08:00		517	1312	1829	
09:00		740	900	1640	
10:00		930	877	1807	
11:00		1001	833	1834	
12:00 PM		1073	904	1977	
01:00		1125	841	1966	
02:00		1046	841	1887	
03:00		999	968	1967	
04:00		993	1092	2085	
05:00		834	1176	2010	
06:00		867	1036	1903	
07:00		733	855	1588	
08:00		622	694	1316	
09:00		539	456	995	
10:00		404	319	723	
11:00		444	196	640	
Total		13938	14822		
Percent		48.5%	51.5%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	26-May-19 Sun	NB	SB	Combined Total	
12:00 AM		255	112	367	
01:00		175	46	221	
02:00		116	46	162	
03:00		76	10	86	
04:00		43	50	93	
05:00		45	126	171	
06:00		105	391	496	
07:00		204	790	994	
08:00		426	1377	1803	
09:00		661	868	1529	
10:00		854	768	1622	
11:00		978	922	1900	
12:00 PM		1017	873	1890	
01:00		1094	866	1960	
02:00		1069	919	1988	
03:00		1071	1074	2145	
04:00		934	1168	2102	
05:00		823	1200	2023	
06:00		774	1106	1880	
07:00		695	812	1507	
08:00		625	780	1405	
09:00		498	619	1117	
10:00		352	333	685	
11:00		184	210	394	
Total		13074	15466		
Percent		45.8%	54.2%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	27-May-19 Mon	NB	SB	Combined Total	
12:00 AM		108	135	243	
01:00		51	56	107	
02:00		23	42	65	
03:00		19	16	35	
04:00		46	46	92	
05:00		127	128	255	
06:00		394	383	777	
07:00		775	756	1531	
08:00		1318	1273	2591	
09:00		942	897	1839	
10:00		884	814	1698	
11:00		839	866	1705	
12:00 PM		904	858	1762	
01:00		857	824	1681	
02:00		904	678	1582	
03:00		1052	998	2050	
04:00		1133	1084	2217	
05:00		1217	1191	2408	
06:00		1056	977	2033	
07:00		799	663	1462	
08:00		665	608	1273	
09:00		458	447	905	
10:00		311	305	616	
11:00		185	300	485	
Total		15067	14345		
Percent		51.2%	48.8%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	28-May-19 Tue	NB	SB	Combined Total	
12:00 AM		84	101	185	
01:00		45	46	91	
02:00		38	25	63	
03:00		17	23	40	
04:00		43	53	96	
05:00		136	184	320	
06:00		384	415	799	
07:00		791	642	1433	
08:00		1358	809	2167	
09:00		906	733	1639	
10:00		811	691	1502	
11:00		848	821	1669	
12:00 PM		875	970	1845	
01:00		893	877	1770	
02:00		895	969	1864	
03:00		1005	1097	2102	
04:00		1080	1349	2429	
05:00		1159	1424	2583	
06:00		1045	1102	2147	
07:00		811	964	1775	
08:00		636	782	1418	
09:00		509	581	1090	
10:00		332	298	630	
11:00		180	203	383	
Total		14881	15159		
Percent		49.5%	50.5%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	29-May-19 Wed	NB	SB	Combined Total	
12:00 AM		127	103	230	
01:00		61	50	111	
02:00		38	37	75	
03:00		19	20	39	
04:00		39	62	101	
05:00		130	195	325	
06:00		393	429	822	
07:00		783	629	1412	
08:00		1387	783	2170	
09:00		945	752	1697	
10:00		820	737	1557	
11:00		889	868	1757	
12:00 PM		926	1017	1943	
01:00		850	914	1764	
02:00		894	910	1804	
03:00		1035	1144	2179	
04:00		1059	1392	2451	
05:00		1246	1476	2722	
06:00		1180	1237	2417	
07:00		836	938	1774	
08:00		768	867	1635	
09:00		555	608	1163	
10:00		338	358	696	
11:00		220	235	455	
Total		15538	15761		
Percent		49.6%	50.4%		

Site Code: 03
 Station ID: MC34/MC03
 Gordon St btwn Edinburgh/Arkel (HP#282)

Latitude: 0' 0.0000 Undefined

Start Time	30-May-19 Thu	NB	SB	Combined Total	
12:00 AM		106	108	214	
01:00		50	48	98	
02:00		31	37	68	
03:00		20	26	46	
04:00		45	59	104	
05:00		135	187	322	
06:00		370	413	783	
07:00		784	682	1466	
08:00		1304	816	2120	
09:00		932	791	1723	
10:00		883	841	1724	
11:00		861	937	1798	
12:00 PM		995	981	1976	
01:00		968	940	1908	
02:00		958	1047	2005	
03:00		1089	1161	2250	
04:00		1175	1365	2540	
05:00		1296	1499	2795	
06:00		1186	1149	2335	
07:00		897	941	1838	
08:00		750	927	1677	
09:00		528	637	1165	
10:00		345	345	690	
11:00		289	278	567	
Total		15997	16215		
Percent		49.7%	50.3%		
Grand Total		105159	108042		
Percentage		49.3%	50.7%		
ADT		ADT 30,457	AADT 30,457		

Ontario Traffic Inc.

Morning Peak Diagram		Specified Period From: 7:00:00 To: 10:00:00	One Hour Peak From: 9:00:00 To: 10:00:00
Municipality: Guelph Site #: 1907200003 Intersection: Gordon St & Edinburgh Rd S TFR File #: 1 Count date: 27-Mar-19		Weather conditions: Person(s) who counted:	
** Non-Signalized Intersection **		Major Road: Gordon St runs N/S	
North Leg Total: 1636 North Entering: 549 North Peds: 38 Peds Cross:	Heavys 0 0 0 Trucks 1 52 53 Cars 36 460 496 Totals 37 512	Heavys 0 Trucks 112 Cars 975 Totals 1087	
Heavys Trucks Cars Totals 0 39 410 449		Gordon St 	
Heavys Trucks Cars Totals 0 9 41 50 0 17 271 288 0 26 312		 	
Peds Cross: West Peds: 0 West Entering: 338 West Leg Total: 787	Cars 731 Trucks 69 Heavys 0 Totals 800	Cars 374 934 1308 Trucks 38 103 141 Heavys 0 0 0 Totals 412 1037	Peds Cross: South Peds: 0 South Entering: 1449 South Leg Total: 2249
Comments			

Ontario Traffic Inc.

