



REPORT

Noise Impact Assessment

École Élémentaire Catholique - Leirim (2025LTR115)

Submitted to:

Conseil des écoles catholiques du Centre-Est (CECCE)

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Executive Summary

This Noise Impact Assessment (NIA) was prepared to support a Site Plan Control (SPC) Application for the proposed Conseil des écoles catholiques du Centre-Est (CECCE) Leitrim Catholic Elementary School that is to be located at 3290 Findlay Creek Drive, Leitrim, Ontario (the Site).

The purpose of the study is to assess the potential noise effects of the environment onto the Site and assess the potential noise impact of the proposed stationary noise sources at the Site on surrounding noise-sensitive areas. The assessment was based on the Site Plan prepared by Edward J. Cuhaci & Associates Architects Inc. prepared June 2025.

The assessment was conducted in accordance with the City of Ottawa guideline, Environmental Noise Control Guidelines (ENCG) and the Ministry of the Environment, Conservation and Parks (MECP) Noise Guideline “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning” (Publication NPC-300). The acceptable levels of road traffic noise impacting noise-sensitive institutional developments are discussed in Section “Part C- Land Use Planning of NPC-300 as well as Section 2 and 4 of the ENCG.

The significant existing environmental noise sources in the vicinity of the Site are limited to transportation noise sources, mainly road traffic on Findlay Creek Drive which is identified by the City of Ottawa Official Plan as major collector. The significant stationary noise sources at the Site will include rooftop Heating Ventilation and Air Conditioning (HVAC) equipment and exhaust fans.

The Site is located outside the Ottawa Macdonald Cartier International Airport Operating Influence Zone, and thus, an aircraft noise assessment is not required.

The evaluated potential noise impact of transportation sources onto the Site, and the potential noise impact from stationary noise sources associated with the Site on to; nearby residential uses and onto the school itself are summarized in this report. The predicted sound levels were assessed as per the MECP Publication NPC-300 and ENCG requirements where it was determined that the Site is expected to comply with the applicable noise guidelines without additional noise control measures. Additionally, exterior walls, door, and window construction meeting the Ontario Building Code (OBC) minimum requirements will be adequate to reduce the sound levels in the indoor environment to below the requirements set out in the City of Ottawa and the MECP noise guidelines. Stationary sources at the Site are predicted to comply with the City of Ottawa and the MECP noise guidelines sound level limits onsite and at offsite Point(s) of Reception.

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1 INTRODUCTION

WSP Canada Inc. (WSP) retained by Conseil des écoles catholiques du Centre-Est (CECCE) to complete an Environmental Noise Impact Assessment for the proposed Leitrim Catholic Elementary School development to be located at 3290 Findlay Creek Drive in Leitrim, Ontario (the Site). This report was prepared in support of the Site Plan Control (SPC) Application submission to the City of Ottawa.

The assessment was based on the Site Plan prepared by Edward J. Cuhaci & Associates Architects Inc. prepared June 2025, included in Appendix A, and was prepared in accordance with the Environmental Noise Control Guidelines (ENCG) published by the City of Ottawa, dated July 2017. The ENCG is based on the Ministry of the Environment, Conservation and Parks (MECP) Noise Guideline “Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning” (Publication NPC-300).

This assessment investigates the potential for noise impacts of the environment onto the Site from nearby transportation sources (i.e. Findlay Creek Drive) and the potential noise impacts from the proposed stationary sources associated with the Site on; surrounding noise-sensitive areas and sensitive receptors associated with the school itself. The findings and recommendations needed to comply with the applicable noise guidelines are included herein.

1.1 The Site and Surrounding Area

The Site is bounded by:

- Findlay Creek Drive to the north with residential uses further beyond.
- Trident Mews Street to the east with residential uses further beyond.
- Residential land use to the south followed by other residential uses further beyond.
- Luminosity Private Street and residential uses to the west with Bank Street further west.

The following recently developed or proposed development lands around the Site have been included in the analysis, including:

- Application #D07-12-20-0015 – Cowan's Grove Mid-Density Residential Block at 4791 Bank Street, seven (7) three-storey residential buildings, with 102 residential town home units. (Residential Units located along Moon Shadow Private and Luminosity Private Street)
- Application #D07-16-13-0035 - Lilythorne Zens at 4789 Bank Street Block 278 of 4M-1659, three (3) three-storey buildings, with twelve (12) units each with pathways and drive aisles.
- Application #D07-12-22-011 – North-east Intersection of Bank Street and Findlay Creek (Block 240 in the Lilythorne Subdivision) at 4781 Bank Street, new stacked apartment dwellings, 8 blocks, 96 units with parking spaces. (Note: Site Plan application pending as of September 2025)

The zoning designation of the area in the immediate vicinity of the Site was obtained from the City of Ottawa from the existing zoning By-law 2008-250. While the Zoning By-law 2008-250 remains in effect, a review of the new zoning By-law 2026-50 Final Draft (September 2025) was also completed.

Proposed changes in Bylaw 2026-50 will include the following:

- The Site is currently zoned “R4Z/I1A” and is proposed to be changed to “N4B”, both zones reflect institutional permitted land use.
- The residential area to the immediate north, east and south is currently zoned “R4Z” Residential Zone is proposed to be changed to “N4B” Neighbourhood Zone, both reflecting residential use.
- The residential area to the immediate west or northwest is currently zoned “GM” Mixed Use Commercial Zones is proposed to be changed to “MS2” Mainstreet Corridor Zone, where residential use is permitted.

A scaled map showing the Site with respect to the surrounding area in a 1 km radius is provided in Figure 1. A land use zoning designation plan from the City of Ottawa (By-law 2008-250) and the final draft zoning By-law 2026-50 is provided in Figure 2 and Figure 3, respectively.

1.2 The Proposed Development

The assessment was based on the Site Plan prepared by Edward J. Cuhaci & Associates Architects Inc. prepared in June 2025 and included in APPENDIX A (Site Plan). The proposed school development includes a site area of 22,500 square meters (m²) which consists of a main two-storey building with a daycare centre, a portable area designed to accommodate up to eight (8) future portables located to the south of the main building, outdoor play areas and a paved parking area to the west, as outlined in the Site Plan.

2 NOISE IMPACT ASSESSMENT CRITERIA

2.1 Transportation 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 be addressed in the planning of any new development.

In land use planning, although the 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 Environmental Noise Control Guidelines (ENCG) follows the MECP’s Publication NPC-300, Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning for acceptable levels of road, rail and air traffic noise impacting noise-sensitive institutional developments and 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 2 and 4 of the ENCG.

The ENCG stipulates that a noise study shall be prepared when a new development is proposed within distances as follows:

- 100 metres from the right-of-way of an existing or proposed road; arterial, major collector, light rail transit, bus rapid transit or transit priority corridor;
- 250 metres from the right-of-way of an existing or proposed highway;
- 300 metres from the right-of-way of a proposed or existing rail corridor or secondary main railway line;
- 500 metres from the right-of-way of a freeway or 400-series provincial highway or principal main railway line; or
- The defined area from the Noise Exposure Forecast (NEF) noise contour of airport/aircraft noise.

