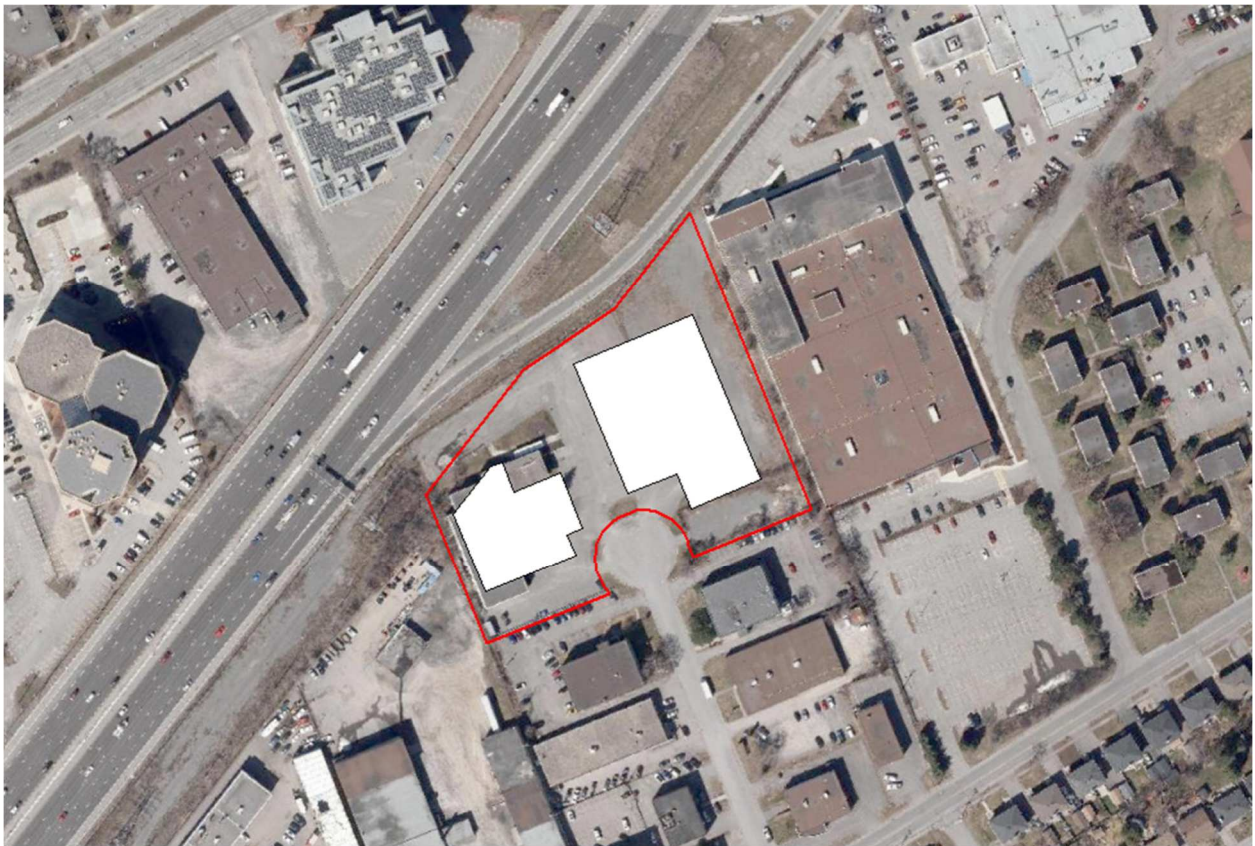


ACCESS PROPERTY DEVELOPMENTS

# NOISE IMPACT ASSESSMENT 864 LADY ELLEN PLACE, OTTAWA

MARCH 13, 2023

FINAL





# NOISE IMPACT ASSESSMENT

864 LADY ELLEN PLACE,  
OTTAWA

ACCESS PROPERTY DEVELOPMENTS

FINAL

PROJECT NO.: 221-04646-00  
DATE: MARCH 13, 2023

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# SIGNATURES

PREPARED BY



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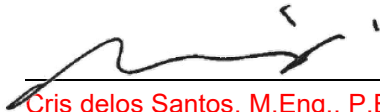
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# 1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Access Property Developments to prepare a Noise Impact Study for the proposed industrial development to be located at 864 Lady Ellen Place in Ottawa, Ontario (the Site).

The purpose of this study is to evaluate the potential noise impacts of stationary sources associated with the Site to the neighbouring noise sensitive receptors. The report was prepared in support of a Site Plan Control Application (SPCA) submission to the City of Ottawa (the City).

The noise impact assessment was conducted in accordance with the City's *Environmental Noise Control Guidelines* (ENCG) and the Ministry of Environment, Conservation and Parks (MECP) Noise Pollution Control (NPC) publication NPC-300 "*Environmental Noise Guideline, Stationary and Transportation Sources –Approval and Planning*". This report was based on the Proposed Site Plan provided by Architecture 49, dated November 29, 2022. The Proposed Site Plan is included as **Appendix A**.

---

## 1.1 THE SITE AND SURROUNDING AREA

The Site is located in the Carlington neighbourhood area in Ottawa, Ontario at 864 Lady Ellen Place, between Carling and Maitland next to the 417 Highway. The Site is bounded by:

- **South:** several industrial and commercial buildings and then residential buildings on the other side of Laperriere Avenue.
- **East:** single-storey commercial and office building at 1550 Carling Avenue and surface parking areas with residential dwellings further east.
- **West:** Single-storey warehouse buildings, surface parking lots, outdoor storage.
- **North:** Highway 417 and further north other industrial and commercial facilities.

The location of the Site is shown in **Figure 1**. A zoning map showing the land use surrounding the proposed development from the City of Ottawa is provided in **Figure 2**. The Site is currently zoned "Light Industrial, Urban Exception 278, Height Limit 30" (IL [278] H(30)) under the City of Ottawa Zoning By-Law 2008-250. The area surrounding the proposed development includes Parks and Open Space, Arterial Mainstreet Zone, and Light Industrial Zone.

---

## 1.2 THE PROPOSED DEVELOPMENT

Access Property Developments intends to develop two (2) self-storage/warehouse buildings. The first of these will be a four-storey light industrial building with a gross floor area (GFA) of 15,913 m<sup>2</sup>, containing self-storage units on the upper three (3) storeys and warehouse space on the ground floor with loading bays. The ground floor will also contain ancillary administrative office space to serve clients of the self-storage use. The second building will consist of a single-storey self-storage building with a GFA of 1,750 m<sup>2</sup>. There will also be surface parking around the buildings. The buildings will be separated by a central driveway which extends out to Lady Ellen Place. Two new access roads to the left and right will provide vehicular access to the site from the cul-de-sac at the end of Lady Ellen Place.

The proposed hours of the warehouse or rental office is 9 am to 5 pm, Monday to Friday. However, the self-storage will be accessible 24 hours a day 7 days a week via secure access.

The locations of the proposed structures, parking and access associated with the site layout are illustrated in preliminary design drawing of the proposed development is included in **Appendix A**.



## 2 STATIONARY NOISE SOURCES

Stationary source is defined in the ENCG and the MECP publication NPC-300 as source of sound or combination of sources of sound that are included and normally operated within the property lines of a facility.

The noise sources considered in the assessment are rooftop HVAC units and noise associated with vehicle movements within the Site. The noise stationary source locations are shown in **Figure 3**. The overall sound power levels and source heights are listed in **Appendix B**.

As the project is still in its early stages, detailed mechanical design and final equipment selection are not yet available. Thus, typical assumptions based on similarly sized facilities have been used to assess its potential noise impact to the surrounding noise sensitive land use.

---

### 2.1 ROOFTOP MECHANICAL EQUIPMENT

As the mechanical information is not available at this time, the size of the rooftop HVAC units was estimated based on building size. Building A (15,913m<sup>2</sup>), the four-storey self-storage, assumed to have twelve (12) 10-ton HVAC units. For the one-storey self-storage Building B (1,750m<sup>2</sup>), it was assumed to have three (3) 10-ton HVAC units.

The HVAC units were assumed to operate continually for full hour during the daytime, evening, and nighttime (100% duty cycle) to be conservative.

---

### 2.2 VEHICLE ACTIVITIES

Vehicle trips on the proposed site was supplied in a memo relating to the Traffic Impact Study provided by WSP, dated December 2, 2022 (included in **Appendix B**). For the proposed self-storage land use, the anticipated number of trips during AM and PM peak hours are expected to be 17 and 29, respectively.

As the proposed development's hours of operation is during the daytime hours only, the busiest 1-hour period (predictable worst-case), based on the memo provided for each building is expected to have the following volumes: Building A – 15 trucks per hour; and Building B – 14 trucks per hour for a total of 29 trucks per hour on site.

It is understood that there will be no refrigerated trucks entering and leaving the facility. Typical trucks used for warehousing activities are tractor semi-trailer trucks and or/ 26-foot delivery trucks and thus were assumed to be heavy duty trucks in this assessment as a conservative approach. All trucks are assumed to travel at 15 kph while within the site. Reference emission levels for trucks were taken from WSP database.

Truck movements were modelled as a moving point source (line source). Heavy trucks travelling at 15 kph were modelled using a reference sound power level of 102 dBA at 2.4 m above grade.

Trucks are not expected to idle on site. However, five minutes of idling per loading area was included in the assessment to account for any accidental idling that may occur during arrival or departure.

---

### 2.3 LOADING AND/OR UNLOADING ACTIVITIES

To be conservative, more than 9 forklift entry and exits are assumed to occur within an hour at the Site. A sound power level of 99.7 dBA (based on previous WSP measurements) were used to model this activity occurring at loading areas of Building A and B. As per provided Site Plan provided in Appendix A, Building A has two (2) loading docks at the northwest and southeast corners and Building B has one (1) at the northeast corner.

# 3 POINTS OF RECEPTION

Points of reception (PORs) for a noise assessment are those locations identified to be noise sensitive. The site-attributable sound level is the logarithmic sum of the individual noise source contributions at each POR. In accordance with Publication NPC-300, a POR is a property that accommodates a dwelling, a noise-sensitive commercial building, or a noise-sensitive institutional building. Noise-sensitive land uses may also constitute one or more PORs. PORs for an acoustic assessment are those locations where the sound from the Site is received and assessed against applicable limits. Sound may be assessed at the outdoor areas (outdoor point of reception, OPOR) and/or at a plane of a window (PW) of a noise sensitive window.

OPORs associated with residential dwellings or noise-sensitive land uses require assessment. For dwellings, the OPORs are on the land use defined as the lesser of 30 m from the facade of the building or the property line, at a height of 1.5 m above ground, typically in backyards, front yards, or patios. PWs at the facade of a building include windows or openings in the facade leading to noise-sensitive spaces such as bedrooms, living rooms, classrooms, treatment rooms, or assembly spaces for worship.

The objective of this assessment is to determine the predictable worst-case one-hour equivalent sound level (Leq, dBA) at the worst-case PORs. The worst-case POR is defined as the noise-sensitive receptor with the greatest potential exposure to the noise sources due to proximity and line-of-sight.

A total of nine (9) receptors were chosen to represent the potentially impacted points of reception in this area. The receptor heights for PORs have been either assessed at 4.5 m for two-storey dwelling structures representing the second-floor window, or at 5.5 m for the apartments which are a split level and three-storey apartments with the bottom level some of it being below grade.

There are noise sensitive land uses to the north and northwest of the Site. However, these receptors are sufficiently separated from the Site with Highway 417 intervening in between. These receptors are expected to experience elevated background noise levels due to road traffic from the highway. Thus, significant noise impact due to the operation of the Site is not expected at these receptors and therefore, have not been considered further in the assessment.

The details of the PORs of interest to this assessment are summarized in **Table 3-1** and illustrated in **Figure 3**.

**Table 3-1 Summary of Noise Receptors**

| POR ID <sup>1</sup> | DESCRIPTION   | LOCATION                | RECEPTOR HEIGHT ABOVE GRADE (m) |
|---------------------|---|-------------------------|---------------------------------|
| R01_PW              | 1456 Coldrey Avenue - Westview Apartments (2.5 Storey)    | Plane of nearest window | 5.5                             |
| R02_PW              | 1464 Coldrey Avenue - Westview Apartments (2.5 Storey)    | Plane of nearest window | 5.5                             |
| R03_PW              | 1474 Coldrey Avenue - Westview Apartments (2.5 Storey)    | Plane of nearest window | 5.5                             |
| R04_PW              | 1443 Laperriere Avenue - Westview Apartments (2.5 Storey) | Plane of nearest window | 5.5                             |
| R05_PW              | 1440 Laperriere Avenue – 2-storey semi-detached dwelling  | Plane of nearest window | 4.5                             |
| R06_PW              | 1470 Laperriere Avenue – 2-storey semi-detached dwelling  | Plane of nearest window | 4.5                             |
| R07_PW              | 1478 Laperriere Avenue – 2-storey single dwelling         | Plane of nearest window | 4.5                             |
| R08_PW              | 1496 Laperriere Avenue – 2-storey semi-detached dwelling  | Plane of nearest window | 4.5                             |
| R09_PW              | 1516 Laperriere Avenue – 2-storey semi-detached dwelling  | Plane of nearest window | 4.5                             |

Notes:

<sup>1</sup> Refer **Figure 3** for receptor locations; locations are referred using these IDs.

# 4 NOISE GUIDELINES AND ASSESSMENT CRITERIA

Noise is recognized as a pollutant in the Environmental Protection Act, as uncontrolled noise can affect human activities. Ontario provincial noise control guidelines require that noise concerns are addressed in the planning of any new development.

In land use planning, although elimination or control of the source of pollution is usually a primary objective, there are general limits as to what is practical and technically possible. The City's ENCG follows the MECP's Publication NPC-300, *Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning* for acceptable levels of stationary noise on surrounding noise-sensitive residential areas. These limits are discussed in Section "Part C – Land Use Planning" of NPC-300 as well as Section 3 of the ENCG.

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## 4.1 SOUND LEVEL DESCRIPTOR

For steady-state stationary sources, the MECP Publication NPC-300 and ENCG provides criteria based on one-hour energy equivalent sound level ( $L_{eq-1 \text{ hour}}$ ) in spectral (i.e. frequency based) as well as overall sound level; the overall sound level is described in units of A-weighted decibel. The  $L_{eq}$  is defined as the energy-equivalent sound level ( $L_{eq}$ ) over a specified period of time, which is a one-hour period in this case, that would have the same sound energy as the actual (i.e., unsteady) time varying sound over the same period of time.

The sound levels for impulsive sources are expressed as  $L_{LM}$  which is the logarithmic average of the energy received at a receptor. Due to its average in nature, the overall impulsive sound level at a receptor would have a lower numerical result for a wide range of values.

---

## 4.2 SOUND LEVEL LIMITS

In order to comply, the predicted sound level from stationary sources must comply with the sound limits stipulated in the MECP publication, NPC-300 and ENCG.

Both guidelines provide sound level limits for receptors based on the acoustical environment in which the development is located. NPC-300 categorizes the acoustical environment into four classes: Class 1 (urban), Class 2 (suburban), Class 3 (rural), or Class 4 (special cases). This classification depends on the local land use and the existing ambient sound environment.

As per MECP's classification, the acoustical environment surrounding the Site is considered as MECP Class 1; in that the environment is dominated by anthropogenic sound during the daytime, evening and nighttime. This is due to the busy roads such as the Trans-Canada Highway 417 located adjacent to the proposed development.

---

### 4.2.1 STEADY-STATE (NON-IMPULSIVE)

**Table 4-1** summarizes the ENCG and MECP exclusionary limits for steady-state sources in a Class 1 area.

**Table 4-1 MECP Noise Criteria Exclusion Limits in dBA (Steady-State Sources)**

| TIME PERIOD               | POINT OF RECEPTION                                    | SOUND LEVEL LIMIT VALUES (L <sub>EQ 1-HR</sub> , dBA) |
|---------------------------|---|---|
| Daytime (07:00 – 19:00)   | Outdoor <sup>1</sup> and Plane of Window <sup>2</sup> | 50  |
| Evening (19:00 – 23:00)   | Outdoor <sup>1</sup> and Plane of Window <sup>2</sup> | 50  |
| Nighttime (23:00 – 07:00) | Plane of Window <sup>2</sup>                          | 45  |

**Notes**

<sup>1</sup> PoR means point of reception; representing a point in a receptor location as defined by MECP.

<sup>2</sup> Plane of window means a point in space corresponding with the location of the centre of a window of a noise sensitive space. The noise effects assessment excludes the effect of sound reflection from the plane of the window on which it is located. In general, the plane of a window is a point used for prediction (including extrapolation), rather than measurement, of sound levels (MOE 2013).

### 4.2.2 IMPULSIVE SOURCES

Products are typically on pallets which would be unloaded with a forklift. During unloading/loading activities at loading bays, there is potential that a ‘banging’ sound will be produced when a forklift enters the trailer; this sound is classified as an impulsive sound. Impulsive sounds are a category of sound which last for a brief time (typically a fraction of one second) and are measured and treated separately from non-impulsive sounds because of their special characteristics.

**Table 4-2** summarizes the ENCG and MECP sound level limits for impulsive sources specific to this site based on the number of impulses anticipated at the Site.

**Table 4-2 MECP Exclusion Limits in dBAI (Impulsive Sources)**

| TIME PERIOD               | NUMBER OF IMPULSES IN PERIOD OF 1-HOUR | POINT OF RECEPTION                                    | EXCLUSIONARY LIMIT VALUES (L <sub>LM</sub> , dBAI) |
|---------------------------|--|---|--|
| Daytime (07:00 – 19:00)   | 9 or more                              | Outdoor <sup>1</sup> and Plane of Window <sup>2</sup> | 50   |
| Evening (19:00 – 23:00)   | 9 or more                              | Outdoor <sup>1</sup> and Plane of Window <sup>2</sup> | 50   |
| Nighttime (23:00 – 07:00) | 9 or more                              | Plane of Window <sup>2</sup>                          | 45   |

**Notes**

<sup>1</sup> PoR means point of reception; representing a point in a receptor location as defined by MECP.

<sup>2</sup> Plane of window means a point in space corresponding with the location of the centre of a window of a noise sensitive space. The noise effects assessment excludes the effect of sound reflection from the plane of the window on which it is located. In general, the plane of a window is a point used for prediction (including extrapolation), rather than measurement, of sound levels (MOE 2013).

# 5 NOISE IMPACT ASSESSMENT

The objective of this acoustic assessment is to determine the Site's compliance as they relate to the applicable sound level limits during a predictable worst-case hour operation of the Site. This section discusses the assessment methodology, the modelling scenarios used, and the results of the assessment as well as the compliance of the Site with the MECP's and ENCG's limits.

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## 5.1 ANALYSIS METHOD

In order to estimate the sound levels from the industrial and commercial area activities to the proposed residential receptors, a predictive analysis was completed using a commercially available software package CADNA/A, a computer implementation of the ISO Standard 9613-2 "Acoustics – Attenuation of Sound During Propagation Outdoors", which takes into account the following:

- Source sound power levels;
- Distance attenuation;
- Source-receptor geometry;
- Ground and air (atmospheric) attenuation;
- Temperature and humidity effects on noise propagation; and,

Hard ground overall ground absorption coefficient of 0 was used in the assessment due to the proposed site, roadways surrounding the area. One order of reflection was used in the assessment.

Key parameters used in the model and sample calculations are located in **Appendix C**.

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## 5.2 PREDICTABLE WORST-CASE

The noise impact assessment requires that a predictable worst-case noise impact be assessed at each 1-hour period during the daytime, evening and nighttime hours; an assessment of the greatest noise impact at a POR when the facility is at capacity compared against acoustical environment during the quietest hour.

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## 5.3 OPERATING SCENARIOS

Both proposed buildings, Building A and Building B, are self-storage facilities that are open to cliental 24 hours a day and 7 days a week. The operation of the facilities, including truck traffic and loading/unloading activities, is anticipated to be from 9 am to 5 pm. However, to be conservative, the assessment assumed that these activities occur between 7am and 11pm.

It should be noted that the predictable worst-case operating conditions over a 1-hour period, as required by the MECP, would not be expected to occur on a regular basis. The operating scenarios are described in **Table 5-1** below:

**Table 5-1 Operating Scenarios**

| SCENARIO | SOURCE TYPE                          | BUSIEST 1-HOUR TIME PERIOD                          | DESCRIPTION OF ACTIVITIES   |
|----------|--------------------------------------|---|---|
| 1        | Steady-State (Non-Impulsive Sources) | Daytime (07:00 – 19:00) and Evening (19:00 – 23:00) | <ul style="list-style-type: none"> <li>– All rooftop units operating at 100% duty cycle (operating 60 min per hour)</li> <li>– 15 heavy trucks entering and leaving the north loading area of Building A</li> <li>– 14 heavy trucks entering and leaving the loading area of Building B</li> <li>– Three (3) Heavy trucks idling (5 min per hour) at each loading area</li> </ul> |
| 2        | Steady-State (Non-Impulsive Sources) | Nighttime (23:00 – 07:00)                           | <ul style="list-style-type: none"> <li>– All rooftop units operating at 100% duty cycle (operating 60 min per hour)</li> </ul>  |
| 3        | Impulsive Sources                    | Daytime (07:00 – 19:00) and Evening (19:00 – 23:00) | <ul style="list-style-type: none"> <li>– Forklift entering and exiting a trailer at the loading bays</li> </ul>   |
| 4        | Impulsive Sources                    | Nighttime (23:00 – 07:00)                           | <ul style="list-style-type: none"> <li>– None</li> </ul>  |

## 5.4 RESULTS

The results of the analysis were based on typical assumptions. It is recommended that the noise assessment be reviewed when more detailed information, such as tenant information, mechanical design and final equipment selection becomes available.

### 5.4.1 STEADY-STATE (NON-IMPULSIVE) SOUND

The overall steady-state sound levels at the representative PORs for the predictable worst-case operations of the Site are summarized in **Table 5-2**. Sound levels attributable to the operation of the Site were compared to the applicable sound level limits.

**Table 5-2 Predicted Sound Levels from Stationary Sources**

| POR ID | PREDICTED HOURLY SOUND LEVELS, dBA |       | CLASS 1 MECP SOUND LEVEL LIMITS, dBA |       | COMPLIANCE WITH MECP LIMIT |
|--------|------------------------------------|-------|--------------------------------------|-------|----------------------------|
|        | DAY/EVE                            | NIGHT | DAY/EVE                              | NIGHT |                            |
| R01_PW | 36                                 | 32    | 50                                   | 45    | Yes                        |
| R02_PW | 37                                 | 33    | 50                                   | 45    | Yes                        |
| R03_PW | 39                                 | 33    | 50                                   | 45    | Yes                        |
| R04_PW | 41                                 | 33    | 50                                   | 45    | Yes                        |
| R05_PW | 40                                 | 31    | 50                                   | 45    | Yes                        |
| R06_PW | 39                                 | 31    | 50                                   | 45    | Yes                        |
| R07_PW | 36                                 | 32    | 50                                   | 45    | Yes                        |
| R08_PW | 40                                 | 32    | 50                                   | 45    | Yes                        |
| R09_PW | 30                                 | 29    | 50                                   | 45    | Yes                        |

As shown in the table above, the sound levels attributable to the operation of the Site meets the sound level limits at all the receptors for daytime, evening and nighttime hours without the need for noise mitigation measures. Sound level contours are presented in **Figure 4** for Daytime and Evening and **Figure 5** for Nighttime, at a height of 4.5 m above grade.

#### 5.4.2 IMPULSIVE SOUND

This assessment considered the predictable worst-case operating scenario as the loading/unloading activities were assessed separately and at the worst-case locations. Only the daytime and evening hours were analysed at the loading areas. Impulsive sound levels at the nearby PORs due to loading and unloading activities were assessed separately for each loading area. It should be noted that this is considered conservative as impulsive sound levels at the receptors are averaged logarithmically which would normally result to lower sound levels.

The overall impulsive sound levels at the representative PORs for the predictable worst-case operations of the Site are summarized in **Table 5-3** below. Impulsive sound levels attributable to the operation of the Site were compared against the applicable sound level limits in the daytime when the forklifts are operational at each of the three loading areas: Building A North, Building A South, and Building B.

As shown in table below, the Facility will comply at all points of reception during the daytime hours for the activities associated with the loading and/or unloading. **Figure 6** shows Building A Southeast loading area which has the highest predicted impulsive sound levels at the receptors level contours at a height of 4.5 m above grade.

**Table 5-3 Predicted Sound Levels from Impulsive Sources**

| POR ID | PREDICTED IMPULSIVE SOUND LEVELS (L <sub>LM</sub> , dBAI) |                  |            | CLASS 1 MECP SOUND LEVEL LIMITS (L <sub>LM</sub> , dBAI) | COMPLIANCE WITH MECP LIMIT |
|--------|---|------------------|------------|--|----------------------------|
|        | DAY / EVE   |                  |            | DAY / EVE  |                            |
|        | Building A North  | Building A South | Building B |  |                            |
| R01_PW | 20  | 42               | 22         | 50   | Yes                        |
| R02_PW | 20  | 42               | 22         | 50   | Yes                        |
| R03_PW | 20  | 44               | 21         | 50   | Yes                        |
| R04_PW | 27  | 45               | 22         | 50   | Yes                        |
| R05_PW | 21  | 48               | 31         | 50   | Yes                        |
| R06_PW | 27  | 48               | 27         | 50   | Yes                        |
| R07_PW | 34  | 38               | 27         | 50   | Yes                        |
| R08_PW | 44  | 32               | 26         | 50   | Yes                        |
| R09_PW | 27  | 26               | 22         | 50   | Yes                        |



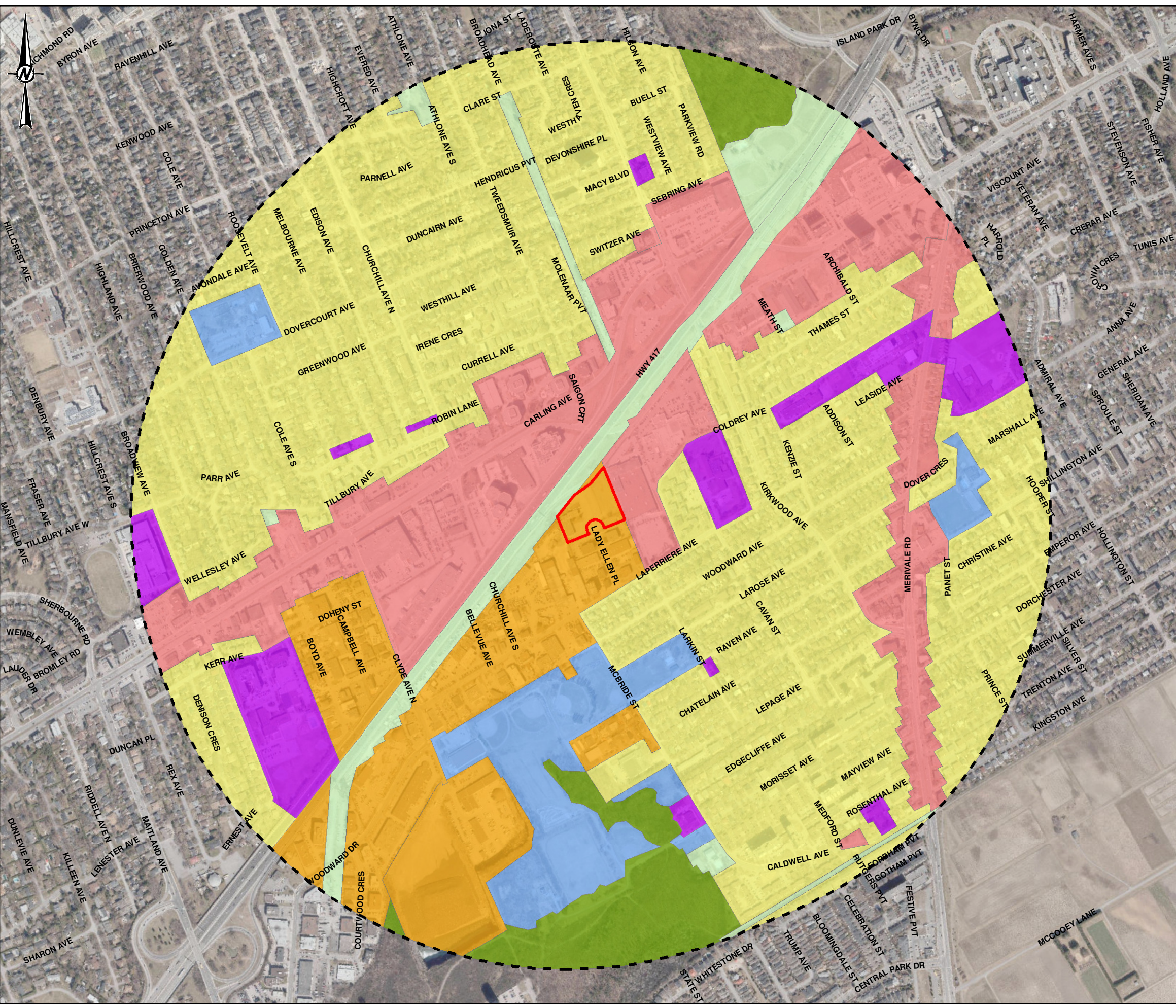
## 6 CONCLUSIONS

An assessment of potential noise impacts of stationary sources of a proposed a commercial development, to be located at 864 Lady Ellen Place in Ottawa, Ontario. The report was prepared in support of a Site Plan Control Application (SPCA) submission to the City of Ottawa. The sound levels attributable to the proposed development are predicted to comply with the sound level limits outlined by the ENCG and the MECP at the surrounding properties. Since the analysis was based on typical assumptions, this study will need to be updated once detailed information such as mechanical design, equipment selection and operating scenarios become available. The Site's operation is not considered a significant source of vibration; therefore, a vibration assessment was not included.

# FIGURES







**LEGEND**

- SITE LOCATION
- 1000 m STUDY AREA
- COMMERCIAL
- ENVIRONMENTAL PROTECTION
- INDUSTRIAL
- INSTITUTIONAL
- LEISURE ZONE
- PARKS AND OPEN SPACE ZONE
- RESIDENTIAL

**DRAFT**



**NOTE(S)**  
1. ALL LOCATIONS ARE APPROXIMATE

---

**REFERENCE(S)**  
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO  
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N  
3. IMAGERY, CITY OF OTTAWA, 2021  
4. CITY OF OTTAWA, ZONING BY-LAW 2008-250 CONSOLIDATION

---

CLIENT  
**A49**

---

PROJECT  
**NOISE IMPACT ASSESSMENT  
864 LADY ELLEN PLACE  
OTTAWA, ONTARIO**

---

TITLE  
**LAND USE ZONING DESIGNATION**

---

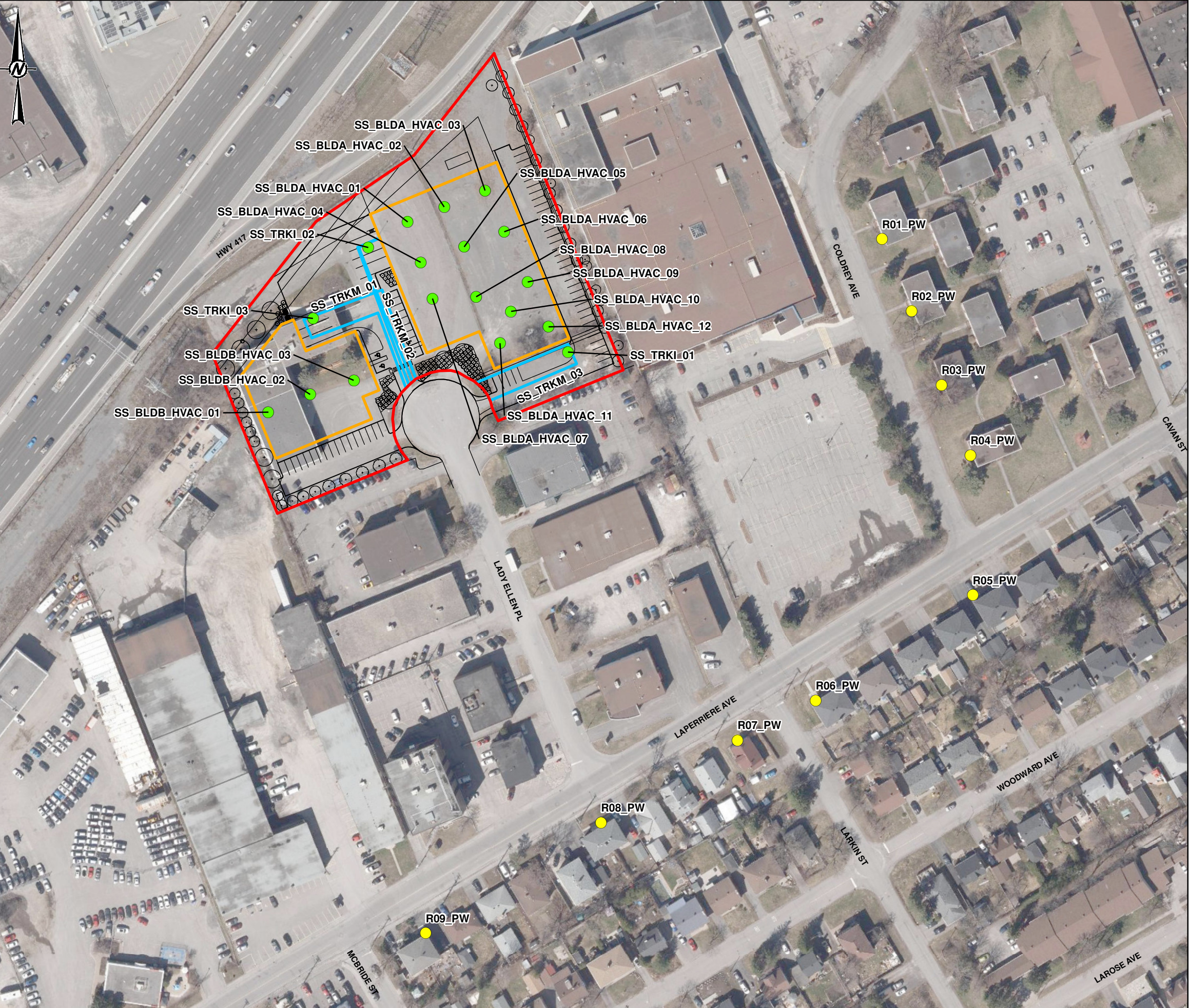
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| CONSULTANT | YYYY-MM-DD | 2022-12-14 |
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|            | PREPARED   | TP         |
|            | REVIEWED   | CR         |
|            | APPROVED   | ----       |

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|              |         |      |          |
|--------------|---------|------|----------|
| PROJECT NO.  | CONTROL | REV. | FIGURE   |
| 221-04646-00 | 0001    | A    | <b>2</b> |

PATH: S:\Clients\A49\864\_Lady\_Ellen\_Place\_Ottawa\09\_PNOI\221-04646-00\A49\_PNOI\001\_NoiseImpactAssessment\221-04646-00\001\_PNOI\001.mxd PRINTED ON: 2023-12-14 AT: 12:50:31 PM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**LEGEND**

- SITE LOCATION
- PROPOSED BUILDING
- PROPOSED DEVELOPMENT
- LINE SOURCE
- SOURCE LOCATIONS
- RECEPTORS



**NOTE(S)**  
1. ALL LOCATIONS ARE APPROXIMATE

**REFERENCE(S)**  
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO  
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N  
3. IMAGERY, CITY OF OTTAWA, 2021

**CLIENT**  
A49

**PROJECT**  
NOISE IMPACT ASSESSMENT  
864 LADY ELLEN PLACE  
OTTAWA, ONTARIO

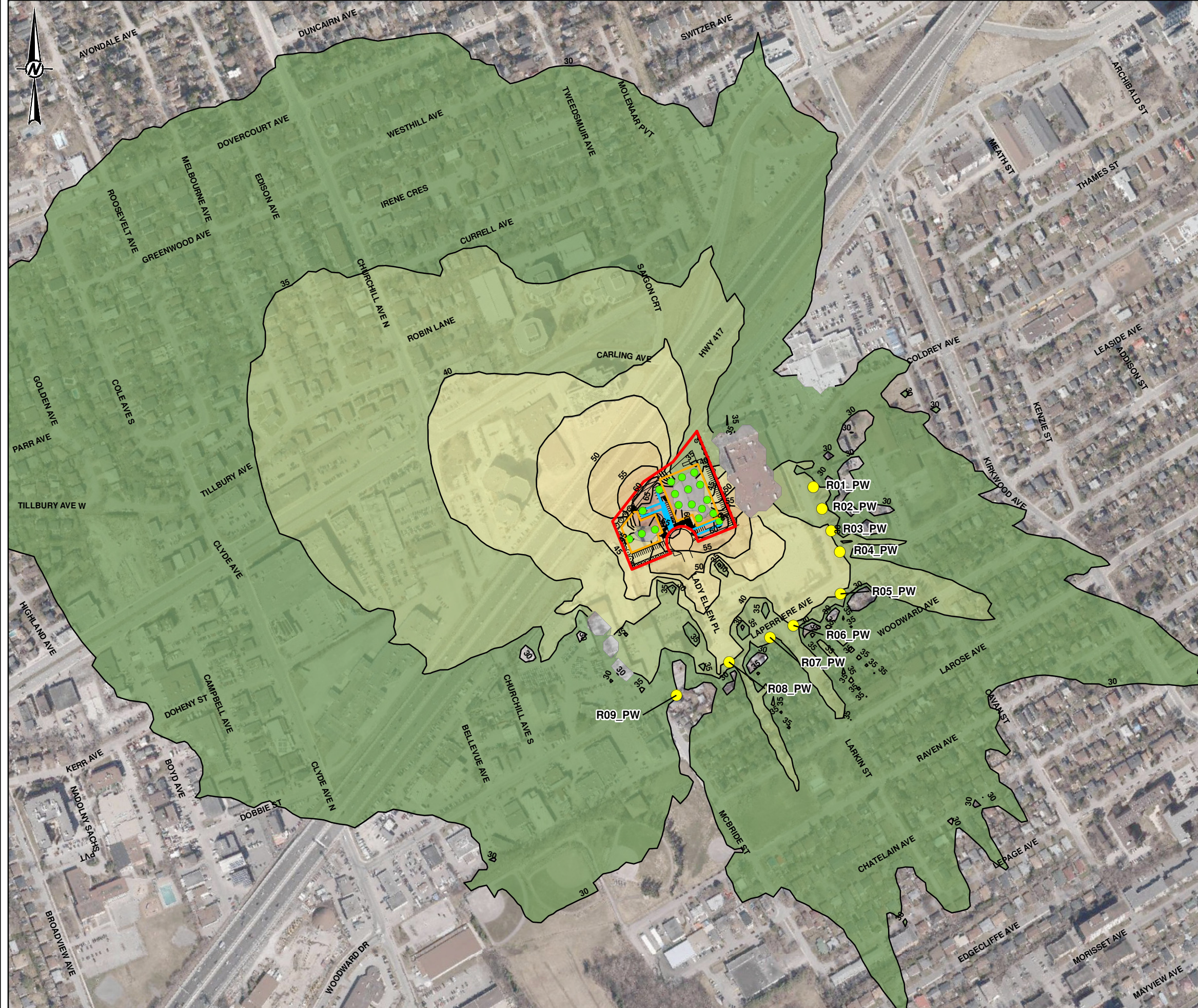
**TITLE**  
SOURCE ID AND RECEPTORS LOCATIONS

|                   |            |            |
|-------------------|------------|------------|
| <b>CONSULTANT</b> | YYYY-MM-DD | 2022-12-14 |
| <b>DESIGNED</b>   | ----       |            |
| <b>PREPARED</b>   | TP         |            |
| <b>REVIEWED</b>   | CR         |            |
| <b>APPROVED</b>   | ----       |            |

|                                    |                        |                  |                    |
|------------------------------------|------------------------|------------------|--------------------|
| <b>PROJECT NO.</b><br>221-04646-00 | <b>CONTROL</b><br>0001 | <b>REV.</b><br>A | <b>FIGURE</b><br>3 |
|------------------------------------|------------------------|------------------|--------------------|

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**LEGEND**

- SITE LOCATION
- PROPOSED BUILDING
- PROPOSED DEVELOPMENT
- LINE SOURCE
- SOURCE LOCATIONS
- RECEPTORS

|   |        |
|---|--------|
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| <span style="background-color: #e8f5e9; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 40 dBA |
| <span style="background-color: #fff9c4; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 45 dBA |
| <span style="background-color: #fff176; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 50 dBA |
| <span style="background-color: #ffcdd2; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 55 dBA |
| <span style="background-color: #e57373; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 60 dBA |
| <span style="background-color: #c0392b; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> | 65 dBA |
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DRAFT

0 50 100 200  
1:5,000 METRES

**NOTE(S)**  
1. ALL LOCATIONS ARE APPROXIMATE

**REFERENCE(S)**  
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO  
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N  
3. IMAGERY, CITY OF OTTAWA, 2021

CLIENT  
**A49**

PROJECT  
**NOISE IMPACT ASSESSMENT  
864 LADY ELLEN PLACE  
OTTAWA, ONTARIO**

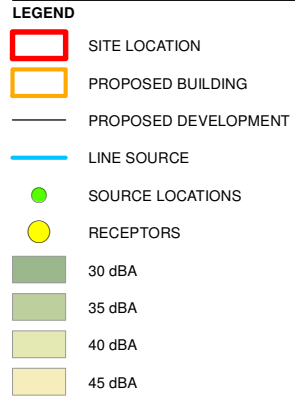
TITLE  
**STEADY-STATE SOUND LEVEL CONTOUR AT 4.5 METERS -  
DAYTIME AND EVENING**

|                   |            |            |
|-------------------|------------|------------|
| CONSULTANT        | YYYY-MM-DD | 2022-12-14 |
| <b>wsp GOLDER</b> | DESIGNED   | ----       |
|                   | PREPARED   | TP         |
|                   | REVIEWED   | CR         |
|                   | APPROVED   | ----       |

|              |         |      |        |
|--------------|---------|------|--------|
| PROJECT NO.  | CONTROL | REV. | FIGURE |
| 221-04646-00 | 0001    | A    | 4      |

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**DRAFT**



**NOTE(S)**  
1. ALL LOCATIONS ARE APPROXIMATE

**REFERENCE(S)**  
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO  
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N  
3. IMAGERY, CITY OF OTTAWA, 2021

CLIENT  
A49

PROJECT  
NOISE IMPACT ASSESSMENT  
864 LADY ELLEN PLACE  
OTTAWA, ONTARIO

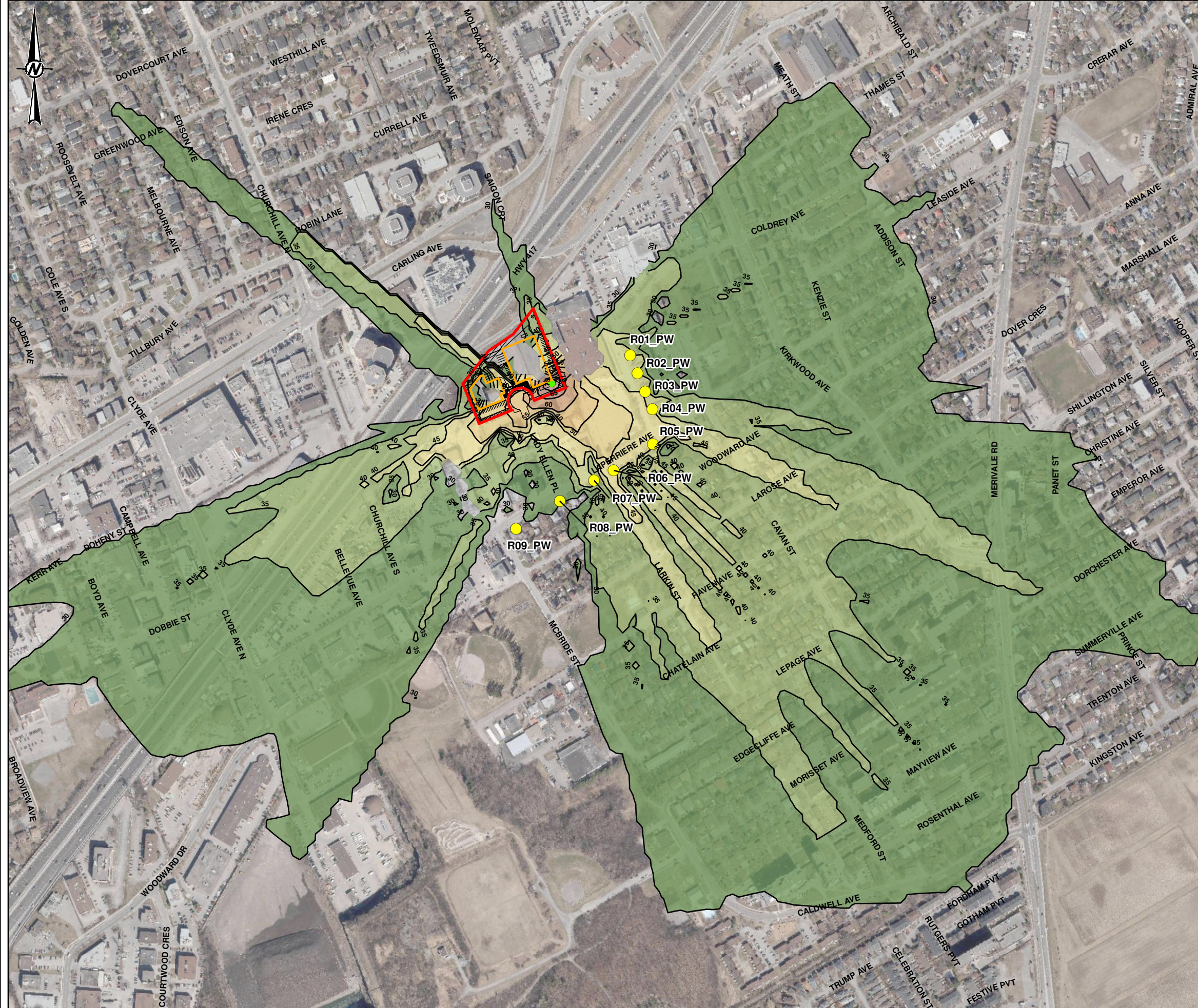
TITLE  
**STEADY-STATE SOUND LEVEL CONTOUR AT 4.5 METERS - NIGHTTIME**

| CONSULTANT | YYYY-MM-DD | 2022-12-14 |
|------------|------------|------------|
| DESIGNED   | ----       |            |
| PREPARED   | TP         |            |
| REVIEWED   | CR         |            |
| APPROVED   | ----       |            |

| PROJECT NO.  | CONTROL | REV. | FIGURE |
|--------------|---------|------|--------|
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25mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**LEGEND**

- SITE LOCATION
- PROPOSED BUILDING
- PROPOSED DEVELOPMENT
- SOURCE LOCATIONS
- RECEPTORS
- 30 dBA
- 35 dBA
- 40 dBA
- 45 dBA
- 50 dBA
- 55 dBA
- 60 dBA
- 65 dBA
- 70 dBA
- 75 dBA
- 80 dBA

DRAFT

0 60 120 240  
1:6,000 METRES

**NOTE(S)**  
1. ALL LOCATIONS ARE APPROXIMATE

**REFERENCE(S)**  
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO  
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N  
3. IMAGERY, CITY OF OTTAWA, 2021

**CLIENT**  
A49

**PROJECT**  
NOISE IMPACT ASSESSMENT  
864 LADY ELLEN PLACE  
OTTAWA, ONTARIO

**TITLE**  
IMPULSE SOUND LEVEL CONTOUR AT 4.5 METERS - DAYTIME  
AND EVENING (BUILDING A SOUTH)

| CONSULTANT        | YYYY-MM-DD | 2022-12-14 |
|-------------------|------------|------------|
| <b>wsp</b> GOLDER | DESIGNED   | ----       |
|                   | PREPARED   | TP         |
|                   | REVIEWED   | CR         |
|                   | APPROVED   | ----       |

| PROJECT NO.  | CONTROL | REV. | 6 |
|--------------|---------|------|---|
| 221-04646-00 | 0001    | A    | 6 |

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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# APPENDIX

## A DRAWINGS



LAYOUT NOTES:

- CONTRACTOR TO CONFIRM ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO CONTRACTOR ADMINISTRATOR PRIOR TO CONSTRUCTION
- LAYOUT TO BE APPROVED BY CONTRACT ADMINISTRATOR PRIOR TO ANY CONSTRUCTION OR REMOVALS
- ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE NOTED
- CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATIONS, REMOVALS, DISPOSALS AND ROUGH GRADING AS REQUIRED TO CONSTRUCTION ALL WORKS AS SHOWN ON ALL PLANS, DETAILS AND SPECIFICATIONS
- LOCATION OF ALL UTILITIES SHOWN FOR ILLUSTRATION ONLY. CONTRACTOR MUST CONTACT ALL UTILITIES REGARDING RULES FOR WORKING IN THE AREA OF THE UTILITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR MUST CONFIRM LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION
- ALL EXISTING ROADS, SIDEWALKS, CURBS, FENCING, PAVING, SODDED AREAS, AND APPROACHES, ETC. TO REMAIN TO BE PROTECTED DURING CONSTRUCTION TO CONTRACT ADMINISTRATOR'S APPROVAL AT THE CONTRACTOR'S OWN COSTS.
- ALL EXISTING TREES, SHRUB BEDS, MULCH BEDS, AND SOD TO REMAIN TO BE PROTECTED DURING CONSTRUCTION. AREAS DAMAGED DURING CONSTRUCTION TO BE REPAIRED TO CONTRACT ADMINISTRATOR'S APPROVAL AT THE CONTRACTOR'S OWN COST.
- USE SPECIFIED BACKFILL IN ALL TRENCHES RUNNING BELOW ALL STRUCTURES, PAVING, WALKWAYS, ETC.
- FILL ALL HOLES AND LOW AREAS TO DESIGN SUBGRADE WITH COMPACTED FILL (SUITABLE TO SURFACE FINISH), FOR SODDED/PLANTED AREAS USE COMPACTED CLEAN EARTH FILL SUITABLE FOR PLANT GROWTH. FOR PAVED AREAS USE COMPACTED GRANULAR BASE.
- ALL TREES WITHIN OR IMMEDIATELY ADJACENT TO AREA OF WORK TO BE PROTECTED TO CITY OF OTTAWA TREE PROTECTION STANDARDS.