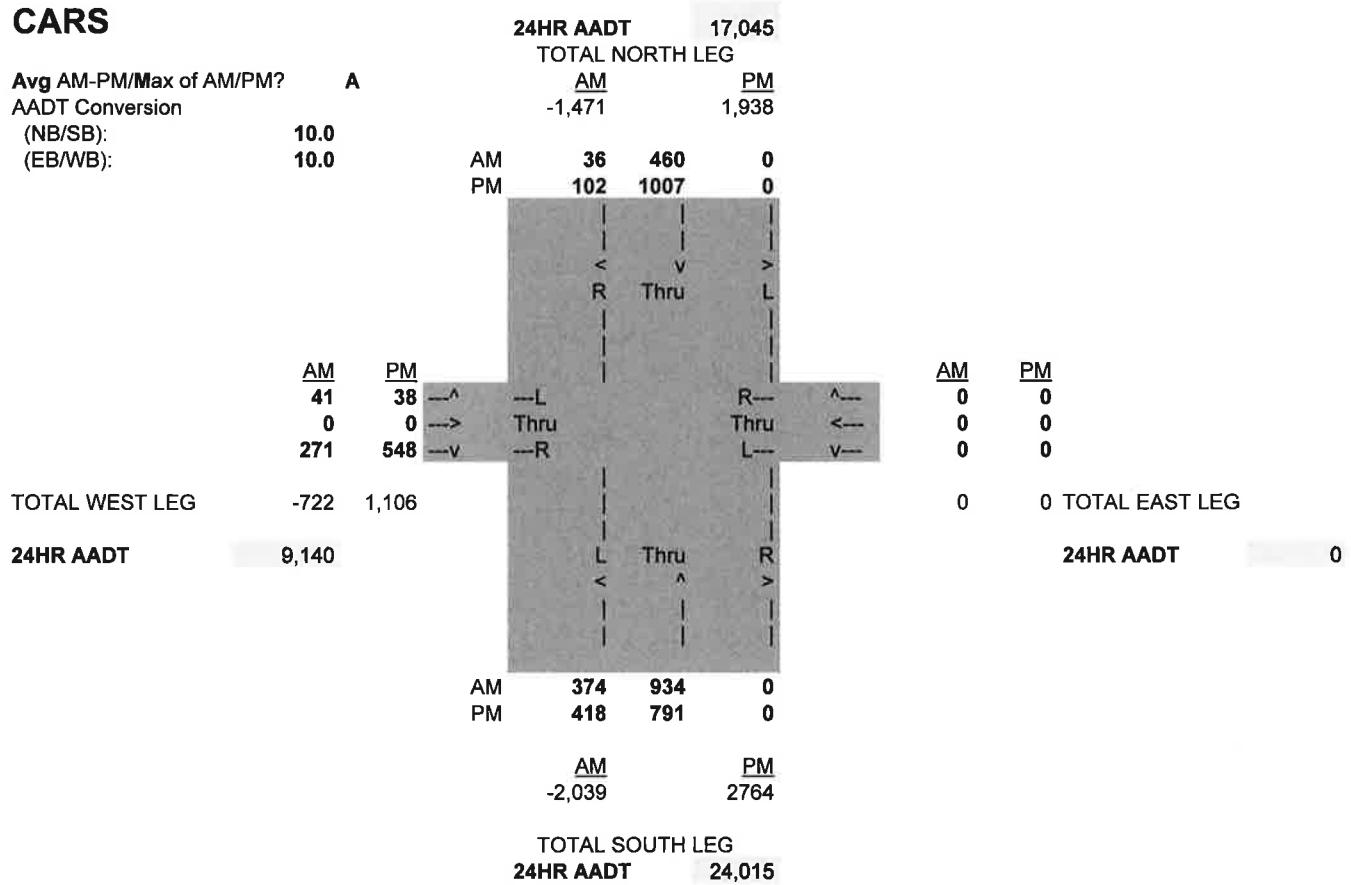
Afternoon Peak Diagram		Specified Period From: 16:30:00 To: 19:30:00	One Hour Peak From: 17:45:00 To: 18:45:00
Municipality: Guelph Site #: 1907200003 Intersection: Gordon St & Edinburgh Rd S TFR File #: 1 Count date: 27-Mar-19		Weather conditions: Person(s) who counted:	
** Non-Signalized Intersection **		Major Road: Gordon St runs N/S	
North Leg Total: 2100 North Entering: 1188 North Peds: 36 Peds Cross: ▷	Heavys 0 0 0 Trucks 5 74 79 Cars 102 1007 1109 Totals 107 1081	Heavys 0 0 0 Trucks 83 83 83 Cars 829 829 829 Totals 912 912 912	
<p>Gordon St</p> <p>Edinburgh Rd S</p> <p>N W E S</p>			
Heavys Trucks Cars Totals 0 36 520 556	Heavys Trucks Cars Totals 0 8 38 46	Heavys Trucks Cars Totals 0 42 548 590	Peds Cross: X West Peds: 35 West Entering: 636 West Leg Total: 1192
Cars 1555 Trucks 116 Heavys 0 Totals 1671	Cars 418 791 1209 Trucks 31 75 106 Heavys 0 0 0 Totals 449 866	Peds Cross: ▷ South Peds: 25 South Entering: 1315 South Leg Total: 2986	
Comments			