2.1.1 Aircraft Sources

The Site is located outside the City of Ottawa's International Airport's (Macdonald-Cartier International Airport) Vicinity Development Zone (AVDZ) and outside the Airport Operating Influencing Zone (AOIZ). Therefore, aircraft noise has not been considered in the assessment. The NEF/NEP contour map provided by the City's "Official Plan – Schedule C14 – Land Use Constraints Due to Aircraft Noise" (November 4, 2022) is included in APPENDIX B.

2.1.2 Surface Transportation Noise Sources

The significant sources of noise in the vicinity of the Site are transportation noise sources. The road types were identified using the City's "Official Plan – Schedule C4 – Urban Road Network" (November 4, 2022) as provided in APPENDIX B. Findlay Creek Drive is located within 100 metres of the Site. As per the Official Plan (Schedule C4), the section of Findlay Creek Drive located east of Bank Street, which is located immediately north of the Site is not shown to be a major collector. However, in completing a conservative assessment all of Findlay Creek Drive was considered to be a Major Collector. Bank Street, which is a major arterial, is located greater than 100 metres of the Site, along with all other more significant roads, light rail transit, bus rapid transit, and transit priority corridors. Accordingly, these roadways and transit facilities are not expected to have a significant acoustic impact on the Site.

Proposed and existing highways are located further than 250 metres away from the Site. Proposed or existing rail corridors or main railway lines are located further than 300 metres away. Freeway and 400-series or principal railway line are further than 500 metres away. Therefore, these transportation noise sources are not included in the assessment.

2.1.3 Road Sources Assessment Criteria

NPC-300 and ENCG provides sound level limits in terms of energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels (dBA) at a specific noise-sensitive location. Outdoor areas are not considered noise-sensitive for institutional developments. Therefore, only indoor locations are identified and only during the daytime period.

The Table 1 summarizes the indoor sound level limits from road traffic applicable for the proposed institutional development.

Table 1: ENCG and NPC-300 Road Traffic Indoor Sound Level Criteria for Schools

Area	Time Period	L_{EQ} (dBA) ¹ – Road	Reference
Schools, Daycares	Daytime (07:00 – 23:00)	45	NPC-300 Table C-2, ENCG Table 2.2b

Notes:

¹ Daytime: L_{EQ} 16hr

The building envelope, such as walls, windows and doors, where applicable, should be designed so that the indoor sound levels comply with the sound level limits summarized in Table 1.

2.1.4 Building Component Requirements

To comply with the indoor sound level criteria listed in Table 1, the ENCG and NPC-300 provides guidelines based on predicted sound levels at the façade/plane of window. All buildings are required to comply with the Ontario Building Code (OBC) requirements. If the predicted sound level at the façade/plane of window exceeds 65 dBA during the daytime for institutional building, additional considerations such as the type of windows, exterior walls, and doors that can provide noise attenuation must be selected.

Table 2 summarizes the requirements for type of building façade construction for institutional purpose buildings.

Table 2: Building Component Requirements for Indoor Spaces

Area	Time Period	L_{EQ} (dBA) ²	Building Component Requirements
Plane of Window ¹	Daytime (07:00 – 23:00)	≤ 65	Building components compliant with Ontario Building Code (OBC)
		> 65	Building components designed/selected to meet Indoor Requirements

Notes:

¹ Plane of Window of an institutional purpose building leading to a noise sensitive room, such as a teacher's lounge, classrooms, etc.

² Daytime: L_{EQ} 16hr.

2.2 Stationary Sources and Assessment Criteria

Stationary source is defined in the MECP publication NPC-300 as a source of sound or combination of sources of sound that are included and normally operated within the property lines of a facility. The ENCG states new stationary sources of noise (noise generating) are defined by proximity to existing or approved noise-sensitive developments.

It is expected there will be stationary noise sources introduced by the proposed school building development which is surrounded by existing residential dwellings. These stationary sources include rooftop mechanical units. Therefore, stationary noise has been included in the study to assess the potential noise impacts of the Site on the surrounding noise sensitive land uses and onto itself.

From a review of available aerial imagery and land use information, there are stationary sources (i.e. HVAC units, exhaust fans, etc.) associated with the commercial buildings that are located to the west of Bank Street along Bank Street, north of Shuttleworth Drive. However, there are recently built three-storey residential dwellings (Application # D07-12-20-0015 and D07-16-13-0035) that have been built between those commercial buildings and the Site (school). Those commercial developments would have to comply at the existing and recently built sensitive land uses. In addition, the newly built three (3) storey dwellings would provide shielding from those stationary sources, and the potential to impact the Site would be minimal.

For stationary sources, the MECP NPC-300 and ENCG Section 3 provides criteria based on one-hour equivalent sound level. Two locations are typically considered: an outdoor location and the plane of window. The predicted sound level must comply with the noise limits set out in NPC-300 and ENCG. Both guidelines provide the sound level limits for noise-sensitive receptors based on the acoustical environment of the area. NPC-300 categorizes the acoustical environment into four classes: Class 1 (urban), Class 2 (semi-urban), Class 3 (rural), or Class 4 (special cases). Based on review of the area using aerial imagery, the general area is urban residential and can be considered as a Class 1. Table 3 summarizes the MECP's sound level limits for a Class 1 Area which were used as the applicable sound level limits for the proposed development.

Table 3: ENCG and NPC-300 Exclusion Limits in dBA

Period	Class 1	
	Plane of Window ¹	Outdoor POR ²
Daytime (07:00 – 19:00)	50	50
Evening (19:00 – 23:00)	50	50
Nighttime (23:00 – 07:00)	45	n/a

Notes:

¹ Plane of Window for an institutional purpose building leading to a noise sensitive room, such as a teacher's lounge, classrooms, etc.

² POR means Point of Reception; representing a point in a receptor location.

3 NOISE IMPACT ASSESSMENT

3.1 Transportation Noise

3.1.1 Road Traffic Data

Road traffic data were obtained from the ENCG and included in APPENDIX B for Findlay Creek Drive. The data obtained from the ENCG provides future traffic volume, day/night split, commercial vehicle percentages, and posted speed limits for various roadways based on roadway class and number of lanes. The ENCG data represents the future traffic volume and corresponding to a “mature state of development” in the City's Official Plan. Findlay Creek Drive is a two-lane, undivided collector road (2-UCU) with a posted speed limit of 50 km/hr. The extension of this road east of Bank Street was recently constructed (2020) and serves as a primary connection to the Lilythorne community. It is assumed the speed along that section of Findlay Creek Drive would be dropped to 40 km/hr due to being in school zone area as per other roads across Ontario around a school.

The traffic and road parameters used for sound level predictions are provided in Table 4. The surrounding topography is generally flat and assessed as such.