PARKING REQUIREMENTS:

- WAREHOUSE:
  - 0.4 PER 100m<sup>2</sup> FOR THE FIRST 5000m<sup>2</sup> GROSS FLOOR AREA,
  - 0.4 PER 100m<sup>2</sup> ABOVE 5000m<sup>2</sup> GROSS FLOOR AREA.
  - = 71 SPACES
- ACCESSIBLE PARKING REQ.:
  - 1 TYPE A
  - 2 TYPE B
- TOTAL PARKING PROVIDED:
  - 74 SPACES PROVIDED (71 REQ.)
  - 7 LOADING SPACES PROVIDED (3 REQ.)
- BICYCLE PARKING:
  - 1 STALL PER 2000m<sup>2</sup> GROSS FLOOR AREA
  - 10 SPACES PROVIDED (9 REQ.)

LEGEND:

- TOPSOIL AND SOD
- PLANT BED
- CONCRETE SIDEWALK
- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- PAINTED LINES
- SNOW REMOVAL AREA
- TOPSOIL AND NATIVE GRASS SEED MIX
- TOPSOIL AND DEEP ROOTING GRASS SEED MIX
- TOPSOIL AND POLLINATOR SEED MIX
- 3/4" RIVER STONE MULCH
- 2-4" RIVER STONE MULCH
- PROPERTY LINE
- EASEMENT LINE
- BUILDING OVERHANG
- EXISTING CHAINLINK FENCE
- APPROXIMATE AREA OF WORK
- EXISTING CURB
- NEW CURB
- ACCESSIBLE PARKING STALL

KEYNOTES:

- CONCRETE SIDEWALK. REFER TO DETAIL 4/L300
- ACCESSIBLE RAMP WITH TACTILE WARNING SURFACE INDICATOR (TWS)
- 150mm HT CONCRETE CURB. REFER TO DETAIL 5/L300
- ASPHALT PARKING LOT. REFER TO CIVIL FOR DETAIL.
- TYPE A PARKING STALL
- TYPE B PARKING STALL
- PROPOSED GARBAGE ENCLOSURE. REFER TO DETAIL 11/L300
- SNOW REMOVAL STORAGE AREA
- EXISTING FIRE HYDRANT
- 3/4" RIVER STONE MULCH.
- 2-4" RIVER STONE MULCH.
- 316 STAINLESS STEEL BICYCLE RACKS. REFER TO DETAIL 10/L300
- SODDED AREA. REFER TO DETAIL 6/L300
- PAINTED CROSSWALK
- PAINTED ISLAND
- SIGNAGE
- LOADING SPACE
- SEEDDED AREA. REFER TO DETAIL 6/L300

ZONING STATISTICS

**SITE INFORMATION:**  
 LEGAL DESCRIPTION:  
 Lots 9, 10, 11, 12, and Part of Lot 13,  
 Registered Plan 387939, City of Ottawa

**EASEMENTS:**  
 Inst. CR388144, Plan 387939  
 Inst. CR621418, Part 8 Plan 4R-29611  
 Inst. OC201490, By-law 2003-162  
 Inst. N430098 (L1609535)

**MUNICIPAL ADDRESS:** 864 Lady Ellen Place, Ottawa, Ontario

**LOT AREA:** 13,576.785 m<sup>2</sup> (146,144.07 sq.ft.)

**BUILDING GROSS FLOOR AREAS:**  
 Existing 3,529 m<sup>2</sup>  
 Proposed 17,663 m<sup>2</sup>

**ZONING INFORMATION:**  
 ZONE: Light Industrial Zone, Urban Exception 278,  
 Height Limit 30 (L1 (278) H(30))  
 Sec. 203(3), Table 203

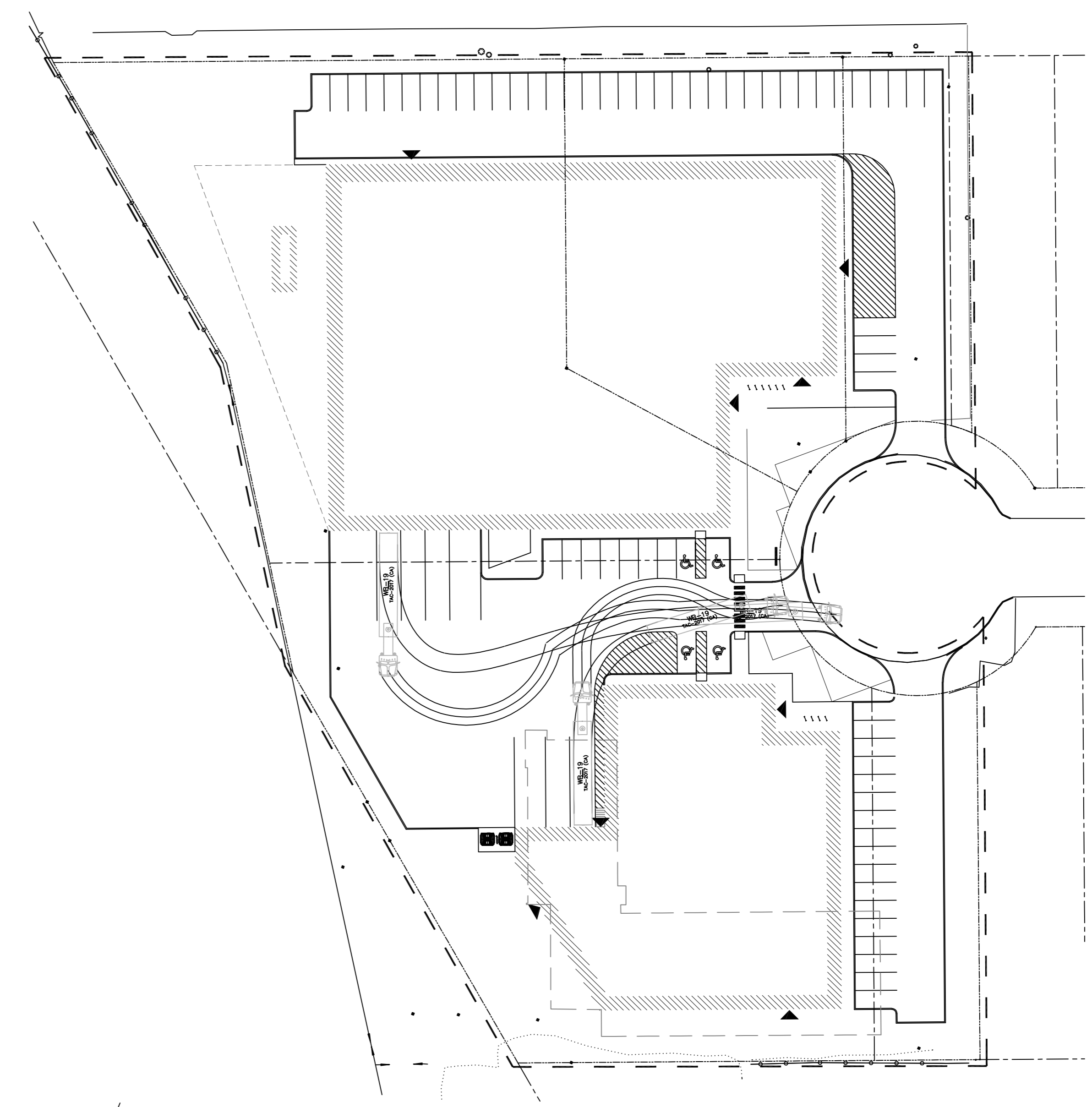
**PROPOSED LOT COVERAGE:** 39.3% (Maximum allowable 65%)

**BUILDING HEIGHT:**  
 Building 'A' 23m (Maximum allowable 30m)  
 Building 'B' 7m (Maximum allowable 30m)

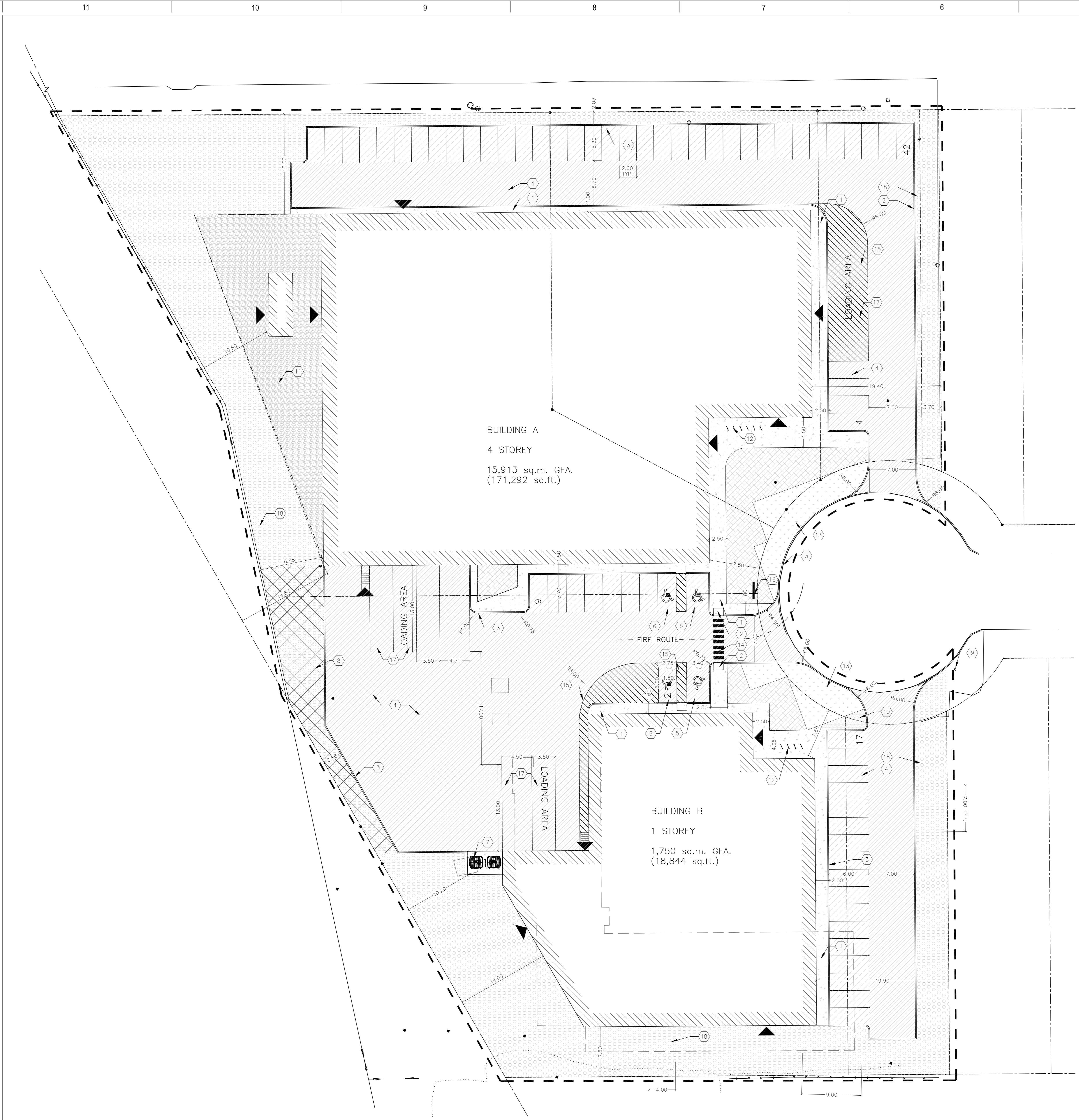
**FLOOR SPACE INDEX:** 1.3 (Maximum allowable 2)

**BUILDING SETBACKS:**  
 Building 'A' Setbacks:  
 Min. Front Yard: 7.5 m (7.5 m required)  
 Min. Interior Side Yard: 15 m (7.5 m required)  
 Min. Rear Side Yard: 8.88 m (3.5 m required)

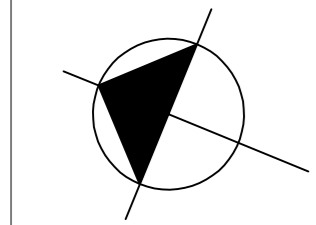
Building 'B' Setbacks:  
 Min. Front Yard: 7.5 m (7.5 m required)  
 Min. Interior Side Yard: 7.5 m (7.5 m required)  
 Min. Rear Yard: 14 m (3.5 m required)



1 VEHICLE TURNING MOVEMENTS  
 L100 1:500



1 SITE PLAN  
 L100 1:250



PROPOSED SELF-STORAGE  
 LADY ELLEN PLACE

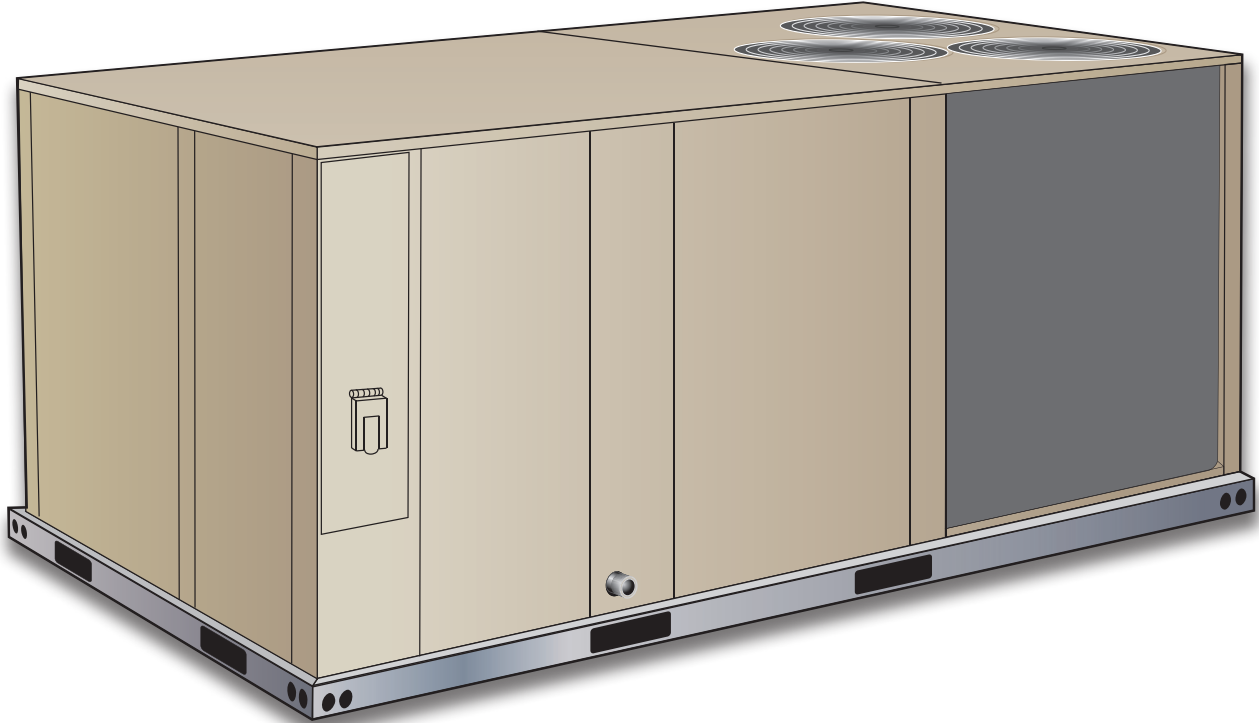
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|--|---|------------------------------------|----------------|
| CLIENT REF. #  |   | PROJECT                            |                |
| KEY PLAN   |   |                                    |                |
| DISCLAIMER:<br>THE DRAWING AND DESIGN IS COPYRIGHT PROTECTED BY ARCHITECTURE 49. IT IS NOT BE LOANED, REPRODUCED OR RELEASED WITHOUT WRITTEN PERMISSION BY ARCHITECTURE 49. CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.<br>THIS DRAWING IS NOT TO BE SCALED. |   |                                    |                |
| ISSUED FOR: REVISION:  |   |                                    |                |
| 1  | 0 | 11/09/2022                         | ISSUES FOR RPA |
| 2  | 0 | 2022-11-29                         | DATE           |
| PROJECT NO. 219-00028-09   |   | DISCIPLINE: LANDSCAPE ARCHITECTURE |                |
| DESIGNED BY: AH  |   | TITLE: SITE PLAN                   |                |
| DRAWN BY: SG   |   | SHEET NUMBER: A100                 |                |
| CHECKED BY: AH   |   | SHEET # OF: 1                      |                |
| DATE: 2022-11-04   |   | REV. #                             |                |

# APPENDIX

# B

SUPPORTING  
DOCUMENTATION

**PRODUCT SPECIFICATIONS**



**ASHRAE 90.1  
COMPLIANT**

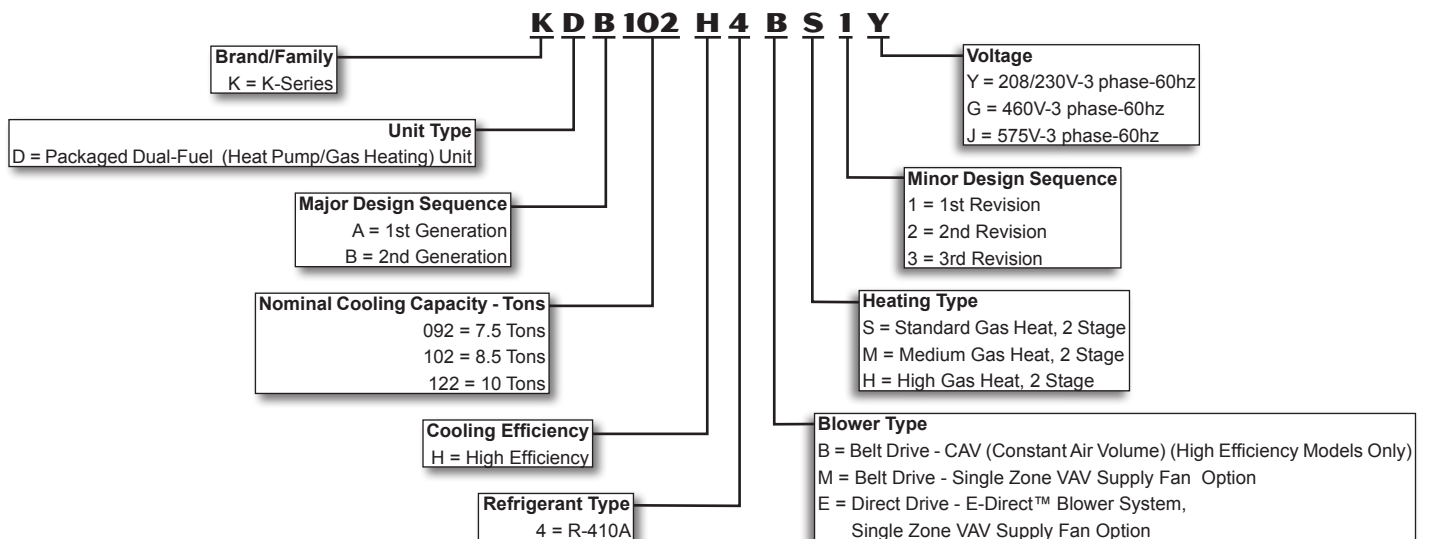
**7.5 to 10 Tons**

**Net Cooling Capacity – 89,000 to 138,000 Btuh**

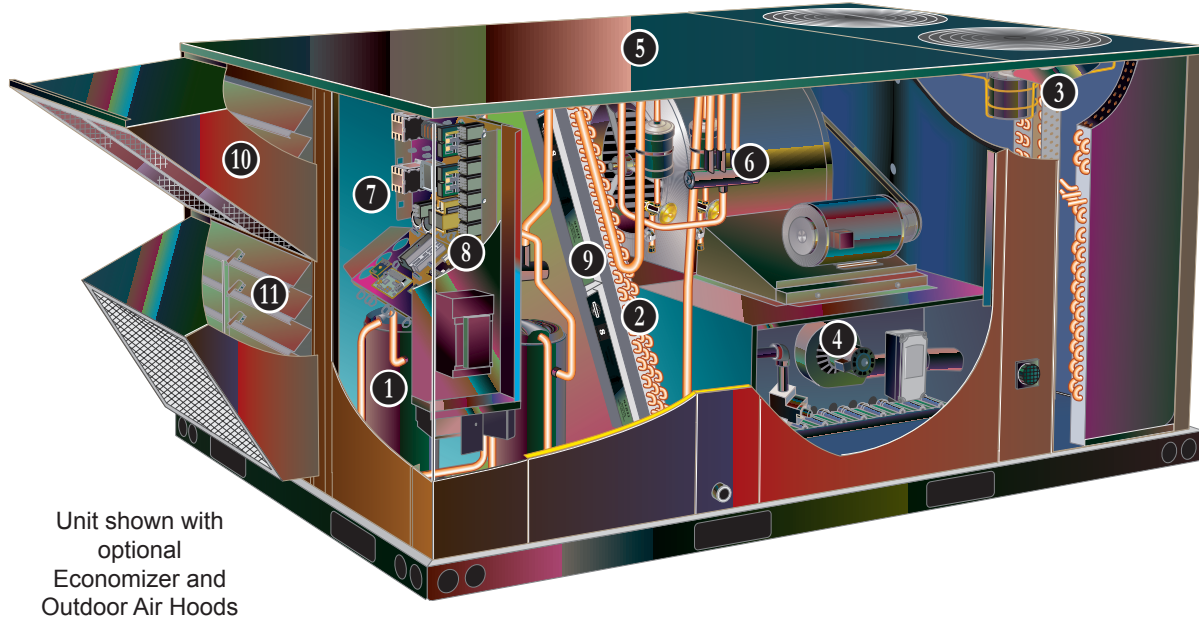
**Net Heating Capacity - 86,000 to 138,000 Btuh**

**Gas Input Heat Capacity – 130,000 to 240,000 Btuh**

**MODEL NUMBER IDENTIFICATION**



## FEATURES AND BENEFITS



K-Series™ rooftop units from Allied are the new standard for reliable, efficient rooftop units built for long-lasting performance that can significantly improve indoor environments. K-Series™ rooftop units feature:

- **Dual-Fuel** - Alternates between mechanical heat pump heating and gas heating depending on outdoor conditions.
- **R-410A Refrigerant** - Environmentally friendly.
- **Scroll Compressors** - Single speed scroll compressors are furnished on all models.
- **High Pressure Switches** - Protect compressor.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Independent Outdoor Fan Motor Mounts** - Allows for easy and efficient service access without removing the top panel.
- **Constant Air Volume (CAV) or Single Zone VAV Supply Fan Blower Option** - Allows constant or multi-staged air delivery.
- **E-Direct™ Blower System (KDB122 Direct Drive Models Only)** - High-efficiency, variable-speed ECM motor combined with an aerodynamically optimized impeller for quiet operation.
- **Downflow or Horizontal Airflow** - Easy field conversion.
- **Two Fork Lift Slots on Three Sides** - Easy to pick up and transport units from almost any angle.
- **Corrosion-Resistant Removable, Reversible Drain Pan** - Provides application flexibility, durability and improved serviceability.
- **Thermostatic Expansion Valves** - Provide peak cooling performance across the entire application range.
- **MERV 8 or MERV 13 Filters** - Available as field installed option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED credits.
- **Common Components** - Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

## FEATURES AND BENEFITS

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### APPROVALS

AHRI Certified to AHRI Standard 340/360-2007.

Units are ETL listed.

Units are certified by CSA.

Components bonded for grounding to meet safety standards for servicing required by UL, ULC and National and Canadian Electrical Codes.

All models are ASHRAE 90.1-2010 energy efficiency compliant and meet or exceed requirements of Section 6.8.

Models equipped with the Single Zone VAV Supply Fan and E-Direct™ options meet California Code of Regulations, Title 24 and ASHRAE 90.1-2010 Section 6.4.3.10 requirements for staged airflow.

ISO 9001 Registered Manufacturing Quality System.

### WARRANTY

Limited five years on compressors.

Limited fifteen years on stainless steel heat exchanger.

Limited five years Optional High Performance Economizers.

Limited one year all other covered components.

### DUAL-FUEL OPERATION

In heating mode the heat pump operates the heat pump for 1st stage heating. If 1st stage is not satisfied, the 2nd stage will activate gas heating (secondary heat source). Mechanical heat pump operation is automatically terminated on gas heat start-up.

Unit control automatically changes blower speeds between heat pump heating and gas heat operation. Blower operates in high speed during 1st stage (heat pump) operation and is terminated during changeover to gas heat operation.

Blower starts up when heat exchanger is warm, and runs in high speed during 2nd stage (gas heat) operation.

If continuous blower operation is available on thermostat, change in blower speed automatically occurs during heat pump heat to gas heat changeover.

### COOLING/HEATING SYSTEM

Designed to maximize sensible and latent cooling performance at design conditions.

System can operate in the cooling mode from 30°F to 125°F without any additional controls.

#### R-410A Refrigerant

Non-chlorine based, ozone friendly, R-410A.

#### 1 Scroll Compressors

Scroll compressors on all models for high performance, reliability and quiet operation.

Resiliently mounted on rubber grommets for quiet operation.

#### Compressor Crankcase Heaters

Protects against refrigerant migration that can occur during low ambient operation.

#### Check/Thermal Expansion Valves

Assures optimal performance throughout the application range. Removable element head.

#### Reversing Valves

4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa.

#### Filter/Driers

High capacity filter/drier protects the system from dirt and moisture.

#### High Pressure Switches

Protects the compressor from overload conditions such as dirty condenser coils, blocked refrigerant flow, or loss of outdoor fan operation. Auto-reset.

#### Freezestats

Protects the evaporator coil from damaging ice build-up due to conditions such as low/no airflow, or low refrigerant charge.

## FEATURES AND BENEFITS

### **COOLING/HEATING SYSTEM** **(continued)**

#### **2** **Coil Construction**

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction for improved heat transfer. Factory leak tested.

#### **Indoor Coil**

Cross row circuiting with rifled copper tubing optimizes both sensible and latent cooling capacity.

#### **Condenser Coil**

Two independent formed coils allow separation for cleaning.

#### **Condensate Drain Pan**

Plastic pan, sloped to meet drainage requirements of ASHRAE 62.1.

Side or bottom drain connections.

Reversible to allow connection at back of unit.

#### **Outdoor Coil Fan Motors**

All models have variable speed (ECM) fan motors for energy efficient operation and quiet operation.

Thermal overload protected, totally enclosed, permanently lubricated ball bearings, shaft up, wire basket mount.

#### **3** **Outdoor Coil Fans**

PVC coated fan guard furnished.

### **Required Selections**

#### **Cooling Capacity**

Specify nominal cooling capacity of the unit

### **Options/Accessories**

#### **Field Installed**

##### **Condensate Drain Trap**

Available in copper or PVC.

##### **Drain Pan Overflow Switch**

Monitors condensate level in drain pan, shuts down unit if drain becomes clogged.

#### **Low Ambient Kit**

Designed for use in ambient temperatures no lower than 0°F. Cycles the outdoor fans while allowing compressor operation in the cooling cycle. Includes field installed pressure switches on the liquid line to determine when to operate the outdoor fans. This intermittent fan operation allows the system to operate without icing the evaporator coil and losing capacity.

If the liquid line pressure drops below 240 psig outdoor fans operate at 25% normal fan speed. If pressure drops below 180 psig all outdoor fans stop until pressure rises to 300 psig, then fans operate at 25% normal fan speed unless main pressure switches have reset to 450 psig to resume normal cooling operation and full fan speed operation.

### **GAS HEATING SYSTEM**

Aluminized steel inshot burners, direct spark ignition, electronic flame sensor, combustion air inducer, redundant automatic dual stage gas valve with manual shut-off.

#### **4** **Heat Exchanger**

Tubular construction, stainless steel, life cycle tested.

#### **Electronic Pilot Ignition**

Electronic spark igniter provides positive direct ignition of burners on each operating cycle. The system permits main gas valve to stay open only when the burners are proven to be lit. Should a loss of flame occur, the gas valve closes, shutting off the gas to the burners. Ignition module has an LED to indicate status and aid in troubleshooting.

Watchguard circuit on module automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance service calls.

Ignition control is factory installed in the controls section.

#### **Limit Control**

Factory installed, limit control with fixed temperature setting. Heat limit control protects heat

exchanger and other components from overheating.

#### **Safety Switches**

Flame roll-out switch, flame sensor and combustion air inducer proving switch protect system operation.

### **Required Selections**

#### **Gas Input Choice - Order one:**

Standard Gas Heat, 2 Stage  
(84,500/130,000 Btuh)

Medium Gas Heat, 2 Stage  
(117,000/180,000 Btuh)

High Gas Heat, 2 Stage  
(156,000/240,000 Btuh)

### **Options/Accessories**

#### **Field Installed**

##### **Bottom Gas Piping Kit**

Allows bottom gas entry.

##### **Combustion Air Intake Extensions**

Recommended for use with existing flue extension kits in areas where high snow areas can block intake air.

##### **Low Temperature Vestibule Heater**

Electric heater automatically controls minimum temperature in gas burner compartment when temperature is below -40°F. CSA certified to allow operation of unit down to -60°F.

##### **LPG/Propane Kits**

Conversion kit to field change over units from Natural Gas to LPG/Propane.

### **Options/Accessories**

#### **Field Installed**

##### **Vertical Vent Extension Kit**

Use to exhaust flue gases vertically above unit. Required when unit vent is too close to fresh air intakes per building codes. The vent kit also prevents ice formation on intake louvers.

Kit contains vent transition, vent tee, drain cap and installation hardware.

*NOTE - Straight vent pipes (4 in. B-Vent) and caps are not furnished and must be field supplied. Refer to kit instructions for additional information.*

## FEATURES AND BENEFITS

### CABINET

#### 5 Construction

Heavy-gauge steel panels and full perimeter heavy-gauge galvanized steel base rail provides structural integrity for transportation, handling, and installation.

Base rails have rigging holes.

Three sides of the base rail have forklift slots.

Raised edges around duct and power entry openings in the bottom of the unit provide additional protection against water entering the building.

#### Airflow Choice

Units are shipped in downflow (vertical) configuration, can be field converted to horizontal airflow with optional Horizontal Discharge Kit.

#### Duct Flanges

Provided for horizontal duct attachment.

#### Power/Gas Entry

Electrical and gas lines can be brought through the unit base or through horizontal access knock-outs.

#### Exterior Panels

Constructed of heavy-gauge, galvanized steel with a two-layer enamel paint finish.

#### Insulation

All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation.

Unit base is fully insulated in conditioned area. The insulation also serves as an air seal to the roof curb, eliminating the need to add a seal during installation.

#### Access Panels

Access panels are provided for the filter section, heating/blower section, and the compressor/controls section.

### Options/Accessories

#### Factory Installed

##### Corrosion Protection

A completely flexible immersed coating with an electrodeposited dry film process (AST ElectroFin E-Coat). Meets Mil Spec MIL-P-53084, ASTM B117 Standard Method Salt Spray Testing.

Indoor Corrosion Protection:

- Coated coil
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:

- Coated coil
- Painted base

##### Hinged Access Panels

Large access panels are hinged and have quarter-turn latches for quick and easy access to maintenance areas (filter, compressor / controls, heating / blower).

#### Field Installed

##### Combination Coil/Hail Guards

Heavy gauge steel frame painted to match cabinet with expanded metal mesh to protect the outdoor coil from damage.

##### Horizontal Discharge Kit

Consists of duct covers to block off downflow supply and return air openings for horizontal applications.

Also includes return air duct flanges for end return air when economizer is used in horizontal applications.

*NOTE - When configuring unit for horizontal application with economizer, a separate Horizontal Barometric Relief Damper with Hood must be ordered separately for installation in the return air duct.* **Return Air Adaptor Plate**

For same size LC/LG/LH and TC/TG/TH unit replacement.

Installs on return air opening in unit to match return air opening on existing roof curbs. Also see Accessory Air Resistance table.

### 6 BLOWER

A wide selection of supply air blower options are available to meet a variety of airflow requirements.

#### Belt Drive Blower System (All Models Except KDB122)

Overload protected, equipped with ball bearings. Belt drive motors are available in several different sizes to maximize air performance.

Forward curved blades, double inlet, blower wheel is statically and dynamically balanced. Equipped with ball bearings and adjustable pulley (allows speed change).

Blower assembly slides out of unit for servicing.

#### E-Direct™ Blower System (KDB122 Models Only)

High-efficiency, variable-speed ECM (electronically commutated) motor with an aerodynamically optimized impeller with backward curved blades mounted directly onto the rotor.

Design combines the motor and electronics into one unit, eliminating the need for a variable-frequency drive.

Maintains the ability to ramp up or down the blower to meet comfort needs.

Blower assembly slides out of unit for servicing.

Air inlet grill reduces indoor sound levels without affecting air performance.

### Required Selections

#### Select Belt Drive Constant Air Volume (CAV) or Single Zone VAV Supply Fan Supply Air Blower Option

(All Models except KDB122) Order blower motor horsepower and drive kit number required when base unit is ordered, see Drive Kit Specifications Table.

#### Or Select E-Direct™ (KDB122 Models Only)



## FEATURES AND BENEFITS

### **BLOWER (continued)**

#### **CAV Operation**

On units ordered with the Constant Air volume (CAV) option, the supply air blower will provide a constant volume of air.

#### **Single Zone VAV Supply Fan Operation**

Units ordered with the Single Zone VAV Supply Fan option utilize a Variable Frequency Drive (VFD) to stage the supply air blower airflow. The VFD alters the frequency and voltage of the power supply to the blower to control blower speed.

The supply air blower has two speeds:

1. Low speed for part-load cooling operation. Note - Low speed is 66% of high speed.
2. High speed for full load cooling and all heat modes.

Full speed blower operation is set by adjusting the motor pulley to deliver the desired air volume.

The ventilation speed is selectable between high and low speed.

*NOTE - Part load airflow in cooling mode on **Single Zone VAV Supply Fan** units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.*

The VFD has an operational range of -40 to 125° F outdoor air ambient temperature.

Lower operating costs are obtained when the blower is operated on lower speeds.

#### **Single Zone VAV Supply Fan Sequence of Operation**

Ventilation speed is determined by the VENT SPEED switch setting on fan control board (LO or HI).

Blower operates in low speed for mechanical cooling (Y1).

Blower operates in high speed for any other mode (free cooling, mechanical cooling Y1+Y2, and heating).

Economizer damper minimum position is fully closed in unoccupied mode.

In occupied mode, the economizer damper minimum position is determined by the setting of the two potentiometers on fan control board.

- LO SPD MIN POS potentiometer sets the minimum position when blower is operating at low speed.
- HI SPD MIN POS potentiometer sets the minimum position when blower is operating at high speed.

### **Options/Accessories**

#### **Field Installed**

##### **VFD Manual Bypass Kit**

VFD Manual Bypass Control is available as a kit for units equipped with the Single Zone VAV Supply Fan option.

The VFD Manual Bypass Control is a manual bypass and is set by re-configuring the wiring on the unit.

### **CONTROLS**

#### **7 Unit Control**

All control voltage is provided via a 24V (secondary) transformer with built-in circuit breaker protection.

**Heat/Cool Staging** - Capable of up to 2 heat / 2 cool staging with a third party DDC control system or thermostat.

#### **Low Voltage Terminal Block**

Provides screw terminal connections for thermostat or controller wiring.

**Night Setback Mode** - Saves energy by closing outdoor air dampers and operating supply fan on thermostat demand only.

#### **Defrost Control**

Provides a defrost cycle, if needed, every 30 or 60 or 90 minutes (adjustable) of compressor on<sup>1</sup> time at outdoor coil temperature below 35°F. Temperature switch mounted on outdoor coil liquid line terminates defrost cycle.

*NOTE - Gas heating operates during a defrost cycle.*

### **Fan Control (E-Direct™ Blower System Only)**

Provides variable speed control. Blower speed can be independently set for both full load and part load applications. Outdoor fan motor speed will vary depending on full or part load applications.

#### **Balance Point Thermostat**

Controls the changeover temperature between the heat pump heating operation and gas heat heating operation.

### **Options/Accessories**

#### **Field Installed**

##### **Smoke Detector**

Photoelectric type, installed in supply air section, return air section or both sections. Available with power board and single sensor (supply or return) or power board and two sensors (supply and return).

#### **Thermostats**

Control system and thermostat options, see page 27.

Aftermarket unit controller options, see Options/Accessories table.

## FEATURES AND BENEFITS

### **ELECTRICAL**

#### **Marked & Color-Coded Wiring**

All electrical wiring is color-coded and marked to identify which components it is connecting.

#### **Electrical Plugs**

Positive connection electrical plugs are used to connect common accessories or maintenance parts for easy removal or installation.

#### **Phase Monitor**

**(Factory Installed on Units Equipped with the Single Zone VAV Supply Fan and E-Direct™ Option)**

Phase monitor located in the control compartment detects the phasing of incoming power. If the incoming power is out of phase or if any of the three phases are lost, an indicator LED on the phase monitor will turn red and the unit will not start. In normal operation with correct incoming power phasing, the LED will be green.

### **Required Selections**

#### **Voltage Choice**

Specify when ordering base unit.

### **Options/Accessories**

#### **Factory or Field Installed**

#### **8 Disconnect Switch**

Accessible from outside of unit, spring loaded weatherproof cover furnished. Main power to the unit is field connected to the disconnect which allows all power to be shut off for service. See Electrical Data tables for ordering information, page 24.

#### **GFI Service Outlets (2)**

115V ground fault circuit interrupter (GFCI) type, non-powered, field-wired.

#### **Field Installed**

#### **GFI Weatherproof Cover**

Single-gang cover.

Heavy-duty UV-resistant polycarbonate case construction.

Hinged base cover with gasket.

### **INDOOR AIR QUALITY**

#### **9 Air Filters**

Disposable 2-inch filters furnished as standard.

### **Options/Accessories**

#### **Field Installed**

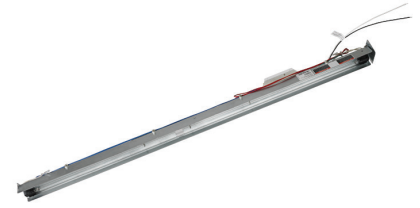
#### **High Efficiency Air Filter**

Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters.