HOURLY BREAKDOWN - CARS, MEDIUM, HEAVY TRUCKS

 Project: TriGor - Gordon St
 Date: May 30 2019

Time	Cars	2 Axle		2 Axle	3 Axle	4 Axle		<6 Axle	6 Axle	>6 Axle	6 Axle	>6 Axle		Not	Total	Total		
	Trailer	Long	Cars	Buses	6 Tire	Single	Single	Doubi	Doubi	Doubi	Multi	Multi	Hvy	Class	Total	Truck	P.C.	
				Med	Med	Med	Hvy	Hvy	Hvy	Hvy	Hvy	Hvy	Hvy					
12:00 AM	60	5		6	0	0	0	0	0	0	0	0	0	0	71	6	8.45%	
12:15	62	0		5	1	0	0	0	0	0	0	0	0	0	68	6	8.82%	
12:30	39	2		4	2	0	0	0	0	0	0	0	0	0	47	6	12.77%	
12:45	27	0		0	0	0	0	0	0	0	0	0	0	0	27	0	0.00%	
1:00	36	1		1	0	0	0	0	0	0	0	0	0	0	38	1	2.63%	
1:15	20	3		2	0	0	0	0	0	0	0	0	0	0	25	2	8.00%	
1:30	17	2		1	0	0	0	0	0	0	0	0	0	0	20	1	5.00%	
1:45	12	1		1	0	0	0	0	0	0	0	0	0	0	14	1	7.14%	
2:00	20	2		0	0	0	0	0	0	0	0	0	0	0	22	0	0.00%	
2:15	21	1		0	0	0	0	0	0	0	0	0	0	0	22	0	0.00%	
2:30	9	1		0	0	0	0	0	0	0	0	0	0	0	10	0	0.00%	
2:45	10	3		0	0	0	0	0	0	0	0	0	0	0	13	0	0.00%	
3:00	10	2		0	0	0	0	0	0	0	0	0	0	0	12	0	0.00%	
3:15	9	0		0	1	0	0	0	0	0	0	0	0	0	10	1	10.00%	
3:30	7	1		0	0	0	0	0	1	0	0	0	0	0	9	1	11.11%	
3:45	13	2		0	0	0	0	0	0	0	0	0	0	0	15	0	0.00%	
4:00	17	2		0	0	0	0	0	0	0	0	0	0	0	19	0	0.00%	
4:15	18	0		2	0	0	0	0	0	0	0	0	0	0	20	2	10.00%	
4:30	21	4		0	2	0	0	0	0	0	0	0	0	0	27	2	7.41%	
4:45	32	2		1	0	0	0	0	0	0	0	0	0	0	35	1	2.86%	
5:00	39	9		2	0	0	0	0	0	0	0	0	0	0	50	2	4.00%	
5:15	46	8		1	0	0	0	0	0	0	0	0	0	0	55	1	1.82%	
5:30	78	11		3	4	0	0	0	0	0	0	0	0	0	96	7	7.29%	
5:45	89	21		4	1	1	1	0	1	0	0	0	0	0	118	8	6.78%	
6:00	126	16		6	1	0	2	0	0	0	0	0	0	0	151	9	5.96%	
6:15	127	27		5	2	0	1	1	0	0	0	0	0	1	164	9	5.49%	
6:30	180	36		6	1	1	2	0	0	0	0	0	0	4	230	10	4.35%	
6:45	199	25		3	2	1	0	0	0	1	0	0	0	2	234	9	3.85%	
7:00	189	35		5	2	0	3	1	1	0	0	0	0	0	1	237	12	5.06%
7:15	261	38		8	7	1	0	4	1	2	0	0	0	0	3	325	23	7.08%
7:30	350	46		6	8	3	3	4	0	0	0	0	0	0	7	427	24	5.62%
7:45	399	37		8	5	4	3	4	0	0	0	0	0	1	6	467	25	5.35%
8:00	372	41		9	9	0	5	5	0	0	0	0	0	1	6	448	29	6.47%
8:15	391	58		8	5	2	8	3	0	0	0	0	0	0	17	492	26	5.28%
8:30	494	49		18	7	1	3	4	1	0	0	0	0	0	14	591	34	5.75%
8:45	480	51		5	6	10	0	2	0	3	0	0	1	18	581	32	5.51%	
9:00	405	42		6	11	3	0	4	1	0	0	0	1	5	478	26	5.44%	
9:15	369	51		4	5	4	4	1	1	0	0	0	0	0	9	448	19	4.24%
9:30	329	55		2	12	3	1	3	0	0	0	0	0	2	3	410	23	5.61%
9:45	303	48		7	8	2	2	2	1	0	0	0	0	3	5	381	25	6.58%