Table 4: Summary of Road Traffic Data Used in the Transportation Noise Analysis

Road	Road Classification	Traffic Volumes (AADT)	Day/Night Split (%)	Medium Trucks (%)	Heavy Trucks (%)	Posted Speed Limit (KPH)
Findlay Creek Drive	2-UCU	8,000	92/8	7	5	50/40

Notes:

¹ Currently 50 kph, however typically in school zones the speed is reduced to 40 kph.

3.1.2 Analysis Method

Road traffic sound levels at the Site were predicted using Cadna/A, a commercially available noise propagation modelling software. The following parameters were taken into consideration in the model:

- Road alignments and gradients;
- Traffic volumes and design speeds;
- Commercial vehicle percentages for roads;
- Shielding provided by intervening buildings, barriers and/or topographical features; and
- Special details such as barrier and receptor locations, elevations and heights.

The software's Building Evaluation feature was used to predict the sound levels on every façade of the proposed school and portables. The software generates an array of receivers along each building façade producing a comprehensive analysis of where the highest sound levels from road noise will be located on the building.

Findlay Creek Drive was modelled as a road source using the U.S. FHWA Traffic Noise Model (TNM) noise emission and calculation method implemented by Cadna/A. TNM predictions were similar to those made using the MECP prediction software STAMSON, which is an implementation of the ORNAMENT calculation methods recommended in the ENCG. The TNM predictions were validated against the STAMSON predictions; the validation files are included in APPENDIX C.

3.1.3 Results

Based on road traffic data, sound levels were predicted at the proposed school. The Site's building and outdoor classroom location with respect to Findlay Creek Drive is shown on Figure 4. The predicted sound levels were used to investigate building construction requirements. The highest predicted/estimated sound levels on the façades of the Site are summarized in Table 5 and shown on Figure 4.

Table 5: Summary of Predicted Sound Levels due to Road Traffic

POR ¹	Location Description	Approximate Height (m)	Daytime Highest Sound Level L _{EQ} (dBA)
Main School Building	North façade adjacent to Findlay Creek Drive	4.5	62
Portables	North façade adjacent to Findlay Creek Drive	1.5	50

Notes:

¹ POR = Point of Reception

3.1.4 Recommendations

As shown in Table 5, the sound levels at the plane of window are below 65 dBA during the daytime hours. Thus wall, door and window glazing assemblies meeting the minimum non-acoustical requirements of the Ontario Building Code (OBC) will be sufficient to meet the applicable indoor sound level limits.

3.2 Stationary Sources

The significant stationary sources of noise are the rooftop HVAC units and condensers. Insignificant sources or sources with negligible sound level contributions off-site would include small boilers, hot water heaters, and small fans associated with washrooms and indoor equipment. Additionally, there is no emergency generators planned for the Site.

The bus drop-off location will be located along Findlay Creek Drive outside the school's property boundary (off-site noise source). Therefore, noise associated with the bus drop-off activities are not included in the assessment.

3.2.1 Onsite Noise Sources

A total of eight (8) rooftop HVAC units (RTUs) are planned on the main school building as shown in Figure 5. All eight RTUs were conservatively assumed to operate simultaneously for 60 minutes in a predictable worst-case hour during the day and a worst-case 15 minutes during the night as provided by CECCE energy management team.

The sound level data used in the assessment is summarized Table 6 and manufacturer specifications are provided in APPENDIX D.

Table 6: Proposed Stationary Source Sound Data

Source ID ¹	Description	Overall Sound Power Level (dBA)
SS_RTU01	HVAC 8T Unit Condenser (1 fan) – Serving the Daycare Area	88
SS_RTU02	HVAC 6T Unit Condenser (1 fan) – Serving the North Level 1 Area	81
SS_RTU03	HVAC 11T Unit Condenser (2 fan) – Serving the North Level 2 Area	84
SS_RTU04	HVAC 4T Unit Condenser (1 fan) – Serving the Administration Area	81
SS_RTU05	HVAC 8T Unit Condenser (1 fan) – Serving the East Area	88
SS_RTU06	HVAC 11T Unit Condenser (2 fan) – Serving the Gym Area	84
SS_RTU07	HVAC 13T Unit Condenser (3 fan) – Serving the South Area	91
SS_RTU08	HVAC 9T Unit Condenser (2 fan) – Serving the Library	84

Notes:

¹ Refer to Figure 5 for source locations; locations are referred to using these IDs.

3.2.2 Analysis Method

In order to estimate the sound levels from stationary sources to the surrounding residential areas, 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; and,
- Temperature and humidity effects on noise propagation.

Key parameters used in the model and sample calculations are provided in APPENDIX E.

3.2.3 Receptors

Off-site Receptors: There are several residential lots surrounding the Site (north, east, south and west sides) which were considered in this assessment. These off-site receptor buildings were evaluated with receptors at the second-floor or third-floor plane of window (i.e. 4.5 or 7.5 metres above ground) and are described in Table 7. Outdoor points of reception were assessed at a height of 1.5 metres above ground representing the backyards and are also described in Table 7 and shown in Figure 6 for daytime and Figure 7 for nighttime periods. Contours shown in Figures 6 and 7 are at height of 4.5 metres.

On-site Receptors: In addition to off-site receptors, the Site itself is a receptor. Figure 5 shows the school, inclusive of the proposed building and portables, in relation to onsite stationary noise sources.

3.2.4 Results

3.2.4.1 *Impacts of the Site onto the Surrounding Environment*

The overall sound levels at off-site receptors surrounding the Site, generated using the considered predictable worst-case operations of the school, are summarized in Table 7 and shown on Figure 6 and 7.

Table 7: Summary of Predicted Sound Levels at Surrounding Noise Sensitive Land Uses due to Proposed Stationary Sources