#### **Replacement Filter Media Kit With Frame**

Replaces existing pleated filter media. Includes washable metal mesh screen and metal frame with clip for holding replaceable non-pleated filter.

### **UVC Germicidal Lamps**



Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds. This process either destroys the organism or controls its ability to reproduce.

UV-C energy greatly reduces the growth and proliferation of mold and other bioaerosols (bacteria and viruses) on illuminated surfaces (particularly coil and drain pan).

Lamps are field installed in the blower/evaporator coil section.

All necessary hardware for installation is included.

Lamps operate on 208/230V power supply. Step-down transformer must be field supplied when used with 460V and 575V rooftop units.

Magnetic safety interlock terminates power when access panels are removed.

Approved by ETL.

#### **Indoor Air Quality (CO<sub>2</sub>) Sensors**

Monitors CO<sub>2</sub> levels, reports to the Unit Controller which adjusts economizer dampers as needed.

**ECONOMIZER OPTIONS**

**Factory or Field Installed**

**10 Economizer Features (Standard and High Performance Common Features)**

Downflow or Horizontal with Outdoor Air Hood and Barometric Relief Dampers with Exhaust Hood.

**11 Barometric Relief Dampers** allow relief of excess air, aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle, bird screen furnished.

*NOTE - Optional Horizontal Low Profile Barometric Relief Dampers with Exhaust Hood are available for field installation in a reduced space.*

Occupied/Unoccupied mode with field furnished setback thermostat.

Demand Control Ventilation (DCV) ready using optional CO<sub>2</sub> sensors.

Mixed Air Sensor is furnished for field installation in the rooftop unit. Sensor is factory installed when Economizers are factory installed.

Single sensible sensor is furnished with Economizer and enables economizer operation if the outdoor temperature is less than the setpoint of the control.

**Standard Economizer Features (Not for Title 24)**

Gear-driven action, return air and outdoor air dampers, plug-in connections to unit, nylon bearings, neoprene seals, 24-volt, fully-modulating spring return motor.

**Standard Economizer Control Module**

The Standard Economizer Control Module can be adjusted to operate based on outdoor air temperatures.



**Economizer Controls:**

- Damper Minimum Position - Can be set lower than traditional minimum air requirements resulting in cost savings.
- IAQ Sensor - Signals dampers to modulate and maintain 55°F when CO<sub>2</sub> is higher than the CO<sub>2</sub> setpoint.
- Demand Control Ventilation (DCV) LED - A steady green Demand Control Ventilation LED indicates the IAQ reading is higher than setpoint and requires more fresh air.
- Free Cool LED - A steady green LED indicates outdoor air is suitable for free cooling.

Free Cooling runs when outdoor air temperature is lower than the set temperature on the economizer control.

*NOTE: The Free Cooling default setting for outdoor air temperature sensor is 55°F.*

**High Performance Economizer Features**

Approved for California Title 24 building standards.

Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.

ASHRAE 90.1-2010 compliant.

Gear-driven action, high torque 24-volt fully-modulating spring return damper motor, return air and outdoor air dampers, plug-in connections to unit, stainless steel bearings, enhanced neoprene blade edge seals and flexible stainless steel jamb seals to minimize air leakage.

*NOTE - High Performance Economizers are not approved for use with enthalpy controls in Title 24 applications.*

*NOTE - The Free Cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 "Prescriptive Requirements for Space Conditioning Systems" of the California Energy Commission's*

*2013 Building Energy Efficiency Standards.*

*Refer to Installation Instructions for complete setup information and menu parameters available.*

**High Performance Economizer Control Module**

Module provides inputs and outputs to control economizer based on parameter settings. Module automatically detects sensors by polling to determine which sensors are installed in system.



Module displays any alarm messages (fault detection and diagnostics) as an aid in troubleshooting.

Non-volatile memory retains parameter settings in case of power failure.

Keypad with four navigation buttons and LCD screen is furnished for setting economizer parameters.

- Menu Up/Exit (↑) button returns to the main menu.
- Arrow Up (▲) button moves to the previous or next parameter within the selected menu.
- Arrow Down (▼) button moves to the next parameter within the selected menu.
- Select (enter) (↵) button confirms parameter selection.

**Main Menu Structure:**

- STATUS (economizer and system operation status)
- SETPOINTS (settings for various setpoint parameters)
- SYSTEM SETUP (settings/information about the system)
- ADVANCED SETUP (freeze protection, CO<sub>2</sub> settings, stage 3 delay and additional calibration settings)
- CHECKOUT (damper positions)
- ALARMS (output signal that can be configured for remote alarm monitoring)

### **ECONOMIZER OPTIONS (continued)**

#### **Factory or Field Installed**

##### **Single Enthalpy Temperature Control**

##### **(Not for Title 24)**

Outdoor air enthalpy sensor enables economizer if the outdoor enthalpy is less than the setpoint of the control. Single enthalpy control is furnished with economizer.

#### **Field Installed**

##### **Differential Enthalpy Control (Not for Title 24)**

Order two Single Enthalpy Control Kits. One is field installed in the return air section, the other in the outdoor air section. Allows the economizer control board to select between outdoor air or return air, whichever has lower enthalpy.

### **EXHAUST OPTIONS**

#### **Field Installed**

##### **Horizontal Low Profile Barometric Relief Dampers**

Replaces barometric relief dampers furnished with Economizer.

For use when unit is configured for horizontal applications in a reduced space requiring an economizer.

Allows relief of excess air.

Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle.

Field installed in return air duct.

Exhaust hood with bird screen furnished.

Requires Horizontal Discharge Kit.

##### **Power Exhaust Fan**

Installs internal to unit for downflow applications only with economizer option. Provides exhaust air pressure relief. Interlocked to run when supply air blower is operating, fan runs when outdoor air dampers are 50% open (adjustable), motor is overload protected. Requires Economizer with Outdoor Air Hood and Barometric Relief Dampers. Fan is 20 in. diameter with 5 blades (K1PWRE10B) WITH 1/3 hp motor.

### **OUTDOOR AIR OPTIONS**

#### **Factory or Field Installed**

##### **Outdoor Air Damper - Downflow or Horizontal With Air Hood**

Linked mechanical dampers, 0 to 25% (fixed) outdoor air adjustable, installs in unit. Includes outdoor air hood.

Automatic model features fully modulating spring return damper motor with plug-in connection.

Manual model features a slide damper.

Maximum mixed air temperature in cooling mode: 100°F.

### **ROOF CURBS**

Nailer strip furnished, mates to unit, U.S. National Roofing Contractors Approved, shipped knocked down.

##### **Hybrid Roof Curbs, Downflow**

Roof curb can be assembled using interlocking tabs to fasten corners together. No tools required.

Curb can also be fastened together with furnished hardware.

Available in 8, 14, 18, and 24 inch heights.

##### **Adjustable Pitch Curb**

Fully adjustable pitch curbs (3/4 in. per foot in any direction) provide a level platform for rooftop units allowing flexible installations on roofs with uneven or sloped angles.

Uses interlocking tabs to fasten corners together. No tools required.

Hardware is furnished to connect upper curb with lower curb.

Available in 14 inch height.

##### **Adaptor Curbs (not shown)**

Curbs are regionally sourced. Dimensions will vary based upon the source. Contact your local sales representative for a detailed cut sheet with applicable dimensions.

### **CEILING DIFFUSERS**

#### **Ceiling Diffusers (Flush or Step-Down)**

Diffuser face and grilles with white powder coat finish, insulated (UL listed duct liner), diffuser box with collars for duct connection, fixed blades (flush diffusers) and double deflection blades (step-down diffusers), provisions for suspending, internally sealed (prevents recirculation), removable return air grille, adapts to T-bar ceiling grids or plaster ceilings.

##### **Transitions (Supply and Return)**

Used with diffusers, installs in roof curb, galvanized steel construction, flanges furnished for duct connection to diffusers, fully insulated.

## OPTIONS / ACCESSORIES

| Item Description   | Model Number  | Catalog Number | Unit Model No |         |         |
|--|---|----------------|---------------|---------|---------|
|  |   |                | KDB 092       | KDB 102 | KDB 122 |
| <b>COOLING/HEATING SYSTEM</b>  |   |                |               |         |         |
| Condensate Drain Trap  | PVC - C1TRAP20AD2                                   | <b>76W26</b>   | X             | X       | X       |
|  | Copper - C1TRAP10AD2                                | <b>76W27</b>   | X             | X       | X       |
| Corrosion Protection   |   | Factory        | O             | O       | O       |
| Drain Pan Overflow Switch  | K1SNSR71AB1-  | <b>74W42</b>   | X             | X       | X       |
| Efficiency   |   | High           | O             | O       | O       |
| Low Ambient Kit  | K1SNSR34*B0   | <b>14N31</b>   | X             | X       | X       |
| Refrigerant Type   |   | R-410A         | O             | O       | O       |
| <b>GAS HEATING SYSTEM</b>  |   |                |               |         |         |
| Bottom Gas Piping Kit  | C1GPKT01B-01  | <b>54W95</b>   | X             | X       | X       |
| Combustion Air Intake Extensions   | T1EXTN10AN1   | <b>19W51</b>   | X             | X       | X       |
| Gas Heat Input   | 130,000 Btuh  | Factory        | O             | O       | O       |
|  | 180,000 Btuh  | Factory        | O             | O       | O       |
|  | 240,000 Btuh  | Factory        | O             | O       | O       |
| Low Temperature Vestibule Heater   | 208/230V-3ph - C1LTVH10B-2Y                         | <b>13X63</b>   | X             | X       | X       |
|  | 460V - C1LTVH10B-2G                                 | <b>13X64</b>   | X             | X       | X       |
|  | 575V - C1LTVH10B-2J                                 | <b>13X65</b>   | X             | X       | X       |
| LPG/Propane Conversion Kits  | Standard Heat - C1PROP23BS1                         | <b>14N22</b>   | X             | X       | X       |
|  | Medium Heat - C1PROP22BS1                           | <b>14N23</b>   | X             | X       | X       |
|  | High Heat - C1PROP21BS1                             | <b>14N25</b>   | X             | X       | X       |
| Vertical Vent Extension  | C1EXTN2021  | <b>42W16</b>   | X             | X       | X       |
| <b>BLOWER - SUPPLY AIR</b>   |   |                |               |         |         |
| Blower Option  | CAV (Constant Air Volume)                           | Factory        | O             | O       |         |
|  | Single Zone VAV Supply Fan                          | Factory        | O             | O       |         |
|  | E-Direct™ (Direct Drive) Single Zone VAV Supply Fan | Factory        |               |         | O       |
| Blower Motors  | Belt Drive - 2 hp                                   | Factory        | O             | O       |         |
|  | Belt Drive - 3 hp                                   | Factory        | O             | O       |         |
|  | Belt Drive - 5 hp                                   | Factory        | O             | O       |         |
| VFD Manual Bypass Kit (for Single Zone VAV Supply Fan equipped units only) | KVFDB12C-1  | <b>90W53</b>   | X             | X       |         |
| Drive Kits   | Kit #1 590-890 rpm                                  | Factory        | O             | O       |         |
| See Blower Data Tables for selection                                       | Kit #2 800-1105 rpm                                 | Factory        | O             | O       |         |
|  | Kit #3 795-1195 rpm                                 | Factory        | O             | O       |         |
|  | Kit #4 730-970 rpm                                  | Factory        | O             | O       |         |
|  | Kit #5 940-1200 rpm                                 | Factory        | O             | O       |         |
|  | Kit #6 1015-1300 rpm                                | Factory        | O             | O       |         |
|  | Kit #10 900-1135 rpm                                | Factory        | O             | O       |         |
|  | Kit #11 1040-1315 rpm                               | Factory        | O             | O       |         |
|  | Kit #12 1125-1425 rpm                               | Factory        | O             | O       |         |

NOTE - Catalog and model numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

| Item Description   | Model Number  | Catalog Number | Unit Model No |         |         |
|--|---|----------------|---------------|---------|---------|
|  |   |                | KDB 092       | KDB 102 | KDB 122 |
| <b>CABINET</b>   |   |                |               |         |         |
| Combination Coil/Hail Guards   | High Efficiency - K1GARD53B-1                         | <b>14Y77</b>   | X             | X       |         |
|  | High Efficiency - E1GARD51BP1                         | <b>13T06</b>   |               |         | X       |
| Hinged Access Panels   |   | Factory        | O             | O       | O       |
| Horizontal Discharge Kit   | K1HECK00B-1   | <b>51W25</b>   | X             | X       | X       |
| Return Air Adaptor Plate (for LC/LG/LH and TC/TG/TH unit replacement)  | C1CONV10B-1   | <b>54W96</b>   | X             | X       | X       |
| <b>CONTROLS</b>  |   |                |               |         |         |
| <b>NOTE - Also see Conventional Thermostat Control Systems on page 27 for Additional Options.</b>            |   |                |               |         |         |
| Commercial Controls  |   |                |               |         |         |
| Smoke Detector - Supply or Return (Power board and one sensor)   | C1SNSR44B-2   | <b>11K76</b>   | X             | X       | X       |
| Smoke Detector - Supply and Return (Power board and two sensors)   | C1SNSR43B-2   | <b>11K80</b>   | X             | X       | X       |
| <b>INDOOR AIR QUALITY</b>  |   |                |               |         |         |
| High Efficiency Air Filters<br>20 x 25 x 2 (Order 4 per unit)  | MERV 8 - C1FLTR15B-1                                  | <b>50W61</b>   | X             | X       | X       |
|  | MERV 13 - C1FLTR40B-1                                 | <b>52W41</b>   | X             | X       | X       |
| Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media)                           | C1FLTR30B-1-  | <b>Y3063</b>   | X             | X       | X       |
| <b>Indoor Air Quality (CO<sub>2</sub>) Sensors</b>   |   |                |               |         |         |
| Sensor - Wall-mount, off-white plastic cover with LCD display  | C0SNSR50AE1L  | <b>77N39</b>   | X             | X       | X       |
| Sensor - Wall-mount, off-white plastic cover, no display   | C0SNSR52AE1L  | <b>87N53</b>   | X             | X       | X       |
| Sensor - Black plastic case with LCD display, rated for plenum mounting                                      | C0SNSR51AE1L  | <b>87N52</b>   | X             | X       | X       |
| Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting                               | C0MISC19AE1   | <b>87N54</b>   | X             | X       | X       |
| CO <sub>2</sub> Sensor Duct Mounting Kit - for downflow applications   | C0MISC19AE1-  | <b>85L43</b>   | X             | X       | X       |
| Aspiration Box - for duct mounting non-plenum rated CO <sub>2</sub> sensors ( <b>87N53</b> or <b>77N39</b> ) | C0MISC16AE1-  | <b>90N43</b>   | X             | X       | X       |
| <b>UVC Germicidal Lamps</b>  |   |                |               |         |         |
| <sup>1</sup> UVC Light Kit (208/230v-1ph)  | C1UVCL10B-1   | <b>54W62</b>   | X             | X       | X       |
| <b>ELECTRICAL</b>  |   |                |               |         |         |
| Voltage 60 hz  | 208/230V - 3 phase                                    | Factory        | O             | O       | O       |
|  | 460V - 3 phase  | Factory        | O             | O       | O       |
|  | 575V - 3 phase  | Factory        | O             | O       | O       |
| Disconnect Switch  | 80 amp - C1DISC080B-1                                 | <b>54W56</b>   | OX            | OX      | OX      |
| GFI Service Outlets  | 15 amp non-powered, field-wired (208/230V, 460V only) | LTAGFIK10/15   | <b>74M70</b>  | OX      | OX      |
|  | 20 amp non-powered, field-wired (575V only)           | C1GFIC120FF1   | <b>67E01</b>  | X       | X       |
| Weatherproof Cover for GFI   | C1GFIC199FF1  | <b>10C89</b>   | X             | X       | X       |

NOTE - Catalog and model numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

| Item Description   | Model Number                | Catalog Number | Unit Model No |         |         |
|--|-----------------------------|----------------|---------------|---------|---------|
|  |                             |                | KDB 092       | KDB 102 | KDB 122 |
| <b>ECONOMIZER</b>  |                             |                |               |         |         |
| <b>Standard Economizer (Not for Title 24)</b>  |                             |                |               |         |         |
| Standard Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods         | K1ECON20B-2                 | 13U45          | OX            | OX      | OX      |
| <b>Standard Economizer Controls (Not for Title 24)</b>   |                             |                |               |         |         |
| Single Enthalpy Control  | C1SNSR64FF1                 | 53W64          | OX            | OX      | OX      |
| Differential Enthalpy Control (order 2)  | C1SNSR64FF1                 | 53W64          | X             | X       | X       |
| <b>High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)</b>                                 |                             |                |               |         |         |
| High Performance Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods | K1ECON22B-3                 | 17U09          | OX            | OX      | OX      |
| <b>High Performance Economizer Controls (Not for Title 24)</b>   |                             |                |               |         |         |
| Single Enthalpy Control  | C1SNSR60FF1                 | 10Z75          | OX            | OX      | OX      |
| Differential Enthalpy Control (order 2)  | C1SNSR60FF1                 | 10Z75          | X             | X       | X       |
| <b>Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood</b>  |                             |                |               |         |         |
| Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood   | LAGEDH03/15                 | 53K04          | X             | X       | X       |
| <b>OUTDOOR AIR</b>   |                             |                |               |         |         |
| <b>Outdoor Air Dampers with Outdoor Air Hood</b>   |                             |                |               |         |         |
| Motorized  | C1DAMP20B-1                 | 14G28          | OX            | OX      | OX      |
| Manual   | C1DAMP10B-2                 | 14G29          | OX            | OX      | OX      |
| <b>POWER EXHAUST</b>   |                             |                |               |         |         |
| Standard Static  | 208/230V-3ph - K1PWRE10B-1Y | 53W44          | X             | X       | X       |
|  | 460V-3ph - K1PWRE10B-1G     | 53W45          | X             | X       | X       |
|  | 575V-3ph - K1PWRE10B-1J     | 53W46          | X             | X       | X       |
| <b>ROOF CURBS</b>  |                             |                |               |         |         |
| <b>Hybrid Roof Curbs, Downflow</b>   |                             |                |               |         |         |
| 8 in. height   | C1CURB70B-1                 | 11F54          | X             | X       | X       |
| 14 in. height  | C1CURB71B-1                 | 11F55          | X             | X       | X       |
| 18 in. height  | C1CURB72B-1                 | 11F56          | X             | X       | X       |
| 24 in. height  | C1CURB73B-1                 | 11F57          | X             | X       | X       |
| <b>Adjustable Pitch Curb, Downflow</b>   |                             |                |               |         |         |
| 14 in. height  | C1CURB55B-1                 | 54W50          | X             | X       | X       |
| <b>CEILING DIFFUSERS</b>   |                             |                |               |         |         |
| Step-Down - Order one  | RTD11-95S                   | 13K61          | X             |         |         |
|  | RTD11-135S                  | 13K62          |               | X       | X       |
| Flush - Order one  | FD11-95S                    | 13K56          | X             |         |         |
|  | FD11-135S                   | 13K57          |               | X       | X       |
| Transitions (Supply and Return) - Order one  | C1DIFF30B-1                 | 12X65          | X             |         |         |
|  | C1DIFF31B-1                 | 12X66          |               | X       | X       |

NOTE - Catalog and model numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## SPECIFICATIONS

| General Data  |  | Nominal Tonnage | 7.5 Ton  | 7.5 Ton                    | 8.5 Ton  | 8.5 Ton                    | 10 Ton   |
|---|--|-----------------|--|----------------------------|--|----------------------------|--|
|   |  | Model Number    | KDB092H4B  | KDB092H4M                  | KDB102H4B  | KDB102H4M                  | KDB122H4E  |
|   |  | Efficiency Type | High   | High                       | High   | High                       | High   |
|   |  | Blower Type     | CAV (Constant Air Volume)  | Single Zone VAV Supply Fan | CAV (Constant Air Volume)  | Single Zone VAV Supply Fan | Single Zone VAV Supply Fan <b>E-Direct™</b> (Direct Drive) |
| <b>Cooling Performance</b>                            | Gross Cooling Capacity - Btuh                |                 | 91,600   | 91,600                     | 103,400  | 103,400                    | 121,000  |
|   | <sup>1</sup> Net Cooling Capacity - Btuh     |                 | 89,000   | 89,000                     | 100,000  | 100,000                    | 118,000  |
|   | AHRI Rated Air Flow - cfm                    |                 | 3,000  | 3,000                      | 3,400  | 3,400                      | 3600   |
|   | Total Unit Power - kW                        |                 | 7.3  | 7.3                        | 8.3  | 8.3                        | 9.6  |
|   | <sup>1</sup> EER (Btuh/Watt)                 |                 | 12.1   | 12.1                       | 12.0   | 12.0                       | 12.3   |
|   | <sup>1</sup> IEER (Btuh/Watt)                |                 | 12.9   | 14.2                       | 12.5   | 14.3                       | 14.8   |
|   | Refrigerant Type                             |                 | R-410A   | R-410A                     | R-410A   | R-410A                     | R-410A   |
|   | Refrigerant Charge                           | Circuit 1       | 13 lbs. 8 oz.  | 13 lbs. 8 oz.              | 13 lbs. 8 oz.  | 13 lbs. 8 oz.              | 19 lbs. 8 oz.  |
|   | Circuit 2                                    | 13 lbs. 8 oz.   | 13 lbs. 8 oz.  | 13 lbs. 0 oz.              | 13 lbs. 0 oz.  | 20 lbs. 8 oz.              |  |
| <b>Heating Performance</b>                            | <sup>1</sup> Total High Heat Capacity - Btuh |                 | 86,000   | 86,000                     | 100,000  | 100,000                    | 116,000  |
|   | Total Unit Power - kW                        |                 | 7.0  | 7.0                        | 8.1  | 8.1                        | 9.5  |
|   | <sup>1</sup> C.O.P.                          |                 | 3.60   | 3.60                       | 3.60   | 3.60                       | 3.60   |
|   | <sup>1</sup> Total Low Heat Capacity - Btuh  |                 | 51,000   | 51,000                     | 55,000   | 56,000                     | 65,000   |
|   | Total Unit Power (kW)                        |                 | 6.6  | 6.6                        | 7.3  | 7.3                        | 8.5  |
|   | <sup>1</sup> C.O.P.                          |                 | 2.25   | 2.25                       | 2.25   | 2.25                       | 2.25   |
| <b>Gas Heating Options Available - See page 14</b>    |  |                 | Standard (2 stage), Medium (2 Stage), High (2 Stage)                               |                            |  |                            |  |
| <b>Compressor Type (number)</b>                       |  |                 | Scroll (2)   | Scroll (2)                 | Scroll (2)   | Scroll (2)                 | Scroll (2)   |
| <b>Outdoor Coils</b>                                  | Net face area (total) - sq. ft.              |                 | 25.9   | 25.9                       | 25.9   | 25.9                       | 40.4   |
|   | Tube diameter - in.                          |                 | 3/8  | 3/8                        | 3/8  | 3/8                        | 3/8  |
|   | Number of rows                               |                 | 3  | 3                          | 3  | 3                          | 3  |
|   | Fins per inch                                |                 | 20   | 20                         | 20   | 20                         | 20   |
| <b>Outdoor Coil Fans</b>                              | Motor - (No.) horsepower                     |                 | (2) 1/3 ECM  | (2) 1/3 ECM                | (2) 1/3 ECM  | (2) 1/3 ECM                | (3) 1/3 ECM  |
|   | Motor rpm                                    |                 | 530-950  | 530-950                    | 650-1010   | 650-1010                   | 530-950  |
|   | Total Motor watts                            |                 | 140-620  | 140-620                    | 220-700  | 220-700                    | 180-800  |
|   | Diameter - (No.) in.                         |                 | (2) 24   | (2) 24                     | (2) 24   | (2) 24                     | (3) 24   |
|   | Number of blades                             |                 | 3  | 3                          | 3  | 3                          | 3  |
|   | Total Air volume - cfm                       |                 | 3600-7000  | 3600-7000                  | 4600-7500  | 4600-7500                  | 5500-10,600  |
| <b>Indoor Coils</b>                                   | Net face area (total) - sq. ft.              |                 | 12.8   | 12.8                       | 12.8   | 12.8                       | 12.8   |
|   | Tube diameter - in.                          |                 | 3/8  | 3/8                        | 3/8  | 3/8                        | 3/8  |
|   | Number of rows                               |                 | 4  | 4                          | 4  | 4                          | 4  |
|   | Fins per inch                                |                 | 14   | 14                         | 14   | 14                         | 14   |
|   | Drain connection - Number and size           |                 | (1) 1 in. NPT coupling   |                            |  |                            |  |
|   | Expansion device type                        |                 | Balance port TXV, removable head   |                            |  |                            |  |
| <b><sup>2</sup> Indoor Blower and Drive Selection</b> | Nominal motor output                         |                 | 2 hp, 3 hp, 5 hp   |                            |  |                            | 3.75 hp (ECM)  |
|   | Maximum usable motor output (US Only)        |                 | 2.3 hp, 3.45 hp, 5.75 hp   |                            |  |                            | ---  |
|   | Motor - Drive kit number                     |                 | 2 hp<br><sup>3</sup> Kit 1 590-890 rpm<br>Kit 2 800-1105 rpm<br>Kit 3 795-1195 rpm |                            | 3 hp<br>Kit 4 730-970 rpm<br>Kit 5 940-1200 rpm<br>Kit 6 1015-1300 rpm |                            | ---  |
|   |  |                 | 5 hp<br>Kit 10 900-1135 rpm<br>Kit 11 1040-1315 rpm<br>Kit 12 1125-1425 rpm        |                            |  |                            |  |
|   | Blower wheel nominal diameter x width - in.  |                 | (1) 15 X 15  | (1) 15 X 15                | (1) 15 X 15  | (1) 15 X 15                | (1) 22 x 19  |
| <b>Filters</b>  | Type of filter                               |                 | Disposable   |                            |  |                            |  |
|   | Number and size - in.                        |                 | (4) 20 x 25 x 2  |                            |  |                            |  |
| <b>Electrical characteristics</b>                     |  |                 | 208/230V, 460V or 575V - 60 hertz - 3 phase  |                            |  |                            |  |

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

<sup>1</sup> AHRI Certified to AHRI Standard 340/360:

**Cooling Ratings** - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

**High Temperature Heating Ratings** - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

**Low Temperature Heating Ratings** - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

<sup>2</sup> Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

<sup>4</sup> Standard motor and drive kit furnished with unit.

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.



## SPECIFICATIONS - GAS HEAT

|  |              | Heat Input Type             | Standard   | Medium     | High       |
|--|--------------|-----------------------------|------------|------------|------------|
|  |              | Number of Gas Heat Stages   | 2          | 2          | 2          |
| Gas Heating Performance                    | Input - Btuh | First Stage                 | 84,500     | 117,000    | 156,000    |
|  |              | Second Stage                | 130,000    | 180,000    | 240,000    |
|  |              | Output - Btuh               | 104,000    | 144,000    | 192,000    |
|  |              | Temperature Rise Range - °F | 15-45      | 30-60      | 40-70      |
|  |              | Thermal Efficiency          | 80%        | 80%        | 80%        |
|  |              | Gas Supply Connections      | 3/4 in NPT | 3/4 in NPT | 3/4 in NPT |
| Recommended Gas Supply Pressure - in. w.g. | Natural      |                             | 7          | 7          | 7          |
|  | LPG/Propane  |                             | 11         | 11         | 11         |

## HIGH ALTITUDE DERATE

Units may be installed at altitudes up to 2000 feet above sea level without any modification.

At altitudes above 2000 feet, units must be derated to match gas manifold pressures shown in table below.

At altitudes above 4500 feet unit must be derated 2% for each 1000 feet above sea level.

NOTE – This is the only permissible derate for these units.

| Gas Heat Type | Altitude  | Gas Manifold Pressure |                 | Input Rate<br>Natural Gas or LPG/Propane |              |
|---------------|-----------|-----------------------|-----------------|--|--------------|
|               |           | Natural Gas           | LPG/Propane Gas | First Stage                              | Second Stage |
|               | ft.       | In. w.g.              | In. w.g.        | Btuh                                     | Btuh         |
| Standard      | 2001-4500 | 3.4                   | 9.6             | 84,500                                   | 124,000      |
| Medium        | 2001-4500 | 3.4                   | 9.6             | 117,000                                  | 172,000      |
| High          | 2001-4500 | 3.4                   | 9.6             | 156,000                                  | 230,000      |

## COOLING/HEATING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 7.5 TON COOLING HIGH EFFICIENCY KDB092H4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 65°F  |                   |  |      |      | 75°F            |                   |  |      |      | 85°F            |                   |  |      |      | 95°F            |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
|                               |                  | cfm   | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F |
| 63°F                          | 2400             | 49.0  | 2.33              | 0.62                                   | 0.78 | 0.97 | 43.8            | 2.62              | 0.62                                   | 0.80 | 1.00 | 38.4            | 2.94              | 0.61                                   | 0.82 | 1.00 | 32.9            | 3.31              | 0.60                                   | 0.85 | 1.00 |
|                               | 3000             | 52.7  | 2.35              | 0.68                                   | 0.90 | 1.00 | 47.2            | 2.64              | 0.69                                   | 0.93 | 1.00 | 41.8            | 2.96              | 0.69                                   | 0.96 | 1.00 | 36.1            | 3.33              | 0.70                                   | 1.00 | 1.00 |
|                               | 3600             | 55.5  | 2.37              | 0.76                                   | 0.99 | 1.00 | 50.2            | 2.66              | 0.77                                   | 1.00 | 1.00 | 45.0            | 2.99              | 0.79                                   | 1.00 | 1.00 | 39.8            | 3.36              | 0.82                                   | 1.00 | 1.00 |
| 67°F                          | 2400             | 53.8  | 2.36              | 0.48                                   | 0.60 | 0.74 | 48.4            | 2.65              | 0.47                                   | 0.60 | 0.76 | 42.9            | 2.97              | 0.44                                   | 0.60 | 0.77 | 37.2            | 3.34              | 0.42                                   | 0.59 | 0.80 |
|                               | 3000             | 57.3  | 2.38              | 0.53                                   | 0.67 | 0.85 | 51.8            | 2.67              | 0.51                                   | 0.67 | 0.88 | 45.9            | 2.99              | 0.50                                   | 0.68 | 0.92 | 39.9            | 3.36              | 0.48                                   | 0.69 | 0.96 |
|                               | 3600             | 59.9  | 2.40              | 0.56                                   | 0.74 | 0.95 | 54.2            | 2.68              | 0.55                                   | 0.75 | 0.98 | 48.1            | 3.01              | 0.55                                   | 0.77 | 1.00 | 42.0            | 3.38              | 0.53                                   | 0.80 | 1.00 |
| 71°F                          | 2400             | 58.5  | 2.39              | 0.36                                   | 0.48 | 0.59 | 53.1            | 2.67              | 0.34                                   | 0.47 | 0.59 | 47.4            | 3.00              | 0.31                                   | 0.45 | 0.59 | 41.6            | 3.37              | 0.27                                   | 0.42 | 0.58 |
|                               | 3000             | 62.2  | 2.41              | 0.38                                   | 0.52 | 0.65 | 56.4            | 2.70              | 0.37                                   | 0.51 | 0.66 | 50.5            | 3.02              | 0.34                                   | 0.50 | 0.66 | 44.4            | 3.39              | 0.30                                   | 0.49 | 0.67 |
|                               | 3600             | 64.7  | 2.43              | 0.41                                   | 0.56 | 0.72 | 58.8            | 2.71              | 0.39                                   | 0.55 | 0.73 | 52.8            | 3.04              | 0.37                                   | 0.55 | 0.75 | 46.3            | 3.41              | 0.33                                   | 0.54 | 0.77 |

### 7.5 TON COOLING HIGH EFFICIENCY KDB092H4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 85°F  |                   |  |      |      | 95°F            |                   |  |      |      | 105°F           |                   |  |      |      | 115°F           |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
|                               |                  | cfm   | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F | 85°F            | kBtuh             | kW                                     | 75°F | 80°F |
| 63°F                          | 2400             | 89.0  | 5.20              | 0.69                                   | 0.84 | 0.99 | 81.7            | 5.90              | 0.69                                   | 0.86 | 1.00 | 74.1            | 6.69              | 0.70                                   | 0.89 | 1.00 | 66.1            | 7.63              | 0.72                                   | 0.94 | 1.00 |
|                               | 3000             | 94.7  | 5.21              | 0.75                                   | 0.94 | 1.00 | 87.0            | 5.90              | 0.76                                   | 0.97 | 1.00 | 79.0            | 6.69              | 0.78                                   | 1.00 | 1.00 | 71.5            | 7.62              | 0.82                                   | 1.00 | 1.00 |
|                               | 3600             | 99.1  | 5.23              | 0.81                                   | 1.00 | 1.00 | 92.1            | 5.90              | 0.83                                   | 1.00 | 1.00 | 84.7            | 6.71              | 0.87                                   | 1.00 | 1.00 | 76.8            | 7.63              | 0.91                                   | 1.00 | 1.00 |
| 67°F                          | 2400             | 96.6  | 5.22              | 0.53                                   | 0.66 | 0.80 | 88.8            | 5.90              | 0.52                                   | 0.67 | 0.83 | 80.8            | 6.70              | 0.52                                   | 0.68 | 0.85 | 72.4            | 7.63              | 0.52                                   | 0.70 | 0.89 |
|                               | 3000             | 101.9   | 5.23              | 0.57                                   | 0.73 | 0.90 | 93.7            | 5.91              | 0.57                                   | 0.74 | 0.93 | 85.4            | 6.70              | 0.57                                   | 0.76 | 0.96 | 76.4            | 7.64              | 0.57                                   | 0.79 | 1.00 |
|                               | 3600             | 105.8   | 5.24              | 0.60                                   | 0.79 | 0.98 | 97.3            | 5.91              | 0.61                                   | 0.81 | 1.00 | 88.6            | 6.71              | 0.62                                   | 0.84 | 1.00 | 79.4            | 7.62              | 0.63                                   | 0.88 | 1.00 |
| 71°F                          | 2400             | 103.6   | 5.24              | 0.39                                   | 0.51 | 0.64 | 95.8            | 5.92              | 0.38                                   | 0.52 | 0.65 | 87.6            | 6.70              | 0.36                                   | 0.51 | 0.66 | 78.9            | 7.63              | 0.34                                   | 0.51 | 0.68 |
|                               | 3000             | 109.5   | 5.25              | 0.41                                   | 0.56 | 0.71 | 101.3           | 5.93              | 0.40                                   | 0.56 | 0.72 | 92.3            | 6.71              | 0.39                                   | 0.57 | 0.74 | 83.2            | 7.64              | 0.37                                   | 0.57 | 0.76 |
|                               | 3600             | 113.4   | 5.26              | 0.43                                   | 0.60 | 0.77 | 104.9           | 5.94              | 0.41                                   | 0.60 | 0.79 | 95.8            | 6.72              | 0.41                                   | 0.62 | 0.82 | 85.9            | 7.64              | 0.40                                   | 0.62 | 0.86 |

### 7.5 TON HEATING HIGH EFFICIENCY KDB092H4 - CONSTANT AIR VOLUME

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil |                   |                        |                   |                        |                   |                        |                   |                        |                   |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
|  | 65°F                                  |                   | 45°F                   |                   | 25°F                   |                   | 5°F                    |                   | -15°F                  |                   |
|  | Total Heating Capacity                | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
|  | kBtuh                                 | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                |
| 2400                                     | 113.5                                 | 5.44              | 86.6                   | 5.53              | 59.9                   | 5.65              | 34.9                   | 5.24              | 17.5                   | 3.84              |
| 3000                                     | 115.5                                 | 5.07              | 88.6                   | 5.17              | 61.9                   | 5.28              | 36.9                   | 4.88              | 19.5                   | 3.48              |
| 3600                                     | 117.3                                 | 4.85              | 90.5                   | 4.94              | 63.7                   | 5.06              | 38.7                   | 4.65              | 21.4                   | 3.25              |

## COOLING/HEATING RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 8.5 TON COOLING HIGH EFFICIENCY KDB102H4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|------|
|                               |                  | 65°F  |                   |  |      |       | 75°F            |                   |  |      |       | 85°F            |                   |  |      |       | 95°F            |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F |
| cfm                           | kBtuh            | kW  | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F |      |
| 63°F                          | 2720             | 56.5  | 2.64              | 0.63                                   | 0.79 | 0.97  | 50.8            | 3.00              | 0.62                                   | 0.80 | 0.99  | 45.1            | 3.40              | 0.62                                   | 0.82 | 1.00  | 39.2            | 3.84              | 0.61                                   | 0.85 | 1.00 |
|                               | 3400             | 60.6  | 2.66              | 0.68                                   | 0.89 | 1.00  | 54.8            | 3.03              | 0.69                                   | 0.92 | 1.00  | 48.8            | 3.43              | 0.70                                   | 0.96 | 1.00  | 42.8            | 3.87              | 0.71                                   | 0.99 | 1.00 |
|                               | 4080             | 63.8  | 2.69              | 0.76                                   | 0.99 | 1.00  | 58.0            | 3.05              | 0.77                                   | 1.00 | 1.00  | 52.5            | 3.46              | 0.79                                   | 1.00 | 1.00  | 46.7            | 3.90              | 0.81                                   | 1.00 | 1.00 |
| 67°F                          | 2720             | 61.8  | 2.67              | 0.49                                   | 0.61 | 0.75  | 56.2            | 3.04              | 0.47                                   | 0.61 | 0.76  | 50.3            | 3.43              | 0.45                                   | 0.60 | 0.78  | 44.0            | 3.88              | 0.43                                   | 0.60 | 0.80 |
|                               | 3400             | 65.8  | 2.69              | 0.53                                   | 0.67 | 0.85  | 59.9            | 3.06              | 0.52                                   | 0.67 | 0.88  | 53.7            | 3.46              | 0.51                                   | 0.68 | 0.91  | 47.2            | 3.90              | 0.49                                   | 0.69 | 0.95 |
|                               | 4080             | 68.8  | 2.72              | 0.57                                   | 0.74 | 0.95  | 62.6            | 3.08              | 0.56                                   | 0.75 | 0.98  | 56.1            | 3.48              | 0.55                                   | 0.77 | 1.00  | 49.6            | 3.92              | 0.55                                   | 0.79 | 1.00 |
| 71°F                          | 2720             | 67.3  | 2.70              | 0.37                                   | 0.48 | 0.60  | 61.4            | 3.07              | 0.35                                   | 0.47 | 0.59  | 55.4            | 3.47              | 0.32                                   | 0.46 | 0.59  | 48.9            | 3.91              | 0.28                                   | 0.43 | 0.59 |
|                               | 3400             | 71.3  | 2.73              | 0.39                                   | 0.52 | 0.65  | 65.2            | 3.10              | 0.37                                   | 0.52 | 0.66  | 58.9            | 3.50              | 0.35                                   | 0.51 | 0.66  | 52.2            | 3.95              | 0.31                                   | 0.49 | 0.67 |
|                               | 4080             | 74.3  | 2.75              | 0.41                                   | 0.56 | 0.72  | 67.9            | 3.12              | 0.39                                   | 0.56 | 0.73  | 61.3            | 3.52              | 0.37                                   | 0.55 | 0.75  | 54.6            | 3.97              | 0.34                                   | 0.55 | 0.77 |

### 8.5 TON COOLING HIGH EFFICIENCY KDB102H4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|------|
|                               |                  | 85°F  |                   |  |      |       | 95°F            |                   |  |      |       | 105°F           |                   |  |      |       | 115°F           |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F |
| cfm                           | kBtuh            | kW  | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F |      |
| 63°F                          | 2720             | 100.8   | 5.51              | 0.66                                   | 0.83 | 1.00  | 93.3            | 6.23              | 0.67                                   | 0.85 | 1.00  | 85.4            | 7.06              | 0.68                                   | 0.89 | 1.00  | 76.9            | 8.02              | 0.70                                   | 0.94 | 1.00 |
|                               | 3400             | 106.8   | 5.53              | 0.72                                   | 0.94 | 1.00  | 98.8            | 6.24              | 0.74                                   | 0.97 | 1.00  | 90.7            | 7.07              | 0.77                                   | 1.00 | 1.00  | 82.9            | 8.03              | 0.80                                   | 1.00 | 1.00 |
|                               | 4080             | 111.8   | 5.54              | 0.79                                   | 1.00 | 1.00  | 104.3           | 6.25              | 0.82                                   | 1.00 | 1.00  | 96.6            | 7.08              | 0.86                                   | 1.00 | 1.00  | 88.3            | 8.03              | 0.91                                   | 1.00 | 1.00 |
| 67°F                          | 2720             | 108.7   | 5.53              | 0.51                                   | 0.64 | 0.78  | 100.7           | 6.25              | 0.51                                   | 0.65 | 0.81  | 92.3            | 7.06              | 0.51                                   | 0.66 | 0.84  | 83.5            | 8.03              | 0.51                                   | 0.68 | 0.89 |
|                               | 3400             | 114.1   | 5.55              | 0.55                                   | 0.70 | 0.89  | 106.0           | 6.26              | 0.55                                   | 0.71 | 0.93  | 97.1            | 7.08              | 0.56                                   | 0.74 | 0.97  | 87.5            | 8.04              | 0.56                                   | 0.77 | 1.00 |
|                               | 4080             | 118.3   | 5.56              | 0.58                                   | 0.77 | 0.98  | 109.7           | 6.27              | 0.59                                   | 0.79 | 1.00  | 100.4           | 7.09              | 0.60                                   | 0.83 | 1.00  | 90.8            | 8.03              | 0.61                                   | 0.88 | 1.00 |
| 71°F                          | 2720             | 116.4   | 5.55              | 0.38                                   | 0.50 | 0.61  | 108.1           | 6.26              | 0.37                                   | 0.50 | 0.63  | 99.5            | 7.08              | 0.36                                   | 0.50 | 0.64  | 90.4            | 8.04              | 0.35                                   | 0.51 | 0.66 |
|                               | 3400             | 122.1   | 5.57              | 0.40                                   | 0.54 | 0.68  | 113.5           | 6.28              | 0.39                                   | 0.54 | 0.69  | 104.4           | 7.10              | 0.38                                   | 0.55 | 0.71  | 94.7            | 8.04              | 0.37                                   | 0.56 | 0.75 |
|                               | 4080             | 126.4   | 5.58              | 0.41                                   | 0.58 | 0.74  | 117.4           | 6.29              | 0.41                                   | 0.58 | 0.77  | 108.0           | 7.10              | 0.41                                   | 0.60 | 0.81  | 97.6            | 8.05              | 0.40                                   | 0.61 | 0.85 |

### 8.5 TON HEATING HIGH EFFICIENCY KDB102H4 - CONSTANT AIR VOLUME

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil |                   |                        |                   |                        |                   |                        |                   |                        |                   |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
|  | 65°F                                  |                   | 45°F                   |                   | 25°F                   |                   | 5°F                    |                   | -15°F                  |                   |
|  | Total Heating Capacity                | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
|  | kBtuh                                 | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                |
| 2720                                     | 128.8                                 | 6.27              | 99.5                   | 6.41              | 71.5                   | 6.63              | 38.5                   | 5.92              | 19.5                   | 4.34              |
| 3400                                     | 131.0                                 | 5.86              | 101.7                  | 6.00              | 73.7                   | 6.21              | 40.7                   | 5.51              | 21.7                   | 3.93              |
| 4080                                     | 132.8                                 | 5.60              | 103.6                  | 5.74              | 75.5                   | 5.95              | 42.5                   | 5.25              | 23.5                   | 3.67              |