10:00	319	57		8	12	1	3	3	0	0	0	0	0	0	3	406	27	6.65%
10:15	345	45		4	10	3	2	2	0	0	0	0	0	0	9	420	21	5.00%
10:30	372	51		7	4	0	1	3	2	1	0	0	0	0	11	452	18	3.98%
10:45	346	51		8	18	1	2	6	1	1	0	0	0	1	9	444	38	8.56%
11:00	318	48		9	15	4	5	3	1	0	0	0	0	0	4	407	37	9.09%
11:15	368	41		7	4	2	5	6	0	0	0	0	0	0	5	438	24	5.48%
11:30	384	42		5	10	2	2	5	2	0	0	0	0	0	12	464	26	5.60%
11:45	391	57		0	7	2	4	7	2	0	0	0	0	1	6	477	23	4.82%
12:00 PM	403	50		4	13	2	4	6	0	0	0	0	0	0	11	493	29	5.88%
12:15	392	64		3	2	2	2	6	0	0	0	0	1	6	478	16	3.35%	
12:30	407	51		5	9	1	4	7	1	1	0	0	0	0	14	500	28	5.60%
12:45	414	55		3	8	1	4	1	0	0	0	0	0	0	13	499	17	3.41%
1:00	413	62		5	8	1	4	4	0	0	0	0	0	0	4	501	22	4.39%
1:15	371	52		6	8	1	5	5	0	1	1	0	0	0	12	462	27	5.84%
1:30	401	46		5	10	2	7	2	3	0	0	0	0	0	6	482	29	6.02%
1:45	367	49		4	10	0	7	3	0	0	1	0	0	0	9	450	25	5.56%
2:00	423	48		6	6	2	2	4	0	0	0	1	0	1	4	497	22	4.43%
2:15	402	45		4	12	0	1	6	1	0	0	0	0	1	6	478	25	5.23%
2:30	427	57		6	8	1	6	3	0	0	0	0	0	0	7	515	24	4.66%
2:45	422	50		4	11	1	3	0	2	0	0	0	0	0	10	503	21	4.17%
3:00	445	67		7	12	0	5	4	0	0	0	0	0	1	12	553	29	5.24%
3:15	448	47		11	5	0	2	4	0	1	0	0	0	0	13	531	23	4.33%
3:30	449	64		8	11	1	7	5	0	0	0	0	0	0	3	548	32	5.84%
3:45	497	54		10	9	1	9	10	0	0	0	0	0	2	12	604	41	6.79%
4:00	513	43		7	9	1	10	3	0	0	0	0	0	0	9	595	30	5.04%
4:15	498	52		4	10	1	4	4	0	0	0	0	0	0	11	584	23	3.94%
4:30	567	67		0	4	2	4	5	1	1	0	0	0	2	9	662	19	2.87%
4:45	607	60		2	6	0	4	3	0	0	0	0	0	0	8	690	15	2.17%
5:00	606	50		2	9	0	11	7	0	0	0	0	0	1	15	701	30	4.28%
5:15	634	68		4	4	1	3	5	0	0	0	0	0	0	12	731	17	2.33%
5:30	590	54		1	7	1	7	7	0	0	0	0	0	0	11	678	23	3.39%
5:45	592	61		4	2	1	1	6	0	0	0	1	0	0	9	679	17	2.50%
6:00	547	58		4	4	1	5	3	0	0	0	0	0	0	3	625	17	2.72%
6:15	499	50		2	3	3	4	2	0	0	0	0	0	0	10	573	14	2.44%
6:30	500	39		4	4	2	7	3	1	0	0	0	0	0	7	567	21	3.70%
6:45	486	48		4	3	0	6	5	0	0	1	0	0	1	6	560	20	3.57%
7:00	419	50		3	4	1	4	1	0	0	0	0	0	0	3	485	13	2.68%
7:15	423	41		4	6	0	1	2	0	0	0	0	0	1	5	483	14	2.90%
7:30	378	39		3	2	0	2	2	0	0	0	0	0	0	5	431	9	2.09%
7:45	368	41		2	5	0	3	2	0	1	0	0	0	0	1	423	13	3.07%
8:00	403	31		4	2	0	3	0	0	0	0	0	0	0	11	454	9	1.98%
8:15	366	43		4	7	0	4	3	0	0	0	0	0	1	3	431	19	4.41%
8:30	328	31		3	2	0	4	3	0	0	0	0	0	0	4	375		