POR ID	Description	Location	Receptor Height (m)	Daytime Predicted Sound Level (dBA)	Nighttime Predicted Sound Level (dBA)	Daytime Sound Level Limit (dBA)	Nighttime Sound Level Limit (dBA)	Compliance with Limit?
R01_w	Plane of Window	3-Storey Dwelling along Findlay Creek (D07-12-22-011)	7.5	44	38	50	45	Yes
R02_w	Plane of Window	2-Storey Dwelling along Kugagami Road	4.5	47	41	50	45	Yes
R02_o	Outdoor Point of Reception		1.5	42	36	50	45	Yes
R03_w	Plane of Window	2-Storey Dwelling along Findlay Creek Dr	4.5	50	44	50	45	Yes
R04_w	Plane of Window	2-Storey Dwelling along Findlay Creek Dr	4.5	50	44	50	45	Yes
R05_w	Plane of Window	2-Storey Dwelling along Findlay Creek Dr	4.5	48	42	50	45	Yes
R06_w	Plane of Window	2-Storey Dwelling along Findlay Creek Dr	4.5	45	39	50	45	Yes
R07_w	Plane of Window	2-Storey Dwelling along Findlay Creek Dr	4.5	42	36	50	45	Yes
R08_w	Plane of Window	2-Storey Dwelling along Trident Mews	4.5	41	36	50	45	Yes
R09_w	Plane of Window	2-Storey Dwelling along Trident Mews	4.5	43	38	50	45	Yes
R10_w	Plane of Window	2-Storey Dwelling along Trident Mews	4.5	42	37	50	45	Yes
R11_w	Plane of Window	2-Storey Dwelling along Trident Mews	4.5	41	36	50	45	Yes
R12_w	Plane of Window	2-Storey Dwelling along Longworth Avenue	4.5	45	40	50	45	Yes
R12_o	Outdoor Point of Reception		1.5	41	36	50	45	Yes
R13_w	Plane of Window	2-Storey Dwelling along Longworth Avenue	4.5	47	41	50	45	Yes
R13_o	Outdoor Point of Reception		1.5	45	39	50	45	Yes
R14_w	Plane of Window	2-Storey Dwelling along Longworth Avenue	4.5	44	38	50	45	Yes
R14_o	Outdoor Point of Reception		1.5	45	36	50	45	Yes
R15_w	Plane of Window	2-Storey Dwelling along Longworth Avenue	4.5	40	34	50	45	Yes
R15_o	Outdoor Point of Reception		1.5	42	39	50	45	Yes
R16_w	Plane of Window	3-Storey Dwelling along Luminosity Private (D07-12-20-0015)	7.5	40	35	50	45	Yes
R17_w	Plane of Window	3-Storey Dwelling along Moon Shadow Private (D07-12-20-0015)	7.5	42	36	50	45	Yes
R18_w	Plane of Window	2-Storey Dwelling along Findlay Creek Drive (D07-16-13-0035)	7.5	44	38	50	45	Yes

The predicted stationary source sound level of the proposed RTUs are expected to meet the sound level limits at all off-site receptors.

3.2.4.2 Impacts of the Site onto Itself

Based on the source sound data provided in Table 6, sound levels were predicted at the most impacted onsite receptors during the daytime only, as the school typically is only occupied for sensitive use during the daytime hours. The highest sound levels on the façades of the Site building and portables are summarized in Table 8 and shown in Figure 8.

Table 8: Summary of Predicted Sound Levels at the Site due to the Proposed Stationary Sources

POR	Location	Receptor Height (m)	Predicted Sound Level (dBA)	Daytime Sound Level Limit (dBA)	Compliance with Limit?
School Building	North & West Façade	4.5	48	50	Yes
Portables	North Façade	4.5	47	50	Yes

Predicted sound levels from stationary noise sources are expected to comply with the ENCG and NPC-300 at the proposed building development due to the Site's proposed stationary noise sources as summarized in Table 8.

4 RECOMMENDATIONS AND CONCLUSIONS

4.1 Conclusions

WSP Canada Inc. (WSP) was retained by Conseil des écoles catholiques du Centre-Est (CECCE), to complete an Environmental Noise Impact Assessment for the proposed Leitrim Catholic Elementary School development to be located at 3290 Findlay Creek Drive in Leitrim, Ontario. This report was prepared in support of the Site Plan Control (SPC) Application submission to the City of Ottawa. The assessment evaluated the potential for noise impact of transportation sources on the proposed elementary school, and stationary sources associated with the Site on nearby residential uses and onto the school itself.

The predicted sound levels were assessed as per the MECP Publication NPC-300 and the City of Ottawa's ENCG requirements. The assessment demonstrates that the Site is expected to comply with the applicable noise guidelines without additional noise control measures and with the consideration of the minimum requirement of Ontario Building Code (OBC).

4.2 Recommendations

Table 9 further summarizes the building recommendations for the proposed school development.

Table 9: Summary of Building Requirements

Building	Building Components STC (Walls)	Building Components STC (Windows & Doors)	Noise Control Measures
School Building	OBC ¹	OBC ¹	N/A
Portables	OBC ¹	OBC ¹	HVAC location ²

Notes:

¹ OBC – Meet or exceed the minimum requirement of Ontario Building Code (OBC)

² Due to the proximity of the off-site PORs, consideration should be made to have HVAC equipment associated with the portables on the north façade, so the portable itself provides acoustic shielding to the nearest off-site PORs.

Signature Page

WSP Canada Inc.



Carolyn Ropp, B.Sc.
Acoustics, Noise and Vibration Specialist



Joe Tomaselli, M.Eng., P.Eng.
Senior Principal Acoustics, Noise and Vibration Engineer

CR/JT

FIGURES



126 DON HILLOCK DRIVE, UNIT 2
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TEL.: 905-750-3080 | FAX: 905-727-0463
WWW.WSP.COM

LEGEND:

 APPROXIMATE SITE LOCATION



CLIENT:

**Conseil des écoles catholiques
du Centre-Est (CECCE)**

PROJECT:

NOISE IMPACT ASSESSMENT

**3290 FINDLAY CREEK DRIVE
LEITRIM, ON**

PROJECT NO.:

CA0058832.5938

DATE

SEPTEMBER 2025

DESIGNED BY:

--

DRAWN BY:

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CHECKED BY:

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FIGURE NO.

1

SCALE:

N.T.S.

TITLE:

SITE LOCATION PLAN

DISCIPLINE:

ENVIRONMENT

ISSUE:

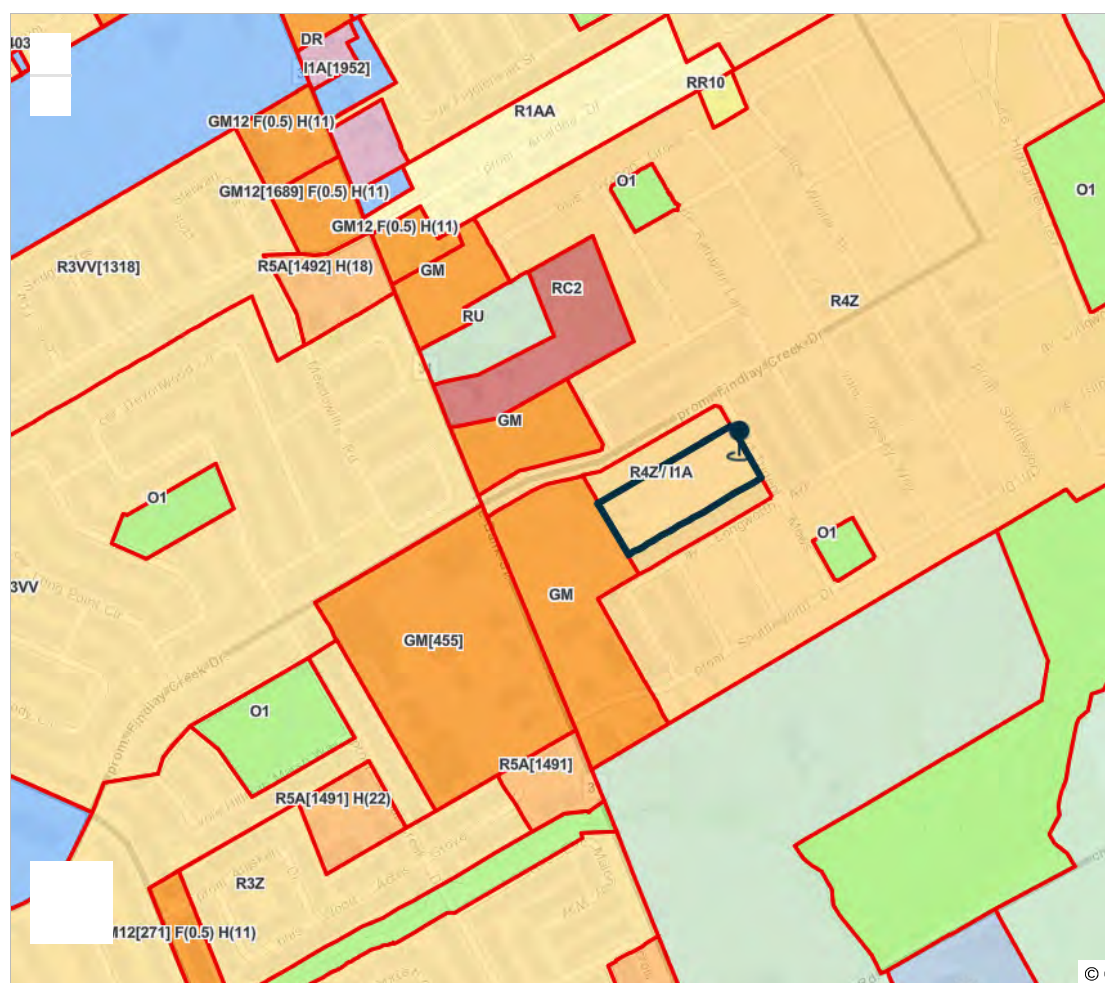
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Figure 2 - Zoning Map (Existing By-law 2008-250)

Selected address: 465 Trident Mews

Ward: Ward 22, Riverside South-Findlay Creek

	Existing Zoning (By-law 2008-250)	New Zoning (By-law 2026-50) Final draft
Zone code	R4Z / I1A	N4B
Legend grouping	Residential Zone	Neighbourhood Zone
Zoning overlays		
Link to By-law text	Existing Zoning (By-law 2008-250) on Ottawa.ca	Final draft of the new Zoning (By-law 2026-50) on Ottawa.ca



Existing Colour Zoning

- R1 - Residential Zones / Zones résidentielle
- R2 - Residential Zones / Zones résidentielle
- R3 - Residential Zones / Zones résidentielle
- R4 - Residential Zones / Zones résidentielle
- R5 - Residential Zones / Zones résidentielle
- RM - Mobile Home Park Zone / Zone de parc de maisons mobiles
- GM, LC - Mixed Use Commercial Zones I / Zones polyvalentes - commerciales I
- MC, MD, TD - Mixed Use Commercial Zones II / Zones polyvalentes - commerciales II
- AM, TM - Arterial & Traditional Mainstreet Zones / Zones d'artère principale et de rue principale traditionnelle
- IG, T1, T2 - Transportation Zones / Zones de transport
- I1, I2 - Institutional Zones / Zones institutionnelles
- L1, L2, L3, O1 - Open Space and Leisure Zones / Zones d'espaces verts et de loisirs
- V1, V2, V3 - Village Residential Zones / Zones résidentielles de village
- VM - Village Mixed Use Zone / Zone polyvalente de village
- RR - Rural Residential Zone / Zone résidentielle rurale
- DR - Development Reserve Zone / Zone d'aménagement futur
- AG - Agricultural Zone / Zone agricole
- RU - Rural Countryside Zone / Zone d'espace rural
- RC - Rural Commercial Zone / Zone de commerces ruraux
- IH, IL, IP, RG, RH - Industrial Zones / Zones industrielles
- RI - Rural Institutional Zone / Zone d'institutions rurales
- ME - Mineral Extraction Zones / Zone d'extraction de minéral
- MR - Mineral Aggregate Reserve Zone / zone de réserve de granulat minéral
- EP - Environmental Zones / Zones environnementales

Figure 3 - Zoning Map (New Zoning By-law 2026-50)



3D Interactive map

Select map layers to display

- ☐ Ward Boundaries
- ☐ Living City (3D City Scope)

Select zoning layer to display

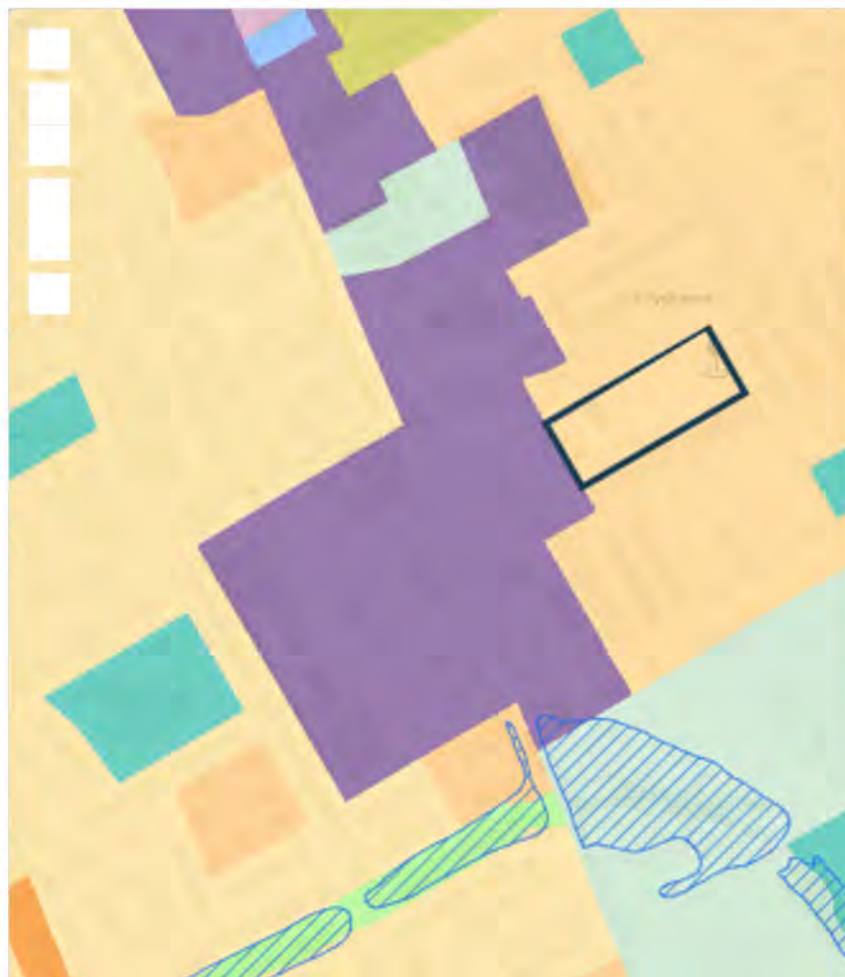
- ☐ New Zoning (By-law 2026-50) Draft 3
- ☐ Existing Zoning (By-law 2008-250)
- ☐ Official Plan - Schedule C6
- ☐ Hide all layers