## COOLING/HEATING RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 7.5 TON COOLING HIGH EFFICIENCY KDB092H4 (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|------|
|                               |                  | 65°F  |                   |  |      |       | 75°F            |                   |  |      |       | 85°F            |                   |  |      |       | 95°F            |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F |
| cfm                           | kBtuh            | kW  | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F |      |
| 63°F                          | 1680             | 43.4  | 2.26              | 0.61                                   | 0.72 | 0.85  | 39.9            | 2.54              | 0.60                                   | 0.73 | 0.86  | 36.2            | 2.87              | 0.59                                   | 0.73 | 0.88  | 32.3            | 3.24              | 0.58                                   | 0.74 | 0.90 |
|                               | 2100             | 47.1  | 2.29              | 0.65                                   | 0.79 | 0.93  | 43.2            | 2.57              | 0.65                                   | 0.80 | 0.95  | 39.2            | 2.89              | 0.65                                   | 0.81 | 0.97  | 35.1            | 3.26              | 0.65                                   | 0.83 | 1.00 |
|                               | 2520             | 49.8  | 2.31              | 0.69                                   | 0.85 | 0.99  | 45.8            | 2.59              | 0.70                                   | 0.87 | 1.00  | 41.6            | 2.91              | 0.70                                   | 0.89 | 1.00  | 37.4            | 3.28              | 0.71                                   | 0.92 | 1.00 |
| 67°F                          | 1680             | 47.2  | 2.29              | 0.49                                   | 0.59 | 0.69  | 43.6            | 2.57              | 0.47                                   | 0.58 | 0.69  | 39.7            | 2.89              | 0.45                                   | 0.57 | 0.70  | 35.7            | 3.26              | 0.43                                   | 0.57 | 0.71 |
|                               | 2100             | 51.0  | 2.31              | 0.51                                   | 0.63 | 0.76  | 47.1            | 2.60              | 0.50                                   | 0.63 | 0.76  | 42.8            | 2.92              | 0.49                                   | 0.63 | 0.78  | 38.7            | 3.29              | 0.48                                   | 0.63 | 0.79 |
|                               | 2520             | 53.8  | 2.34              | 0.54                                   | 0.67 | 0.81  | 49.6            | 2.62              | 0.53                                   | 0.68 | 0.83  | 45.2            | 2.94              | 0.52                                   | 0.68 | 0.85  | 40.7            | 3.31              | 0.51                                   | 0.70 | 0.88 |
| 71°F                          | 1680             | 51.2  | 2.31              | 0.38                                   | 0.48 | 0.57  | 47.4            | 2.60              | 0.36                                   | 0.46 | 0.56  | 43.3            | 2.92              | 0.34                                   | 0.45 | 0.55  | 39.2            | 3.29              | 0.31                                   | 0.43 | 0.55 |
|                               | 2100             | 55.0  | 2.34              | 0.39                                   | 0.50 | 0.61  | 50.8            | 2.63              | 0.37                                   | 0.49 | 0.61  | 46.6            | 2.95              | 0.36                                   | 0.48 | 0.61  | 42.2            | 3.32              | 0.33                                   | 0.47 | 0.61 |
|                               | 2520             | 57.7  | 2.36              | 0.41                                   | 0.53 | 0.65  | 53.5            | 2.65              | 0.40                                   | 0.53 | 0.66  | 48.9            | 2.97              | 0.37                                   | 0.52 | 0.66  | 44.3            | 3.34              | 0.35                                   | 0.51 | 0.67 |

### 7.5 TON COOLING HIGH EFFICIENCY KDB092H4 (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |       |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|-------|-----------------|-------------------|--|------|------|
|                               |                  | 85°F  |                   |  |      |       | 95°F            |                   |  |      |       | 105°F           |                   |  |      |       | 115°F           |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F  |                 |                   | 75°F                                   | 80°F | 85°F |
| cfm                           | kBtuh            | kW  | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F | kBtuh | kW              | 75°F              | 80°F                                   | 85°F |      |
| 63°F                          | 2400             | 87.5  | 5.26              | 0.68                                   | 0.84 | 0.99  | 80.2            | 5.96              | 0.69                                   | 0.86 | 1.00  | 72.8            | 6.76              | 0.70                                   | 0.89 | 1.00  | 64.8            | 7.72              | 0.72                                   | 0.94 | 1.00 |
|                               | 3000             | 93.1  | 5.27              | 0.75                                   | 0.94 | 1.00  | 85.5            | 5.96              | 0.76                                   | 0.97 | 1.00  | 77.6            | 6.76              | 0.78                                   | 1.00 | 1.00  | 70.2            | 7.71              | 0.81                                   | 1.00 | 1.00 |
|                               | 3600             | 97.4  | 5.28              | 0.81                                   | 1.00 | 1.00  | 90.5            | 5.97              | 0.83                                   | 1.00 | 1.00  | 83.2            | 6.78              | 0.87                                   | 1.00 | 1.00  | 75.4            | 7.71              | 0.91                                   | 1.00 | 1.00 |
| 67°F                          | 2400             | 94.8  | 5.27              | 0.52                                   | 0.66 | 0.80  | 87.2            | 5.96              | 0.52                                   | 0.67 | 0.82  | 79.3            | 6.77              | 0.52                                   | 0.68 | 0.85  | 71.0            | 7.71              | 0.51                                   | 0.70 | 0.89 |
|                               | 3000             | 100.2   | 5.29              | 0.57                                   | 0.73 | 0.90  | 92.1            | 5.97              | 0.57                                   | 0.74 | 0.93  | 83.9            | 6.78              | 0.57                                   | 0.76 | 0.96  | 75.0            | 7.72              | 0.57                                   | 0.79 | 1.00 |
|                               | 3600             | 104.0   | 5.30              | 0.60                                   | 0.79 | 0.98  | 95.7            | 5.98              | 0.61                                   | 0.81 | 1.00  | 87.0            | 6.78              | 0.61                                   | 0.84 | 1.00  | 77.9            | 7.70              | 0.63                                   | 0.88 | 1.00 |
| 71°F                          | 2400             | 101.9   | 5.29              | 0.38                                   | 0.51 | 0.64  | 94.1            | 5.98              | 0.37                                   | 0.52 | 0.65  | 86.0            | 6.77              | 0.36                                   | 0.51 | 0.66  | 77.5            | 7.72              | 0.34                                   | 0.51 | 0.68 |
|                               | 3000             | 107.6   | 5.30              | 0.41                                   | 0.56 | 0.71  | 99.5            | 5.99              | 0.40                                   | 0.56 | 0.72  | 90.6            | 6.79              | 0.39                                   | 0.56 | 0.74  | 81.7            | 7.72              | 0.37                                   | 0.57 | 0.76 |
|                               | 3600             | 111.5   | 5.32              | 0.43                                   | 0.59 | 0.77  | 103.1           | 6.00              | 0.41                                   | 0.60 | 0.79  | 94.1            | 6.79              | 0.41                                   | 0.62 | 0.82  | 84.4            | 7.72              | 0.40                                   | 0.62 | 0.86 |

### 7.5 TON HEATING HIGH EFFICIENCY KDB092H4 - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil |                   |                        |                   |                        |                   |                        |                   |                        |                   |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
|  | 65°F                                  |                   | 45°F                   |                   | 25°F                   |                   | 5°F                    |                   | -15°F                  |                   |
|  | Total Heating Capacity                | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
|  |                                       |                   |                        |                   |                        |                   |                        |                   |                        |                   |
| 2400                                     | 109.5                                 | 5.49              | 82.8                   | 5.53              | 56.6                   | 5.56              | 31.0                   | 5.28              | 15.7                   | 3.87              |
| 3000                                     | 111.5                                 | 5.12              | 84.8                   | 5.16              | 58.5                   | 5.19              | 33.0                   | 4.91              | 17.7                   | 3.50              |
| 3600                                     | 113.1                                 | 4.89              | 86.5                   | 4.93              | 60.2                   | 4.96              | 34.6                   | 4.68              | 19.3                   | 3.27              |

## COOLING/HEATING RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 8.5 TON COOLING HIGH EFFICIENCY KDB102H4 (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 65°F  |                   |  |      |      | 75°F            |                   |  |      |      | 85°F            |                   |  |      |      | 95°F            |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
| 63°F                          | 1920             | 50.7  | 2.57              | 0.61                                   | 0.72 | 0.85 | 47.4            | 2.92              | 0.61                                   | 0.73 | 0.86 | 43.9            | 3.31              | 0.60                                   | 0.73 | 0.88 | 40.3            | 3.74              | 0.60                                   | 0.75 | 0.90 |
|                               | 2400             | 54.5  | 2.59              | 0.64                                   | 0.79 | 0.93 | 51.0            | 2.95              | 0.65                                   | 0.79 | 0.95 | 47.2            | 3.34              | 0.65                                   | 0.81 | 0.97 | 43.3            | 3.78              | 0.66                                   | 0.83 | 1.00 |
|                               | 2880             | 57.2  | 2.61              | 0.68                                   | 0.84 | 0.99 | 53.6            | 2.98              | 0.69                                   | 0.86 | 1.00 | 49.6            | 3.37              | 0.70                                   | 0.89 | 1.00 | 45.5            | 3.80              | 0.71                                   | 0.92 | 1.00 |
| 67°F                          | 1920             | 54.6  | 2.59              | 0.49                                   | 0.59 | 0.69 | 51.2            | 2.95              | 0.48                                   | 0.59 | 0.69 | 47.6            | 3.34              | 0.47                                   | 0.58 | 0.70 | 43.9            | 3.78              | 0.46                                   | 0.58 | 0.71 |
|                               | 2400             | 58.6  | 2.62              | 0.51                                   | 0.62 | 0.75 | 54.9            | 2.98              | 0.51                                   | 0.63 | 0.76 | 51.0            | 3.38              | 0.50                                   | 0.63 | 0.77 | 47.0            | 3.82              | 0.50                                   | 0.64 | 0.79 |
|                               | 2880             | 61.3  | 2.65              | 0.53                                   | 0.66 | 0.81 | 57.6            | 3.01              | 0.53                                   | 0.67 | 0.83 | 53.6            | 3.40              | 0.53                                   | 0.68 | 0.85 | 49.1            | 3.84              | 0.53                                   | 0.69 | 0.88 |
| 71°F                          | 1920             | 58.6  | 2.62              | 0.39                                   | 0.47 | 0.57 | 55.1            | 2.99              | 0.37                                   | 0.47 | 0.56 | 51.4            | 3.38              | 0.36                                   | 0.46 | 0.56 | 47.5            | 3.82              | 0.34                                   | 0.45 | 0.56 |
|                               | 2400             | 62.7  | 2.66              | 0.39                                   | 0.50 | 0.60 | 58.9            | 3.02              | 0.38                                   | 0.49 | 0.60 | 54.8            | 3.41              | 0.37                                   | 0.49 | 0.61 | 50.7            | 3.85              | 0.36                                   | 0.49 | 0.62 |
|                               | 2880             | 65.5  | 2.68              | 0.40                                   | 0.52 | 0.64 | 61.6            | 3.05              | 0.40                                   | 0.52 | 0.65 | 57.4            | 3.44              | 0.38                                   | 0.52 | 0.66 | 52.9            | 3.87              | 0.38                                   | 0.52 | 0.67 |

### 8.5 TON COOLING HIGH EFFICIENCY KDB102H4 (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 85°F  |                   |  |      |      | 95°F            |                   |  |      |      | 105°F           |                   |  |      |      | 115°F           |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
| 63°F                          | 2720             | 99.5  | 5.93              | 0.68                                   | 0.84 | 1.00 | 89.3            | 6.73              | 0.68                                   | 0.86 | 1.00 | 78.9            | 7.64              | 0.68                                   | 0.89 | 1.00 | 67.9            | 8.65              | 0.69                                   | 0.94 | 1.00 |
|                               | 3400             | 106.7   | 5.95              | 0.75                                   | 0.94 | 1.00 | 96.0            | 6.76              | 0.76                                   | 0.97 | 1.00 | 85.5            | 7.66              | 0.78                                   | 1.00 | 1.00 | 75.1            | 8.69              | 0.80                                   | 1.00 | 1.00 |
|                               | 4080             | 112.7   | 5.97              | 0.82                                   | 1.00 | 1.00 | 103.0           | 6.79              | 0.83                                   | 1.00 | 1.00 | 92.8            | 7.70              | 0.86                                   | 1.00 | 1.00 | 82.0            | 8.72              | 0.90                                   | 1.00 | 1.00 |
| 67°F                          | 2720             | 109.2   | 5.96              | 0.51                                   | 0.66 | 0.81 | 98.7            | 6.77              | 0.50                                   | 0.66 | 0.82 | 87.7            | 7.67              | 0.48                                   | 0.66 | 0.85 | 76.2            | 8.69              | 0.46                                   | 0.67 | 0.89 |
|                               | 3400             | 115.9   | 5.98              | 0.56                                   | 0.73 | 0.90 | 105.2           | 6.80              | 0.55                                   | 0.74 | 0.93 | 93.6            | 7.70              | 0.54                                   | 0.76 | 0.97 | 81.2            | 8.71              | 0.53                                   | 0.78 | 1.00 |
|                               | 4080             | 121.0   | 6.01              | 0.60                                   | 0.80 | 0.98 | 109.6           | 6.82              | 0.60                                   | 0.81 | 1.00 | 97.8            | 7.72              | 0.60                                   | 0.84 | 1.00 | 85.3            | 8.73              | 0.59                                   | 0.88 | 1.00 |
| 71°F                          | 2720             | 118.9   | 5.99              | 0.37                                   | 0.50 | 0.63 | 108.0           | 6.80              | 0.34                                   | 0.49 | 0.64 | 96.7            | 7.70              | 0.31                                   | 0.48 | 0.65 | 84.9            | 8.73              | 0.28                                   | 0.47 | 0.65 |
|                               | 3400             | 125.9   | 6.02              | 0.39                                   | 0.55 | 0.70 | 114.6           | 6.83              | 0.37                                   | 0.55 | 0.72 | 102.8           | 7.74              | 0.35                                   | 0.54 | 0.73 | 90.2            | 8.75              | 0.31                                   | 0.54 | 0.76 |
|                               | 4080             | 131.0   | 6.04              | 0.42                                   | 0.60 | 0.78 | 119.3           | 6.85              | 0.39                                   | 0.59 | 0.79 | 107.2           | 7.76              | 0.38                                   | 0.60 | 0.82 | 93.8            | 8.77              | 0.35                                   | 0.60 | 0.86 |

### 8.5 TON HEATING HIGH EFFICIENCY KDB102H4 - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil |                   |                        |                   |                        |                   |                        |                   |                        |                   |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
|  | 65°F                                  |                   | 45°F                   |                   | 25°F                   |                   | 5°F                    |                   | -15°F                  |                   |
|  | Total Heating Capacity                | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
|  | kBtuh                                 | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                |
| 2720                                     | 125.3                                 | 6.31              | 94.9                   | 6.44              | 65.0                   | 6.58              | 35.4                   | 6.26              | 18.0                   | 4.57              |
| 3400                                     | 127.5                                 | 5.89              | 97.1                   | 6.03              | 67.2                   | 6.16              | 37.6                   | 5.84              | 20.2                   | 4.15              |
| 4080                                     | 129.2                                 | 5.62              | 98.8                   | 5.76              | 68.9                   | 5.89              | 39.3                   | 5.57              | 21.9                   | 3.88              |

## COOLING/HEATING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 10 TON COOLING HIGH EFFICIENCY KDB122H4 (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 65°F  |                   |  |      |      | 75°F            |                   |  |      |      | 85°F            |                   |  |      |      | 95°F            |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
| 63°F                          | 2240             | 57.7  | 3.00              | 0.62                                   | 0.73 | 0.84 | 55.0            | 3.39              | 0.63                                   | 0.74 | 0.85 | 51.8            | 3.83              | 0.63                                   | 0.75 | 0.87 | 48.7            | 4.32              | 0.63                                   | 0.76 | 0.89 |
|                               | 2800             | 61.6  | 3.04              | 0.65                                   | 0.78 | 0.90 | 58.7            | 3.44              | 0.66                                   | 0.79 | 0.92 | 55.5            | 3.88              | 0.67                                   | 0.81 | 0.95 | 52.0            | 4.38              | 0.68                                   | 0.83 | 0.97 |
|                               | 3360             | 64.7  | 3.08              | 0.68                                   | 0.83 | 0.97 | 61.3            | 3.48              | 0.70                                   | 0.85 | 0.99 | 57.7            | 3.92              | 0.71                                   | 0.87 | 1.00 | 54.1            | 4.41              | 0.72                                   | 0.89 | 1.00 |
| 67°F                          | 2240             | 61.6  | 3.04              | 0.51                                   | 0.60 | 0.69 | 58.7            | 3.44              | 0.51                                   | 0.60 | 0.70 | 55.6            | 3.88              | 0.50                                   | 0.60 | 0.71 | 52.3            | 4.38              | 0.50                                   | 0.61 | 0.72 |
|                               | 2800             | 65.8  | 3.10              | 0.52                                   | 0.63 | 0.74 | 62.5            | 3.49              | 0.52                                   | 0.63 | 0.75 | 59.2            | 3.93              | 0.52                                   | 0.64 | 0.77 | 55.6            | 4.43              | 0.53                                   | 0.65 | 0.79 |
|                               | 3360             | 68.8  | 3.13              | 0.54                                   | 0.66 | 0.80 | 65.4            | 3.53              | 0.55                                   | 0.67 | 0.81 | 61.8            | 3.97              | 0.55                                   | 0.68 | 0.83 | 58.0            | 4.47              | 0.55                                   | 0.70 | 0.86 |
| 71°F                          | 2240             | 65.6  | 3.09              | 0.40                                   | 0.49 | 0.57 | 62.5            | 3.49              | 0.40                                   | 0.49 | 0.58 | 59.3            | 3.94              | 0.39                                   | 0.49 | 0.58 | 55.8            | 4.44              | 0.38                                   | 0.49 | 0.59 |
|                               | 2800             | 69.8  | 3.15              | 0.41                                   | 0.51 | 0.61 | 66.5            | 3.55              | 0.40                                   | 0.51 | 0.61 | 62.9            | 3.99              | 0.40                                   | 0.51 | 0.62 | 59.2            | 4.49              | 0.39                                   | 0.51 | 0.63 |
|                               | 3360             | 72.9  | 3.19              | 0.41                                   | 0.53 | 0.64 | 69.4            | 3.59              | 0.41                                   | 0.53 | 0.65 | 65.5            | 4.03              | 0.41                                   | 0.53 | 0.66 | 61.6            | 4.54              | 0.41                                   | 0.54 | 0.68 |

### 10 TON COOLING HIGH EFFICIENCY KDB122H4 (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |                 |                   |  |      |      |
|-------------------------------|------------------|---|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|-----------------|-------------------|--|------|------|
|                               |                  | 85°F  |                   |  |      |      | 95°F            |                   |  |      |      | 105°F           |                   |  |      |      | 115°F           |                   |  |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb |      |      |
|                               |                  |   |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |                 |                   | 75°F                                   | 80°F | 85°F |
| 63°F                          | 3200             | 122.5   | 6.90              | 0.69                                   | 0.83 | 0.98 | 113.3           | 7.82              | 0.69                                   | 0.85 | 1.00 | 103.8           | 8.85              | 0.70                                   | 0.88 | 1.00 | 93.8            | 10.09             | 0.72                                   | 0.91 | 1.00 |
|                               | 4000             | 130.0   | 6.94              | 0.75                                   | 0.92 | 1.00 | 120.4           | 7.85              | 0.75                                   | 0.94 | 1.00 | 110.7           | 8.91              | 0.78                                   | 0.97 | 1.00 | 100.1           | 10.11             | 0.80                                   | 1.00 | 1.00 |
|                               | 4800             | 136.0   | 6.98              | 0.80                                   | 0.98 | 1.00 | 126.1           | 7.89              | 0.82                                   | 1.00 | 1.00 | 116.8           | 8.95              | 0.85                                   | 1.00 | 1.00 | 106.9           | 10.16             | 0.88                                   | 1.00 | 1.00 |
| 67°F                          | 3200             | 132.1   | 6.94              | 0.53                                   | 0.66 | 0.80 | 122.5           | 7.86              | 0.53                                   | 0.67 | 0.82 | 112.9           | 8.91              | 0.53                                   | 0.68 | 0.84 | 102.1           | 10.13             | 0.53                                   | 0.70 | 0.87 |
|                               | 4000             | 139.7   | 6.99              | 0.57                                   | 0.72 | 0.88 | 129.5           | 7.90              | 0.57                                   | 0.73 | 0.90 | 119.1           | 8.95              | 0.57                                   | 0.75 | 0.94 | 107.9           | 10.17             | 0.58                                   | 0.78 | 0.97 |
|                               | 4800             | 145.1   | 7.03              | 0.60                                   | 0.78 | 0.95 | 134.7           | 7.95              | 0.61                                   | 0.80 | 0.98 | 123.7           | 8.99              | 0.62                                   | 0.82 | 1.00 | 111.8           | 10.18             | 0.62                                   | 0.85 | 1.00 |
| 71°F                          | 3200             | 141.8   | 6.99              | 0.40                                   | 0.52 | 0.64 | 132.0           | 7.92              | 0.39                                   | 0.52 | 0.65 | 121.9           | 8.98              | 0.37                                   | 0.52 | 0.66 | 110.7           | 10.16             | 0.36                                   | 0.52 | 0.68 |
|                               | 4000             | 149.6   | 7.06              | 0.42                                   | 0.56 | 0.70 | 139.0           | 7.98              | 0.40                                   | 0.56 | 0.71 | 128.2           | 9.02              | 0.40                                   | 0.56 | 0.73 | 116.5           | 10.20             | 0.39                                   | 0.57 | 0.76 |
|                               | 4800             | 155.1   | 7.10              | 0.43                                   | 0.59 | 0.76 | 144.4           | 8.01              | 0.43                                   | 0.60 | 0.78 | 133.1           | 9.06              | 0.42                                   | 0.61 | 0.80 | 120.4           | 10.23             | 0.41                                   | 0.62 | 0.83 |

### 10 TON HEATING HIGH EFFICIENCY KDB122H4 - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil |                   |                        |                   |                        |                   |                        |                   |                        |                   |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
|  | 65°F                                  |                   | 45°F                   |                   | 25°F                   |                   | 5°F                    |                   | -15°F                  |                   |
|  | Total Heating Capacity                | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
|  | kBtuh                                 | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                | kBtuh                  | kW                |
| 3200                                     | 146.5                                 | 7.92              | 112.1                  | 7.73              | 77.6                   | 7.55              | 46.4                   | 6.93              | 23.1                   | 5.12              |
| 4000                                     | 149.3                                 | 7.43              | 114.9                  | 7.24              | 80.4                   | 7.05              | 49.2                   | 6.43              | 25.9                   | 4.63              |
| 4800                                     | 151.3                                 | 7.10              | 116.9                  | 6.91              | 82.4                   | 6.73              | 51.3                   | 6.11              | 28.0                   | 4.30              |

**BLOWER DATA - BELT DRIVE**

**7.5 AND 8.5 TON**

KDB092H4B, KDB102H4B - BASE UNIT

**BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY (NO HEAT SECTION) WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE. FOR ALL UNITS ADD:**

- 1 – Wet indoor coil air resistance of selected unit.
- 2 – Any factory installed options air resistance (heat section, economizer, etc.)
- 3 – Any field installed accessories air resistance (duct resistance, diffuser, etc.)

Then determine from blower table blower motor output required.

See page 22 for blower motors and drives.

See page 22 for wet coil and option/accessory air resistance data.

**MAXIMUM STATIC PRESSURE WITH GAS HEAT - 2.0 in. w.g.**

| Total Air Volume<br>cfm | Total Static Pressure – in. w.g. |      |     |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------|----------------------------------|------|-----|------|------|------|------|------|------|------|------|------|------|------|
|                         | 0.2                              |      | 0.4 |      | 0.6  |      | 0.8  |      | 1.0  |      | 1.2  |      | 1.4  |      |
|                         | RPM                              | BHP  | RPM | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 1750                    | 480                              | 0.19 | 548 | 0.39 | 618  | 0.57 | 689  | 0.70 | 758  | 0.81 | 824  | 0.92 | 885  | 1.07 |
| 2000                    | 492                              | 0.27 | 560 | 0.47 | 629  | 0.64 | 700  | 0.77 | 768  | 0.88 | 832  | 1.00 | 892  | 1.16 |
| 2250                    | 505                              | 0.35 | 573 | 0.55 | 643  | 0.72 | 713  | 0.85 | 780  | 0.97 | 842  | 1.10 | 900  | 1.25 |
| 2500                    | 520                              | 0.45 | 588 | 0.64 | 658  | 0.81 | 727  | 0.94 | 793  | 1.07 | 853  | 1.21 | 909  | 1.37 |
| 2750                    | 536                              | 0.55 | 604 | 0.74 | 674  | 0.91 | 743  | 1.05 | 806  | 1.19 | 865  | 1.34 | 919  | 1.50 |
| 3000                    | 553                              | 0.66 | 622 | 0.85 | 692  | 1.02 | 760  | 1.17 | 821  | 1.32 | 878  | 1.48 | 930  | 1.64 |
| 3250                    | 572                              | 0.77 | 641 | 0.98 | 712  | 1.15 | 778  | 1.32 | 837  | 1.48 | 892  | 1.64 | 942  | 1.81 |
| 3500                    | 592                              | 0.90 | 663 | 1.12 | 733  | 1.31 | 798  | 1.48 | 854  | 1.65 | 907  | 1.82 | 955  | 1.99 |
| 3750                    | 614                              | 1.04 | 687 | 1.28 | 756  | 1.48 | 818  | 1.66 | 872  | 1.83 | 922  | 2.01 | 969  | 2.19 |
| 4000                    | 639                              | 1.22 | 712 | 1.47 | 780  | 1.67 | 838  | 1.85 | 890  | 2.03 | 939  | 2.22 | 983  | 2.42 |
| 4250                    | 666                              | 1.42 | 740 | 1.68 | 804  | 1.88 | 859  | 2.06 | 909  | 2.25 | 956  | 2.45 | 998  | 2.67 |
| 4500                    | 697                              | 1.65 | 769 | 1.91 | 829  | 2.10 | 881  | 2.28 | 929  | 2.48 | 973  | 2.71 | 1013 | 2.95 |
| 4750                    | 729                              | 1.91 | 798 | 2.15 | 854  | 2.34 | 903  | 2.53 | 948  | 2.75 | 991  | 3.00 | 1030 | 3.27 |
| 5000                    | 763                              | 2.18 | 826 | 2.41 | 878  | 2.60 | 925  | 2.81 | 968  | 3.05 | 1009 | 3.33 | 1046 | 3.61 |
| 5250                    | 797                              | 2.47 | 854 | 2.69 | 903  | 2.90 | 947  | 3.12 | 989  | 3.39 | 1028 | 3.69 | 1064 | 3.99 |
| 5500                    | 830                              | 2.78 | 882 | 3.00 | 927  | 3.22 | 969  | 3.48 | 1010 | 3.77 | 1047 | 4.09 | 1083 | 4.40 |
| 5750                    | 861                              | 3.11 | 908 | 3.34 | 951  | 3.58 | 992  | 3.87 | 1031 | 4.19 | 1068 | 4.52 | 1102 | 4.84 |
| 6000                    | 890                              | 3.45 | 935 | 3.71 | 976  | 3.98 | 1016 | 4.31 | 1053 | 4.65 | 1089 | 4.99 | 1122 | 5.30 |
| 6250                    | 918                              | 3.84 | 961 | 4.12 | 1001 | 4.43 | 1040 | 4.79 | 1076 | 5.14 | 1110 | 5.48 | ---  | ---  |

| Total Air Volume<br>cfm | Total Static Pressure – in. w.g. |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|
|                         | 1.6                              |      | 1.8  |      | 2    |      | 2.2  |      | 2.4  |      | 2.6  |      |
|                         | RPM                              | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 1750                    | 941                              | 1.23 | 992  | 1.40 | 1039 | 1.55 | 1084 | 1.70 | 1128 | 1.85 | 1156 | 2.08 |
| 2000                    | 946                              | 1.32 | 995  | 1.48 | 1041 | 1.65 | 1085 | 1.81 | 1127 | 1.97 | 1160 | 2.13 |
| 2250                    | 952                              | 1.42 | 999  | 1.59 | 1044 | 1.76 | 1087 | 1.93 | 1127 | 2.10 | 1164 | 2.27 |
| 2500                    | 959                              | 1.54 | 1005 | 1.71 | 1048 | 1.89 | 1089 | 2.07 | 1127 | 2.25 | 1166 | 2.42 |
| 2750                    | 968                              | 1.67 | 1012 | 1.86 | 1053 | 2.04 | 1092 | 2.23 | 1129 | 2.41 | 1167 | 2.60 |
| 3000                    | 977                              | 1.83 | 1020 | 2.02 | 1059 | 2.21 | 1096 | 2.41 | 1133 | 2.60 | 1170 | 2.79 |
| 3250                    | 988                              | 2.00 | 1028 | 2.20 | 1066 | 2.41 | 1102 | 2.61 | 1138 | 2.81 | 1174 | 3.01 |
| 3500                    | 999                              | 2.19 | 1038 | 2.41 | 1074 | 2.63 | 1109 | 2.84 | 1144 | 3.04 | 1180 | 3.24 |
| 3750                    | 1010                             | 2.41 | 1048 | 2.64 | 1084 | 2.87 | 1118 | 3.09 | 1152 | 3.29 | 1188 | 3.50 |
| 4000                    | 1023                             | 2.65 | 1060 | 2.90 | 1095 | 3.14 | 1128 | 3.36 | 1162 | 3.57 | 1198 | 3.77 |
| 4250                    | 1036                             | 2.92 | 1072 | 3.18 | 1106 | 3.42 | 1139 | 3.65 | 1172 | 3.86 | 1208 | 4.07 |
| 4500                    | 1050                             | 3.22 | 1085 | 3.48 | 1118 | 3.73 | 1151 | 3.96 | 1184 | 4.17 | 1221 | 4.39 |
| 4750                    | 1065                             | 3.55 | 1099 | 3.81 | 1132 | 4.06 | 1164 | 4.29 | 1198 | 4.51 | 1235 | 4.74 |
| 5000                    | 1081                             | 3.90 | 1114 | 4.17 | 1146 | 4.42 | 1178 | 4.65 | 1212 | 4.87 | 1250 | 5.09 |
| 5250                    | 1098                             | 4.28 | 1130 | 4.55 | 1162 | 4.80 | 1194 | 5.02 | 1228 | 5.24 | 1266 | 5.47 |
| 5500                    | 1116                             | 4.69 | 1147 | 4.96 | 1179 | 5.20 | 1211 | 5.42 | 1246 | 5.63 | ---  | ---  |
| 5750                    | 1134                             | 5.12 | 1165 | 5.38 | 1196 | 5.61 | ---  | ---  | ---  | ---  | ---  | ---  |
| 6000                    | 1153                             | 5.58 | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  |
| 6250                    | ---                              | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | ---  |

**BLOWER DATA - DIRECT DRIVE**

**10 TON**

**KDB122H4E - BASE UNIT**

**BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY (NO HEAT SECTION) WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE. FOR ALL UNITS ADD:**

- 1 – Wet indoor coil air resistance of selected unit.
- 2 – Any factory installed options air resistance (heat section, economizer, etc.)
- 3 – Any field installed accessories air resistance (duct resistance, diffuser, etc.)

See page 22 for wet coil and option/accessory air resistance data.

**MAXIMUM STATIC PRESSURE WITH GAS HEAT - 2.0 in. w.g.**

| Total Air Volume cfm | Total Static Pressure - in. w.g. |       |      |       |      |       |      |       |      |       |      |       |      |       |
|----------------------|----------------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
|                      | 0.2                              |       | 0.4  |       | 0.6  |       | 0.8  |       | 1.0  |       | 1.2  |       | 1.4  |       |
|                      | RPM                              | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts |
| 1750                 | 711                              | 188   | 771  | 279   | 836  | 366   | 905  | 453   | 975  | 544   | 1044 | 640   | 1109 | 737   |
| 2000                 | 752                              | 242   | 812  | 332   | 876  | 420   | 944  | 510   | 1011 | 606   | 1075 | 709   | 1138 | 812   |
| 2250                 | 799                              | 300   | 860  | 389   | 923  | 479   | 988  | 575   | 1052 | 678   | 1113 | 787   | 1171 | 896   |
| 2500                 | 853                              | 362   | 914  | 453   | 976  | 548   | 1038 | 650   | 1097 | 761   | 1154 | 877   | 1209 | 990   |
| 2750                 | 914                              | 434   | 974  | 529   | 1033 | 629   | 1091 | 739   | 1146 | 858   | 1199 | 979   | 1250 | 1098  |
| 3000                 | 980                              | 513   | 1037 | 614   | 1092 | 720   | 1146 | 837   | 1198 | 961   | 1247 | 1088  | 1295 | 1215  |
| 3250                 | 1048                             | 598   | 1101 | 705   | 1153 | 819   | 1203 | 941   | 1251 | 1071  | 1298 | 1206  | 1343 | 1343  |
| 3500                 | 1116                             | 693   | 1166 | 809   | 1214 | 931   | 1261 | 1060  | 1307 | 1198  | 1351 | 1341  | 1395 | 1489  |
| 3750                 | 1185                             | 806   | 1232 | 931   | 1277 | 1063  | 1322 | 1201  | 1365 | 1348  | 1407 | 1499  | 1448 | 1657  |
| 4000                 | 1254                             | 937   | 1299 | 1072  | 1341 | 1214  | 1383 | 1363  | 1424 | 1518  | 1464 | 1679  | 1503 | 1844  |
| 4250                 | 1324                             | 1089  | 1366 | 1234  | 1406 | 1386  | 1445 | 1545  | 1484 | 1708  | 1522 | 1876  | 1559 | 2046  |
| 4500                 | 1395                             | 1262  | 1433 | 1417  | 1471 | 1579  | 1508 | 1745  | 1544 | 1913  | 1581 | 2084  | 1616 | 2256  |
| 4750                 | 1465                             | 1455  | 1501 | 1619  | 1536 | 1787  | 1571 | 1957  | 1606 | 2128  | 1641 | 2299  | 1675 | 2470  |
| 5000                 | 1534                             | 1666  | 1568 | 1834  | 1602 | 2004  | 1635 | 2174  | 1668 | 2345  | 1701 | 2514  | 1735 | 2682  |
| 5250                 | 1603                             | 1887  | 1635 | 2055  | 1667 | 2224  | 1699 | 2392  | 1731 | 2559  | 1763 | 2724  | ---  | ---   |
| 5500                 | 1671                             | 2110  | 1702 | 2275  | 1733 | 2441  | 1764 | 2605  | ---  | ---   | ---  | ---   | ---  | ---   |
| 5750                 | 1738                             | 2325  | 1768 | 2488  | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |

| Total Air Volume cfm | Total Static Pressure - in. w.g. |       |      |       |      |       |      |       |      |       |      |       |
|----------------------|----------------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
|                      | 1.6                              |       | 1.8  |       | 2.0  |       | 2.2  |       | 2.4  |       | 2.6  |       |
|                      | RPM                              | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts | RPM  | Watts |
| 1750                 | 1172                             | 833   | 1231 | 932   | 1287 | 1039  | 1340 | 1156  | 1391 | 1283  | 1442 | 1426  |
| 2000                 | 1197                             | 913   | 1253 | 1019  | 1306 | 1135  | 1357 | 1261  | 1407 | 1398  | 1457 | 1547  |
| 2250                 | 1227                             | 1003  | 1280 | 1117  | 1330 | 1242  | 1379 | 1378  | 1428 | 1525  | 1477 | 1680  |
| 2500                 | 1261                             | 1103  | 1311 | 1226  | 1360 | 1361  | 1407 | 1507  | 1454 | 1663  | 1501 | 1826  |
| 2750                 | 1299                             | 1219  | 1347 | 1350  | 1394 | 1494  | 1440 | 1649  | 1485 | 1813  | 1530 | 1982  |
| 3000                 | 1342                             | 1346  | 1388 | 1487  | 1432 | 1640  | 1476 | 1803  | 1520 | 1973  | 1563 | 2146  |
| 3250                 | 1388                             | 1485  | 1432 | 1638  | 1475 | 1800  | 1517 | 1969  | 1558 | 2143  | 1600 | 2319  |
| 3500                 | 1437                             | 1643  | 1479 | 1805  | 1519 | 1975  | 1560 | 2148  | 1600 | 2325  | 1640 | 2502  |
| 3750                 | 1489                             | 1821  | 1528 | 1990  | 1567 | 2164  | 1605 | 2340  | 1645 | 2517  | 1685 | 2693  |
| 4000                 | 1541                             | 2014  | 1579 | 2187  | 1616 | 2364  | 1654 | 2540  | 1693 | 2715  | 1732 | 2887  |
| 4250                 | 1596                             | 2218  | 1632 | 2393  | 1668 | 2569  | 1705 | 2742  | 1743 | 2913  | ---  | ---   |
| 4500                 | 1652                             | 2429  | 1687 | 2603  | 1722 | 2775  | 1759 | 2944  | ---  | ---   | ---  | ---   |
| 4750                 | 1709                             | 2641  | 1743 | 2811  | 1778 | 2979  | ---  | ---   | ---  | ---   | ---  | ---   |
| 5000                 | 1768                             | 2850  | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |
| 5250                 | ---                              | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |
| 5500                 | ---                              | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |
| 5750                 | ---                              | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |



## BLOWER DATA

### FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

| Nominal hp | Maximum hp | Drive Kit Number | RPM Range   |
|------------|------------|------------------|-------------|
| 2          | 2.3        | 1                | 590 - 890   |
| 2          | 2.3        | 2                | 800 - 1105  |
| 2          | 2.3        | 3                | 795 - 1195  |
| 3          | 3.45       | 4                | 730 - 970   |
| 3          | 3.45       | 5                | 940 - 1200  |
| 3          | 3.45       | 6                | 1015 - 1300 |
| 5          | 5.75       | 10               | 900 - 1135  |
| 5          | 5.75       | 11               | 1040 - 1315 |
| 5          | 5.75       | 12               | 1125 - 1425 |

NOTE - Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.

### POWER EXHAUST FAN PERFORMANCE

| Return Air System Static Pressure | Air Volume Exhausted |
|-----------------------------------|----------------------|
| in. w.g.                          | cfm                  |
| 0                                 | 3175                 |
| 0.05                              | 2955                 |
| 0.10                              | 2685                 |
| 0.15                              | 2410                 |
| 0.20                              | 2165                 |
| 0.25                              | 1920                 |
| 0.30                              | 1420                 |
| 0.35                              | 1200                 |

### FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE - in. w.g.

| Air Volume<br>cfm | Wet Indoor Coil | Gas Heat Exchanger |             |           | Economizer | Filters |         |
|-------------------|-----------------|--------------------|-------------|-----------|------------|---------|---------|
|                   | 092,102,122     | Standard Heat      | Medium Heat | High Heat |            | MERV 8  | MERV 13 |
| 1750              | 0.04            | 0.06               | 0.02        | 0.02      | 0.05       | 0.01    | 0.03    |
| 2000              | 0.05            | 0.07               | 0.05        | 0.06      | 0.06       | 0.01    | 0.03    |
| 2250              | 0.06            | 0.07               | 0.07        | 0.08      | 0.08       | 0.01    | 0.04    |
| 2500              | 0.07            | 0.09               | 0.10        | 0.11      | 0.11       | 0.01    | 0.05    |
| 2750              | 0.08            | 0.09               | 0.11        | 0.12      | 0.12       | 0.02    | 0.05    |
| 3000              | 0.10            | 0.11               | 0.12        | 0.13      | 0.13       | 0.02    | 0.06    |
| 3250              | 0.11            | 0.12               | 0.15        | 0.16      | 0.15       | 0.02    | 0.06    |
| 3500              | 0.12            | 0.12               | 0.16        | 0.17      | 0.15       | 0.03    | 0.07    |
| 3750              | 0.14            | 0.14               | 0.19        | 0.20      | 0.15       | 0.03    | 0.08    |
| 4000              | 0.15            | 0.14               | 0.21        | 0.22      | 0.19       | 0.04    | 0.08    |
| 4250              | 0.17            | 0.14               | 0.24        | 0.28      | 0.19       | 0.04    | 0.09    |
| 4500              | 0.19            | 0.15               | 0.26        | 0.32      | 0.22       | 0.04    | 0.09    |
| 4750              | 0.20            | 0.16               | 0.29        | 0.37      | 0.25       | 0.05    | 0.10    |
| 5000              | 0.22            | 0.16               | 0.34        | 0.43      | 0.29       | 0.06    | 0.10    |
| 5250              | 0.24            | 0.16               | 0.37        | 0.47      | 0.32       | 0.06    | 0.11    |
| 5500              | 0.25            | 0.18               | 0.44        | 0.54      | 0.34       | 0.07    | 0.12    |
| 5750              | 0.27            | 0.19               | 0.49        | 0.59      | 0.45       | 0.07    | 0.12    |
| 6000              | 0.29            | 0.20               | 0.54        | 0.64      | 0.52       | 0.08    | 0.13    |

## BLOWER DATA

### CEILING DIFFUSERS AIR RESISTANCE - in. w.g.

| Unit Size        | RTD11 Step-Down Diffuser |             |                     | FD11 Flush Diffuser |                       |
|------------------|--------------------------|-------------|---------------------|---------------------|-----------------------|
|                  | Air Volume cfm           | 2 Ends Open | 1 Side, 2 Ends Open |                     | All Ends & Sides Open |
| 092 Models       | 2400                     | 0.21        | 0.18                | 0.15                | 0.14                  |
|                  | 2600                     | 0.24        | 0.21                | 0.18                | 0.17                  |
|                  | 2800                     | 0.27        | 0.24                | 0.21                | 0.20                  |
|                  | 3000                     | 0.32        | 0.29                | 0.25                | 0.25                  |
|                  | 3200                     | 0.41        | 0.37                | 0.32                | 0.31                  |
|                  | 3400                     | 0.50        | 0.45                | 0.39                | 0.37                  |
|                  | 3600                     | 0.61        | 0.54                | 0.48                | 0.44                  |
|                  | 3800                     | 0.73        | 0.63                | 0.57                | 0.51                  |
| 102 & 122 Models | 3600                     | 0.36        | 0.28                | 0.23                | 0.15                  |
|                  | 3800                     | 0.40        | 0.32                | 0.26                | 0.18                  |
|                  | 4000                     | 0.44        | 0.36                | 0.29                | 0.21                  |
|                  | 4200                     | 0.49        | 0.40                | 0.33                | 0.24                  |
|                  | 4400                     | 0.54        | 0.44                | 0.37                | 0.27                  |
|                  | 4600                     | 0.60        | 0.49                | 0.42                | 0.31                  |
|                  | 4800                     | 0.65        | 0.53                | 0.46                | 0.35                  |
|                  | 5000                     | 0.69        | 0.58                | 0.50                | 0.39                  |
|                  | 5200                     | 0.75        | 0.62                | 0.54                | 0.43                  |

### CEILING DIFFUSER AIR THROW DATA

| Model No.        | Air Volume | <sup>1</sup> Effective Throw Range |            |
|------------------|------------|------------------------------------|------------|
|                  |            | RTD11 Step-Down                    | FD11 Flush |
|                  | cfm        | ft.                                | ft.        |
| 092 Models       | 2600       | 24 - 29                            | 19 - 24    |
|                  | 2800       | 25 - 30                            | 20 - 28    |
|                  | 3000       | 27 - 33                            | 21 - 29    |
|                  | 3200       | 28 - 35                            | 22 - 29    |
|                  | 3400       | 30 - 37                            | 22 - 30    |
| 102 & 122 Models | 3600       | 25 - 33                            | 22 - 29    |
|                  | 3800       | 27 - 35                            | 22 - 30    |
|                  | 4000       | 29 - 37                            | 24 - 33    |
|                  | 4200       | 32 - 40                            | 26 - 35    |
|                  | 4400       | 34 - 42                            | 28 - 37    |

<sup>1</sup> Throw is the horizontal or vertical distance an air stream travels on leaving the outlet or diffuser before the maximum velocity is reduced to 50 ft. per minute. Four sides open.