CARS



MEDIUM TRUCKS

Avg AM-PM/Max of AM/PM? A
AADT Conversion
 (NB/SB): 10.0
 (EB/WB): 10.0

24HR AADT 1,635
TOTAL NORTH LEG
AM CARS
-165 162

AM	1	52	0
PM	5	74	0
	-	-	-
	<	v	>
R	Thru	L	-

<u>AM</u>	<u>PM</u>
9	8
0	0
17	42

TOTAL WEST LEG

AM	38	103	0
PM	31	75	0

AM PM

0 0 TOTAL EAST LEG

24HR AADT

24HR AADT

9

TOTAL SOUTH LEG
24HR AADT 2,160

SUMMARY

Edinburg (E-W) & Gordon (N-S) - 2019

TOTAL NORTH LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	17,045	91.2%
Med. Trucks	1,635	8.8%
Heavy Trucks	0	0.0%
24hr AADT	18,680	100.0%

TOTAL EAST LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	0	ERR
Med. Trucks	0	ERR
Heavy Trucks	0	ERR
24hr AADT	0	ERR

TOTAL WEST LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	9,140	92.4%
Med. Trucks	755	7.6%
Heavy Trucks	0	0.0%
24hr AADT	9,895	100.0%

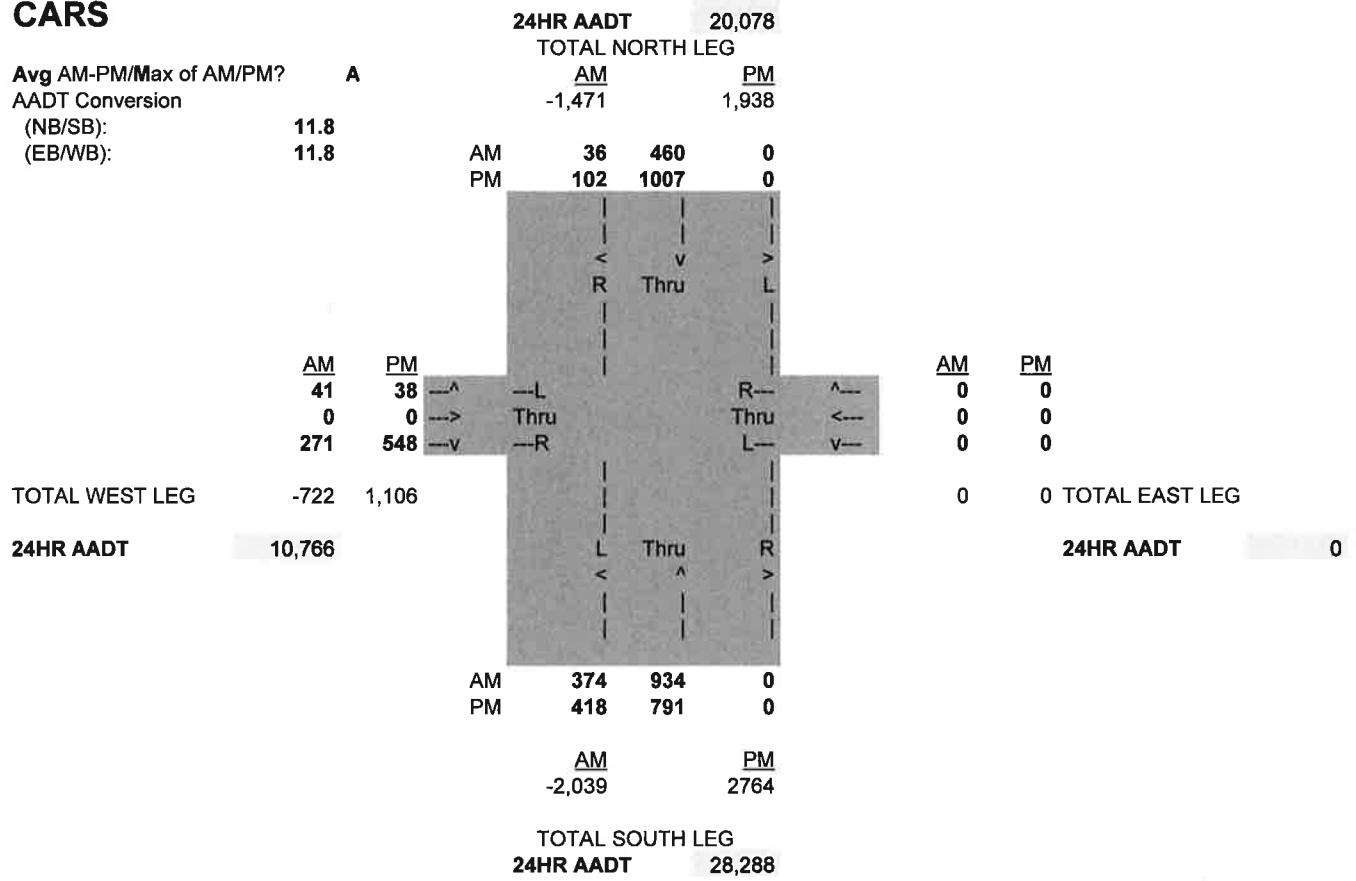
TOTAL SOUTH LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	24,015	91.7%
Med. Trucks	2,160	8.3%
Heavy Trucks	0	0.0%
24hr AADT	26,175	100.0%

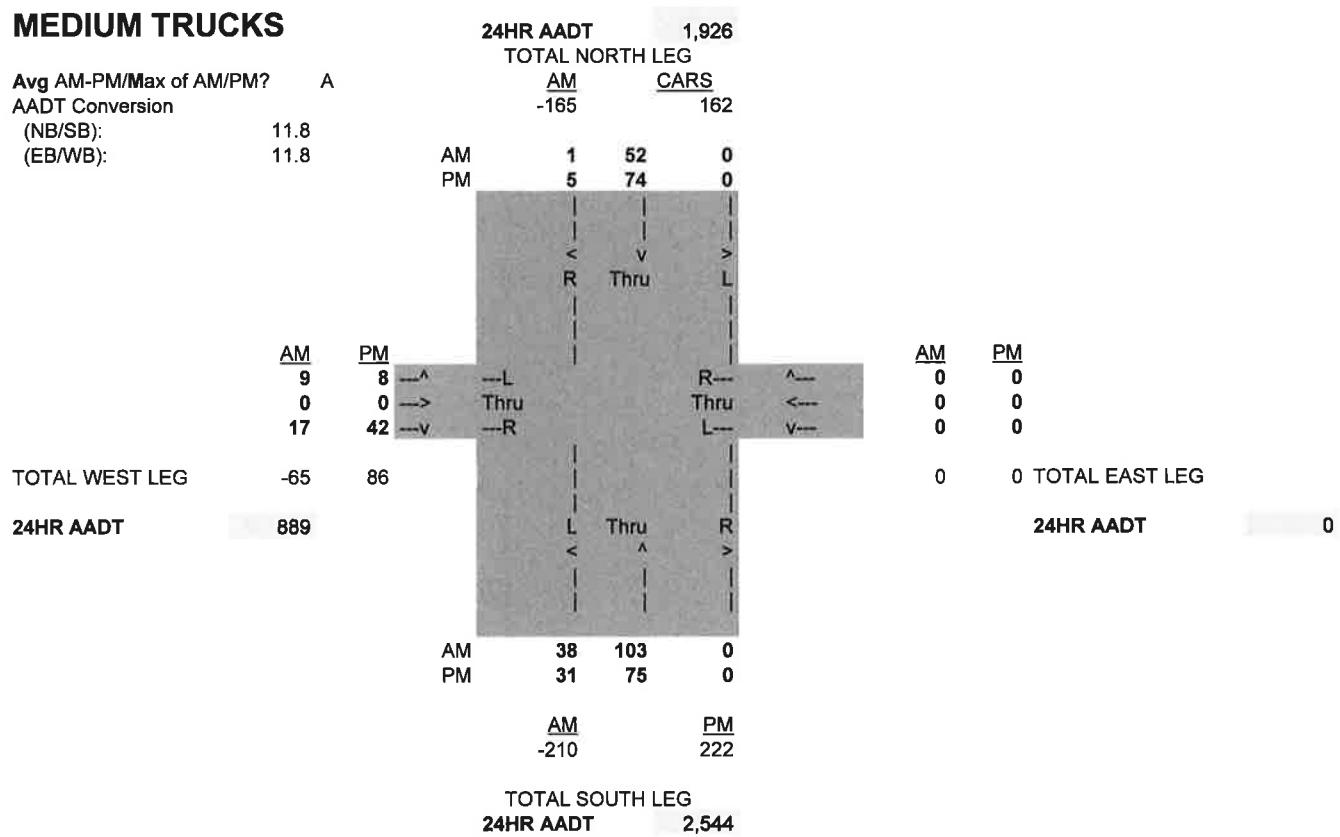
Note: 24hr AADT is calculated on averaging AM & PM values and multiplying results by conversion factor 10