Full street address

Selected address: 465 Trident Mews

Ward: Ward 22, Riverside South-Findlay Creek

	Existing Zoning (By-law 2008-250)	New Zoning (By-law 2026-50) Draft 3
Zone code	R4Z / I1A	N4B
Legend grouping	Residential Zone	Neighbourhood Zone
Zoning overlays		
Link to By-law text	Existing Zoning (By-law 2008-250) on Ottawa.ca	New Zoning (By-law 2026-50) Draft 3 on Ottawa.ca



Legend

New Zoning By-law DRAFT 3

Flood Plain Overlay

- Flood Plain (Section 501)
- Flood Plain - Area Specific Provision (Section 501(4))

Village Residential - Enterprise Overlay



Mineral Aggregate Overlay



New Colour Zoning Draft 3

- NU - Neighbourhood Unserved Zone / Zone de quartier non viabilisées
- N1 - Neighbourhood Zone / Zone de quartier
- N2 - Neighbourhood Zone / Zone de quartier
- N3 - Neighbourhood Zone / Zone de quartier
- N4 - Neighbourhood Zone / Zone de quartier
- N5 - Neighbourhood Zone / Zone de quartier
- N6 - Neighbourhood Zone / Zone de quartier
- NMU - Neighbourhood Mixed-Use Zone / Zone de quartier polyvalente
- H1, H2, H3 - Hub Zones / Zones de carrefour

- SD, ED - Special District Zones / Zones de secteurs spéciaux
- FAC - Open Space Facility Zone / Zone des infrastructures des espaces verts
- REC - Recreation Zone / Zone récréative
- GRN - Greenspace Zone / Zone d'espaces verts
- GBF, GBR - Greenbelt Facility and Greenbelt Rural Zones / Zones de la Ceinture de verdure
- INZ - Institutional Zone / Zone d'institutions
- LGZ - Large-Scale Institutional and Recreation Zone / Zone institutionnelle et récréative à grande échelle
- MH - Mobile Home Park Zone / Zone de parc de maisons mobiles
- AG - Agricultural Zone / Zone agricole
- V - Village Residential Zone / Zones résidentielles de village
- VM - Village Mixed-Use Zone / Zone de village polyvalente
- RR - Rural Residential Zone / Zone résidentielle rurale
- RU - Rural Countryside Zone / Zone rurale de campagne
- RI - Rural Institutional Zone / Zone rurale à vocation institutionnelle
- RC - Rural Commercial Zone / Zone rurale commerciale
- DR - Development Reserve Zone / Zone de réserve d'aménagement
- ME - Mineral Extraction Zones / Zone d'extraction de minéral
- MR - Mineral Aggregate Reserve Zone / Zone de réserve de granulats minéraux
- EP - Environmental Protection Zone / Zone de protection environnementale
- MS1, MS2 - Mainstreet Corridor Zones / Zones de rue principale
- CM1, CM2 - Minor Corridor Zones / Zones de couloir mineur
- T - Transportation Zones / Zone de transport
- IH, IL, IM, RIL, RG, RH - Urban and Rural Industrial Zones / Zones

Teranet



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LEGEND:

- APPROXIMATE SITE LOCATION
- ROAD SOURCE
- BUILDING EVALUATION



CLIENT:

Conseil des écoles catholiques
du Centre-Est (CECCE)

PROJECT:

NOISE IMPACT ASSESSMENT
3290 FINDLAY CREEK DRIVE
LEITHRIM, ON

PROJECT NO.:

CA0058832.5938

DATE

SEPTEMBER 2025

DESIGNED BY:

DRAWN BY:

CHECKED BY:

FIGURE NO.

4

SCALE:

N.T.S.

TITLE:

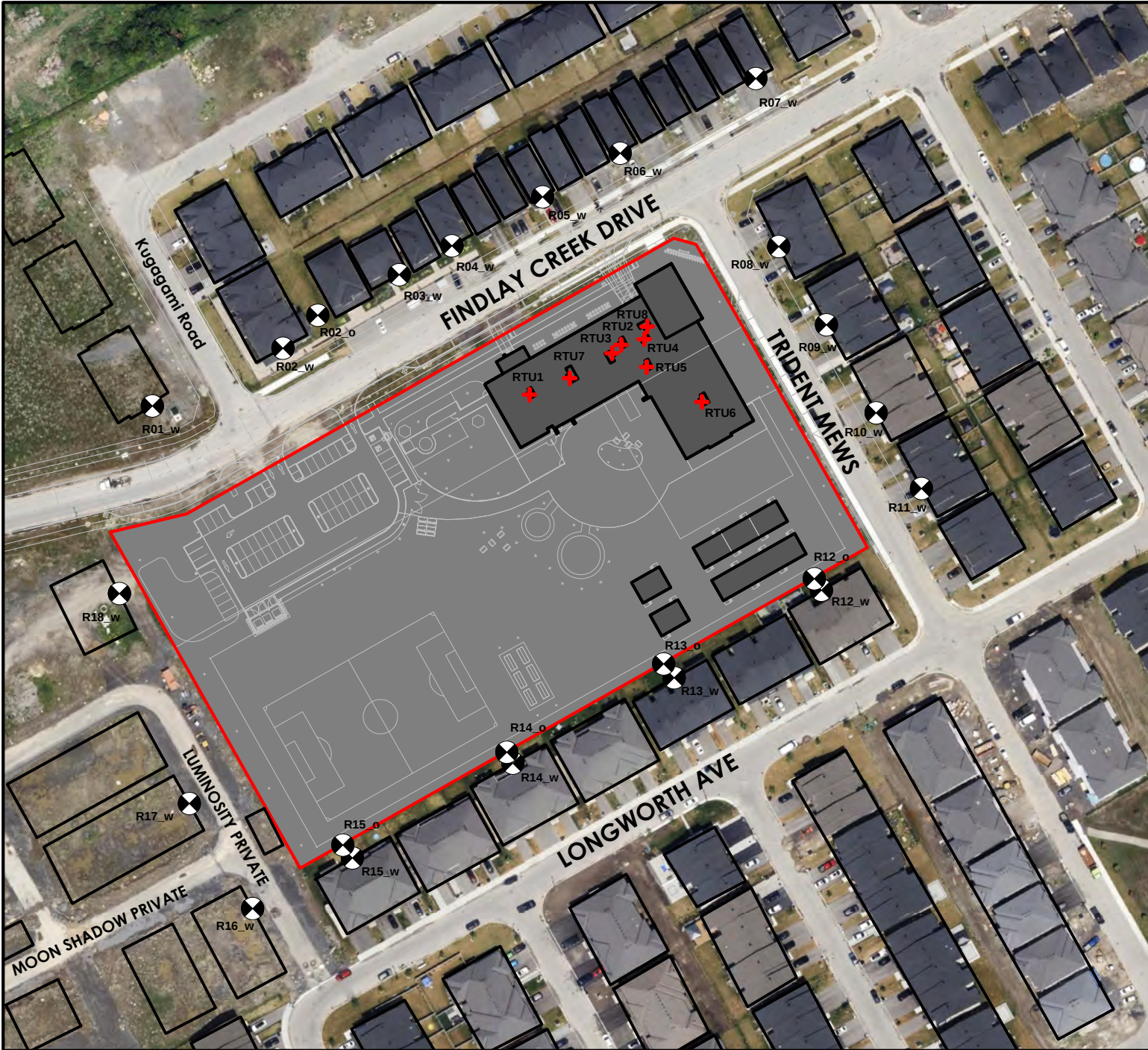
PREDICTED SOUND LEVELS –
TRANSPORTATION SOURCES (ROAD),
DAYTIME

DISCIPLINE:

ENVIRONMENT

ISSUE:

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LEGEND:

APPROXIMATE SITE LOCATION

STATIONARY SOURCES

RECEPTORS



CLIENT:

Conseil des écoles catholiques
du Centre-Est (CECCE)

PROJECT:

NOISE IMPACT ASSESSMENT

3290 FINDLAY CREEK DRIVE
LEITRIM, ON

PROJECT NO.:

CA0058832.5938

DATE

SEPTEMBER 2025

FIGURE NO.

5

SCALE:

N.T.S.

TITLE:

SOURCE ID AND
RECEPTOR LOCATIONS

DISCIPLINE:

ENVIRONMENT

ISSUE:

--



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LEGEND:



RECEPTORS



APPROXIMATE SITE LOCATION



STATIONARY SOURCES

	35.5
	40.5
	45.5
	50.5



CLIENT:

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du Centre-Est (CECCE)

PROJECT:

NOISE IMPACT ASSESSMENT

3290 FINDLAY CREEK DRIVE
LEITRIM, ON

PROJECT NO.:

CA0058832.5938

DATE

SEPTEMBER 2025

FIGURE NO.

6

SCALE:

N.T.S.

TITLE:

PREDICTED SOUND LEVELS -
STATIONARY SOURCES, DAYTIME
(OFFSITE)

DISCIPLINE:

ENVIRONMENT

ISSUE:

--



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LEGEND:

RECEPTORS

APPROXIMATE SITE LOCATION

STATIONARY SOURCES

35.5
40.5
45.5
50.5



CLIENT:

Conseil des écoles catholiques
du Centre-Est (CECCE)

PROJECT:

NOISE IMPACT ASSESSMENT

3290 FINDLAY CREET DRIVE
LEITRIM, ON

PROJECT NO.:

CA0058832.5938

DATE

SEPTMEBER 2025

FIGURE NO.

7

SCALE:

N.T.S.

TITLE:

PREDICTED SOUND LEVELS -
STATIONARY SOURCES, NIGHTTIME
(OFFSITE)

DISCIPLINE:

ENVIRONMENT

ISSUE:

--



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- LEGEND:
- APPROXIMATE SITE LOCATION
 - STATIONARY SOURCES
 - BUILDING EVALUATION



CLIENT:		Conseil des écoles catholiques du Centre-Est (CECCE)	
PROJECT:		NOISE IMPACT ASSESSMENT 3290 FINDLAY CREEK DRIVE LEITHRIM, ON	
PROJECT NO.:	DATE	CA0058832.5938	SEPTEMBER 2025
FIGURE NO.	SCALE:	8	N.T.S.
TITLE:			
PREDICTED SOUND LEVELS - STATIONARY SOURCES, DAYTIME (ONSITE)			
DISCIPLINE:			
ENVIRONMENT			
ISSUE:			
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APPENDIX A