**ELECTRICAL DATA****7.5 TON****BELT DRIVE BLOWER - KDB092H4**

| <sup>1</sup> Voltage - 60hz                 |                                | 208/230V - 3 Ph |      |      | 460V - 3 Ph |     |     | 575V - 3 Ph |     |     |
|---|--------------------------------|-----------------|------|------|-------------|-----|-----|-------------|-----|-----|
| Compressor 1                                | Rated Load Amps                | 13.1            |      |      | 6.1         |     |     | 4.4         |     |     |
|   | Locked Rotor Amps              | 83.1            |      |      | 41          |     |     | 33          |     |     |
| Compressor 2                                | Rated Load Amps                | 13.1            |      |      | 6.1         |     |     | 4.4         |     |     |
|   | Locked Rotor Amps              | 83.1            |      |      | 41          |     |     | 33          |     |     |
| Outdoor Fan Motors (2)                      | Full Load Amps                 | 2.8             |      |      | 1.4         |     |     | 1.1         |     |     |
|   | (total)                        | (5.6)           |      |      | (2.8)       |     |     | (2.2)       |     |     |
| Power Exhaust (1) 0.33 HP                   | Full Load Amps                 | 2.4             |      |      | 1.3         |     |     | 1           |     |     |
| Service Outlet 115V GFI (amps)              |                                | 15              |      |      | 15          |     |     | 20          |     |     |
| Indoor Blower Motor                         | Horsepower                     | 2               | 3    | 5    | 2           | 3   | 5   | 2           | 3   | 5   |
|   | Full Load Amps                 | 7.5             | 10.6 | 16.7 | 3.4         | 4.8 | 7.6 | 2.7         | 3.9 | 6.1 |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                      | 50              | 50   | 60   | 25          | 25  | 30  | 15          | 20  | 20  |
|   | With (1) 0.33 HP Power Exhaust | 50              | 60   | 70   | 25          | 25  | 30  | 20          | 20  | 25  |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                      | 43              | 46   | 53   | 20          | 22  | 25  | 15          | 16  | 19  |
|   | With (1) 0.33 HP Power Exhaust | 45              | 49   | 56   | 22          | 23  | 26  | 16          | 17  | 20  |

**ELECTRICAL ACCESSORIES**

|                   |              |              |              |
|-------------------|--------------|--------------|--------------|
| <b>Disconnect</b> | <b>54W56</b> | <b>54W56</b> | <b>54W56</b> |
|-------------------|--------------|--------------|--------------|

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.<sup>2</sup> HACR type breaker or fuse.<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.**ELECTRICAL DATA****8.5 TON****BELT DRIVE BLOWER - KDB102H4**

| <sup>1</sup> Voltage - 60hz                 |                                | 208/230V - 3 Ph |      |      | 460V - 3 Ph |     |     | 575V - 3 Ph |     |     |
|---|--------------------------------|-----------------|------|------|-------------|-----|-----|-------------|-----|-----|
| Compressor 1                                | Rated Load Amps                | 14.5            |      |      | 6.3         |     |     | 6           |     |     |
|   | Locked Rotor Amps              | 98              |      |      | 55          |     |     | 41          |     |     |
| Compressor 2                                | Rated Load Amps                | 14.5            |      |      | 6.3         |     |     | 6           |     |     |
|   | Locked Rotor Amps              | 98              |      |      | 55          |     |     | 41          |     |     |
| Outdoor Fan Motors (2)                      | Full Load Amps                 | 2.8             |      |      | 1.4         |     |     | 1.1         |     |     |
|   | (total)                        | (5.6)           |      |      | (2.8)       |     |     | (2.2)       |     |     |
| Power Exhaust (1) 0.33 HP                   | Full Load Amps                 | 2.4             |      |      | 1.3         |     |     | 1           |     |     |
| Service Outlet 115V GFI (amps)              |                                | 15              |      |      | 15          |     |     | 20          |     |     |
| Indoor Blower Motor                         | Horsepower                     | 2               | 3    | 5    | 2           | 3   | 5   | 2           | 3   | 5   |
|   | Full Load Amps                 | 7.5             | 10.6 | 16.7 | 3.4         | 4.8 | 7.6 | 2.7         | 3.9 | 6.1 |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                      | 60              | 60   | 70   | 25          | 25  | 30  | 20          | 25  | 25  |
|   | With (1) 0.33 HP Power Exhaust | 60              | 60   | 70   | 25          | 25  | 30  | 25          | 25  | 25  |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                      | 46              | 49   | 56   | 21          | 22  | 25  | 19          | 20  | 22  |
|   | With (1) 0.33 HP Power Exhaust | 49              | 52   | 58   | 22          | 24  | 27  | 20          | 21  | 23  |

**ELECTRICAL ACCESSORIES**

|                   |              |              |              |
|-------------------|--------------|--------------|--------------|
| <b>Disconnect</b> | <b>54W56</b> | <b>54W56</b> | <b>54W56</b> |
|-------------------|--------------|--------------|--------------|

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.<sup>2</sup> HACR type breaker or fuse.<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

**ELECTRICAL DATA****10 TON****DIRECT DRIVE BLOWER - KDBI22H4**

| <sup>1</sup> Voltage - 60hz                 |                                | 208/230V - 3 Ph | 460V - 3 Ph | 575V - 3 Ph |
|---|--------------------------------|-----------------|-------------|-------------|
| Compressor 1                                | Rated Load Amps                | 15.6            | 7.8         | 5.8         |
|   | Locked Rotor Amps              | 110             | 52          | 38.9        |
| Compressor 2                                | Rated Load Amps                | 15.6            | 7.8         | 5.8         |
|   | Locked Rotor Amps              | 110             | 52          | 38.9        |
| Outdoor Fan Motors (3)                      | Full Load Amps                 | 2.8             | 1.4         | 1.1         |
|   | (total)                        | (8.4)           | (4.2)       | (3.3)       |
| Power Exhaust (1) 0.33 HP                   | Full Load Amps                 | 2.4             | 1.3         | 1           |
| Service Outlet 115V GFI (amps)              |                                | 15              | 15          | 20          |
| Indoor Blower Motor                         | Horsepower                     | 3.75            | 3.75        | 3.75        |
|   | Full Load Amps                 | 8.8             | 4.3         | 3.4         |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                      | 60              | 30          | 25          |
|   | With (1) 0.33 HP Power Exhaust | 70              | 35          | 25          |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                      | 53              | 27          | 20          |
|   | With (1) 0.33 HP Power Exhaust | 60              | 30          | 23          |

**ELECTRICAL ACCESSORIES**

|                   |              |              |              |
|-------------------|--------------|--------------|--------------|
| <b>Disconnect</b> | <b>54W56</b> | <b>54W56</b> | <b>54W56</b> |
|-------------------|--------------|--------------|--------------|

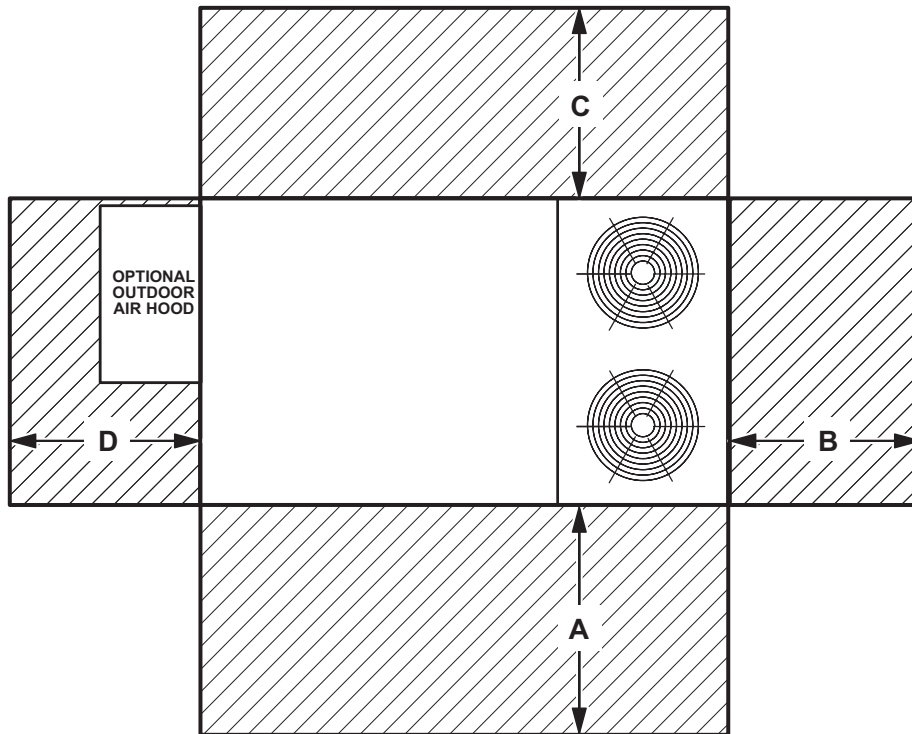
NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

## UNIT CLEARANCES



| <sup>1</sup> Unit Clearance        | A   |      | B   |     | C   |     | D   |      | Top Clearance |
|------------------------------------|-----|------|-----|-----|-----|-----|-----|------|---------------|
|                                    | in. | mm   | in. | mm  | in. | mm  | in. | mm   |               |
| <b>Service Clearance</b>           | 60  | 1524 | 36  | 914 | 36  | 914 | 60  | 1524 | Unobstructed  |
| <b>Minimum Operation Clearance</b> | 36  | 914  | 36  | 914 | 36  | 914 | 36  | 914  |               |

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

<sup>1</sup> **Service Clearance** - Required for removal of serviceable parts.

**Minimum Operation Clearance** - Required clearance for proper unit operation.


## OUTDOOR SOUND DATA

| Unit Model Number | Octave Band Sound Power Levels dBA, re 10 <sup>-12</sup> Watts Center Frequency - Hz |     |     |      |      |      |      | <sup>1</sup> Sound Rating Number (dBA) |
|-------------------|--|-----|-----|------|------|------|------|--|
|                   | 125  | 250 | 500 | 1000 | 2000 | 4000 | 8000 |  |
| KDB092, 102       | 72   | 75  | 76  | 73   | 67   | 60   | 50   | 86                                     |
| KDB122            | 73   | 74  | 75  | 72   | 66   | 60   | 50   | 85                                     |

Note - The octave sound power data does not include tonal corrections.

<sup>1</sup> Sound Rating Number according to AHRI Standard 270-95 or AHRI Standard 370-2001 (includes pure tone penalty). Sound Rating Number is the overall A-Weighted Sound Power Level, (L<sub>wa</sub>), dB (100 Hz to 10,000 Hz).

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

| Item   | Model No. | Catalog No.  |
|--|-----------|--------------|
| <b>7-DAY PROGRAMMABLE THERMOSTAT - BACNET COMPATIBLE WITH REHEAT FUNCTION</b><br> <ul style="list-style-type: none"> <li>• For units with or without <sup>1</sup> Humiditrol®</li> <li>• BTL listed MS/TP ensures compatibility with any BACnet system</li> <li>• Built-in control programs for conventional and heat pump applications</li> <li>• Conventional systems up to 3-stage heat and 3-stage cool</li> <li>• Heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat</li> <li>• On-board temperature and humidity sensor</li> <li>• Multiple configurable inputs and outputs enable advanced control strategies</li> <li>• Set-up Wizard enables rapid system configuration</li> <li>• No special tools required for installation or commissioning</li> <li>• Seven-day (2, 4 or 6 event) occupancy scheduling per day</li> <li>• Backlit 5-inch LCD touchscreen</li> </ul> | ---       | <b>Y8241</b> |

<sup>1</sup> BACnet Thermostat (Y8241) will control units with and without the Humiditrol® option. If there is a mix of units equipped with and without Humiditrol on the same site, this thermostat can be used for all units if desired.

|   |   |             |              |
|---|---|-------------|--------------|
| <b>BACnet Controls<br/>(no reheat capability)</b> | BACnet® Module (factory or field installed)           | K0CTRL31B-2 | <b>16X71</b> |
|   | BACnet® Room Sensor with Display (field installed)    | K0SNSR01FF1 | <b>97W23</b> |
|   | BACnet® Room Sensor without Display (field installed) | K0SNSR00FF1 | <b>97W24</b> |
| <b>Optional Accessories</b>                       | Plenum Cable (RJ45/CAT5 75 ft.)                       | K0MISC00FF1 | <b>97W25</b> |

**WEIGHT DATA**

| Model Number      | Net  |     | Shipping |     |
|-------------------|------|-----|----------|-----|
|                   | lbs. | kg  | lbs.     | kg  |
| KDB092H Base Unit | 1121 | 509 | 1206     | 548 |
| KDB092H Max. Unit | 1264 | 574 | 1349     | 612 |
| KDB102H Base Unit | 1123 | 510 | 1208     | 548 |
| KDB102H Max. Unit | 1266 | 575 | 1351     | 613 |
| KDB122H Base Unit | 1264 | 574 | 1349     | 612 |
| KDB122H Max. Unit | 1407 | 639 | 1492     | 677 |

**OPTIONS / ACCESSORIES**

| Model Number | Shipping Weight |    |
|--------------|-----------------|----|
|              | lbs.            | kg |

**ECONOMIZER / OUTDOOR AIR / EXHAUST**

| <b>Economizer</b>                        |    |    |
|--|----|----|
| Economizer Dampers                       | 60 | 27 |
| Barometric Relief Dampers (downflow)     | 8  | 4  |
| Barometric Relief Damper Hood (downflow) | 25 | 11 |
| Outdoor Air Hood (downflow)              | 23 | 10 |
| <b>Outdoor Air Dampers</b>               |    |    |
| Outdoor Air Damper Section - Automatic   | 51 | 23 |
| Outdoor Air Damper Section - Manual      | 39 | 18 |
| <b>Power Exhaust</b>                     | 31 | 14 |

**GAS HEAT EXCHANGER (NET WEIGHT)**

|  |    |    |
|--|----|----|
| Medium Heat (adder over standard heat) | 9  | 4  |
| High Heat (adder over standard heat)   | 32 | 15 |

**SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER OPTION**

|  |    |   |
|--|----|---|
| Variable Frequency Drive (VFD) and associated components | 10 | 5 |
|--|----|---|

**ROOF CURBS**

| <b>Hybrid Roof Curbs, Downflow</b> |     |    |
|------------------------------------|-----|----|
| 8 in. height                       | 60  | 27 |
| 14 in. height                      | 85  | 39 |
| 18 in. height                      | 100 | 45 |
| 24 in. height                      | 125 | 57 |

**Adjustable Pitch Curb, Downflow**

|               |     |    |
|---------------|-----|----|
| 14 in. height | 191 | 82 |
|---------------|-----|----|

**PACKAGING**

|                                      |     |    |
|--------------------------------------|-----|----|
| LTL Packaging (less than truck load) | 105 | 48 |
|--------------------------------------|-----|----|

**CEILING DIFFUSERS**

| <b>Step-Down</b> |     |    |
|------------------|-----|----|
| RTD11-95S        | 118 | 54 |
| RTD11-135S       | 135 | 61 |
| <b>Flush</b>     |     |    |
| FD11-95S         | 118 | 54 |
| FD11-135S        | 135 | 61 |

**Transitions**

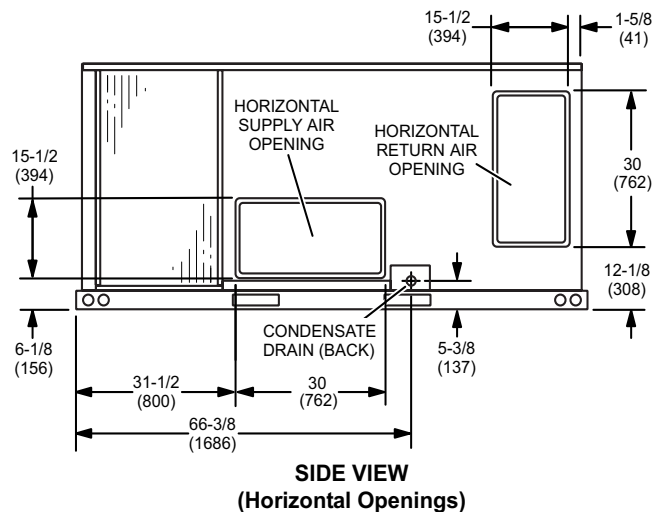
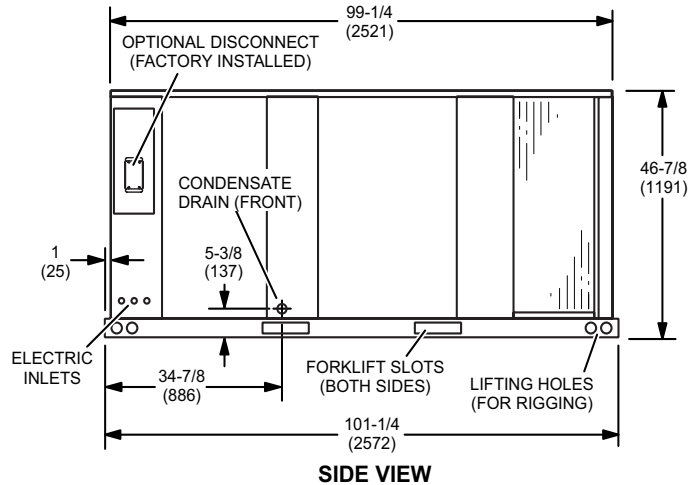
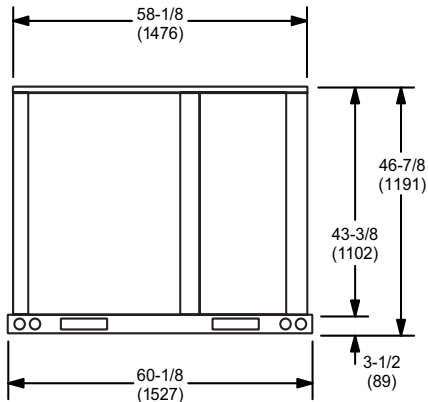
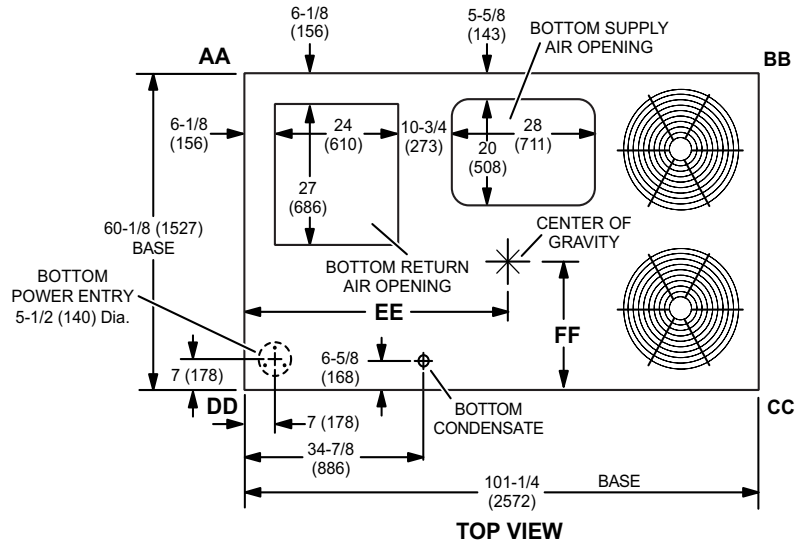
|             |    |    |
|-------------|----|----|
| C1DIFF30B-1 | 30 | 14 |
| C1DIFF31B-1 | 32 | 15 |

# DIMENSIONS - UNIT - 092-102 MODELS

| Model No. | CORNER WEIGHTS |     |      |     |      |     |      |     |      |     |      |     |      |     | CENTER OF GRAVITY |     |      |      |      |      |      |     |      |     |
|-----------|----------------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|-------------------|-----|------|------|------|------|------|-----|------|-----|
|           | AA             |     |      |     | BB   |     |      |     | CC   |     |      |     | DD   |     |                   |     | EE   |      |      |      | FF   |     |      |     |
|           | Base           |     | Max. |     | Base |     | Max. |     | Base |     | Max. |     | Base |     | Max.              |     | Base |      | Max. |      | Base |     | Max. |     |
|           | lbs.           | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | in.               | mm  | in.  | mm   | in.  | mm   | in.  | mm  | in.  | mm  |
| KDB092    | 296            | 134 | 334  | 152 | 248  | 112 | 279  | 127 | 260  | 118 | 293  | 133 | 318  | 144 | 358               | 163 | 44   | 1118 | 43   | 1092 | 27   | 686 | 28   | 711 |
| KDB102    | 297            | 135 | 334  | 152 | 248  | 113 | 280  | 127 | 260  | 118 | 293  | 133 | 318  | 144 | 359               | 163 | 44   | 1118 | 43   | 1092 | 27   | 686 | 28   | 711 |

Base Unit - The unit with NO OPTIONS.

Max. Unit - The unit with ALL OPTIONS Installed (Economizer, etc.).



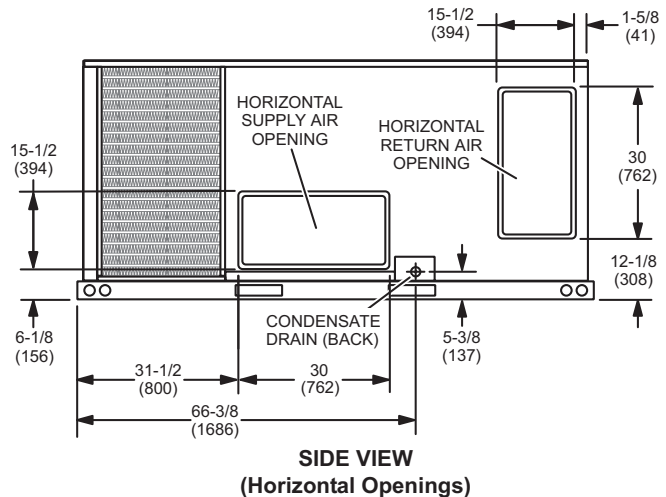
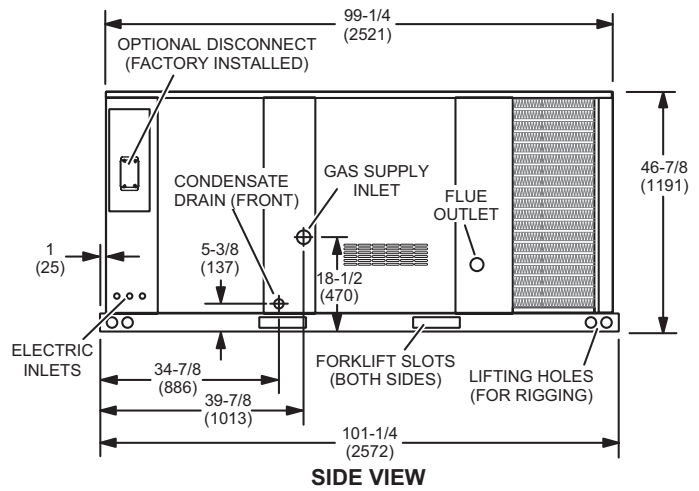
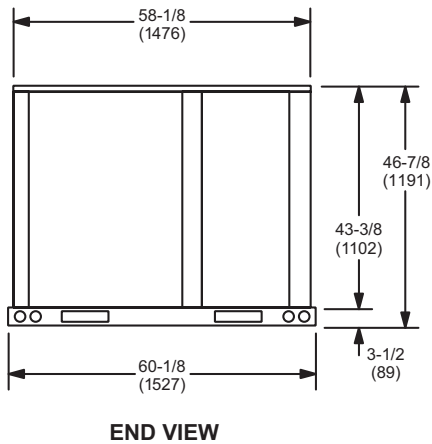
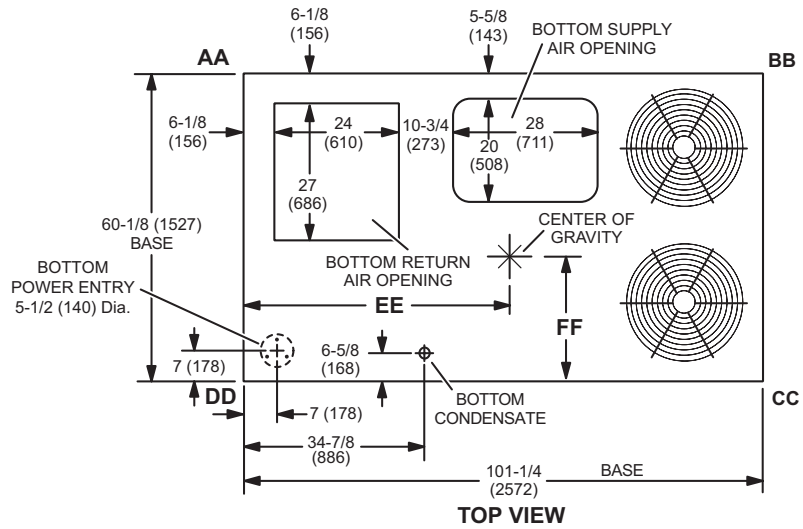


# DIMENSIONS - UNIT - 122 MODELS

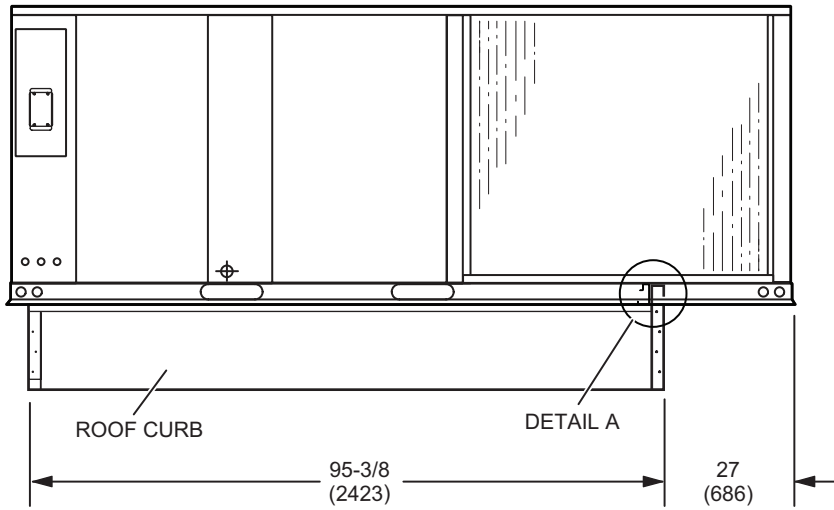
| Model No. | CORNER WEIGHTS |     |      |     |      |     |      |     |      |     |      |     | CENTER OF GRAVITY |     |      |     |      |      |      |      |      |     |      |     |
|-----------|----------------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|-------------------|-----|------|-----|------|------|------|------|------|-----|------|-----|
|           | AA             |     |      |     | BB   |     |      |     | CC   |     |      |     | DD                |     |      |     | EE   |      |      |      | FF   |     |      |     |
|           | Base           |     | Max. |     | Base |     | Max. |     | Base |     | Max. |     | Base              |     | Max. |     | Base |      | Max. |      | Base |     | Max. |     |
|           | lbs.           | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs.              | kg  | lbs. | kg  | in.  | mm   | in.  | mm   | in.  | mm  | in.  | mm  |
| KDB122    | 328            | 149 | 366  | 166 | 284  | 129 | 316  | 144 | 299  | 136 | 333  | 151 | 352               | 160 | 392  | 178 | 56.5 | 1435 | 55.5 | 1010 | 25.5 | 648 | 26.5 | 673 |

Base Unit - The unit with NO OPTIONS.

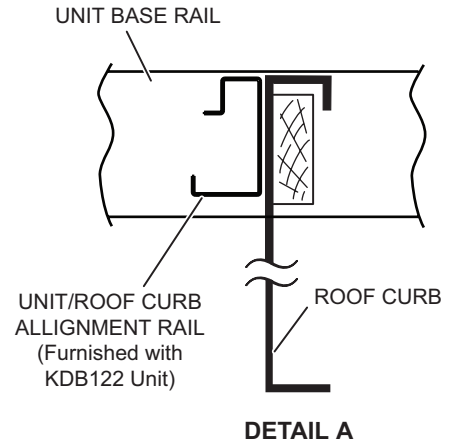
Max. Unit - The unit with ALL OPTIONS Installed (Economizer, etc.).



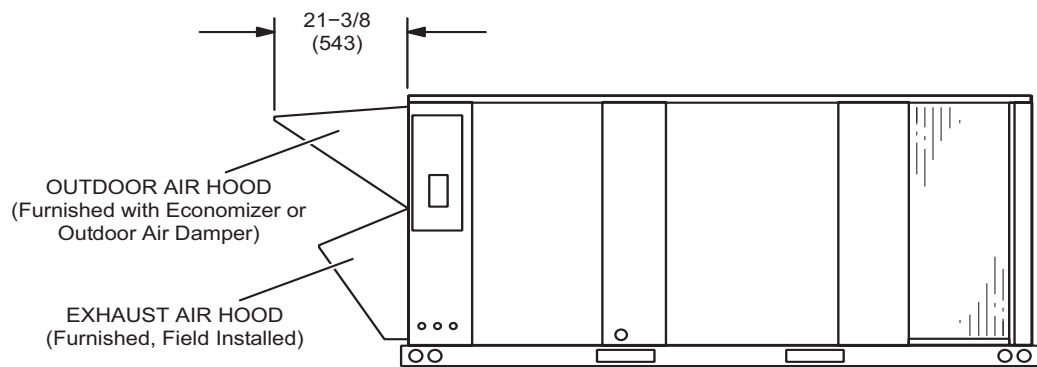
**UNIT ON CURB LOCATION - KDB122**



**SIDE VIEW**



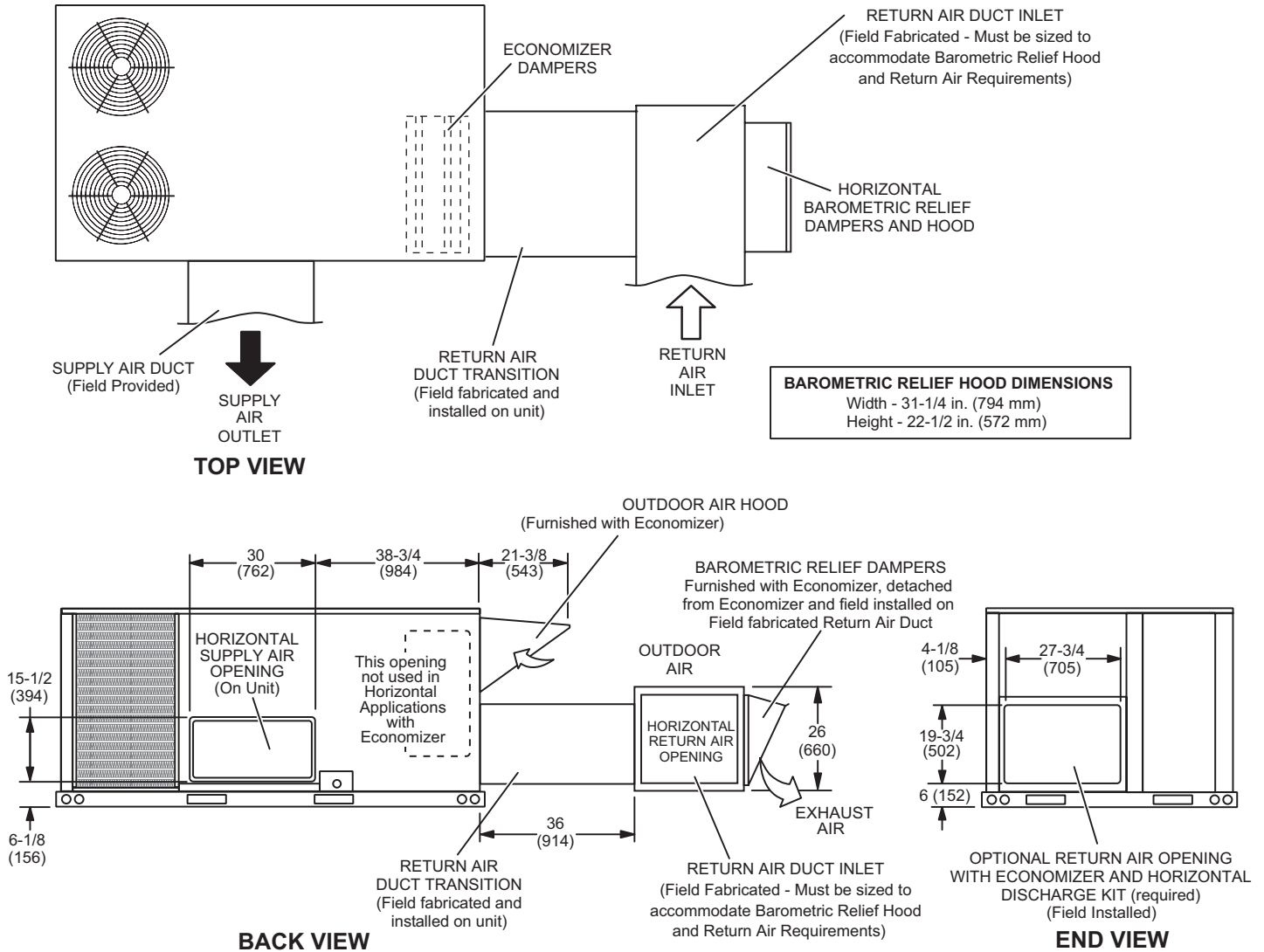
**OUTDOOR AIR HOOD DETAIL**



## DIMENSIONS - ACCESSORIES

### HORIZONTAL ECONOMIZER APPLICATION

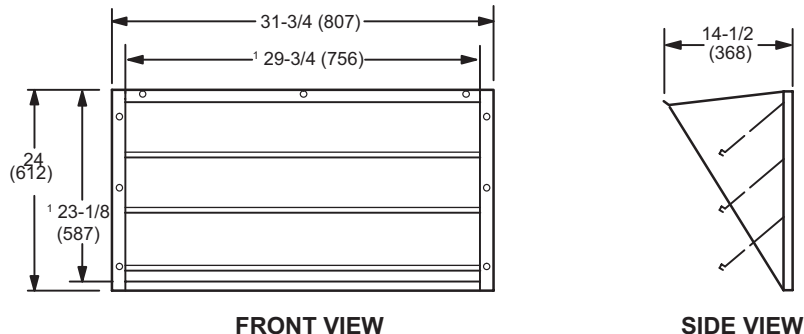
(With Furnished Barometric Relief Dampers and Optional Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

### BAROMETRIC RELIEF DAMPERS (Furnished with Economizer)

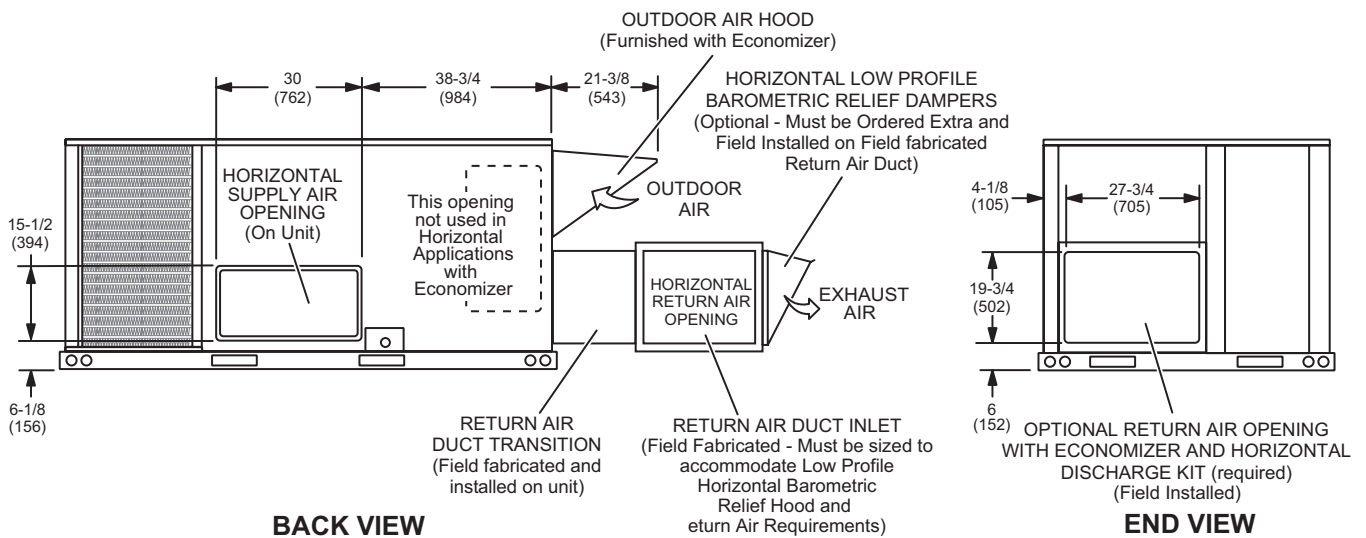
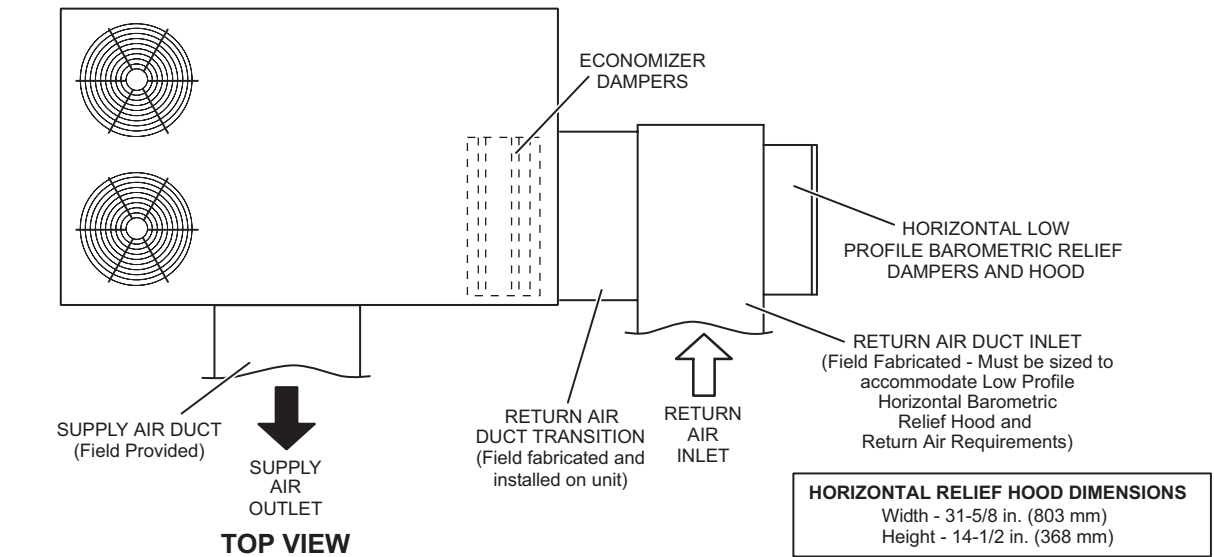
(Field installed in horizontal return air duct adjacent to unit)



## DIMENSIONS - ACCESSORIES

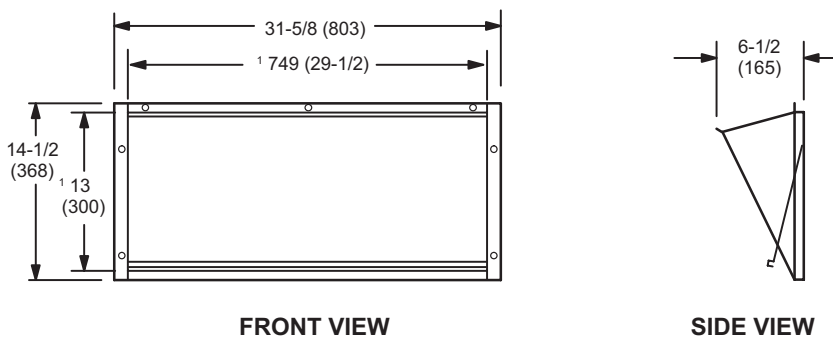
### HORIZONTAL ECONOMIZER APPLICATION

(with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



**NOTE** - Return Air Duct and Transition must be supported.

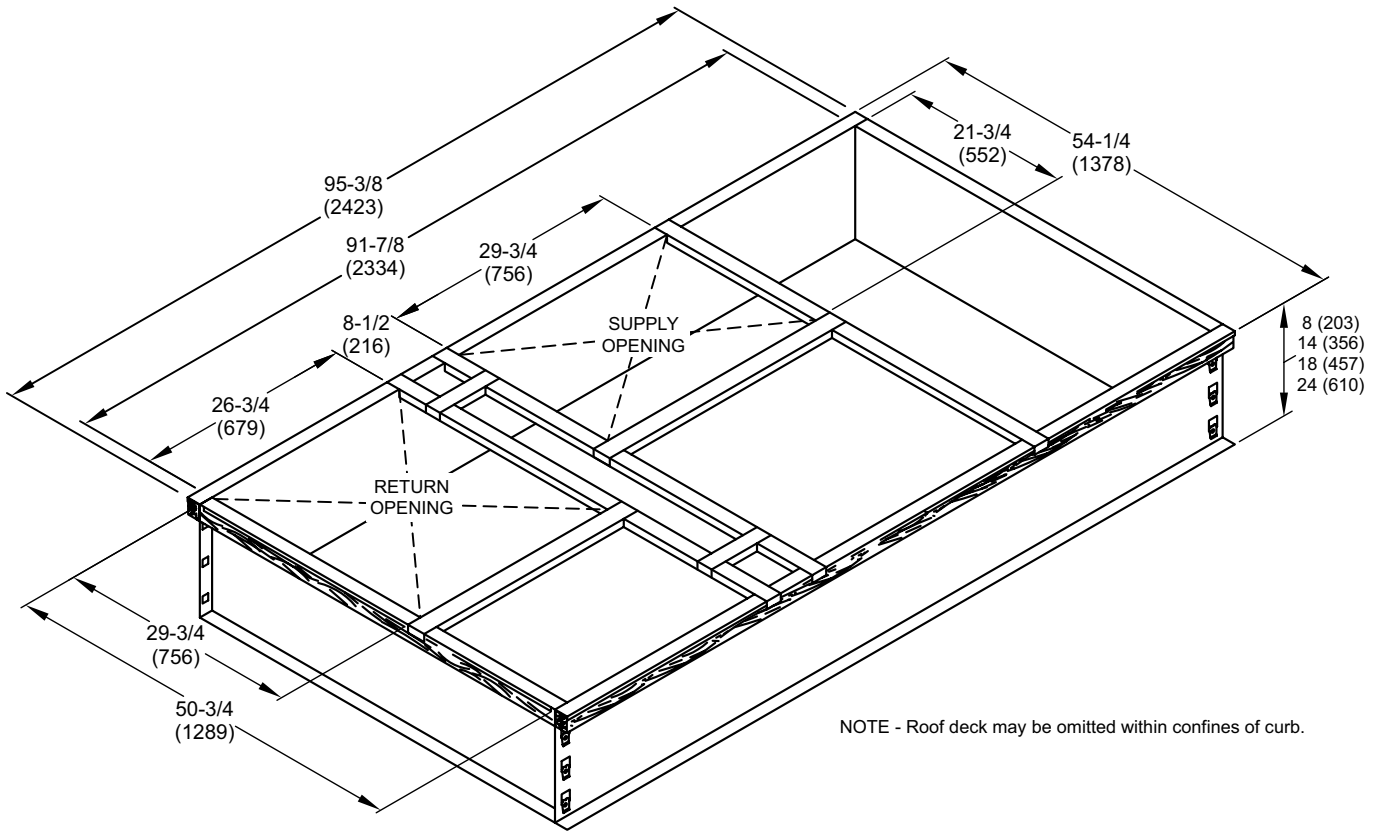
### HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS (Field installed in horizontal return air duct adjacent to unit)



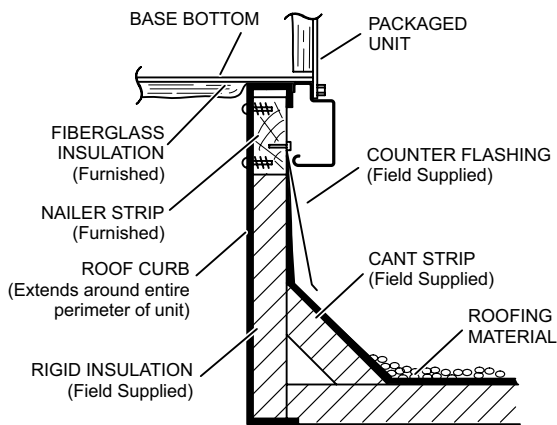
<sup>1</sup> NOTE - Opening size required in return air duct.