13-Feb-20
09:41 AM

CARS



MEDIUM TRUCKS



SUMMARY

Edinburg (E-W) & Gordon (N-S) - 2030

TOTAL NORTH LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	20,078	91.2%
Med. Trucks	1,926	8.8%
Heavy Trucks	0	0.0%
24hr AADT	22,004	100.0%

TOTAL EAST LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	0	ERR
Med. Trucks	0	ERR
Heavy Trucks	0	ERR
24hr AADT	0	ERR

TOTAL WEST LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	10,766	92.4%
Med. Trucks	889	7.6%
Heavy Trucks	0	0.0%
24hr AADT	11,656	100.0%

TOTAL SOUTH LEG

	<u>Vehicles</u>	<u>Breakdown</u>
Cars	28,288	91.7%
Med. Trucks	2,544	8.3%
Heavy Trucks	0	0.0%
24hr AADT	30,833	100.0%

Note: 24hr AADT is calculated on averaging AM & PM values and multiplying results by conversion factor 12

13-Feb-20
09:41 AM

ON-SITE SOUND LEVELS FROM OFF-SITE ROOFTOP HVAC – DAY & NIGHT

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R1
 ID: R1
 X: 17564440.21 m
 Y: 4818499.86 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"

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(A))						
12	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	47.4	0.1	0.0	0.0	0.0	19.2	0.0	0.0	23.3	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
14	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	48.0	0.1	0.0	0.0	0.0	19.3	0.0	0.0	22.6	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
17	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	48.8	0.1	0.0	0.0	0.0	19.3	0.0	0.0	21.8	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
20	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.4	0.2	-1.6	0.0	0.0	8.3	0.0	0.0	30.7	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
22	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.6	0.2	-1.6	0.0	0.0	8.1	0.0	0.0	30.7	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
24	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.8	0.2	-1.6	0.0	0.0	7.1	0.0	0.0	31.5	

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R2
 ID: R2
 X: 17564445.64 m
 Y: 4818522.78 m
 Z: 1.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"																				
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(A))						
1	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.3	0.2	3.8	0.0	0.0	15.5	0.0	0.0	21.3

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"																				
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(A))						
2	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.8	0.2	4.0	0.0	0.0	15.4	0.0	0.0	20.7

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"																				
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(A))						
4	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.4	0.2	4.1	0.0	0.0	15.2	0.0	0.0	20.1

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
6	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.5	0.2	3.4	0.0	0.0	4.9	0.0	0.0	28.9

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
10	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.6	0.2	3.4	0.0	0.0	4.0	0.0	0.0	29.7

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
11	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.8	0.2	3.3	0.0	0.0	4.3	0.0	0.0	29.4

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS – DAY & NIGHT

Receiver
 Name: R3
 ID: R3
 X: 17564480.24 m
 Y: 4818557.05 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"																				
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(A))						
3	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.6	0.2	-0.7	0.0	0.0	10.6	0.0	0.0	28.3

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
5	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	0.0	0.0	0.0	6.1	0.0	0.0	32.0

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
7	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	-0.3	0.0	0.0	7.7	0.0	0.0	30.6

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"																				
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(A))						
9	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	-0.4	0.0	0.0	7.2	0.0	0.0	31.3

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"																				
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(A))						
15	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.9	0.2	-0.7	0.0	0.0	10.6	0.0	0.0	28.0

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"																				
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(A))						
18	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.3	0.2	-1.0	0.0	0.0	10.6	0.0	0.0	27.9

Receiver

Name: R4
 ID: R4
 X: 17564495.38 m
 Y: 4818562.27 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
8	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.2	0.2	0.0	0.0	0.0	18.0	0.0	0.0	20.6	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
13	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.2	0.2	0.0	0.0	0.0	8.5	0.0	0.0	30.0	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
16	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.3	0.2	-0.3	0.0	0.0	7.9	0.0	0.0	30.9	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
19	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.1	0.2	-1.2	0.0	0.0	9.0	0.0	0.0	29.9	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A)						
21	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.3	0.2	-1.2	0.0	0.0	9.1	0.0	0.0	29.6	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A)						
23	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.7	0.2	-1.2	0.0	0.0	9.1	0.0	0.0	29.2	

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R5
 ID: R5
 X: 17564503.71 m
 Y: 4818573.52 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
26	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.5	0.2	0.0	0.0	0.0	17.4	0.0	0.0	20.9

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
28	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.6	0.2	0.0	0.0	0.0	17.4	0.0	0.0	20.8

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
30	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	0.0	0.0	0.0	17.2	0.0	0.0	20.9

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
32	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.0	0.2	-1.1	0.0	0.0	7.5	0.0	0.0	30.3

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
33	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.2	0.2	-1.1	0.0	0.0	7.6	0.0	0.0	30.0

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
34	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.5	0.3	-1.1	0.0	0.0	6.8	0.0	0.0	30.5

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R6
 ID: R6
 X: 17564514.63 m
 Y: 4818582.05 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
25	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	0.0	0.0	0.0	17.3	0.0	0.0	20.8

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
29	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.8	0.2	0.0	0.0	0.0	17.0	0.0	0.0	21.0

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
31	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.0	0.2	0.0	0.0	0.0	17.0	0.0	0.0	20.8

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"

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(A))						
37	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.7	0.3	-0.9	0.0	0.0	6.4	0.0	0.0	30.6

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
39	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.9	0.3	-0.9	0.0	0.0	6.5	0.0	0.0	30.3

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
41	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.1	0.3	-1.0	0.0	0.0	5.9	0.0	0.0	30.6

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R7
 ID: R7
 X: 17564525.85 m
 Y: 4818594.11 m
 Z: 4.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
27	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.2	0.2	0.0	0.0	0.0	17.1	0.0	0.0	20.5	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
36	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.4	0.2	0.0	0.0	0.0	17.2	0.0	0.0	20.2	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
44	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.6	0.2	0.0	0.0	0.0	17.0	0.0	0.0	20.2	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"

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)						
46	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	54.6	0.3	-0.9	0.0	0.0	5.4	0.0	0.0	30.6	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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)						
51	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	54.7	0.3	-0.9	0.0	0.0	5.6	0.0	0.0	30.2	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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)						
53	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	54.9	0.3	-0.9	0.0	0.0	5.3	0.0	0.0	30.4	

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R8
 ID: R8
 X: 17564537.56 m
 Y: 4818378.44 m
 Z: 13.50 m

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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)						
35	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	50.0	0.2	-1.0	0.0	0.0	16.2	0.0	0.0	24.7	

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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)						
38	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	50.6	0.2	-0.9	0.0	0.0	16.7	0.0	0.0	23.4	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
40	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.2	0.2	-0.9	0.0	0.0	17.0	0.0	0.0	22.5	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
42	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.6	0.2	-1.7	0.0	0.0	8.5	0.0	0.0	31.3	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
43	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	51.9	0.2	-1.7	0.0	0.0	9.0	0.0	0.0	30.5	

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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)						
45	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	52.2	0.2	-1.7	0.0	0.0	9.1	0.0	0.0	30.2	

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R9
 ID: R9
 X: 17564628.11 m
 Y: 4818439.57 m
 Z: 13.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
47	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.0	0.2	-2.1	0.0	0.0	7.8	0.0	0.0	34.1

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
49	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.1	0.2	-1.6	0.0	0.0	7.6	0.0	0.0	33.7

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A)						
54	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.2	0.2	-1.5	0.0	0.0	6.9	0.0	0.0	34.2

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A)						
55	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.2	0.3	-1.7	0.0	0.0	5.0	0.0	0.0	32.2

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A)						
56	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.5	0.3	-1.6	0.0	0.0	5.5	0.0	0.0	31.4

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"

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(A)						
57	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.8	0.3	-1.6	0.0	0.0	5.4	0.0	0.0	31.1

ON-SITE ROOFTOP HVAC MECHANICAL SYSTEMS - DAY & NIGHT

Receiver

Name: R10
 ID: R10
 X: 17564601.88 m
 Y: 4818486.31 m
 Z: 13.50 m

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
48	17564557.63	4818489.05	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	45.1	0.1	-0.2	0.0	0.0	16.4	0.0	0.0	28.6

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
50	17564554.62	4818485.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	45.5	0.1	-0.2	0.0	0.0	16.2	0.0	0.0	28.4

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR_B"

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(A))						
52	17564551.22	4818481.61	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	46.0	0.1	-0.3	0.0	0.0	16.4	0.0	0.0	27.8

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
58	17564485.40	4818446.23	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.0	0.2	-1.1	0.0	0.0	18.5	0.0	0.0	19.4

Point Source, ISO 9613, Name: "Bldg A - HVAC", ID: "125GOR_A"

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(A))						
59	17564480.26	4818451.47	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.2	0.2	-0.9	0.0	0.0	19.1	0.0	0.0	18.3

Point Source, ISO 9613, Name: "Bldg B - HVAC", ID: "125GOR"

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(A))						
60	17564476.06	4818455.75	38.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.4	0.3	-0.8	0.0	0.0	19.6	0.0	0.0	17.5

OFF-SITE SOUND LEVELS FROM ON-SITE ROOFTOP HVAC – DAY & NIGHT

OFF-SITE ROOFTOP MECHANICAL SOURCES - DAY & NIGHT

Receiver

Name: R1- 1250 Gordon
 ID: APT2_HVAC
 X: 17564510.40 m
 Y: 4818418.41 m
 Z: 15.50 m

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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(A)						
1	17564572.20	4818375.02	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	48.6	0.1	-2.2	0.0	0.0	0.0	0.0	38.5	

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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(A)						
3	17564562.81	4818360.07	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	48.9	0.2	-2.3	0.0	0.0	0.0	0.0	38.2	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
5	17564611.74	4818206.75	24.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	58.4	0.5	-0.5	0.0	0.0	0.0	0.0	31.7	

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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(A)						
7	17564654.35	4818491.04	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	55.1	0.3	-1.6	0.0	0.0	0.0	0.0	31.2	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
14	17564430.31	4818276.36	2.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	55.3	0.3	-2.1	0.0	0.0	0.0	0.0	27.3	

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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(A)						
16	17564673.80	4818477.68	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	55.8	0.3	-1.8	0.0	0.0	0.0	0.0	30.7	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
18	17564584.86	4818235.10	24.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	56.9	0.4	-0.5	0.0	0.0	0.0	0.0	28.2	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
20	17564623.13	4818187.96	24.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	59.2	0.5	-0.5	0.0	0.0	0.0	0.0	25.8	

OFF-SITE ROOFTOP MECHANICAL SOURCES - DAY & NIGHT

Receiver

Name: R2 - 1250 Gordon
 ID: APT2_HVAC
 X: 17564537.38 m
 Y: 4818450.01 m
 Z: 15.50 m

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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(A)						
2	17564572.20	4818375.02	17.00	0	DEN	500	85.0	0.0	0.0	0.0	49.3	0.2	-2.4	0.0	0.0	0.0	0.0	0.0	37.9	

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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(A)						
4	17564562.81	4818360.07	17.00	0	DEN	500	85.0	0.0	0.0	0.0	50.4	0.2	-2.4	0.0	0.0	0.0	0.0	0.0	36.9	