# DIMENSIONS - ACCESSORIES

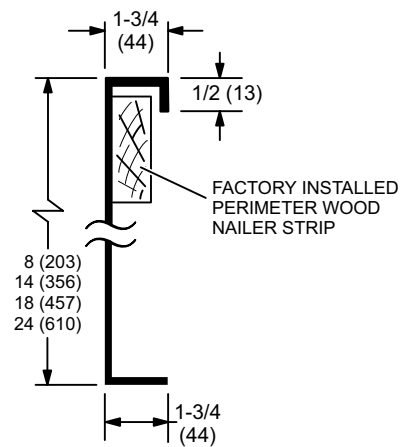
## HYBRID ROOF CURBS - DOUBLE DUCT OPENING



**TYPICAL FLASHING DETAIL FOR ROOF CURB**

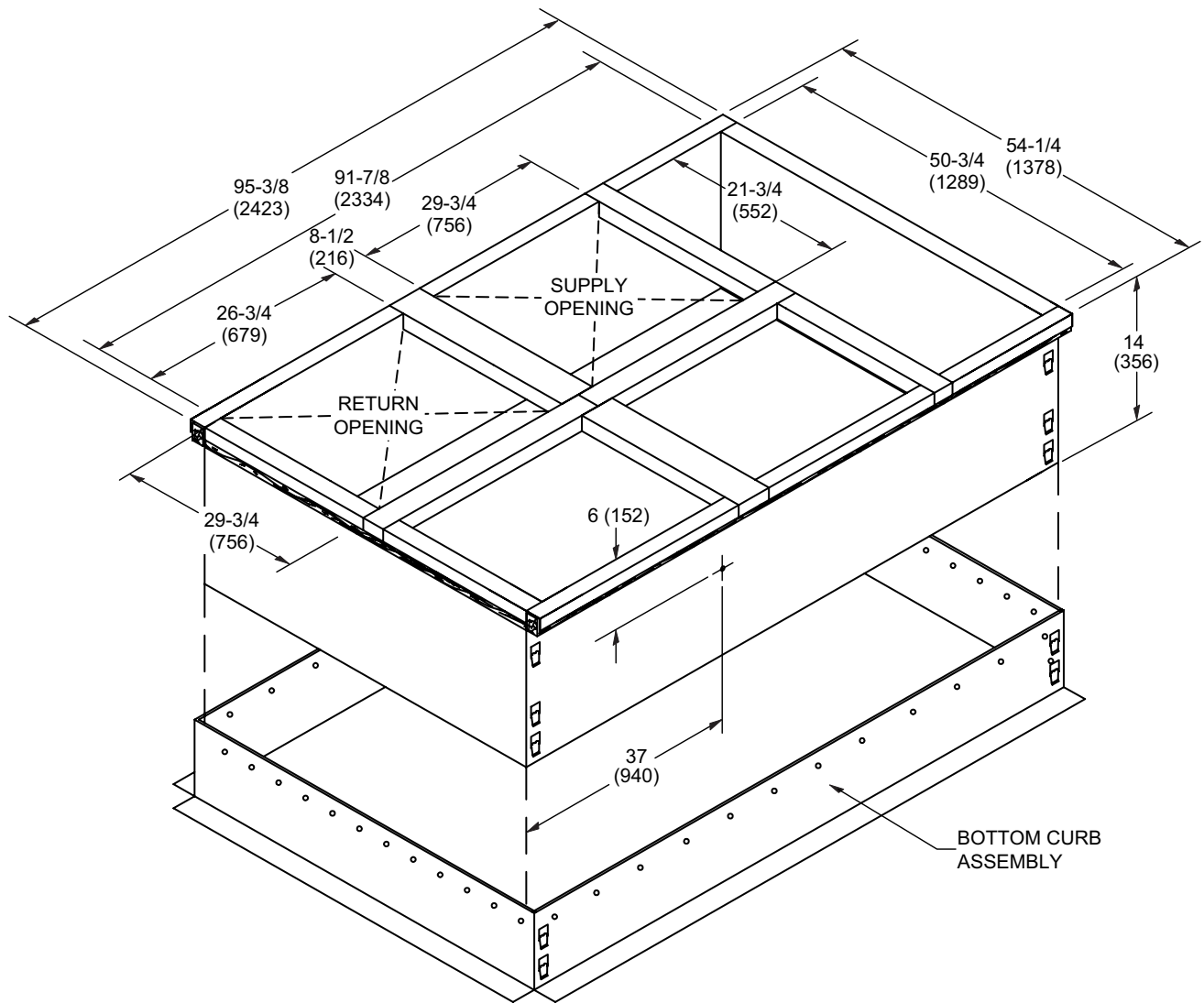


**DETAIL ROOF CURB**



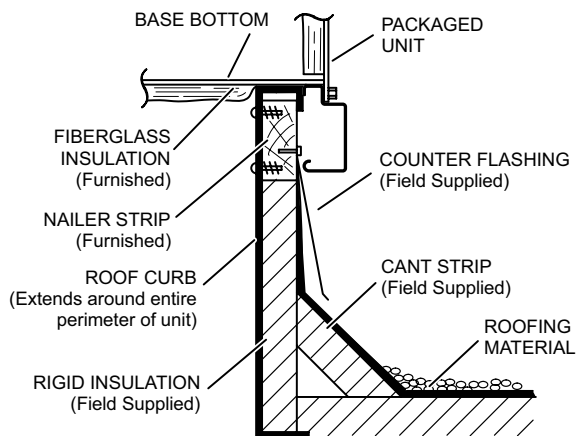
# DIMENSIONS - ACCESSORIES

## ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING

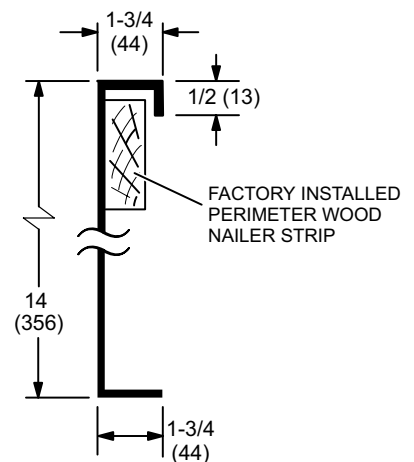


NOTE - Maximum slope pitch is 3/4 in. per 1 foot (19 mm per 305 mm) in any one direction.

### TYPICAL FLASHING DETAIL FOR ROOF CURB



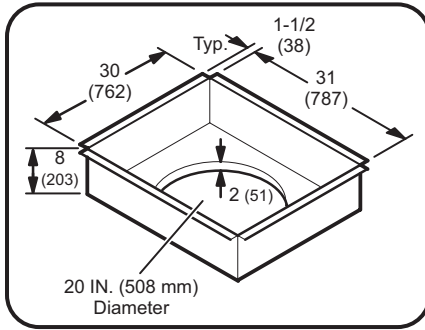
### DETAIL ROOF CURB



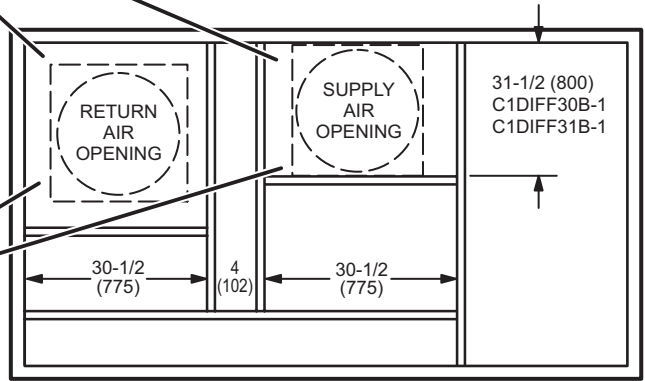
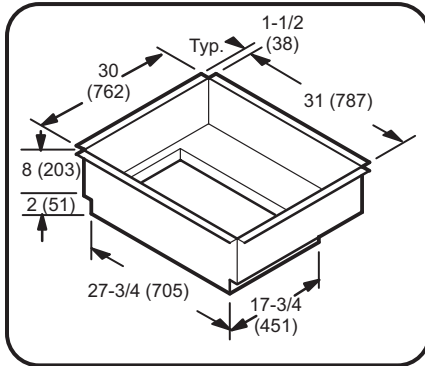
# DIMENSIONS - ACCESSORIES

## ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

**C1DIFF30B-1 ROUND TRANSITIONS**  
(for 092 models)



**C1DIFF31B-1 RECTANGULAR TRANSITIONS**  
(for 102 and 122 models)

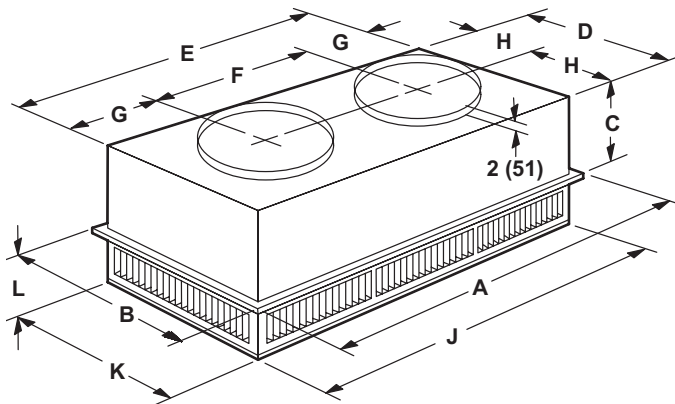


**TOP VIEW**

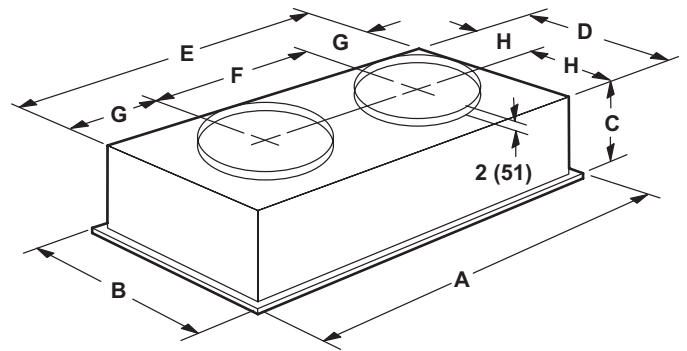
## DIMENSIONS - ACCESSORIES

### COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

#### STEP-DOWN CEILING DIFFUSER



#### FLUSH CEILING DIFFUSER



| Model Number |     | RTD11-95S |
|--------------|-----|-----------|
| A            | in. | 47-5/8    |
|              | mm  | 1159      |
| B            | in. | 29-5/8    |
|              | mm  | 752       |
| C            | in. | 14-3/8    |
|              | mm  | 365       |
| D            | in. | 27-1/2    |
|              | mm  | 699       |
| E            | in. | 45-1/2    |
|              | mm  | 1158      |
| F            | in. | 22-1/2    |
|              | mm  | 572       |
| G            | in. | 11-1/2    |
|              | mm  | 292       |
| H            | in. | 13-3/4    |
|              | mm  | 349       |
| J            | in. | 45-1/2    |
|              | mm  | 1156      |
| K            | in. | 27-1/2    |
|              | mm  | 699       |
| L            | in. | 8-1/8     |
|              | mm  | 206       |
| Duct Size    | in. | 20 round  |
|              | mm  | 508 round |

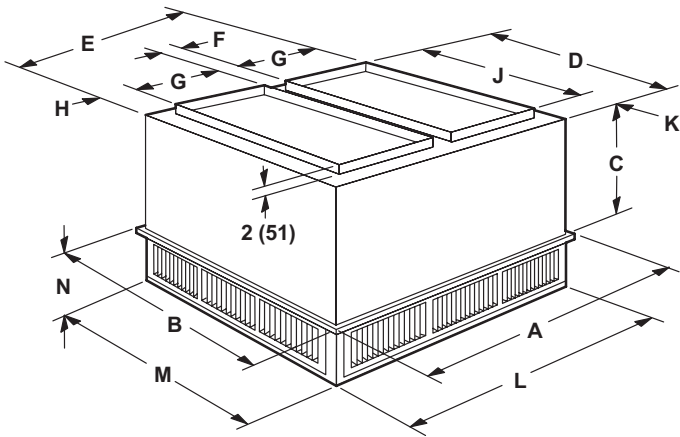
| Model Number |     | FD11-95S  |
|--------------|-----|-----------|
| A            | in. | 47-5/8    |
|              | mm  | 1159      |
| B            | in. | 29-5/8    |
|              | mm  | 752       |
| C            | in. | 16-5/8    |
|              | mm  | 422       |
| D            | in. | 27        |
|              | mm  | 686       |
| E            | in. | 45        |
|              | mm  | 1143      |
| F            | in. | 22-1/2    |
|              | mm  | 572       |
| G            | in. | 11-1/4    |
|              | mm  | 286       |
| H            | in. | 13-1/2    |
|              | mm  | 343       |
| Duct Size    | in. | 20 round  |
|              | mm  | 508 round |



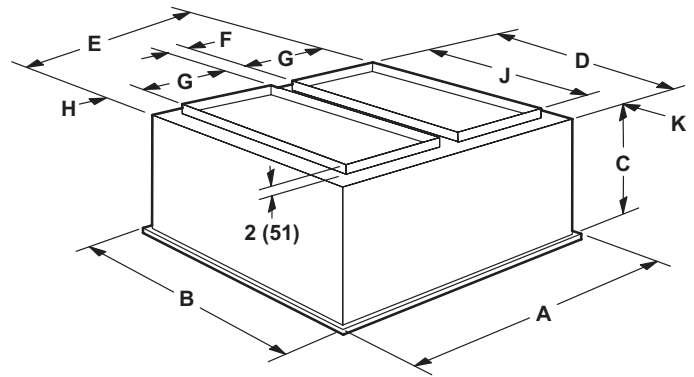
## DIMENSIONS - ACCESSORIES

### COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

#### STEP-DOWN CEILING DIFFUSER



#### FLUSH CEILING DIFFUSER



| Model Number |     | RTD11-135S |
|--------------|-----|------------|
| A            | in. | 47-5/8     |
|              | mm  | 1210       |
| B            | in. | 35-5/8     |
|              | mm  | 905        |
| C            | in. | 20-5/8     |
|              | mm  | 524        |
| D            | in. | 33-1/2     |
|              | mm  | 851        |
| E            | in. | 45-1/2     |
|              | mm  | 1156       |
| F            | in. | 4-1/2      |
|              | mm  | 114        |
| G            | in. | 18         |
|              | mm  | 457        |
| H            | in. | 2-1/2      |
|              | mm  | 64         |
| J            | in. | 28         |
|              | mm  | 711        |
| K            | in. | 2-3/4      |
|              | mm  | 70         |
| L            | in. | 45-1/2     |
|              | mm  | 1156       |
| M            | in. | 33-1/2     |
|              | mm  | 851        |
| N            | in. | 9-1/8      |
|              | mm  | 232        |
| Duct Size    | in. | 18 x 28    |
|              | mm  | 457 x 711  |

| Model Number |     | FD11-135S |
|--------------|-----|-----------|
| A            | in. | 47-5/8    |
|              | mm  | 1210      |
| B            | in. | 35-5/8    |
|              | mm  | 905       |
| C            | in. | 23-1/4    |
|              | mm  | 591       |
| D            | in. | 33        |
|              | mm  | 838       |
| E            | in. | 45        |
|              | mm  | 1143      |
| F            | in. | 4-1/2     |
|              | mm  | 114       |
| G            | in. | 18        |
|              | mm  | 457       |
| H            | in. | 2-1/4     |
|              | mm  | 57        |
| J            | in. | 28        |
|              | mm  | 711       |
| K            | in. | 2-1/2     |
|              | mm  | 64        |
| Duct Size    | in. | 18 x 28   |
|              | mm  | 457 x 711 |



## REVISIONS

| Section               | Description  |
|-----------------------|--|
| Options / Accessories | Updated High Performance Economizer model and catalog numbers. |



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## CERTIFICATION FORM FOR TIA STUDY PM

### TRANSPORTATION IMPACT ASSESSMENT REPORTS

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

### CERTIFICATION

- I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
- I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
- I am either a licensed<sup>1</sup> or registered<sup>2</sup> professional in good standing, whose field of expertise is either
  - Transportation engineering
  - Transportation planning

<sup>1,2</sup> License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

Dated at Ottawa this 2 day of December, 2022  
(City)

**Name:** Kimberley Hunton, P. Eng.

**Professional Title:** Project Manager, Transportation Planning

Signature of individual certifier that they meet the above criteria

### OFFICE CONTACT INFORMATION

**Address:** 2611 Queensview Drive, Suite 300

**City / Postal Code:** Ottawa, ON K2B 8K2

**Telephone / Extension:** 613-690-1148

**E-Mail Address:** [kimberley.hunton@wsp.com](mailto:kimberley.hunton@wsp.com)

### STAMP





## MEMO

**TO:** Neeti Paudel, P.Eng.  
**FROM:** Kimberley Hunton, P.Eng.  
**SUBJECT:** 864 Lady Ellen Place – Screening Form Explanation  
**DATE:** December 2, 2022

---

The Screening Form has been prepared in support of the Site Plan Control Application for the proposed development at 864 Lady Ellen Place. The site is currently occupied by a three-storey general office building with a gross floor area of 3,529 m<sup>2</sup> and a large parking lot. The site area is 13,582 m<sup>2</sup> (1.3 ha or 3.3 acres) and is located at the north end of Lady Ellen Place in Ottawa, adjacent to the Highway 417 eastbound off-ramp at Carling/Kirkwood. As shown in **Figure 1**, the property currently has four access points at the northern end of Lady Ellen Place.



**Figure 1: Site Location**



The redevelopment of the site includes a one-storey self-storage building (1,750 m<sup>2</sup>) and a four-storey self-storage building (15,913 m<sup>2</sup>) with an estimated date of completion of 2024 and full occupancy date of 2025. Three of the existing access points will be maintained as ingress/egress points for the proposed development.

The Screening Form indicated that the trip generation trigger was satisfied due to the combined gross floor area of the two buildings exceeding the 5,000 m<sup>2</sup> required for an industrial development. However, given the expected land use change from general office to a self-storage warehouse, the anticipated number of trips during AM and PM peak hours are expected to be below the 60 peak hour person-trip threshold required to satisfy the trip generation trigger in the City of Ottawa’s 2017 Transportation Impact Assessment (TIA) Guidelines.

Moreover, when considering the demolition of the existing development and construction of the proposed development, there is a net reduction in future travel demand. Using the 11<sup>th</sup> Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, the trips generated by the existing development (ITE Land Use Code 715 – Single Tenant Office Building) and for the proposed development (ITE Land Use Code 151 – Mini Warehouse) were calculated and are shown in **Table 1**.

**Table 1: Reduction in Trips to 864 Lady Ellen Place**

| TRIPS         | EXISTING DEVELOPMENT |              | PROPOSED DEVELOPMENT |              | NET DECREASE |              |
|---------------|----------------------|--------------|----------------------|--------------|--------------|--------------|
|               | AM PEAK HOUR         | PM PEAK HOUR | AM PEAK HOUR         | PM PEAK HOUR | AM PEAK HOUR | PM PEAK HOUR |
| Vehicle Trips | 64                   | 73           | 17                   | 29           | 47           | 44           |
| Person Trips  | 82                   | 93           | 22                   | 37           | 60           | 56           |

In accordance with the City of Ottawa’s TIA Guidelines, the ITE vehicle trips were multiplied by 1.28 to convert to person trips. As shown in **Table 1**, there is an expected reduction of 60 and 56 person trips during both the AM and PM peak hours when comparing the future to existing conditions.

With the reduction in person-trips it is put forward that the trip generation trigger is not satisfied. As neither the location nor the safety triggers were satisfied, the TIA study for the proposed development is considered complete.

Kimberley Hunton, P.Eng.  
Manager, Transportation Planning

T +1 613-736-7200  
T +1 613-690-1148 (Direct Line)  
kimberley.hunton@wsp.com

## City of Ottawa 2017 TIA Guidelines Screening Form

### 1. Description of Proposed Development

|                                    |   |
|------------------------------------|---|
| Municipal Address                  | 864 Lady Ellen Place                          |
| Description of Location            | Located at the north end of Lady Ellen Place  |
| Land Use Classification            | 4-storey and 1-storey Self-Storage Warehouses |
| Development Size (units)           | N/A   |
| Development Size (m <sup>2</sup> ) | 17,663 (Gross floor area)                     |
| Number of Accesses and Locations   | 3 (North end of Lady Ellen Place)             |
| Phase of Development               | Single phase                                  |
| Buildout Year                      | 2024 (anticipated)                            |

**If available, please attach a sketch of the development or site plan to this form.**

### 2. Trip Generation Trigger

Considering the Development’s Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

| Land Use Type                       | Minimum Development Size |
|-------------------------------------|--------------------------|
| Single-family homes                 | 40 units                 |
| Townhomes or apartments             | 90 units                 |
| Office                              | 3,500 m <sup>2</sup>     |
| Industrial                          | 5,000 m <sup>2</sup>     |
| Fast-food restaurant or coffee shop | 100 m <sup>2</sup>       |
| Destination retail                  | 1,000 m <sup>2</sup>     |
| Gas station or convenience market   | 75 m <sup>2</sup>        |

*\* If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

**If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.**

Proposed Dev (ITE LUC: 151 Mini-Warehouse):  
 AM Peak Hour: 17 vehicle trips  
 PM Peak Hour: 29 vehicle trips

Existing Dev (ITE LUC: 715 Single-Tenant Office Space):  
 AM Peak Hour: 64 vehicle trips  
 PM Peak Hour: 73 vehicle trips



### 3. Location Triggers

|  | Yes | No |
|--|-----|----|
| Does the development propose a new driveway to a boundary street that is designated as part of the City’s Transit Priority, Rapid Transit or Spine Bicycle Networks? |     | X  |
| Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*  |     | X  |

\*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

**If any of the above questions were answered with ‘Yes,’ the Location Trigger is satisfied.**

### 4. Safety Triggers

|   | Yes | No |
|---|-----|----|
| Are posted speed limits on a boundary street are 80 km/hr or greater?   |     | X  |
| Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?  |     | X  |
| Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? |     | X  |
| Is the proposed driveway within auxiliary lanes of an intersection?   |     | X  |
| Does the proposed driveway make use of an existing median break that serves an existing site?   |     | X  |
| Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?  |     | X  |
| Does the development include a drive-thru facility?   |     | X  |

**If any of the above questions were answered with ‘Yes,’ the Safety Trigger is satisfied.**

### 5. Summary

|   | Yes | No |
|---|-----|----|
| Does the development satisfy the Trip Generation Trigger? |     | X  |
| Does the development satisfy the Location Trigger?        |     | X  |
| Does the development satisfy the Safety Trigger?          |     | X  |

**If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).**

| CONSULTANT - SUB CONSULTANT:  |               |                 |                        |             |      |            |  |  |
|---|---------------|-----------------|------------------------|-------------|------|------------|--|--|
| CONSULTANT - SUB CONSULTANT:  |               |                 |                        |             |      |            |  |  |
| CONSULTANT - SUB CONSULTANT:  |               |                 |                        |             |      |            |  |  |
| CONSULTANT - SUB CONSULTANT:  |               |                 |                        |             |      |            |  |  |
| CLIENT REF. #   |               |                 |                        |             |      |            |  |  |
| PROJECT:  |               |                 |                        |             |      |            |  |  |
| <b>PROPOSED SELF-STORAGE<br/>LADY ELLEN PLACE</b>   |               |                 |                        |             |      |            |  |  |
| KEY PLAN:   |               |                 |                        |             |      |            |  |  |
| DISCLAIMER:   |               |                 |                        |             |      |            |  |  |
| ISSUED FOR: -REVISION-  |               |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>ISSUED FOR: RPA</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>11/02/2022</td> <td></td> <td></td> </tr> </tbody> </table> | NO.           | DATE            | ISSUED FOR: RPA        | DESCRIPTION | 1    | 11/02/2022 |  |  |
| NO.   | DATE          | ISSUED FOR: RPA | DESCRIPTION            |             |      |            |  |  |
| 1   | 11/02/2022    |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>PROJECT NO.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>219-00038-09</td> <td>2022-11-04</td> </tr> </tbody> </table>  | PROJECT NO.   | DATE            | 219-00038-09           | 2022-11-04  |      |            |  |  |
| PROJECT NO.   | DATE          |                 |                        |             |      |            |  |  |
| 219-00038-09  | 2022-11-04    |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>DESIGNED BY:</th> <th>DESIGNED BY:</th> </tr> </thead> <tbody> <tr> <td>AH</td> <td></td> </tr> </tbody> </table>   | DESIGNED BY:  | DESIGNED BY:    | AH                     |             |      |            |  |  |
| DESIGNED BY:  | DESIGNED BY:  |                 |                        |             |      |            |  |  |
| AH  |               |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>DRAWN BY:</th> <th>CHECKED BY:</th> </tr> </thead> <tbody> <tr> <td>SG</td> <td>AH</td> </tr> </tbody> </table>   | DRAWN BY:     | CHECKED BY:     | SG                     | AH          |      |            |  |  |
| DRAWN BY:   | CHECKED BY:   |                 |                        |             |      |            |  |  |
| SG  | AH            |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>DISCIPLINE:</th> <th>TITLE:</th> </tr> </thead> <tbody> <tr> <td>LANDSCAPE ARCHITECTURE</td> <td>SITE PLAN</td> </tr> </tbody> </table>                                     | DISCIPLINE:   | TITLE:          | LANDSCAPE ARCHITECTURE | SITE PLAN   |      |            |  |  |
| DISCIPLINE:   | TITLE:        |                 |                        |             |      |            |  |  |
| LANDSCAPE ARCHITECTURE  | SITE PLAN     |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>SHEET NUMBER:</th> <th>SHEET #</th> <th>OF</th> <th>SHEET #</th> </tr> </thead> <tbody> <tr> <td>A100</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>            | SHEET NUMBER: | SHEET #         | OF                     | SHEET #     | A100 |            |  |  |
| SHEET NUMBER:   | SHEET #       | OF              | SHEET #                |             |      |            |  |  |
| A100  |               |                 |                        |             |      |            |  |  |
| <table border="1"> <thead> <tr> <th>DATE OF:</th> <th>DATE OF:</th> </tr> </thead> <tbody> <tr> <td>2022-11-04</td> <td></td> </tr> </tbody> </table>   | DATE OF:      | DATE OF:        | 2022-11-04             |             |      |            |  |  |
| DATE OF:  | DATE OF:      |                 |                        |             |      |            |  |  |
| 2022-11-04  |               |                 |                        |             |      |            |  |  |

LAYOUT NOTES:

- CONTRACTOR TO CONFIRM ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO CONTRACTOR ADMINISTRATOR PRIOR TO CONSTRUCTION
- LAYOUT TO BE APPROVED BY CONTRACT ADMINISTRATOR PRIOR TO ANY CONSTRUCTION OR REMOVALS
- ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE NOTED
- CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATIONS, REMOVALS, DISPOSALS AND ROUGH GRADING AS REQUIRED TO CONSTRUCTION ALL WORKS AS SHOWN ON ALL PLANS, DETAILS AND SPECIFICATIONS
- LOCATION OF ALL UTILITIES SHOWN FOR ILLUSTRATION ONLY. CONTRACTOR MUST CONTACT ALL UTILITIES REGARDING RULES FOR WORKING IN THE AREA OF THE UTILITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR MUST CONFIRM LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION
- ALL EXISTING ROADS, SIDEWALKS, CURBS, FENCING, PAVING, SODDED AREAS, AND APPROACHES, ETC. TO REMAIN TO BE PROTECTED DURING CONSTRUCTION TO CONTRACT ADMINISTRATOR'S APPROVAL AT THE CONTRACTORS OWN COSTS.
- ALL EXISTING TREES, SHRUB BEDS, MULCH BEDS, AND SOD TO REMAIN TO BE PROTECTED DURING CONSTRUCTION. AREAS DAMAGED DURING CONSTRUCTION TO BE REPAIRED TO CONTRACT ADMINISTRATOR'S APPROVAL AT THE CONTRACTORS OWN COST.
- USE SPECIFIED BACKFILL IN ALL TRENCHES RUNNING BELOW ALL STRUCTURES, PAVING, WALKWAYS, ETC.
- FILL ALL HOLES AND LOW AREAS TO DESIGN SUBGRADE WITH COMPACTED FILL (SUITABLE TO SURFACE FINISH), FOR SODDED/PLANTED AREAS USE COMPACTED CLEAN EARTH FILL SUITABLE FOR PLANT GROWTH. FOR PAVED AREAS USE COMPACTED GRANULAR BASE.
- ALL TREES WITHIN OR IMMEDIATELY ADJACENT TO AREA OF WORK TO BE PROTECTED TO CITY OF OTTAWA TREE PROTECTION STANDARDS.

LEGEND:

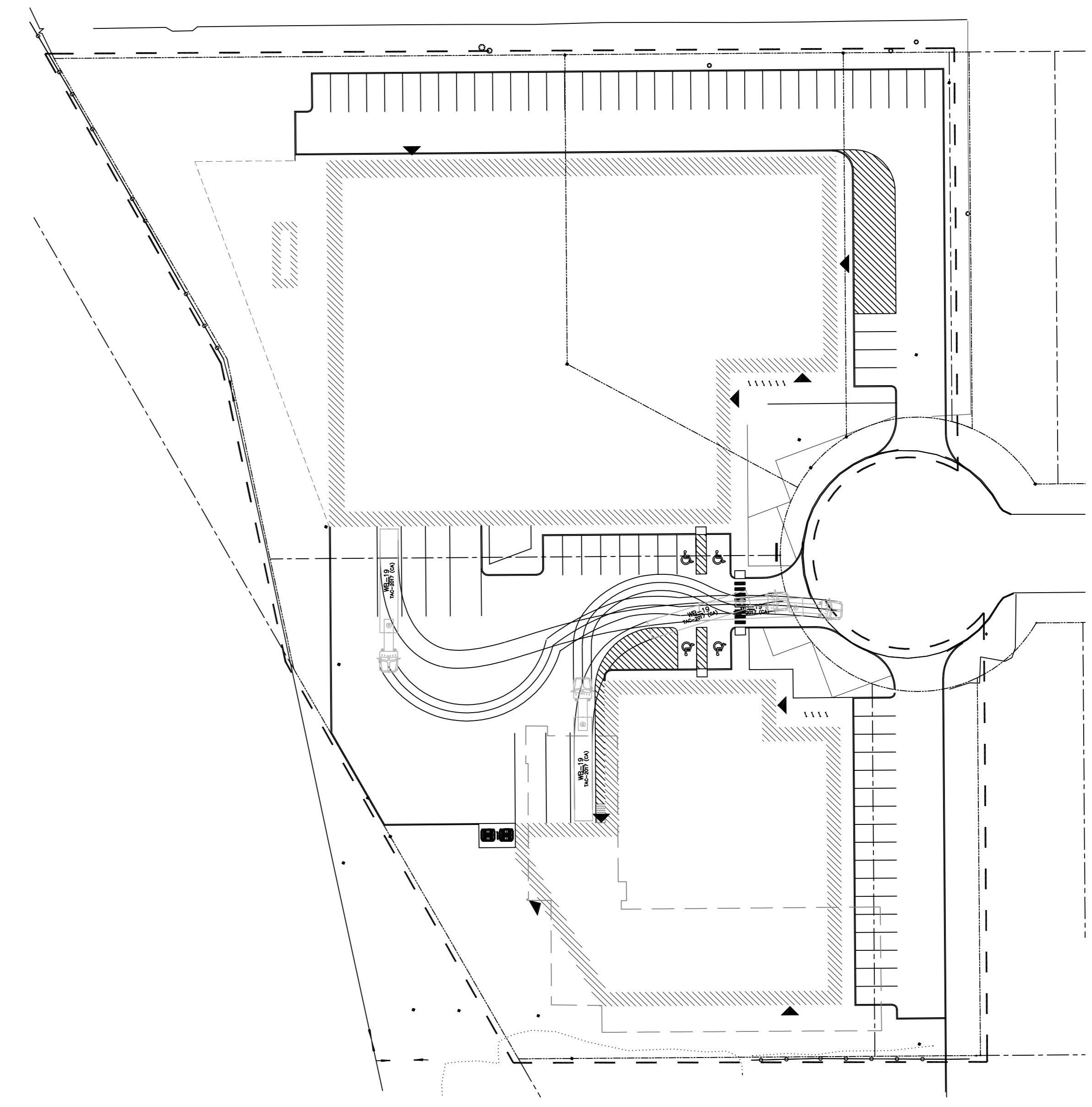
- TOPSOIL AND SOD
- PLANT BED
- CONCRETE SIDEWALK
- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- PAINTED LINES
- SNOW REMOVAL AREA
- TOPSOIL AND NATIVE GRASS SEED MIX
- TOPSOIL AND DEEP ROOTING GRASS SEED MIX
- TOPSOIL AND POLLINATOR SEED MIX
- 3/4" RIVER STONE MULCH
- 2-4" RIVER STONE MULCH
- PROPERTY LINE
- EASEMENT LINE
- BUILDING OVERHANG
- EXISTING CHAINLINK FENCE
- APPROXIMATE AREA OF WORK
- EXISTING CURB
- NEW CURB
- ACCESSIBLE PARKING STALL

KEYNOTES:

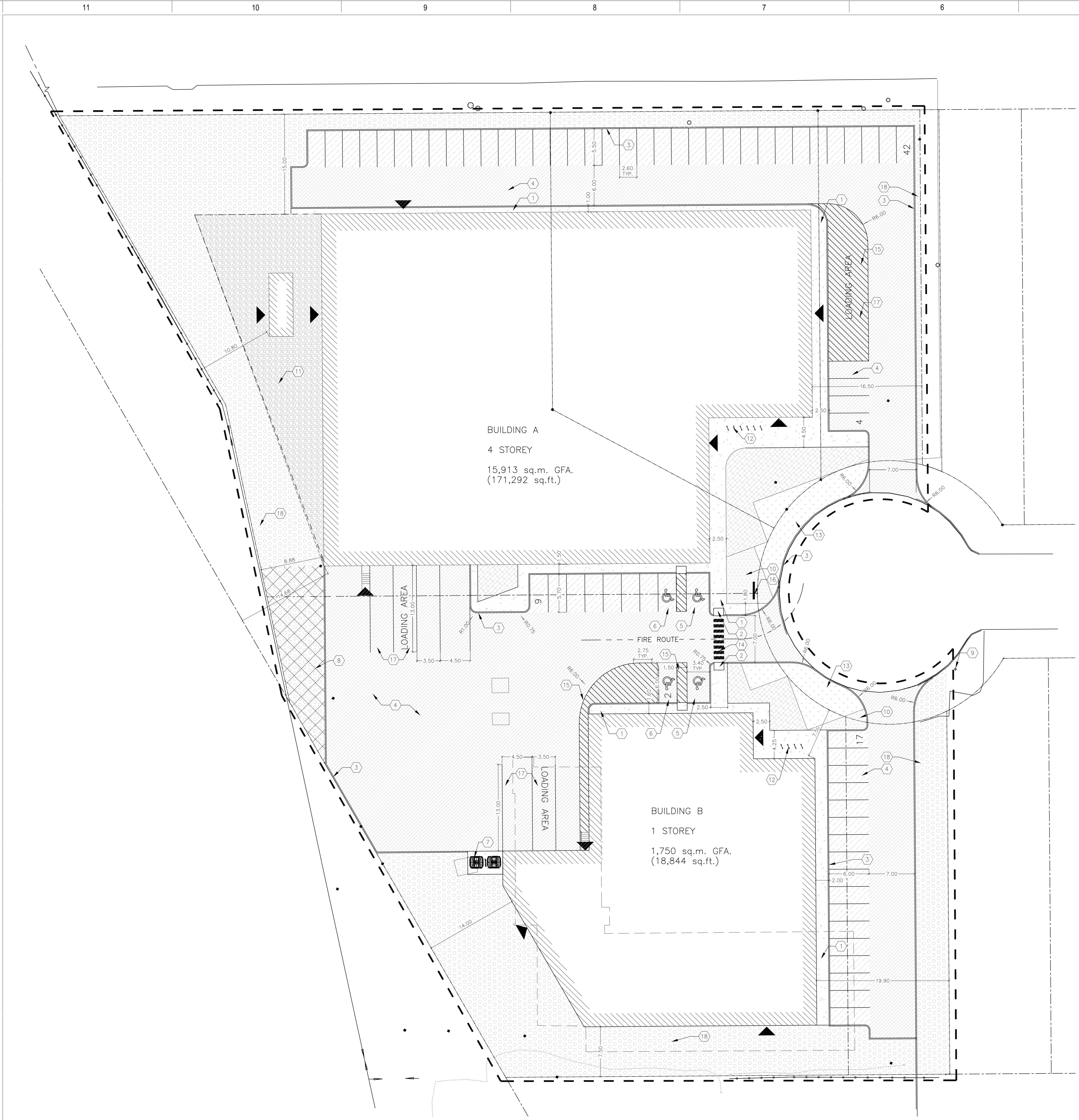
- CONCRETE SIDEWALK. REFER TO DETAIL 4/L300
- ACCESSIBLE RAMP WITH TACTILE WARNING SURFACE INDICATOR (TWSI) REFER TO DETAIL 5/L300
- 150mm HT CONCRETE CURB. REFER TO DETAIL 5/L300
- ASPHALT PARKING LOT. REFER TO CIVIL FOR DETAIL.
- TYPE A PARKING STALL
- TYPE B PARKING STALL
- PROPOSED GARBAGE ENCLOSURE. REFER TO DETAIL 11/L300
- SNOW REMOVAL STORAGE AREA
- EXISTING FIRE HYDRANT
- 3/4" RIVER STONE MULCH.
- 2-4" RIVER STONE MULCH.
- 316 STAINLESS STEEL BICYCLE RACKS. REFER TO DETAIL 10/L300
- SODDED AREA. REFER TO DETAIL 6/L300
- PAINTED CROSSWALK
- PAINTED ISLAND
- SIGNAGE
- LOADING SPACE
- SEEDED AREA. REFER TO DETAIL 6/L300

PARKING REQUIREMENTS:

- WAREHOUSE:  
 0.4 PER 100m<sup>2</sup> FOR THE FIRST 5000m<sup>2</sup> GROSS FLOOR AREA,  
 0.4 PER 100m<sup>2</sup> ABOVE 5000m<sup>2</sup> GROSS FLOOR AREA  
 = 71 SPACES
  - ACCESSIBLE PARKING REQ.:  
 1 TYPE A  
 2 TYPE B
- TOTAL PARKING PROVIDED:  
 74 SPACES PROVIDED  
 7 LOADING SPACES PROVIDED (3 REQ.)
- BICYCLE PARKING:  
 1 STALL PER 2000m<sup>2</sup> GROSS FLOOR AREA  
 10 SPACES PROVIDED (9 REQ.)