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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(A)						
6	17564654.35	4818491.04	17.00	0	DEN	500	85.0	0.0	0.0	0.0	52.9	0.2	-2.1	0.0	0.0	0.0	0.0	0.0	34.0	

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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(A)						
8	17564673.80	4818477.68	17.00	0	DEN	500	85.0	0.0	0.0	0.0	53.9	0.3	-2.0	0.0	0.0	0.0	0.0	0.0	32.9	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
9	17564611.74	4818206.75	24.00	0	DEN	500	90.0	0.0	0.0	0.0	59.1	0.5	-1.2	0.0	0.0	0.0	0.0	0.0	31.6	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
10	17564430.31	4818276.36	2.00	0	DEN	500	85.0	0.0	0.0	0.0	57.2	0.4	2.1	0.0	0.0	0.0	0.0	0.0	25.3	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
11	17564584.86	4818235.10	24.00	0	DEN	500	85.0	0.0	0.0	0.0	57.9	0.4	-1.3	0.0	0.0	0.0	0.0	0.0	28.0	

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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(A)						
12	17564623.13	4818187.96	24.00	0	DEN	500	85.0	0.0	0.0	0.0	59.8	0.5	-1.1	0.0	0.0	0.0	0.0	0.0	25.8	

OFF-SITE ROOFTOP MECHANICAL SOURCES - DAY & NIGHT

Receiver

Name: R3 - 1250 Gordon
 ID: APT2_HVAC
 X: 17564582.39 m
 Y: 4818496.90 m
 Z: 15.50 m

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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)						
13	17564654.35	4818491.04	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	48.2	0.1	-2.0	0.0	0.0	0.0	0.0	38.7	

Point Source, ISO 9613, Name: "APT2 - HVAC", ID: "APT2_HVAC"

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)						
15	17564673.80	4818477.68	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	50.4	0.2	-2.3	0.0	0.0	0.0	0.0	0.0	36.7

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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)						
17	17564572.20	4818375.02	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	52.7	0.2	-1.8	0.0	0.0	0.0	0.0	0.0	33.8

Point Source, ISO 9613, Name: "APT1 - HVAC", ID: "APT1_HVAC"

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)						
19	17564562.81	4818360.07	17.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	53.8	0.3	-1.8	0.0	0.0	0.0	0.0	0.0	32.8

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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)						
21	17564611.74	4818206.75	24.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	60.3	0.6	-1.0	0.0	0.0	0.0	0.0	0.0	30.1

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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)						
22	17564584.86	4818235.10	24.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	59.4	0.5	-1.2	0.0	0.0	0.0	0.0	0.0	26.3

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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)						
23	17564430.31	4818276.36	2.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	59.6	0.5	2.0	0.0	0.0	0.0	0.0	0.0	22.9

Point Source, ISO 9613, Name: "APT3 - HVAC", ID: "APT3_HVAC"

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)						
24	17564623.13	4818187.96	24.00	0	DEN	500	85.0	0.0	0.0	0.0	0.0	60.9	0.6	-0.9	0.0	0.0	0.0	0.0	0.0	24.4

APPENDIX C: CITY OF GUELPH WARNING CLAUSES

This clause shall be included in all cases:

"The Transferee covenants with the Transferor that the below clause, verbatim, will be included in all subsequent Agreements of Purchase or Sale or lease and Sale and Deeds conveying the lands described herein, which covenant shall run with the said lands and is for the benefit of the subsequent owners and renters of the said lands and the owner of the adjacent road."

Select from the following clauses, as is appropriate for the site:

A.

"The Transferee of Buildings A and Building B, for himself, his heirs, executors, administrators, successors and assigns acknowledge being advised that despite the inclusion of noise control features in the development and/or within the building unit sound levels due to increasing road traffic may occasionally interfere with some indoor and/or outdoor activities of the dwelling occupants as the sound levels may at times exceed the sound level limits of the municipal and provincial noise criteria."

"This development includes a number of measures to help reduce noise impacts, listed below. To ensure that provincial and municipal sound level limits are not exceeded and/or to keep sound levels as low as possible it is important to maintain the sound attenuation features provided."

"This development includes building and street orientation to help increase setback distances to major noise sources from excessive noise levels."

B.

"This development includes an acoustic barrier to help reduce the sound levels within the rear yard of this and other nearby units."

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 will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the municipal and provincial sound level limits.

"The building components of this dwelling unit (walls, windows and exterior doors) have been designed to provide acoustic insulation so that, when windows and exterior doors are closed, the indoor sound levels are within the municipal and provincial sound level limits. The details of this building component design are available by contacting the builder of this unit."

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 municipal and provincial sound level limits.

"The building components of this dwelling unit (walls, windows and exterior doors) have been designed to provide acoustic insulation so that, when windows and exterior doors are closed, the indoor sound levels are within the municipal and provincial sound level limits. The details of this building component design are available by contacting the builder of this unit."

F.

"The Transferee, for himself, his heirs, executors, administrators, successors and assigns acknowledge being additionally advised that the installed acoustic barrier is on private property and must be maintained and kept in good repair by the property owner. Any maintenance, repair or replacement is the responsibility of the property owner and shall be the same material or to the same standards, having the same colour, appearance and function of the original."

APPENDIX D: NOISE CRITERIA

The noise study will be based on the following criteria for residential units as required by the City of Guelph and the Ministry of the 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 were based on the Site Plan provided by Astrid J. Clos, Planning Consultants, dated January 21, 2020.

L_{eq}

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: REFERENCES

1. City of Guelph Noise Control Guidelines, Version 1.0, November 2018.
2. Ministry of the Environment, "Publication NPC-300, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning", August 2013.
3. Ministry of Environment and Energy STAMSON Computer Programme (*Version 5.04* for the IBM PC).
4. Ministry of Environment and Energy, *ORNAMENT*, Ontario Road Noise Analysis Method for Environment and Transportation, November 1988.