1 VEHICLE TURNING MOVEMENTS  
 L100 1:500



1 SITE PLAN  
 L100 1:250

1 VEHICLE TURNING MOVEMENTS  
 L100 1:500

# APPENDIX

## C SAMPLE CALCULATIONS

Point Sources

| Name                                       | ID              | Result, PWL |         |       | Lw / Li |           | Correction |       | Operating Time |       |           |       |      | K0  | Height<br>(m) | Coordinates |         |       |
|--|-----------------|-------------|---------|-------|---------|-----------|------------|-------|----------------|-------|-----------|-------|------|-----|---------------|-------------|---------|-------|
|  |                 | Day         | Evening | Night | Type    | Value     | norm.      | Day   | Evening        | Night | Day / Eve | Night | (dB) | X   |               | Y           | Z       |       |
|  |                 | (dBA)       | (dBA)   | (dBA) |         |           | dB(A)      | dB(A) | dB(A)          | dB(A) | (min)     | (min) | (dB) | (m) |               | (m)         | (m)     |       |
| HVAC10T Unit                               | SS_BLDA_HVAC_04 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441843      | 5025421 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_02 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441852.1    | 5025442 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_05 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441859.8    | 5025427 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_03 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441867.9    | 5025449 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_01 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441837.9    | 5025437 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_07 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441847.5    | 5025407 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_11 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441873.7    | 5025390 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_06 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441875.3    | 5025433 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_08 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441864.5    | 5025408 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_09 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441884.4    | 5025413 | 100.8 |
| HVAC10T Unit                               | SS_BLDB_HVAC_03 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441817.1    | 5025375 | 87.29 |
| HVAC10T Unit                               | SS_BLDA_HVAC_12 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441892.5    | 5025396 | 100.8 |
| HVAC10T Unit                               | SS_BLDA_HVAC_10 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441877.9    | 5025402 | 100.8 |
| HVAC10T Unit                               | SS_BLDB_HVAC_02 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441800.3    | 5025370 | 87.29 |
| HVAC10T Unit                               | SS_BLDB_HVAC_01 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  |            | 0     | 0              | 0     | 60        | 60    | 0    | 1.8 | g             | 441784      | 5025363 | 87.29 |
| Trailer unloading - Forklift               | IM_FKLF_03      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    |            | 0     | 0              | 0     | 60        | 0     | 0    | 1.8 | r             | 441796.2    | 5025397 | 79.79 |
| Trailer unloading - Forklift at Building A | IM_FKLF_02      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    |            | 0     | 0              | 0     | 60        | 0     | 0    | 1.8 | r             | 441898.6    | 5025390 | 79.18 |
| Trailer unloading - Forklift - Building A  | IM_FKLF_01      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    |            | 0     | 0              | 0     | 60        | 0     | 0    | 1.8 | r             | 441826.7    | 5025429 | 79.63 |
| Truck Idling at Loading Bay - Bldg B       | SS_TRKI_03      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE |            | 0     | 0              | 0     | 5         | 0     | 0    | 2.4 | r             | 441801.3    | 5025399 | 80.32 |
| Truck Idling at Loading Bay - Bldg A       | SS_TRKI_02      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE |            | 0     | 0              | 0     | 5         | 0     | 0    | 2.4 | r             | 441822.7    | 5025427 | 80.29 |
| Truck Idling at Loading Bay - Bldg A       | SS_TRKI_01      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE |            | 0     | 0              | 0     | 5         | 0     | 0    | 2.4 | r             | 441900      | 5025386 | 79.86 |

Line Sources

| Name                                      | ID         | Result. PWL |       | Result. PWL' |       | Lw / Li |          |         | Correction |         |       | K0   | Moving Pt. Src |       |        |
|---|------------|-------------|-------|--------------|-------|---------|----------|---------|------------|---------|-------|------|----------------|-------|--------|
|   |            | Day/ Eve    | Night | Day/ Eve     | Night | Type    | Value    | norm.   | Day        | Evening | Night |      | Number         |       | Speed  |
|   |            | (dBA)       | (dBA) | (dBA)        | (dBA) |         |          | (dB(A)) | dB(A)      | dB(A)   | dB(A) | (dB) | Day/ Eve       | Night | (km/h) |
| Truck Movement to Building B              | SS_TRKM_01 | 93.1        | -18.4 | 71.8         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0    | 14             | 0     | 15     |
| Truck Movement to Building A (South Side) | SS_TRKM_03 | 87.9        | -20.5 | 68.7         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0    | 7              | 0     | 15     |
| Truck Movement to Building A (North Side) | SS_TRKM_02 | 90.4        | -18.6 | 69.3         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0    | 8              | 0     | 15     |

Sound Power Spectra

| Name                  | ID        | Type | 1/3 Oktave Spectrum (dB) |      |       |       |       |      |      |      |      |      |       | Source |                   |
|-----------------------|-----------|------|--------------------------|------|-------|-------|-------|------|------|------|------|------|-------|--------|-------------------|
|                       |           |      | Weight.                  | 31.5 | 63    | 125   | 250   | 500  | 1000 | 2000 | 4000 | 8000 | A     |        | lin               |
| Large Trucks Delivery | HTFK_MOV  | Lw   |                          | 91   | 101   | 101   | 98    | 98   | 97   | 96   | 90   | 86   | 102.1 | 106.9  | WSP Database      |
| Large Trucks Idling   | HTFK_IDLE | Lw   |                          | 90   | 101   | 101   | 96    | 96   | 94   | 90   | 86   | 76   | 98.5  | 105.8  | WSP Database      |
| 10 Ton HVAC Unit      | York_10T  | Lw   | A                        |      |       | 73    | 74    | 75   | 72   | 66   | 60   | 50   | 79.9  | 90.3   | York KDB122 Specs |
| Forklift              | FL_imp    | Lw   |                          | 99.5 | 102.5 | 103.5 | 100.5 | 97.5 | 92.5 | 90.5 | 89.5 | 83.5 | 99.7  | 108.4  | WSP Database      |

Receptor Locations

| Name   | ID     | Level Lr |       | Limit. Value |       | Height<br>(m) | Coordinates |         |       |
|--------|--------|----------|-------|--------------|-------|---------------|-------------|---------|-------|
|        |        | Day/ Eve | Night | Day/ Eve     | Night |               | X           | Y       | Z     |
|        |        | (dBA)    | (dBA) | (dBA)        | (dBA) |               | (m)         | (m)     | (m)   |
| R01_PW | R01_PW | 36.1     | 31.6  | 50           | 45    | 5.5           | 442021.47   | 5025430 | 82.3  |
| R02_PW | R02_PW | 37       | 32.7  | 50           | 45    | 5.5           | 442032.89   | 5025402 | 82.57 |
| R03_PW | R03_PW | 39.3     | 33.1  | 50           | 45    | 5.5           | 442044.57   | 5025373 | 83.44 |
| R04_PW | R04_PW | 40.5     | 32.6  | 50           | 45    | 5.5           | 442055.72   | 5025346 | 84.42 |
| R05_PW | R05_PW | 39.5     | 31.3  | 50           | 45    | 4.5           | 442056.59   | 5025292 | 84.6  |
| R06_PW | R06_PW | 39.4     | 31.4  | 50           | 45    | 4.5           | 441995.84   | 5025252 | 84.93 |
| R07_PW | R07_PW | 35.6     | 31.8  | 50           | 45    | 4.5           | 441965.54   | 5025236 | 85.36 |
| R08_PW | R08_PW | 40.3     | 32.2  | 50           | 45    | 4.5           | 441912.73   | 5025204 | 85.5  |
| R09_PW | R09_PW | 29.7     | 28.9  | 50           | 45    | 4.5           | 441844.9    | 5025162 | 85.5  |

Sample CADNA/A Calculation at Receptor

Receiver  
 Name: R01\_PW  
 ID: R01\_PW  
 X: 442021.47 m  
 Y: 5025429.82 m  
 Z: 82.30 m

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg A", ID: "SS_TRKI_01" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 1  | 441899.98 | 5025386.19 | 79.86 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 53.2 | 0.7  | -3.0 | 0.0  | 0.0   | 5.5  | 0.0  | 0.0  | 31.3  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_12" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2  | 441892.47 | 5025396.01 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.6 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.7  |
| 2  | 441892.47 | 5025396.01 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.6 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.7  |
| 3  | 441892.47 | 5025396.01 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 14.7  |
| 3  | 441892.47 | 5025396.01 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 14.7  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_09" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 4  | 441884.39 | 5025413.28 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.9 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.5  |
| 4  | 441884.39 | 5025413.28 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.9 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.5  |
| 6  | 441884.39 | 5025413.28 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 13.2 | 0.0  | 2.0  | 9.0   |
| 6  | 441884.39 | 5025413.28 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 13.2 | 0.0  | 2.0  | 9.0   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_06" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 8  | 441875.30 | 5025432.72 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.1  | 0.0  | 0.0  | 20.1  |
| 8  | 441875.30 | 5025432.72 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.1  | 0.0  | 0.0  | 20.1  |
| 13   | 441875.30 | 5025432.72 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.3 | 0.5  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 12.5  |
| 13   | 441875.30 | 5025432.72 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.3 | 0.5  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 12.5  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_10" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 20   | 441877.90 | 5025401.89 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 0.0  | 19.8  |
| 20   | 441877.90 | 5025401.89 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 0.0  | 19.8  |
| 26   | 441877.90 | 5025401.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 15.4  |
| 26   | 441877.90 | 5025401.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 15.4  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_11" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 30   | 441873.70 | 5025389.67 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.8 | 0.3  | -3.0 | 0.0  | 0.0   | 8.8  | 0.0  | 0.0  | 19.0  |
| 30   | 441873.70 | 5025389.67 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.8 | 0.3  | -3.0 | 0.0  | 0.0   | 8.8  | 0.0  | 0.0  | 19.0  |
| 33   | 441873.70 | 5025389.67 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 2.0  | 16.1  |
| 33   | 441873.70 | 5025389.67 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 2.0  | 16.1  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_03" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 49   | 441867.85 | 5025448.56 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.9 | 0.3  | -3.0 | 0.0  | 0.0   | 7.8  | 0.0  | 0.0  | 19.9  |
| 49   | 441867.85 | 5025448.56 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.9 | 0.3  | -3.0 | 0.0  | 0.0   | 7.8  | 0.0  | 0.0  | 19.9  |
| 69   | 441867.85 | 5025448.56 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.5 | 0.5  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 12.5  |
| 69   | 441867.85 | 5025448.56 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.5 | 0.5  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 12.5  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_08" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 79   | 441864.45 | 5025407.53 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.1 | 0.3  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 18.8  |



| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_08" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 79   | 441864.45 | 5025407.53 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.1 | 0.3  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 18.8  |
| 87   | 441864.45 | 5025407.53 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 13.4  |
| 87   | 441864.45 | 5025407.53 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 13.4  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_05" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 95   | 441859.79 | 5025426.88 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.2 | 0.3  | -3.0 | 0.0  | 0.0   | 8.5  | 0.0  | 0.0  | 18.8  |
| 95   | 441859.79 | 5025426.88 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.2 | 0.3  | -3.0 | 0.0  | 0.0   | 8.5  | 0.0  | 0.0  | 18.8  |
| 103  | 441859.79 | 5025426.88 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.7 | 0.5  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 13.2  |
| 103  | 441859.79 | 5025426.88 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.7 | 0.5  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 13.2  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_02" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 106  | 441852.11 | 5025442.31 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 18.6  |
| 106  | 441852.11 | 5025442.31 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 18.6  |
| 127  | 441852.11 | 5025442.31 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.9 | 0.5  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 13.2  |
| 127  | 441852.11 | 5025442.31 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.9 | 0.5  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 13.2  |
| 135  | 441852.11 | 5025442.31 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.0 | 0.4  | -3.0 | 0.0  | 0.0   | 8.2  | 0.0  | 2.0  | 16.3  |
| 135  | 441852.11 | 5025442.31 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.0 | 0.4  | -3.0 | 0.0  | 0.0   | 8.2  | 0.0  | 2.0  | 16.3  |

| Line Source, ISO 9613, Name: "Truck Movement to Building A (South Side)", ID: "SS_TRKM_03" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 142  | 441865.03 | 5025374.61 | 79.81 | 0     | D   | A     | 68.7  | 0.7  | 0.0    | 0.0  | 0.0  | 55.4 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 11.1  |
| 144  | 441869.55 | 5025376.50 | 79.81 | 0     | D   | A     | 68.7  | 9.4  | 0.0    | 0.0  | 0.0  | 55.1 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 20.1  |
| 146  | 441874.44 | 5025378.55 | 79.81 | 0     | D   | A     | 68.7  | 2.9  | 0.0    | 0.0  | 0.0  | 54.8 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 13.9  |
| 157  | 441876.59 | 5025379.45 | 79.81 | 0     | D   | A     | 68.7  | 4.3  | 0.0    | 0.0  | 0.0  | 54.7 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 15.5  |
| 164  | 441879.74 | 5025380.77 | 79.81 | 0     | D   | A     | 68.7  | 6.2  | 0.0    | 0.0  | 0.0  | 54.5 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 17.5  |
| 177  | 441883.98 | 5025382.55 | 79.81 | 0     | D   | A     | 68.7  | 7.1  | 0.0    | 0.0  | 0.0  | 54.3 | 1.0  | -3.0 | 0.0  | 0.0   | 4.9  | 0.0  | 0.0  | 18.6  |
| 180  | 441888.36 | 5025384.38 | 79.81 | 0     | D   | A     | 68.7  | 6.5  | 0.0    | 0.0  | 0.0  | 54.0 | 1.0  | -3.0 | 0.0  | 0.0   | 5.0  | 0.0  | 0.0  | 18.2  |
| 188  | 441892.00 | 5025385.90 | 79.80 | 0     | D   | A     | 68.7  | 5.4  | 0.0    | 0.0  | 0.0  | 53.7 | 1.0  | -3.0 | 0.0  | 0.0   | 5.2  | 0.0  | 0.0  | 17.2  |
| 191  | 441894.64 | 5025387.01 | 79.80 | 0     | D   | A     | 68.7  | 3.6  | 0.0    | 0.0  | 0.0  | 53.5 | 1.0  | -3.0 | 0.0  | 0.0   | 5.4  | 0.0  | 0.0  | 15.4  |
| 192  | 441896.84 | 5025387.93 | 79.80 | 0     | D   | A     | 68.7  | 4.0  | 0.0    | 0.0  | 0.0  | 53.4 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 15.8  |
| 206  | 441898.96 | 5025388.82 | 79.80 | 0     | D   | A     | 68.7  | 3.3  | 0.0    | 0.0  | 0.0  | 53.2 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 15.1  |
| 215  | 441865.84 | 5025374.95 | 79.81 | 1     | D   | A     | 68.7  | 4.6  | 0.0    | 0.0  | 0.0  | 55.4 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.3 | -2.2  |
| 233  | 441867.87 | 5025375.80 | 79.81 | 1     | D   | A     | 68.7  | 1.8  | 0.0    | 0.0  | 0.0  | 55.3 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.3 | -4.9  |
| 239  | 441869.21 | 5025376.36 | 79.81 | 1     | D   | A     | 68.7  | 1.5  | 0.0    | 0.0  | 0.0  | 55.2 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.2 | -5.1  |
| 242  | 441871.24 | 5025377.21 | 79.81 | 1     | D   | A     | 68.7  | 4.7  | 0.0    | 0.0  | 0.0  | 55.1 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.2 | -1.7  |
| 245  | 441873.10 | 5025377.99 | 79.81 | 1     | D   | A     | 68.7  | 0.3  | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -6.0  |
| 247  | 441874.14 | 5025378.42 | 79.81 | 1     | D   | A     | 68.7  | 0.8  | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -5.4  |
| 260  | 441875.48 | 5025378.99 | 79.81 | 1     | D   | A     | 68.7  | 2.4  | 0.0    | 0.0  | 0.0  | 54.8 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -3.7  |
| 279  | 441876.48 | 5025379.40 | 79.81 | 1     | D   | A     | 68.7  | -3.6 | 0.0    | 0.0  | 0.0  | 54.7 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -9.5  |
| 365  | 441893.57 | 5025377.59 | 79.97 | 0     | D   | A     | 68.7  | 13.2 | 0.0    | 0.0  | 0.0  | 53.8 | 1.0  | -3.0 | 0.0  | 0.0   | 5.0  | 0.0  | 0.0  | 25.2  |
| 370  | 441876.93 | 5025370.50 | 79.96 | 0     | D   | A     | 68.7  | 11.8 | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 22.8  |
| 2972   | 441900.19 | 5025388.66 | 79.82 | 0     | D   | A     | 68.7  | 0.9  | 0.0    | 0.0  | 0.0  | 53.2 | 0.9  | -3.0 | 0.0  | 0.0   | 5.9  | 0.0  | 0.0  | 12.7  |
| 2980   | 441900.67 | 5025387.59 | 79.84 | 0     | D   | A     | 68.7  | 0.5  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 12.3  |
| 2988   | 441901.11 | 5025386.60 | 79.86 | 0     | D   | A     | 68.7  | 0.2  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 12.1  |
| 2996   | 441901.57 | 5025385.57 | 79.89 | 0     | D   | A     | 68.7  | 0.8  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.7  |
| 3003   | 441902.02 | 5025384.55 | 79.91 | 0     | D   | A     | 68.7  | 0.1  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.1  |
| 3011   | 441902.44 | 5025383.61 | 79.94 | 0     | D   | A     | 68.7  | 0.1  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.2  |
| 3018   | 441902.87 | 5025382.64 | 79.96 | 0     | D   | A     | 68.7  | 0.3  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 12.4  |
| 3026   | 441903.18 | 5025381.94 | 79.98 | 0     | D   | A     | 68.7  | -3.3 | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 8.8   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_07" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 342  | 441847.54 | 5025406.88 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 0.0  | 17.5  |
| 342  | 441847.54 | 5025406.88 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 0.0  | 17.5  |
| 345  | 441847.54 | 5025406.88 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.8 | 0.4  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 14.3  |
| 345  | 441847.54 | 5025406.88 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.8 | 0.4  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 14.3  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_04" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 377  | 441842.99 | 5025420.89 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.9  | 0.0  | 0.0  | 17.5  |
| 377  | 441842.99 | 5025420.89 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.9  | 0.0  | 0.0  | 17.5  |
| 380  | 441842.99 | 5025420.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.0 | 0.4  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 14.1  |
| 380  | 441842.99 | 5025420.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.0 | 0.4  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 14.1  |
| 387  | 441842.99 | 5025420.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 2.0  | 15.0  |
| 387  | 441842.99 | 5025420.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 2.0  | 15.0  |

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 398   | 441841.13 | 5025376.10 | 79.72 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -5.5  |
| 405   | 441840.57 | 5025377.55 | 79.73 | 0     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -3.1  |
| 416   | 441840.03 | 5025378.97 | 79.74 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -6.0  |
| 432   | 441839.66 | 5025379.94 | 79.75 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -6.1  |
| 455   | 441839.28 | 5025380.94 | 79.75 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -5.9  |
| 466   | 441838.87 | 5025382.01 | 79.76 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -5.7  |
| 476   | 441838.45 | 5025383.09 | 79.77 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -5.9  |
| 482   | 441838.03 | 5025384.18 | 79.77 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -5.9  |
| 488   | 441837.40 | 5025385.83 | 79.78 | 0     | D   | A     | 71.8  | 3.7  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -3.1  |
| 494   | 441836.79 | 5025387.41 | 79.79 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.7  |
| 500   | 441836.42 | 5025388.39 | 79.80 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.7  |
| 512   | 441836.04 | 5025389.38 | 79.80 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.6  |
| 518   | 441835.65 | 5025390.39 | 79.81 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.7  |
| 527   | 441835.24 | 5025391.47 | 79.82 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.1  |
| 534   | 441834.81 | 5025392.58 | 79.82 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.7  |
| 545   | 441834.42 | 5025393.60 | 79.83 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.9  |
| 557   | 441834.01 | 5025394.66 | 79.83 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.5  |
| 563   | 441833.61 | 5025395.72 | 79.84 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.0  |
| 570   | 441833.18 | 5025396.83 | 79.85 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.2  |
| 580   | 441832.75 | 5025397.96 | 79.85 | 0     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.0  |
| 599   | 441832.35 | 5025399.00 | 79.86 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.9  |
| 611   | 441831.88 | 5025400.22 | 79.87 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -5.7  |
| 616   | 441831.36 | 5025401.57 | 79.88 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.1  |
| 624   | 441830.89 | 5025402.80 | 79.88 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.6  |
| 648   | 441830.48 | 5025403.89 | 79.89 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.3  |
| 658   | 441830.07 | 5025404.94 | 79.90 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.9  |
| 668   | 441829.66 | 5025406.01 | 79.90 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.2  |
| 674   | 441829.24 | 5025407.10 | 79.91 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.8  |
| 702   | 441828.84 | 5025408.16 | 79.92 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 713   | 441828.44 | 5025409.19 | 79.92 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.1  |
| 721   | 441828.14 | 5025409.98 | 79.93 | 0     | D   | A     | 71.8  | -2.7 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.4 |
| 741   | 441839.42 | 5025380.56 | 79.75 | 1     | D   | A     | 71.8  | 3.7  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -7.7  |
| 744   | 441838.79 | 5025382.21 | 79.76 | 1     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.5 |
| 751   | 441838.37 | 5025383.30 | 79.77 | 1     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.9 |
| 758   | 441837.98 | 5025384.32 | 79.77 | 1     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -11.1 |
| 773   | 441837.59 | 5025385.35 | 79.78 | 1     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.8 |
| 782   | 441837.16 | 5025386.45 | 79.79 | 1     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.5 |
| 793   | 441836.64 | 5025387.81 | 79.79 | 1     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -9.1  |
| 848   | 441839.09 | 5025381.43 | 79.76 | 1     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 24.8 | 0.0  | 4.0  | -10.9 |
| 2070  | 441827.35 | 5025409.97 | 79.94 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.1  |
| 2079  | 441825.25 | 5025409.17 | 79.97 | 0     | D   | A     | 71.8  | 4.8  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -3.0  |
| 2088  | 441823.18 | 5025408.39 | 80.00 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.5  |
| 2098  | 441821.40 | 5025407.71 | 80.03 | 0     | D   | A     | 71.8  | 3.8  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -4.1  |
| 2107  | 441819.36 | 5025406.93 | 80.06 | 0     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -5.1  |
| 2115  | 441817.57 | 5025406.25 | 80.08 | 0     | D   | A     | 71.8  | 2.7  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -5.4  |
| 2125  | 441816.18 | 5025405.73 | 80.10 | 0     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 57.3 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.7  |
| 2133  | 441815.12 | 5025405.33 | 80.12 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.5  |
| 2142  | 441813.82 | 5025404.83 | 80.14 | 0     | D   | A     | 71.8  | 2.1  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.1  |
| 2152  | 441812.16 | 5025404.20 | 80.16 | 0     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -5.3  |
| 2162  | 441810.63 | 5025403.62 | 80.19 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.0  |
| 2172  | 441809.21 | 5025403.08 | 80.21 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -5.9  |
| 2181  | 441807.46 | 5025402.41 | 80.23 | 0     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -5.3  |
| 2190  | 441805.89 | 5025401.82 | 80.26 | 0     | D   | A     | 71.8  | 1.3  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -7.1  |
| 2200  | 441804.46 | 5025401.28 | 80.28 | 0     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.1  |

Sample CADNA/A Calculation at Receptor

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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)  |
| 2209  | 441802.99 | 5025400.72 | 80.30 | 0     | D   | A     | 71.8  | 1.6  | 0.0    | 0.0  | 0.0  | 57.9 | 1.4  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.8  |
| 2219  | 441801.04 | 5025399.98 | 80.33 | 0     | D   | A     | 71.8  | 4.3  | 0.0    | 0.0  | 0.0  | 57.9 | 1.5  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -3.9  |
| 2228  | 441798.96 | 5025399.19 | 80.36 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.7  |
| 2254  | 441806.84 | 5025402.18 | 80.24 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 58.7 | 1.6  | -3.1 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -10.4 |
| 2269  | 441804.13 | 5025401.15 | 80.28 | 1     | D   | A     | 71.8  | 3.4  | 0.0    | 0.0  | 0.0  | 58.6 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -8.9  |
| 2277  | 441802.49 | 5025400.52 | 80.31 | 1     | D   | A     | 71.8  | 1.3  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -10.6 |
| 2295  | 441800.15 | 5025399.64 | 80.34 | 1     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -10.4 |
| 2304  | 441798.91 | 5025399.17 | 80.36 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -10.7 |
| 2328  | 441826.64 | 5025400.79 | 79.91 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.2  |
| 2338  | 441827.06 | 5025399.67 | 79.91 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.6  |
| 2349  | 441827.51 | 5025398.48 | 79.90 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.5  |
| 2360  | 441827.92 | 5025397.38 | 79.90 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.2  |
| 2369  | 441828.32 | 5025396.32 | 79.90 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.8  |
| 2379  | 441828.70 | 5025395.29 | 79.89 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.4  |
| 2388  | 441829.10 | 5025394.23 | 79.89 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.4  |
| 2398  | 441829.50 | 5025393.16 | 79.88 | 0     | D   | A     | 71.8  | 0.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -7.2  |
| 2408  | 441829.91 | 5025392.06 | 79.88 | 0     | D   | A     | 71.8  | 1.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.2  |
| 2417  | 441830.35 | 5025390.88 | 79.87 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.4  |
| 2428  | 441830.75 | 5025389.81 | 79.87 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -7.0  |
| 2438  | 441831.11 | 5025388.84 | 79.86 | 0     | D   | A     | 71.8  | 0.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -7.1  |
| 2448  | 441831.50 | 5025387.80 | 79.86 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.3  |
| 2456  | 441831.92 | 5025386.67 | 79.85 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -6.3  |
| 2466  | 441832.43 | 5025385.30 | 79.85 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -4.6  |
| 2477  | 441832.96 | 5025383.88 | 79.84 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -5.7  |
| 2487  | 441833.38 | 5025382.77 | 79.84 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -6.4  |
| 2497  | 441833.74 | 5025381.80 | 79.83 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -6.6  |
| 2507  | 441834.13 | 5025380.77 | 79.83 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -5.8  |
| 2516  | 441834.54 | 5025379.67 | 79.82 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -5.8  |
| 2525  | 441834.92 | 5025378.63 | 79.82 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -6.1  |
| 2534  | 441835.29 | 5025377.64 | 79.81 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -6.0  |
| 2543  | 441835.72 | 5025376.49 | 79.81 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -4.8  |
| 2551  | 441836.16 | 5025375.32 | 79.80 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -5.6  |
| 2561  | 441836.54 | 5025374.32 | 79.80 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -6.1  |
| 2572  | 441836.90 | 5025373.35 | 79.80 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -5.8  |
| 2582  | 441837.18 | 5025372.60 | 79.79 | 0     | D   | A     | 71.8  | -2.5 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.7 | 0.0  | 0.0  | -8.4  |
| 2596  | 441832.67 | 5025384.65 | 79.84 | 1     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.4 |
| 2603  | 441833.09 | 5025383.55 | 79.84 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.8  |
| 2612  | 441833.58 | 5025382.23 | 79.83 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -8.8  |
| 2621  | 441834.06 | 5025380.94 | 79.83 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.0 |
| 2630  | 441834.48 | 5025379.83 | 79.82 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.0 |
| 2636  | 441834.95 | 5025378.56 | 79.82 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -8.9  |
| 2644  | 441835.44 | 5025377.25 | 79.81 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.7  |
| 2663  | 441836.22 | 5025375.17 | 79.80 | 1     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 2.6  | -10.5 |
| 2681  | 441837.00 | 5025373.08 | 79.80 | 1     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 2.8  | -11.0 |
| 2783  | 441801.58 | 5025391.92 | 80.22 | 0     | D   | A     | 71.8  | 1.6  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 2792  | 441802.97 | 5025392.44 | 80.20 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 57.9 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.3  |
| 2800  | 441804.23 | 5025392.92 | 80.18 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.9 | 1.4  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.3  |
| 2810  | 441806.52 | 5025393.78 | 80.16 | 0     | D   | A     | 71.8  | 5.7  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -3.3  |
| 2819  | 441808.81 | 5025394.65 | 80.13 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -8.3  |
| 2829  | 441810.22 | 5025395.18 | 80.11 | 0     | D   | A     | 71.8  | 2.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.2  |
| 2838  | 441811.86 | 5025395.80 | 80.09 | 0     | D   | A     | 71.8  | 2.2  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.6  |
| 2846  | 441813.32 | 5025396.36 | 80.08 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.3  |
| 2854  | 441814.71 | 5025396.88 | 80.06 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.3  |
| 2863  | 441816.65 | 5025397.61 | 80.04 | 0     | D   | A     | 71.8  | 4.3  | 0.0    | 0.0  | 0.0  | 57.3 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -3.7  |
| 2871  | 441819.55 | 5025398.71 | 80.00 | 0     | D   | A     | 71.8  | 5.5  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -2.4  |
| 2880  | 441822.63 | 5025399.88 | 79.96 | 0     | D   | A     | 71.8  | 4.8  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -3.0  |
| 2889  | 441824.84 | 5025400.71 | 79.94 | 0     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -5.4  |
| 2897  | 441826.04 | 5025401.17 | 79.92 | 0     | D   | A     | 71.8  | -0.6 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.3  |
| 2905  | 441801.71 | 5025391.97 | 80.22 | 1     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -9.2  |
| 2910  | 441803.36 | 5025392.59 | 80.20 | 1     | D   | A     | 71.8  | 2.5  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -9.2  |
| 2916  | 441805.12 | 5025393.26 | 80.17 | 1     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -8.9  |
| 2923  | 441806.96 | 5025393.95 | 80.15 | 1     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -9.0  |
| 2931  | 441808.53 | 5025394.54 | 80.13 | 1     | D   | A     | 71.8  | 1.5  | 0.0    | 0.0  | 0.0  | 58.6 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -10.8 |

Sample CADNA/A Calculation at Receptor

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 3034  | 441798.01 | 5025398.09 | 80.36 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.8  |
| 3043  | 441798.61 | 5025396.75 | 80.34 | 0     | D   | A     | 71.8  | 2.0  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.2  |
| 3051  | 441799.24 | 5025395.36 | 80.31 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 3060  | 441799.76 | 5025394.19 | 80.28 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.8  |
| 3068  | 441800.25 | 5025393.10 | 80.26 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.9  |
| 3075  | 441800.71 | 5025392.08 | 80.23 | 0     | D   | A     | 71.8  | -0.4 | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 3092  | 441798.43 | 5025397.16 | 80.34 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -10.7 |
| 3100  | 441798.92 | 5025396.06 | 80.32 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -11.0 |
| 3108  | 441799.48 | 5025394.83 | 80.29 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -9.8  |
| 3123  | 441800.47 | 5025392.61 | 80.25 | 1     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -11.0 |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_01" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 892  | 441837.92 | 5025436.51 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 17.4  |
| 892  | 441837.92 | 5025436.51 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 17.4  |
| 895  | 441837.92 | 5025436.51 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 14.0  |
| 895  | 441837.92 | 5025436.51 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 14.0  |
| 907  | 441837.92 | 5025436.51 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.6  | 0.0  | 2.0  | 15.3  |
| 907  | 441837.92 | 5025436.51 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.6  | 0.0  | 2.0  | 15.3  |

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg A", ID: "SS_TRKI_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 913  | 441822.65 | 5025426.57 | 80.29 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 57.0 | 1.0  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | 8.4   |

| Line Source, ISO 9613, Name: "Truck Movement to Building A (North Side)", ID: "SS_TRKM_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 921  | 441819.30 | 5025425.80 | 80.37 | 0     | D   | A     | 69.3  | 2.0 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.6  |
| 930  | 441819.95 | 5025424.19 | 80.35 | 0     | D   | A     | 69.3  | 2.7 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.8  |
| 935  | 441820.49 | 5025422.83 | 80.33 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 941  | 441820.88 | 5025421.86 | 80.32 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.3 |
| 951  | 441821.27 | 5025420.88 | 80.31 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 961  | 441821.93 | 5025419.23 | 80.29 | 0     | D   | A     | 69.3  | 4.0 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -6.5  |
| 974  | 441822.60 | 5025417.56 | 80.27 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.1 |
| 982  | 441823.05 | 5025416.43 | 80.25 | 0     | D   | A     | 69.3  | 1.3 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.1  |
| 991  | 441823.52 | 5025415.28 | 80.24 | 0     | D   | A     | 69.3  | 0.5 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.9  |
| 998  | 441824.07 | 5025413.90 | 80.22 | 0     | D   | A     | 69.3  | 2.6 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.7  |
| 1005   | 441824.61 | 5025412.54 | 80.20 | 0     | D   | A     | 69.3  | 0.4 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.9  |
| 1017   | 441825.04 | 5025411.48 | 80.19 | 0     | D   | A     | 69.3  | 0.8 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 1027   | 441825.52 | 5025410.27 | 80.18 | 0     | D   | A     | 69.3  | 1.5 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.8  |
| 1038   | 441825.97 | 5025409.15 | 80.16 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.2 |
| 1045   | 441826.40 | 5025408.10 | 80.15 | 0     | D   | A     | 69.3  | 0.9 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.3  |
| 1056   | 441826.82 | 5025407.04 | 80.14 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.1 |
| 1070   | 441827.21 | 5025406.06 | 80.12 | 0     | D   | A     | 69.3  | 0.4 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.8  |
| 1081   | 441827.62 | 5025405.04 | 80.11 | 0     | D   | A     | 69.3  | 0.5 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1091   | 441828.12 | 5025403.80 | 80.10 | 0     | D   | A     | 69.3  | 2.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -8.1  |
| 1101   | 441828.65 | 5025402.48 | 80.08 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.0  |
| 1108   | 441829.13 | 5025401.28 | 80.07 | 0     | D   | A     | 69.3  | 1.3 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -8.7  |
| 1117   | 441829.61 | 5025400.07 | 80.05 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.0  |
| 1127   | 441830.08 | 5025398.90 | 80.04 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.9  |
| 1137   | 441830.52 | 5025397.81 | 80.02 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.6  |
| 1143   | 441830.94 | 5025396.77 | 80.01 | 0     | D   | A     | 69.3  | 0.7 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.2  |
| 1150   | 441831.34 | 5025395.77 | 80.00 | 0     | D   | A     | 69.3  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.8  |
| 1157   | 441831.76 | 5025394.72 | 79.99 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -8.8  |
| 1167   | 441832.18 | 5025393.67 | 79.97 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.6  |
| 1178   | 441832.61 | 5025392.60 | 79.96 | 0     | D   | A     | 69.3  | 1.1 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.6  |
| 1193   | 441833.08 | 5025391.43 | 79.95 | 0     | D   | A     | 69.3  | 0.9 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.7  |
| 1203   | 441833.50 | 5025390.39 | 79.93 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.4  |
| 1213   | 441833.88 | 5025389.44 | 79.92 | 0     | D   | A     | 69.3  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.4  |
| 1222   | 441834.29 | 5025388.42 | 79.91 | 0     | D   | A     | 69.3  | 0.8 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -8.7  |
| 1233   | 441834.73 | 5025387.31 | 79.89 | 0     | D   | A     | 69.3  | 0.7 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -8.6  |
| 1243   | 441835.27 | 5025385.97 | 79.88 | 0     | D   | A     | 69.3  | 2.3 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -7.0  |

| Line Source, ISO 9613, Name: "Truck Movement to Building A (North Side)", ID: "SS_TRKM_02" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 1252   | 441835.82 | 5025384.58 | 79.86 | 0     | D   | A     | 69.3  | 1.1  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -8.1  |
| 1260   | 441836.26 | 5025383.49 | 79.85 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.8  |
| 1269   | 441836.68 | 5025382.44 | 79.83 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.2  |
| 1276   | 441837.11 | 5025381.36 | 79.82 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -8.3  |
| 1286   | 441837.59 | 5025380.17 | 79.81 | 0     | D   | A     | 69.3  | 1.6  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -7.3  |
| 1296   | 441838.06 | 5025378.99 | 79.79 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.2  |
| 1306   | 441838.62 | 5025377.60 | 79.78 | 0     | D   | A     | 69.3  | 2.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -5.8  |
| 1315   | 441839.18 | 5025376.20 | 79.76 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -8.0  |
| 1325   | 441839.56 | 5025375.27 | 79.75 | 0     | D   | A     | 69.3  | -0.4 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -8.9  |
| 1497   | 441838.08 | 5025374.47 | 79.77 | 0     | D   | A     | 69.3  | 1.9  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -6.5  |
| 1506   | 441837.61 | 5025375.73 | 79.79 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -8.0  |
| 1516   | 441837.17 | 5025376.91 | 79.80 | 0     | D   | A     | 69.3  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -7.3  |
| 1525   | 441836.75 | 5025378.04 | 79.82 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.4  |
| 1534   | 441836.38 | 5025379.03 | 79.83 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.5  |
| 1543   | 441836.00 | 5025380.06 | 79.84 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -8.3  |
| 1552   | 441835.59 | 5025381.15 | 79.85 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -8.2  |
| 1562   | 441835.18 | 5025382.25 | 79.87 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.3  |
| 1571   | 441834.76 | 5025383.36 | 79.88 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -8.4  |
| 1581   | 441834.13 | 5025385.05 | 79.90 | 0     | D   | A     | 69.3  | 3.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -5.5  |
| 1589   | 441833.53 | 5025386.66 | 79.92 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -9.2  |
| 1597   | 441833.16 | 5025387.66 | 79.93 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -9.2  |
| 1608   | 441832.78 | 5025388.67 | 79.94 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -9.1  |
| 1617   | 441832.40 | 5025389.70 | 79.95 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.2  |
| 1626   | 441831.99 | 5025390.80 | 79.97 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -8.6  |
| 1635   | 441831.57 | 5025391.93 | 79.98 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.1  |
| 1645   | 441831.18 | 5025392.97 | 79.99 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.3  |
| 1656   | 441830.77 | 5025394.05 | 80.00 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.9  |
| 1667   | 441830.37 | 5025395.13 | 80.02 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.5  |
| 1677   | 441829.95 | 5025396.26 | 80.03 | 0     | D   | A     | 69.3  | 1.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -8.6  |
| 1687   | 441829.52 | 5025397.41 | 80.04 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.4  |
| 1697   | 441829.13 | 5025398.47 | 80.06 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.4  |
| 1707   | 441828.66 | 5025399.72 | 80.07 | 0     | D   | A     | 69.3  | 1.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.2  |
| 1717   | 441828.15 | 5025401.09 | 80.09 | 0     | D   | A     | 69.3  | 1.5  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.6  |
| 1726   | 441827.68 | 5025402.35 | 80.10 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.1  |
| 1735   | 441827.27 | 5025403.45 | 80.11 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1744   | 441826.87 | 5025404.53 | 80.13 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.4  |
| 1752   | 441826.46 | 5025405.62 | 80.14 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1760   | 441826.05 | 5025406.73 | 80.15 | 0     | D   | A     | 69.3  | 0.9  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.3  |
| 1769   | 441825.64 | 5025407.80 | 80.17 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.0 |
| 1778   | 441825.25 | 5025408.85 | 80.18 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.6  |
| 1788   | 441824.85 | 5025409.93 | 80.19 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.8  |
| 1797   | 441824.48 | 5025410.93 | 80.20 | 0     | D   | A     | 69.3  | 0.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.3 |
| 1806   | 441824.07 | 5025412.02 | 80.22 | 0     | D   | A     | 69.3  | 1.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.1  |
| 1815   | 441823.53 | 5025413.46 | 80.23 | 0     | D   | A     | 69.3  | 2.5  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.9  |
| 1824   | 441823.01 | 5025414.87 | 80.25 | 0     | D   | A     | 69.3  | 0.9  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 1833   | 441822.50 | 5025416.23 | 80.26 | 0     | D   | A     | 69.3  | 2.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.2  |
| 1842   | 441822.02 | 5025417.52 | 80.28 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.2 |
| 1853   | 441821.48 | 5025418.97 | 80.30 | 0     | D   | A     | 69.3  | 3.0  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.5  |
| 1862   | 441820.86 | 5025420.63 | 80.32 | 0     | D   | A     | 69.3  | 1.9  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.7  |
| 1872   | 441820.41 | 5025421.84 | 80.33 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.3 |
| 1882   | 441820.04 | 5025422.82 | 80.34 | 0     | D   | A     | 69.3  | 0.1  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 1893   | 441819.66 | 5025423.85 | 80.35 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.9  |
| 1904   | 441819.14 | 5025425.23 | 80.37 | 0     | D   | A     | 69.3  | 2.5  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.2  |
| 1936   | 441836.42 | 5025378.93 | 79.83 | 1     | D   | A     | 69.3  | 3.6  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.6  |
| 1988   | 441833.74 | 5025386.11 | 79.91 | 1     | D   | A     | 69.3  | 2.2  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -11.0 |
| 3141   | 441819.59 | 5025427.10 | 80.37 | 0     | D   | A     | 69.3  | 3.3  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.3  |
| 3150   | 441821.21 | 5025427.80 | 80.34 | 0     | D   | A     | 69.3  | 1.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.2  |
| 3157   | 441822.34 | 5025428.29 | 80.33 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.1 |
| 3164   | 441824.56 | 5025429.25 | 80.29 | 0     | D   | A     | 69.3  | 5.7  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -4.7  |
| 3177   | 441825.10 | 5025429.43 | 80.28 | 0     | D   | A     | 69.3  | 4.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.2  |
| 3185   | 441823.08 | 5025428.47 | 80.31 | 0     | D   | A     | 69.3  | 2.7  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.8  |
| 3192   | 441821.67 | 5025427.81 | 80.33 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.5  |
| 3200   | 441820.05 | 5025427.04 | 80.36 | 0     | D   | A     | 69.3  | 3.6  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.0  |

Sample CADNA/A Calculation at Receptor

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg B", ID: "SS_TRKI_03" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2756   | 441801.33 | 5025399.16 | 80.32 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 57.9 | 1.1  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | 7.6   |
| 2764   | 441801.33 | 5025399.16 | 80.32 | 1     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 58.5 | 1.2  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 2.2  | 4.8   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_03" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2774   | 441817.10 | 5025375.32 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.5 | 0.4  | -3.0 | 0.0  | 0.0   | 12.8 | 0.0  | 0.0  | 12.2  |
| 2774   | 441817.10 | 5025375.32 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.5 | 0.4  | -3.0 | 0.0  | 0.0   | 12.8 | 0.0  | 0.0  | 12.2  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2954   | 441800.25 | 5025369.82 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 11.6 | 0.0  | 0.0  | 12.6  |
| 2954   | 441800.25 | 5025369.82 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 11.6 | 0.0  | 0.0  | 12.6  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_01" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2963   | 441784.00 | 5025362.97 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.8 | 0.5  | -3.0 | 0.0  | 0.0   | 10.1 | 0.0  | 0.0  | 13.4  |
| 2963   | 441784.00 | 5025362.97 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.8 | 0.5  | -3.0 | 0.0  | 0.0   | 10.1 | 0.0  | 0.0  | 13.4  |



## Configuration

| Configuration Parameter                        | Value                          |
|--|--------------------------------|
| General  |                                |
| Max. Error (dB)                                | 0                              |
| Max. Search Radius (#(Unit,LEN))               | 2000                           |
| Min. Dist Src to Rcvr                          | 0                              |
| Partition                                      |                                |
| Raster Factor                                  | 0.5                            |
| Max. Length of Section (#(Unit,LEN))           | 1000                           |
| Min. Length of Section (#(Unit,LEN))           | 1                              |
| Min. Length of Section (%)                     | 0                              |
| Proj. Line Sources                             | On                             |
| Proj. Area Sources                             | On                             |
| Ref. Time                                      |                                |
| Reference Time Day (min)                       | 960                            |
| Reference Time Night (min)                     | 480                            |
| Daytime Penalty (dB)                           | 0                              |
| Recr. Time Penalty (dB)                        | 0                              |
| Night-time Penalty (dB)                        | 0                              |
| DTM  |                                |
| Standard Height (m)                            | 0                              |
| Model of Terrain                               | Triangulation                  |
| Reflection                                     |                                |
| max. Order of Reflection                       | 1                              |
| Search Radius Src                              | 100                            |
| Search Radius Rcvr                             | 100                            |
| Max. Distance Source - Rcvr                    | 1000.00 1000.00                |
| Min. Distance Rcvr - Reflector                 | 1.00 1.00                      |
| Min. Distance Source - Reflector               | 0.1                            |
| Industrial (ISO 9613)                          |                                |
| Lateral Diffraction                            | some Obj                       |
| Obst. within Area Src do not shield            | On                             |
| Screening                                      | Excl. Ground Att. over Barrier |
|  | Dz with limit (20/25)          |
| Barrier Coefficients C1,2,3                    | 3.0 20.0 0.0                   |
| Temperature (#(Unit,TEMP))                     | 10                             |
| rel. Humidity (%)                              | 70                             |
| Ground Absorption G                            | 0                              |
| Wind Speed for Dir. (#(Unit,SPEED))            | 3                              |
| Roads (TNM)                                    |                                |
| Railways (Schall 03 (1990))                    |                                |
| Strictly acc. to Schall 03 / Schall-Transrapid |                                |
| Aircraft (???)                                 |                                |
| Strictly acc. to AzB                           |                                |



Line Sources

| Name                                      | ID         | Result. PWL |       | Result. PWL' |       | Lw / Li |          |         | Correction |         |       | K0       | Moving Pt. Src |        |       |
|---|------------|-------------|-------|--------------|-------|---------|----------|---------|------------|---------|-------|----------|----------------|--------|-------|
|   |            | Day/ Eve    | Night | Day/ Eve     | Night | Type    | Value    | norm.   | Day        | Evening | Night |          | Number         |        | Speed |
|   |            | (dBA)       | (dBA) | (dBA)        | (dBA) |         |          | (dB(A)) | (dB(A))    | (dB(A)) | (dB)  | Day/ Eve | Night          | (km/h) |       |
| Truck Movement to Building B              | SS_TRKM_01 | 93.1        | -18.4 | 71.8         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0        | 14             | 0      | 15    |
| Truck Movement to Building A (South Side) | SS_TRKM_03 | 87.9        | -20.5 | 68.7         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0        | 7              | 0      | 15    |
| Truck Movement to Building A (North Side) | SS_TRKM_02 | 90.4        | -18.6 | 69.3         | -39.7 | PWL-Pt  | HTRK_MOV |         | 0          | 0       | 0     | 0        | 8              | 0      | 15    |

Point Sources

| Name                                       | ID              | Result, PWL |         |       | Lw / Li |           | Correction |       | Operating Time |       |           |       |      | K0  | Height<br>(m) | Coordinates |       |  |
|--|-----------------|-------------|---------|-------|---------|-----------|------------|-------|----------------|-------|-----------|-------|------|-----|---------------|-------------|-------|--|
|  |                 | Day         | Evening | Night | Type    | Value     | norm.      | Day   | Evening        | Night | Day / Eve | Night | (dB) | X   |               | Y           | Z     |  |
|  |                 | (dBA)       | (dBA)   | (dBA) |         |           | dB(A)      | dB(A) | dB(A)          | dB(A) | (min)     | (min) | (dB) | (m) |               | (m)         | (m)   |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_04 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441843        | 5025421     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_02 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441852.1      | 5025442     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_05 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441859.8      | 5025427     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_03 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441867.9      | 5025449     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_01 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441837.9      | 5025437     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_07 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441847.5      | 5025407     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_11 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441873.7      | 5025390     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_06 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441875.3      | 5025433     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_08 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441864.5      | 5025408     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_09 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441884.4      | 5025413     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDB_HVAC_03 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441817.1      | 5025375     | 87.29 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_12 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441892.5      | 5025396     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDA_HVAC_10 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441877.9      | 5025402     | 100.8 |  |
| HVAC10T Unit                               | SS_BLDB_HVAC_02 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441800.3      | 5025370     | 87.29 |  |
| HVAC10T Unit                               | SS_BLDB_HVAC_01 | 79.9        | 79.9    | 79.9  | Lw      | York_10T  | 0          | 0     | 0              | 60    | 60        | 0     | 1.8  | g   | 441784        | 5025363     | 87.29 |  |
| Trailer unloading - Forklift               | IM_FKLF_03      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    | 0          | 0     | 0              | 60    | 0         | 0     | 1.8  | r   | 441796.2      | 5025397     | 79.79 |  |
| Trailer unloading - Forklift at Building A | IM_FKLF_02      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    | 0          | 0     | 0              | 60    | 0         | 0     | 1.8  | r   | 441898.6      | 5025390     | 79.18 |  |
| Trailer unloading - Forklift - Building A  | IM_FKLF_01      | 99.7        | 99.7    | 99.7  | Lw      | FL_imp    | 0          | 0     | 0              | 60    | 0         | 0     | 1.8  | r   | 441826.7      | 5025429     | 79.63 |  |
| Truck Idling at Loading Bay - Bldg B       | SS_TRKI_03      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE | 0          | 0     | 0              | 5     | 0         | 0     | 2.4  | r   | 441801.3      | 5025399     | 80.32 |  |
| Truck Idling at Loading Bay - Bldg A       | SS_TRKI_02      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE | 0          | 0     | 0              | 5     | 0         | 0     | 2.4  | r   | 441822.7      | 5025427     | 80.29 |  |
| Truck Idling at Loading Bay - Bldg A       | SS_TRKI_01      | 98.5        | 98.5    | 98.5  | Lw      | HTRK_IDLE | 0          | 0     | 0              | 5     | 0         | 0     | 2.4  | r   | 441900        | 5025386     | 79.86 |  |

Receptor Locations

| Name   | ID     | Level Lr |       | Limit. Value |       | Height<br>(m) | Coordinates |         |       |
|--------|--------|----------|-------|--------------|-------|---------------|-------------|---------|-------|
|        |        | Day/ Eve | Night | Day/ Eve     | Night |               | X           | Y       | Z     |
|        |        | (dBA)    | (dBA) | (dBA)        | (dBA) |               | (m)         | (m)     | (m)   |
| R01_PW | R01_PW | 36.1     | 31.6  | 50           | 45    | 5.5           | 442021.47   | 5025430 | 82.3  |
| R02_PW | R02_PW | 37       | 32.7  | 50           | 45    | 5.5           | 442032.89   | 5025402 | 82.57 |
| R03_PW | R03_PW | 39.3     | 33.1  | 50           | 45    | 5.5           | 442044.57   | 5025373 | 83.44 |
| R04_PW | R04_PW | 40.5     | 32.6  | 50           | 45    | 5.5           | 442055.72   | 5025346 | 84.42 |
| R05_PW | R05_PW | 39.5     | 31.3  | 50           | 45    | 4.5           | 442056.59   | 5025292 | 84.6  |
| R06_PW | R06_PW | 39.4     | 31.4  | 50           | 45    | 4.5           | 441995.84   | 5025252 | 84.93 |
| R07_PW | R07_PW | 35.6     | 31.8  | 50           | 45    | 4.5           | 441965.54   | 5025236 | 85.36 |
| R08_PW | R08_PW | 40.3     | 32.2  | 50           | 45    | 4.5           | 441912.73   | 5025204 | 85.5  |
| R09_PW | R09_PW | 29.7     | 28.9  | 50           | 45    | 4.5           | 441844.9    | 5025162 | 85.5  |

Sample CADNA/A Calculation at Receptor

Receiver  
 Name: R01\_PW  
 ID: R01\_PW  
 X: 442021.47 m  
 Y: 5025429.82 m  
 Z: 82.30 m

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg A", ID: "SS_TRKI_01" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 1  | 441899.98 | 5025386.19 | 79.86 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 53.2 | 0.7  | -3.0 | 0.0  | 0.0   | 5.5  | 0.0  | 0.0  | 31.3  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_12" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2  | 441892.47 | 5025396.01 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.6 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.7  |
| 2  | 441892.47 | 5025396.01 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.6 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.7  |
| 3  | 441892.47 | 5025396.01 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 14.7  |
| 3  | 441892.47 | 5025396.01 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 14.7  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_09" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 4  | 441884.39 | 5025413.28 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.9 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.5  |
| 4  | 441884.39 | 5025413.28 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 53.9 | 0.3  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 20.5  |
| 6  | 441884.39 | 5025413.28 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 13.2 | 0.0  | 2.0  | 9.0   |
| 6  | 441884.39 | 5025413.28 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 13.2 | 0.0  | 2.0  | 9.0   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_06" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 8  | 441875.30 | 5025432.72 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.1  | 0.0  | 0.0  | 20.1  |
| 8  | 441875.30 | 5025432.72 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.1  | 0.0  | 0.0  | 20.1  |
| 13   | 441875.30 | 5025432.72 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.3 | 0.5  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 12.5  |
| 13   | 441875.30 | 5025432.72 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.3 | 0.5  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 12.5  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_10" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 20   | 441877.90 | 5025401.89 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 0.0  | 19.8  |
| 20   | 441877.90 | 5025401.89 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.4 | 0.3  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 0.0  | 19.8  |
| 26   | 441877.90 | 5025401.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 15.4  |
| 26   | 441877.90 | 5025401.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 15.4  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_11" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 30   | 441873.70 | 5025389.67 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.8 | 0.3  | -3.0 | 0.0  | 0.0   | 8.8  | 0.0  | 0.0  | 19.0  |
| 30   | 441873.70 | 5025389.67 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.8 | 0.3  | -3.0 | 0.0  | 0.0   | 8.8  | 0.0  | 0.0  | 19.0  |
| 33   | 441873.70 | 5025389.67 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 2.0  | 16.1  |
| 33   | 441873.70 | 5025389.67 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 2.0  | 16.1  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_03" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 49   | 441867.85 | 5025448.56 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.9 | 0.3  | -3.0 | 0.0  | 0.0   | 7.8  | 0.0  | 0.0  | 19.9  |
| 49   | 441867.85 | 5025448.56 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 54.9 | 0.3  | -3.0 | 0.0  | 0.0   | 7.8  | 0.0  | 0.0  | 19.9  |
| 69   | 441867.85 | 5025448.56 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.5 | 0.5  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 12.5  |
| 69   | 441867.85 | 5025448.56 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.5 | 0.5  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 12.5  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_08" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 79   | 441864.45 | 5025407.53 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.1 | 0.3  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 18.8  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_08" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 79   | 441864.45 | 5025407.53 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.1 | 0.3  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 18.8  |
| 87   | 441864.45 | 5025407.53 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 13.4  |
| 87   | 441864.45 | 5025407.53 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.4 | 0.4  | -3.0 | 0.0  | 0.0   | 9.6  | 0.0  | 2.0  | 13.4  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_05" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 95   | 441859.79 | 5025426.88 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.2 | 0.3  | -3.0 | 0.0  | 0.0   | 8.5  | 0.0  | 0.0  | 18.8  |
| 95   | 441859.79 | 5025426.88 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.2 | 0.3  | -3.0 | 0.0  | 0.0   | 8.5  | 0.0  | 0.0  | 18.8  |
| 103  | 441859.79 | 5025426.88 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.7 | 0.5  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 13.2  |
| 103  | 441859.79 | 5025426.88 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.7 | 0.5  | -3.0 | 0.0  | 0.0   | 9.5  | 0.0  | 2.0  | 13.2  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_02" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 106  | 441852.11 | 5025442.31 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 18.6  |
| 106  | 441852.11 | 5025442.31 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.3  | 0.0  | 0.0  | 18.6  |
| 127  | 441852.11 | 5025442.31 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.9 | 0.5  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 13.2  |
| 127  | 441852.11 | 5025442.31 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.9 | 0.5  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 13.2  |
| 135  | 441852.11 | 5025442.31 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.0 | 0.4  | -3.0 | 0.0  | 0.0   | 8.2  | 0.0  | 2.0  | 16.3  |
| 135  | 441852.11 | 5025442.31 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.0 | 0.4  | -3.0 | 0.0  | 0.0   | 8.2  | 0.0  | 2.0  | 16.3  |

| Line Source, ISO 9613, Name: "Truck Movement to Building A (South Side)", ID: "SS_TRKM_03" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 142  | 441865.03 | 5025374.61 | 79.81 | 0     | D   | A     | 68.7  | 0.7  | 0.0    | 0.0  | 0.0  | 55.4 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 11.1  |
| 144  | 441869.55 | 5025376.50 | 79.81 | 0     | D   | A     | 68.7  | 9.4  | 0.0    | 0.0  | 0.0  | 55.1 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 20.1  |
| 146  | 441874.44 | 5025378.55 | 79.81 | 0     | D   | A     | 68.7  | 2.9  | 0.0    | 0.0  | 0.0  | 54.8 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 13.9  |
| 157  | 441876.59 | 5025379.45 | 79.81 | 0     | D   | A     | 68.7  | 4.3  | 0.0    | 0.0  | 0.0  | 54.7 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 15.5  |
| 164  | 441879.74 | 5025380.77 | 79.81 | 0     | D   | A     | 68.7  | 6.2  | 0.0    | 0.0  | 0.0  | 54.5 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 17.5  |
| 177  | 441883.98 | 5025382.55 | 79.81 | 0     | D   | A     | 68.7  | 7.1  | 0.0    | 0.0  | 0.0  | 54.3 | 1.0  | -3.0 | 0.0  | 0.0   | 4.9  | 0.0  | 0.0  | 18.6  |
| 180  | 441888.36 | 5025384.38 | 79.81 | 0     | D   | A     | 68.7  | 6.5  | 0.0    | 0.0  | 0.0  | 54.0 | 1.0  | -3.0 | 0.0  | 0.0   | 5.0  | 0.0  | 0.0  | 18.2  |
| 188  | 441892.00 | 5025385.90 | 79.80 | 0     | D   | A     | 68.7  | 5.4  | 0.0    | 0.0  | 0.0  | 53.7 | 1.0  | -3.0 | 0.0  | 0.0   | 5.2  | 0.0  | 0.0  | 17.2  |
| 191  | 441894.64 | 5025387.01 | 79.80 | 0     | D   | A     | 68.7  | 3.6  | 0.0    | 0.0  | 0.0  | 53.5 | 1.0  | -3.0 | 0.0  | 0.0   | 5.4  | 0.0  | 0.0  | 15.4  |
| 192  | 441896.84 | 5025387.93 | 79.80 | 0     | D   | A     | 68.7  | 4.0  | 0.0    | 0.0  | 0.0  | 53.4 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 15.8  |
| 206  | 441898.96 | 5025388.82 | 79.80 | 0     | D   | A     | 68.7  | 3.3  | 0.0    | 0.0  | 0.0  | 53.2 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 15.1  |
| 215  | 441865.84 | 5025374.95 | 79.81 | 1     | D   | A     | 68.7  | 4.6  | 0.0    | 0.0  | 0.0  | 55.4 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.3 | -2.2  |
| 233  | 441867.87 | 5025375.80 | 79.81 | 1     | D   | A     | 68.7  | 1.8  | 0.0    | 0.0  | 0.0  | 55.3 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.3 | -4.9  |
| 239  | 441869.21 | 5025376.36 | 79.81 | 1     | D   | A     | 68.7  | 1.5  | 0.0    | 0.0  | 0.0  | 55.2 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.2 | -5.1  |
| 242  | 441871.24 | 5025377.21 | 79.81 | 1     | D   | A     | 68.7  | 4.7  | 0.0    | 0.0  | 0.0  | 55.1 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.2 | -1.7  |
| 245  | 441873.10 | 5025377.99 | 79.81 | 1     | D   | A     | 68.7  | 0.3  | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -6.0  |
| 247  | 441874.14 | 5025378.42 | 79.81 | 1     | D   | A     | 68.7  | 0.8  | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -5.4  |
| 260  | 441875.48 | 5025378.99 | 79.81 | 1     | D   | A     | 68.7  | 2.4  | 0.0    | 0.0  | 0.0  | 54.8 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -3.7  |
| 279  | 441876.48 | 5025379.40 | 79.81 | 1     | D   | A     | 68.7  | -3.6 | 0.0    | 0.0  | 0.0  | 54.7 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 17.1 | -9.5  |
| 365  | 441893.57 | 5025377.59 | 79.97 | 0     | D   | A     | 68.7  | 13.2 | 0.0    | 0.0  | 0.0  | 53.8 | 1.0  | -3.0 | 0.0  | 0.0   | 5.0  | 0.0  | 0.0  | 25.2  |
| 370  | 441876.93 | 5025370.50 | 79.96 | 0     | D   | A     | 68.7  | 11.8 | 0.0    | 0.0  | 0.0  | 54.9 | 1.1  | -3.0 | 0.0  | 0.0   | 4.8  | 0.0  | 0.0  | 22.8  |
| 2972   | 441900.19 | 5025388.66 | 79.82 | 0     | D   | A     | 68.7  | 0.9  | 0.0    | 0.0  | 0.0  | 53.2 | 0.9  | -3.0 | 0.0  | 0.0   | 5.9  | 0.0  | 0.0  | 12.7  |
| 2980   | 441900.67 | 5025387.59 | 79.84 | 0     | D   | A     | 68.7  | 0.5  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 12.3  |
| 2988   | 441901.11 | 5025386.60 | 79.86 | 0     | D   | A     | 68.7  | 0.2  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.8  | 0.0  | 0.0  | 12.1  |
| 2996   | 441901.57 | 5025385.57 | 79.89 | 0     | D   | A     | 68.7  | 0.8  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.7  |
| 3003   | 441902.02 | 5025384.55 | 79.91 | 0     | D   | A     | 68.7  | 0.1  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.1  |
| 3011   | 441902.44 | 5025383.61 | 79.94 | 0     | D   | A     | 68.7  | 0.1  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.7  | 0.0  | 0.0  | 12.2  |
| 3018   | 441902.87 | 5025382.64 | 79.96 | 0     | D   | A     | 68.7  | 0.3  | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 12.4  |
| 3026   | 441903.18 | 5025381.94 | 79.98 | 0     | D   | A     | 68.7  | -3.3 | 0.0    | 0.0  | 0.0  | 53.1 | 0.9  | -3.0 | 0.0  | 0.0   | 5.6  | 0.0  | 0.0  | 8.8   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_07" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 342  | 441847.54 | 5025406.88 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 0.0  | 17.5  |
| 342  | 441847.54 | 5025406.88 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 55.9 | 0.4  | -3.0 | 0.0  | 0.0   | 9.1  | 0.0  | 0.0  | 17.5  |
| 345  | 441847.54 | 5025406.88 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.8 | 0.4  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 14.3  |
| 345  | 441847.54 | 5025406.88 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.8 | 0.4  | -3.0 | 0.0  | 0.0   | 9.4  | 0.0  | 2.0  | 14.3  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_04" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 377  | 441842.99 | 5025420.89 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.9  | 0.0  | 0.0  | 17.5  |
| 377  | 441842.99 | 5025420.89 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.9  | 0.0  | 0.0  | 17.5  |
| 380  | 441842.99 | 5025420.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.0 | 0.4  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 14.1  |
| 380  | 441842.99 | 5025420.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.0 | 0.4  | -3.0 | 0.0  | 0.0   | 9.3  | 0.0  | 2.0  | 14.1  |
| 387  | 441842.99 | 5025420.89 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 2.0  | 15.0  |
| 387  | 441842.99 | 5025420.89 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.1 | 0.4  | -3.0 | 0.0  | 0.0   | 8.4  | 0.0  | 2.0  | 15.0  |

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 398   | 441841.13 | 5025376.10 | 79.72 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -5.5  |
| 405   | 441840.57 | 5025377.55 | 79.73 | 0     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -3.1  |
| 416   | 441840.03 | 5025378.97 | 79.74 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -6.0  |
| 432   | 441839.66 | 5025379.94 | 79.75 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -6.1  |
| 455   | 441839.28 | 5025380.94 | 79.75 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -5.9  |
| 466   | 441838.87 | 5025382.01 | 79.76 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -5.7  |
| 476   | 441838.45 | 5025383.09 | 79.77 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -5.9  |
| 482   | 441838.03 | 5025384.18 | 79.77 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -5.9  |
| 488   | 441837.40 | 5025385.83 | 79.78 | 0     | D   | A     | 71.8  | 3.7  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -3.1  |
| 494   | 441836.79 | 5025387.41 | 79.79 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.7  |
| 500   | 441836.42 | 5025388.39 | 79.80 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.7  |
| 512   | 441836.04 | 5025389.38 | 79.80 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.6  |
| 518   | 441835.65 | 5025390.39 | 79.81 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.7  |
| 527   | 441835.24 | 5025391.47 | 79.82 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.1  |
| 534   | 441834.81 | 5025392.58 | 79.82 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.7  |
| 545   | 441834.42 | 5025393.60 | 79.83 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.9  |
| 557   | 441834.01 | 5025394.66 | 79.83 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.5  |
| 563   | 441833.61 | 5025395.72 | 79.84 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.0  |
| 570   | 441833.18 | 5025396.83 | 79.85 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.2  |
| 580   | 441832.75 | 5025397.96 | 79.85 | 0     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.0  |
| 599   | 441832.35 | 5025399.00 | 79.86 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.9  |
| 611   | 441831.88 | 5025400.22 | 79.87 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -5.7  |
| 616   | 441831.36 | 5025401.57 | 79.88 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.1  |
| 624   | 441830.89 | 5025402.80 | 79.88 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.6  |
| 648   | 441830.48 | 5025403.89 | 79.89 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.3  |
| 658   | 441830.07 | 5025404.94 | 79.90 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.9  |
| 668   | 441829.66 | 5025406.01 | 79.90 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.2  |
| 674   | 441829.24 | 5025407.10 | 79.91 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.8  |
| 702   | 441828.84 | 5025408.16 | 79.92 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 713   | 441828.44 | 5025409.19 | 79.92 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.1  |
| 721   | 441828.14 | 5025409.98 | 79.93 | 0     | D   | A     | 71.8  | -2.7 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.4 |
| 741   | 441839.42 | 5025380.56 | 79.75 | 1     | D   | A     | 71.8  | 3.7  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -7.7  |
| 744   | 441838.79 | 5025382.21 | 79.76 | 1     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.5 |
| 751   | 441838.37 | 5025383.30 | 79.77 | 1     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.9 |
| 758   | 441837.98 | 5025384.32 | 79.77 | 1     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -11.1 |
| 773   | 441837.59 | 5025385.35 | 79.78 | 1     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.8 |
| 782   | 441837.16 | 5025386.45 | 79.79 | 1     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -10.5 |
| 793   | 441836.64 | 5025387.81 | 79.79 | 1     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 2.6  | -9.1  |
| 848   | 441839.09 | 5025381.43 | 79.76 | 1     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.5 | 1.3  | -3.0 | 0.0  | 0.0   | 24.8 | 0.0  | 4.0  | -10.9 |
| 2070  | 441827.35 | 5025409.97 | 79.94 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.1  |
| 2079  | 441825.25 | 5025409.17 | 79.97 | 0     | D   | A     | 71.8  | 4.8  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -3.0  |
| 2088  | 441823.18 | 5025408.39 | 80.00 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -6.5  |
| 2098  | 441821.40 | 5025407.71 | 80.03 | 0     | D   | A     | 71.8  | 3.8  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -4.1  |
| 2107  | 441819.36 | 5025406.93 | 80.06 | 0     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -5.1  |
| 2115  | 441817.57 | 5025406.25 | 80.08 | 0     | D   | A     | 71.8  | 2.7  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -5.4  |
| 2125  | 441816.18 | 5025405.73 | 80.10 | 0     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 57.3 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.7  |
| 2133  | 441815.12 | 5025405.33 | 80.12 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.5  |
| 2142  | 441813.82 | 5025404.83 | 80.14 | 0     | D   | A     | 71.8  | 2.1  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.1  |
| 2152  | 441812.16 | 5025404.20 | 80.16 | 0     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -5.3  |
| 2162  | 441810.63 | 5025403.62 | 80.19 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.0  |
| 2172  | 441809.21 | 5025403.08 | 80.21 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -5.9  |
| 2181  | 441807.46 | 5025402.41 | 80.23 | 0     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -5.3  |
| 2190  | 441805.89 | 5025401.82 | 80.26 | 0     | D   | A     | 71.8  | 1.3  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -7.1  |
| 2200  | 441804.46 | 5025401.28 | 80.28 | 0     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.1  |

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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)  |
| 2209  | 441802.99 | 5025400.72 | 80.30 | 0     | D   | A     | 71.8  | 1.6  | 0.0    | 0.0  | 0.0  | 57.9 | 1.4  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.8  |
| 2219  | 441801.04 | 5025399.98 | 80.33 | 0     | D   | A     | 71.8  | 4.3  | 0.0    | 0.0  | 0.0  | 57.9 | 1.5  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -3.9  |
| 2228  | 441798.96 | 5025399.19 | 80.36 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -6.7  |
| 2254  | 441806.84 | 5025402.18 | 80.24 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 58.7 | 1.6  | -3.1 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -10.4 |
| 2269  | 441804.13 | 5025401.15 | 80.28 | 1     | D   | A     | 71.8  | 3.4  | 0.0    | 0.0  | 0.0  | 58.6 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -8.9  |
| 2277  | 441802.49 | 5025400.52 | 80.31 | 1     | D   | A     | 71.8  | 1.3  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -10.6 |
| 2295  | 441800.15 | 5025399.64 | 80.34 | 1     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -10.4 |
| 2304  | 441798.91 | 5025399.17 | 80.36 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -10.7 |
| 2328  | 441826.64 | 5025400.79 | 79.91 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -7.2  |
| 2338  | 441827.06 | 5025399.67 | 79.91 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.6  |
| 2349  | 441827.51 | 5025398.48 | 79.90 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -6.5  |
| 2360  | 441827.92 | 5025397.38 | 79.90 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.2  |
| 2369  | 441828.32 | 5025396.32 | 79.90 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -6.8  |
| 2379  | 441828.70 | 5025395.29 | 79.89 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -7.4  |
| 2388  | 441829.10 | 5025394.23 | 79.89 | 0     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.4  |
| 2398  | 441829.50 | 5025393.16 | 79.88 | 0     | D   | A     | 71.8  | 0.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -7.2  |
| 2408  | 441829.91 | 5025392.06 | 79.88 | 0     | D   | A     | 71.8  | 1.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.2  |
| 2417  | 441830.35 | 5025390.88 | 79.87 | 0     | D   | A     | 71.8  | 0.9  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.4  |
| 2428  | 441830.75 | 5025389.81 | 79.87 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -7.0  |
| 2438  | 441831.11 | 5025388.84 | 79.86 | 0     | D   | A     | 71.8  | 0.1  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -7.1  |
| 2448  | 441831.50 | 5025387.80 | 79.86 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -6.3  |
| 2456  | 441831.92 | 5025386.67 | 79.85 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -6.3  |
| 2466  | 441832.43 | 5025385.30 | 79.85 | 0     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -4.6  |
| 2477  | 441832.96 | 5025383.88 | 79.84 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -5.7  |
| 2487  | 441833.38 | 5025382.77 | 79.84 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -6.4  |
| 2497  | 441833.74 | 5025381.80 | 79.83 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -6.6  |
| 2507  | 441834.13 | 5025380.77 | 79.83 | 0     | D   | A     | 71.8  | 0.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -5.8  |
| 2516  | 441834.54 | 5025379.67 | 79.82 | 0     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -5.8  |
| 2525  | 441834.92 | 5025378.63 | 79.82 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -6.1  |
| 2534  | 441835.29 | 5025377.64 | 79.81 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -6.0  |
| 2543  | 441835.72 | 5025376.49 | 79.81 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -4.8  |
| 2551  | 441836.16 | 5025375.32 | 79.80 | 0     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -5.6  |
| 2561  | 441836.54 | 5025374.32 | 79.80 | 0     | D   | A     | 71.8  | 0.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -6.1  |
| 2572  | 441836.90 | 5025373.35 | 79.80 | 0     | D   | A     | 71.8  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -5.8  |
| 2582  | 441837.18 | 5025372.60 | 79.79 | 0     | D   | A     | 71.8  | -2.5 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.7 | 0.0  | 0.0  | -8.4  |
| 2596  | 441832.67 | 5025384.65 | 79.84 | 1     | D   | A     | 71.8  | 0.4  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.4 |
| 2603  | 441833.09 | 5025383.55 | 79.84 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.8  |
| 2612  | 441833.58 | 5025382.23 | 79.83 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -8.8  |
| 2621  | 441834.06 | 5025380.94 | 79.83 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.0 |
| 2630  | 441834.48 | 5025379.83 | 79.82 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -10.0 |
| 2636  | 441834.95 | 5025378.56 | 79.82 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -8.9  |
| 2644  | 441835.44 | 5025377.25 | 79.81 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.7  |
| 2663  | 441836.22 | 5025375.17 | 79.80 | 1     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 2.6  | -10.5 |
| 2681  | 441837.00 | 5025373.08 | 79.80 | 1     | D   | A     | 71.8  | 0.5  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 2.8  | -11.0 |
| 2783  | 441801.58 | 5025391.92 | 80.22 | 0     | D   | A     | 71.8  | 1.6  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 2792  | 441802.97 | 5025392.44 | 80.20 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 57.9 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.3  |
| 2800  | 441804.23 | 5025392.92 | 80.18 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.9 | 1.4  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.3  |
| 2810  | 441806.52 | 5025393.78 | 80.16 | 0     | D   | A     | 71.8  | 5.7  | 0.0    | 0.0  | 0.0  | 57.8 | 1.4  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -3.3  |
| 2819  | 441808.81 | 5025394.65 | 80.13 | 0     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -8.3  |
| 2829  | 441810.22 | 5025395.18 | 80.11 | 0     | D   | A     | 71.8  | 2.7  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.2  |
| 2838  | 441811.86 | 5025395.80 | 80.09 | 0     | D   | A     | 71.8  | 2.2  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.6  |
| 2846  | 441813.32 | 5025396.36 | 80.08 | 0     | D   | A     | 71.8  | 1.8  | 0.0    | 0.0  | 0.0  | 57.5 | 1.4  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -6.3  |
| 2854  | 441814.71 | 5025396.88 | 80.06 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 57.4 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -6.3  |
| 2863  | 441816.65 | 5025397.61 | 80.04 | 0     | D   | A     | 71.8  | 4.3  | 0.0    | 0.0  | 0.0  | 57.3 | 1.4  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -3.7  |
| 2871  | 441819.55 | 5025398.71 | 80.00 | 0     | D   | A     | 71.8  | 5.5  | 0.0    | 0.0  | 0.0  | 57.2 | 1.4  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -2.4  |
| 2880  | 441822.63 | 5025399.88 | 79.96 | 0     | D   | A     | 71.8  | 4.8  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -3.0  |
| 2889  | 441824.84 | 5025400.71 | 79.94 | 0     | D   | A     | 71.8  | 2.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -5.4  |
| 2897  | 441826.04 | 5025401.17 | 79.92 | 0     | D   | A     | 71.8  | -0.6 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.3  |
| 2905  | 441801.71 | 5025391.97 | 80.22 | 1     | D   | A     | 71.8  | 2.4  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -9.2  |
| 2910  | 441803.36 | 5025392.59 | 80.20 | 1     | D   | A     | 71.8  | 2.5  | 0.0    | 0.0  | 0.0  | 58.4 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -9.2  |
| 2916  | 441805.12 | 5025393.26 | 80.17 | 1     | D   | A     | 71.8  | 3.0  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -8.9  |
| 2923  | 441806.96 | 5025393.95 | 80.15 | 1     | D   | A     | 71.8  | 2.9  | 0.0    | 0.0  | 0.0  | 58.5 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.1  | -9.0  |
| 2931  | 441808.53 | 5025394.54 | 80.13 | 1     | D   | A     | 71.8  | 1.5  | 0.0    | 0.0  | 0.0  | 58.6 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.5  | -10.8 |

| Line Source, ISO 9613, Name: "Truck Movement to Building B", ID: "SS_TRKM_01" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|---|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 3034  | 441798.01 | 5025398.09 | 80.36 | 0     | D   | A     | 71.8  | 1.4  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.8  |
| 3043  | 441798.61 | 5025396.75 | 80.34 | 0     | D   | A     | 71.8  | 2.0  | 0.0    | 0.0  | 0.0  | 58.1 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.2  |
| 3051  | 441799.24 | 5025395.36 | 80.31 | 0     | D   | A     | 71.8  | 1.7  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.5  |
| 3060  | 441799.76 | 5025394.19 | 80.28 | 0     | D   | A     | 71.8  | 0.3  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.8  |
| 3068  | 441800.25 | 5025393.10 | 80.26 | 0     | D   | A     | 71.8  | 1.2  | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.9  |
| 3075  | 441800.71 | 5025392.08 | 80.23 | 0     | D   | A     | 71.8  | -0.4 | 0.0    | 0.0  | 0.0  | 58.0 | 1.5  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 3092  | 441798.43 | 5025397.16 | 80.34 | 1     | D   | A     | 71.8  | 1.0  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -10.7 |
| 3100  | 441798.92 | 5025396.06 | 80.32 | 1     | D   | A     | 71.8  | 0.7  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -11.0 |
| 3108  | 441799.48 | 5025394.83 | 80.29 | 1     | D   | A     | 71.8  | 1.9  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -9.8  |
| 3123  | 441800.47 | 5025392.61 | 80.25 | 1     | D   | A     | 71.8  | 0.6  | 0.0    | 0.0  | 0.0  | 58.3 | 1.5  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 2.0  | -11.0 |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDA_HVAC_01" |           |            |        |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|--------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 892  | 441837.92 | 5025436.51 | 100.80 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 17.4  |
| 892  | 441837.92 | 5025436.51 | 100.80 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.3 | 0.4  | -3.0 | 0.0  | 0.0   | 8.7  | 0.0  | 0.0  | 17.4  |
| 895  | 441837.92 | 5025436.51 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 14.0  |
| 895  | 441837.92 | 5025436.51 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.3 | 0.4  | -3.0 | 0.0  | 0.0   | 9.2  | 0.0  | 2.0  | 14.0  |
| 907  | 441837.92 | 5025436.51 | 100.80 | 1     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.6  | 0.0  | 2.0  | 15.3  |
| 907  | 441837.92 | 5025436.51 | 100.80 | 1     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 0.4  | -3.0 | 0.0  | 0.0   | 8.6  | 0.0  | 2.0  | 15.3  |

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg A", ID: "SS_TRKI_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 913  | 441822.65 | 5025426.57 | 80.29 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 57.0 | 1.0  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | 8.4   |

| Line Source, ISO 9613, Name: "Truck Movement to Building A (North Side)", ID: "SS_TRKM_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 921  | 441819.30 | 5025425.80 | 80.37 | 0     | D   | A     | 69.3  | 2.0 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.6  |
| 930  | 441819.95 | 5025424.19 | 80.35 | 0     | D   | A     | 69.3  | 2.7 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.8  |
| 935  | 441820.49 | 5025422.83 | 80.33 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 941  | 441820.88 | 5025421.86 | 80.32 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.3 |
| 951  | 441821.27 | 5025420.88 | 80.31 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 961  | 441821.93 | 5025419.23 | 80.29 | 0     | D   | A     | 69.3  | 4.0 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -6.5  |
| 974  | 441822.60 | 5025417.56 | 80.27 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.1 |
| 982  | 441823.05 | 5025416.43 | 80.25 | 0     | D   | A     | 69.3  | 1.3 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.1  |
| 991  | 441823.52 | 5025415.28 | 80.24 | 0     | D   | A     | 69.3  | 0.5 | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.9  |
| 998  | 441824.07 | 5025413.90 | 80.22 | 0     | D   | A     | 69.3  | 2.6 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.7  |
| 1005   | 441824.61 | 5025412.54 | 80.20 | 0     | D   | A     | 69.3  | 0.4 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.9  |
| 1017   | 441825.04 | 5025411.48 | 80.19 | 0     | D   | A     | 69.3  | 0.8 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 1027   | 441825.52 | 5025410.27 | 80.18 | 0     | D   | A     | 69.3  | 1.5 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.8  |
| 1038   | 441825.97 | 5025409.15 | 80.16 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.2 |
| 1045   | 441826.40 | 5025408.10 | 80.15 | 0     | D   | A     | 69.3  | 0.9 | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.3  |
| 1056   | 441826.82 | 5025407.04 | 80.14 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.1 |
| 1070   | 441827.21 | 5025406.06 | 80.12 | 0     | D   | A     | 69.3  | 0.4 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.8  |
| 1081   | 441827.62 | 5025405.04 | 80.11 | 0     | D   | A     | 69.3  | 0.5 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1091   | 441828.12 | 5025403.80 | 80.10 | 0     | D   | A     | 69.3  | 2.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -8.1  |
| 1101   | 441828.65 | 5025402.48 | 80.08 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.0  |
| 1108   | 441829.13 | 5025401.28 | 80.07 | 0     | D   | A     | 69.3  | 1.3 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -8.7  |
| 1117   | 441829.61 | 5025400.07 | 80.05 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.0  |
| 1127   | 441830.08 | 5025398.90 | 80.04 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.9  |
| 1137   | 441830.52 | 5025397.81 | 80.02 | 0     | D   | A     | 69.3  | 0.3 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.6  |
| 1143   | 441830.94 | 5025396.77 | 80.01 | 0     | D   | A     | 69.3  | 0.7 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.2  |
| 1150   | 441831.34 | 5025395.77 | 80.00 | 0     | D   | A     | 69.3  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.8  |
| 1157   | 441831.76 | 5025394.72 | 79.99 | 0     | D   | A     | 69.3  | 1.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -8.8  |
| 1167   | 441832.18 | 5025393.67 | 79.97 | 0     | D   | A     | 69.3  | 0.1 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.6  |
| 1178   | 441832.61 | 5025392.60 | 79.96 | 0     | D   | A     | 69.3  | 1.1 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.6  |
| 1193   | 441833.08 | 5025391.43 | 79.95 | 0     | D   | A     | 69.3  | 0.9 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.7  |
| 1203   | 441833.50 | 5025390.39 | 79.93 | 0     | D   | A     | 69.3  | 0.2 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.4  |
| 1213   | 441833.88 | 5025389.44 | 79.92 | 0     | D   | A     | 69.3  | 0.0 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.4  |
| 1222   | 441834.29 | 5025388.42 | 79.91 | 0     | D   | A     | 69.3  | 0.8 | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -8.7  |
| 1233   | 441834.73 | 5025387.31 | 79.89 | 0     | D   | A     | 69.3  | 0.7 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -8.6  |
| 1243   | 441835.27 | 5025385.97 | 79.88 | 0     | D   | A     | 69.3  | 2.3 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -7.0  |



| Line Source, ISO 9613, Name: "Truck Movement to Building A (North Side)", ID: "SS_TRKM_02" |           |            |       |       |     |       |       |      |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|------|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 1252   | 441835.82 | 5025384.58 | 79.86 | 0     | D   | A     | 69.3  | 1.1  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -8.1  |
| 1260   | 441836.26 | 5025383.49 | 79.85 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.8  |
| 1269   | 441836.68 | 5025382.44 | 79.83 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.2  |
| 1276   | 441837.11 | 5025381.36 | 79.82 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -8.3  |
| 1286   | 441837.59 | 5025380.17 | 79.81 | 0     | D   | A     | 69.3  | 1.6  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -7.3  |
| 1296   | 441838.06 | 5025378.99 | 79.79 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.2  |
| 1306   | 441838.62 | 5025377.60 | 79.78 | 0     | D   | A     | 69.3  | 2.8  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -5.8  |
| 1315   | 441839.18 | 5025376.20 | 79.76 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -8.0  |
| 1325   | 441839.56 | 5025375.27 | 79.75 | 0     | D   | A     | 69.3  | -0.4 | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -8.9  |
| 1497   | 441838.08 | 5025374.47 | 79.77 | 0     | D   | A     | 69.3  | 1.9  | 0.0    | 0.0  | 0.0  | 56.6 | 1.3  | -3.0 | 0.0  | 0.0   | 22.8 | 0.0  | 0.0  | -6.5  |
| 1506   | 441837.61 | 5025375.73 | 79.79 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 22.9 | 0.0  | 0.0  | -8.0  |
| 1516   | 441837.17 | 5025376.91 | 79.80 | 0     | D   | A     | 69.3  | 1.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.0 | 0.0  | 0.0  | -7.3  |
| 1525   | 441836.75 | 5025378.04 | 79.82 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.4  |
| 1534   | 441836.38 | 5025379.03 | 79.83 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.1 | 0.0  | 0.0  | -8.5  |
| 1543   | 441836.00 | 5025380.06 | 79.84 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.2 | 0.0  | 0.0  | -8.3  |
| 1552   | 441835.59 | 5025381.15 | 79.85 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.3 | 0.0  | 0.0  | -8.2  |
| 1562   | 441835.18 | 5025382.25 | 79.87 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.4 | 0.0  | 0.0  | -8.3  |
| 1571   | 441834.76 | 5025383.36 | 79.88 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.6 | 0.0  | 0.0  | -8.4  |
| 1581   | 441834.13 | 5025385.05 | 79.90 | 0     | D   | A     | 69.3  | 3.8  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -5.5  |
| 1589   | 441833.53 | 5025386.66 | 79.92 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.7 | 0.0  | 0.0  | -9.2  |
| 1597   | 441833.16 | 5025387.66 | 79.93 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -9.2  |
| 1608   | 441832.78 | 5025388.67 | 79.94 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.8 | 0.0  | 0.0  | -9.1  |
| 1617   | 441832.40 | 5025389.70 | 79.95 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -9.2  |
| 1626   | 441831.99 | 5025390.80 | 79.97 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 23.9 | 0.0  | 0.0  | -8.6  |
| 1635   | 441831.57 | 5025391.93 | 79.98 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.1  |
| 1645   | 441831.18 | 5025392.97 | 79.99 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.7 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -9.3  |
| 1656   | 441830.77 | 5025394.05 | 80.00 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.0 | 0.0  | 0.0  | -8.9  |
| 1667   | 441830.37 | 5025395.13 | 80.02 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.5  |
| 1677   | 441829.95 | 5025396.26 | 80.03 | 0     | D   | A     | 69.3  | 1.3  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -8.6  |
| 1687   | 441829.52 | 5025397.41 | 80.04 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | -9.4  |
| 1697   | 441829.13 | 5025398.47 | 80.06 | 0     | D   | A     | 69.3  | 0.6  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -9.4  |
| 1707   | 441828.66 | 5025399.72 | 80.07 | 0     | D   | A     | 69.3  | 1.8  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.2  |
| 1717   | 441828.15 | 5025401.09 | 80.09 | 0     | D   | A     | 69.3  | 1.5  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.2 | 0.0  | 0.0  | -8.6  |
| 1726   | 441827.68 | 5025402.35 | 80.10 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.1  |
| 1735   | 441827.27 | 5025403.45 | 80.11 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 56.8 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1744   | 441826.87 | 5025404.53 | 80.13 | 0     | D   | A     | 69.3  | 0.8  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.4  |
| 1752   | 441826.46 | 5025405.62 | 80.14 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.7  |
| 1760   | 441826.05 | 5025406.73 | 80.15 | 0     | D   | A     | 69.3  | 0.9  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.3 | 0.0  | 0.0  | -9.3  |
| 1769   | 441825.64 | 5025407.80 | 80.17 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.0 |
| 1778   | 441825.25 | 5025408.85 | 80.18 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.6  |
| 1788   | 441824.85 | 5025409.93 | 80.19 | 0     | D   | A     | 69.3  | 0.5  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.8  |
| 1797   | 441824.48 | 5025410.93 | 80.20 | 0     | D   | A     | 69.3  | 0.0  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.3 |
| 1806   | 441824.07 | 5025412.02 | 80.22 | 0     | D   | A     | 69.3  | 1.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.1  |
| 1815   | 441823.53 | 5025413.46 | 80.23 | 0     | D   | A     | 69.3  | 2.5  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -7.9  |
| 1824   | 441823.01 | 5025414.87 | 80.25 | 0     | D   | A     | 69.3  | 0.9  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -9.5  |
| 1833   | 441822.50 | 5025416.23 | 80.26 | 0     | D   | A     | 69.3  | 2.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -8.2  |
| 1842   | 441822.02 | 5025417.52 | 80.28 | 0     | D   | A     | 69.3  | 0.3  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 0.0  | -10.2 |
| 1853   | 441821.48 | 5025418.97 | 80.30 | 0     | D   | A     | 69.3  | 3.0  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.5  |
| 1862   | 441820.86 | 5025420.63 | 80.32 | 0     | D   | A     | 69.3  | 1.9  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.7  |
| 1872   | 441820.41 | 5025421.84 | 80.33 | 0     | D   | A     | 69.3  | 0.2  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.3 |
| 1882   | 441820.04 | 5025422.82 | 80.34 | 0     | D   | A     | 69.3  | 0.1  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.4 |
| 1893   | 441819.66 | 5025423.85 | 80.35 | 0     | D   | A     | 69.3  | 0.7  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.9  |
| 1904   | 441819.14 | 5025425.23 | 80.37 | 0     | D   | A     | 69.3  | 2.5  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -8.2  |
| 1936   | 441836.42 | 5025378.93 | 79.83 | 1     | D   | A     | 69.3  | 3.6  | 0.0    | 0.0  | 0.0  | 57.6 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -9.6  |
| 1988   | 441833.74 | 5025386.11 | 79.91 | 1     | D   | A     | 69.3  | 2.2  | 0.0    | 0.0  | 0.0  | 57.7 | 1.4  | -3.0 | 0.0  | 0.0   | 24.4 | 0.0  | 2.1  | -11.0 |
| 3141   | 441819.59 | 5025427.10 | 80.37 | 0     | D   | A     | 69.3  | 3.3  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.3  |
| 3150   | 441821.21 | 5025427.80 | 80.34 | 0     | D   | A     | 69.3  | 1.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.2  |
| 3157   | 441822.34 | 5025428.29 | 80.33 | 0     | D   | A     | 69.3  | 0.4  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -10.1 |
| 3164   | 441824.56 | 5025429.25 | 80.29 | 0     | D   | A     | 69.3  | 5.7  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -4.7  |
| 3177   | 441825.10 | 5025429.43 | 80.28 | 0     | D   | A     | 69.3  | 4.2  | 0.0    | 0.0  | 0.0  | 56.9 | 1.3  | -3.0 | 0.0  | 0.0   | 24.6 | 0.0  | 0.0  | -6.2  |
| 3185   | 441823.08 | 5025428.47 | 80.31 | 0     | D   | A     | 69.3  | 2.7  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.8  |
| 3192   | 441821.67 | 5025427.81 | 80.33 | 0     | D   | A     | 69.3  | 1.0  | 0.0    | 0.0  | 0.0  | 57.0 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -9.5  |
| 3200   | 441820.05 | 5025427.04 | 80.36 | 0     | D   | A     | 69.3  | 3.6  | 0.0    | 0.0  | 0.0  | 57.1 | 1.3  | -3.0 | 0.0  | 0.0   | 24.5 | 0.0  | 0.0  | -7.0  |

Sample CADNA/A Calculation at Receptor

| Point Source, ISO 9613, Name: "Truck Idling at Loading Bay - Bldg B", ID: "SS_TRKI_03" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2756   | 441801.33 | 5025399.16 | 80.32 | 0     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 57.9 | 1.1  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 0.0  | 7.6   |
| 2764   | 441801.33 | 5025399.16 | 80.32 | 1     | D   | A     | 98.5  | 0.0 | -10.8  | 0.0  | 0.0  | 58.5 | 1.2  | -3.0 | 0.0  | 0.0   | 24.1 | 0.0  | 2.2  | 4.8   |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_03" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2774   | 441817.10 | 5025375.32 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.5 | 0.4  | -3.0 | 0.0  | 0.0   | 12.8 | 0.0  | 0.0  | 12.2  |
| 2774   | 441817.10 | 5025375.32 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 57.5 | 0.4  | -3.0 | 0.0  | 0.0   | 12.8 | 0.0  | 0.0  | 12.2  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_02" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2954   | 441800.25 | 5025369.82 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 11.6 | 0.0  | 0.0  | 12.6  |
| 2954   | 441800.25 | 5025369.82 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.2 | 0.5  | -3.0 | 0.0  | 0.0   | 11.6 | 0.0  | 0.0  | 12.6  |

| Point Source, ISO 9613, Name: "HVAC 10T Unit", ID: "SS_BLDB_HVAC_01" |           |            |       |       |     |       |       |     |        |      |      |      |      |      |      |       |      |      |      |       |
|--|-----------|------------|-------|-------|-----|-------|-------|-----|--------|------|------|------|------|------|------|-------|------|------|------|-------|
| 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) |
| 2963   | 441784.00 | 5025362.97 | 87.29 | 0     | D   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.8 | 0.5  | -3.0 | 0.0  | 0.0   | 10.1 | 0.0  | 0.0  | 13.4  |
| 2963   | 441784.00 | 5025362.97 | 87.29 | 0     | N   | A     | 79.9  | 0.0 | 0.0    | 0.0  | 0.0  | 58.8 | 0.5  | -3.0 | 0.0  | 0.0   | 10.1 | 0.0  | 0.0  | 13.4  |



Sound Power Spectra

| Name                  | ID        | Type | 1/3 Oktave Spectrum (dB) |      |       |       |       |      |      |      |      |      |       | Source |                   |
|-----------------------|-----------|------|--------------------------|------|-------|-------|-------|------|------|------|------|------|-------|--------|-------------------|
|                       |           |      | Weight.                  | 31.5 | 63    | 125   | 250   | 500  | 1000 | 2000 | 4000 | 8000 | A     |        | lin               |
| Large Trucks Delivery | HTFK_MOV  | Lw   |                          | 91   | 101   | 101   | 98    | 98   | 97   | 96   | 90   | 86   | 102.1 | 106.9  | WSP Database      |
| Large Trucks Idling   | HTFK_IDLE | Lw   |                          | 90   | 101   | 101   | 96    | 96   | 94   | 90   | 86   | 76   | 98.5  | 105.8  | WSP Database      |
| 10 Ton HVAC Unit      | York_10T  | Lw   | A                        |      |       | 73    | 74    | 75   | 72   | 66   | 60   | 50   | 79.9  | 90.3   | York KDB122 Specs |
| Forklift              | FL_imp    | Lw   |                          | 99.5 | 102.5 | 103.5 | 100.5 | 97.5 | 92.5 | 90.5 | 89.5 | 83.5 | 99.7  | 108.4  | WSP Database      |