Drawings

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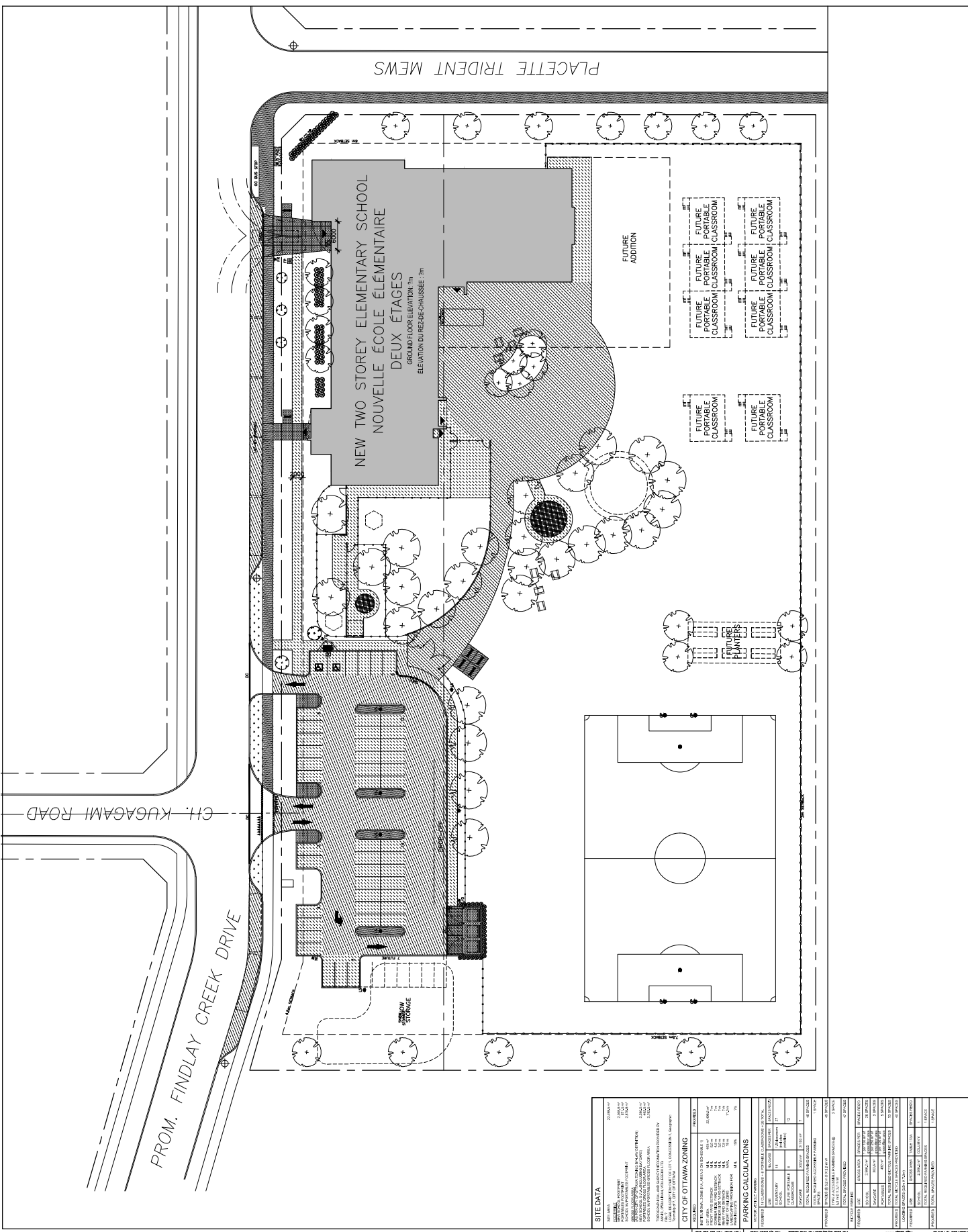
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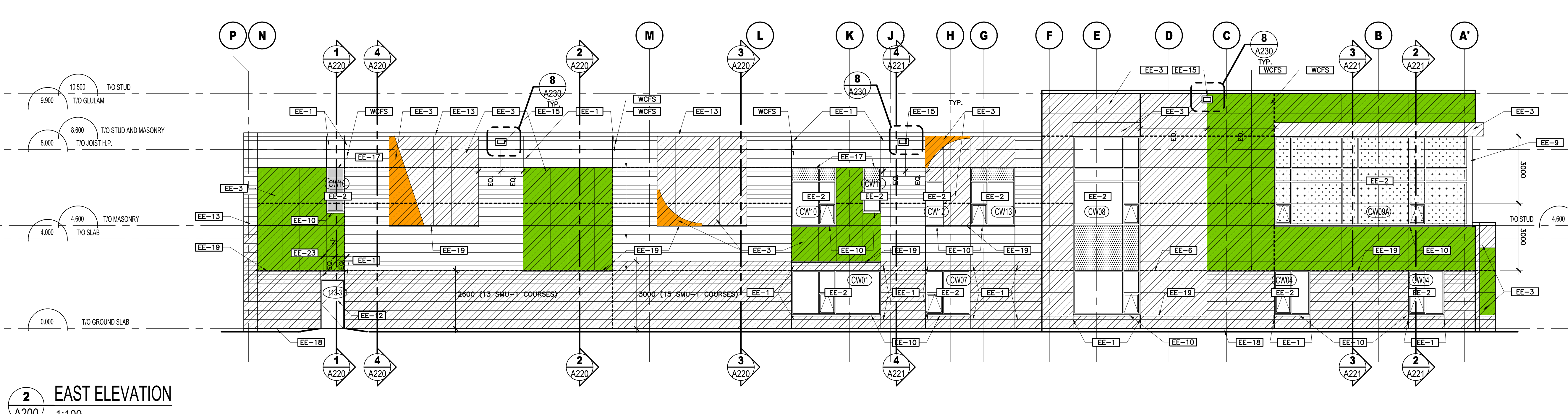
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DATE	JUNE 2025	ACAD 211 20250601 00000001 JPNAC
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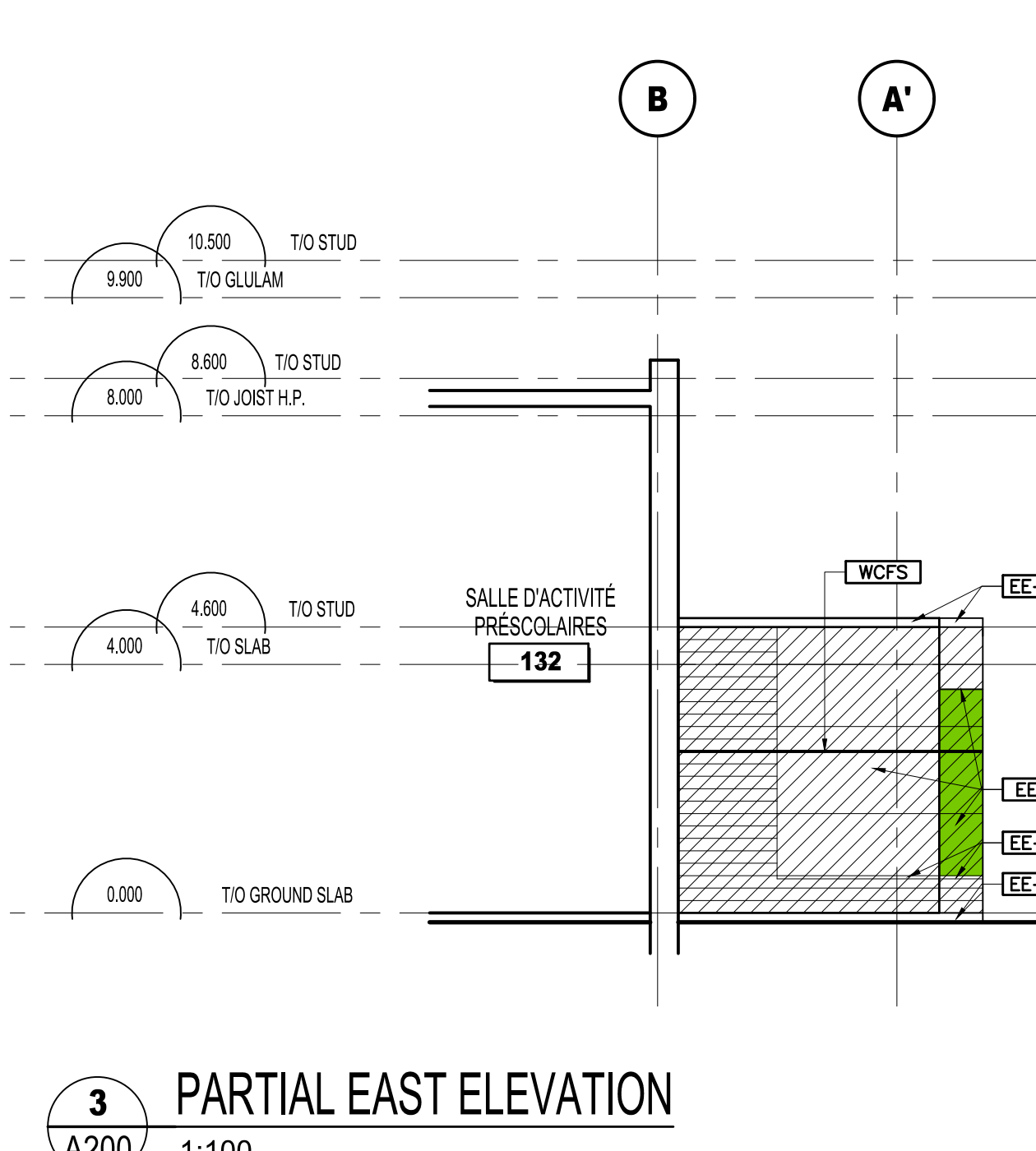




1 NORTH ELEVATION
A200 1:100



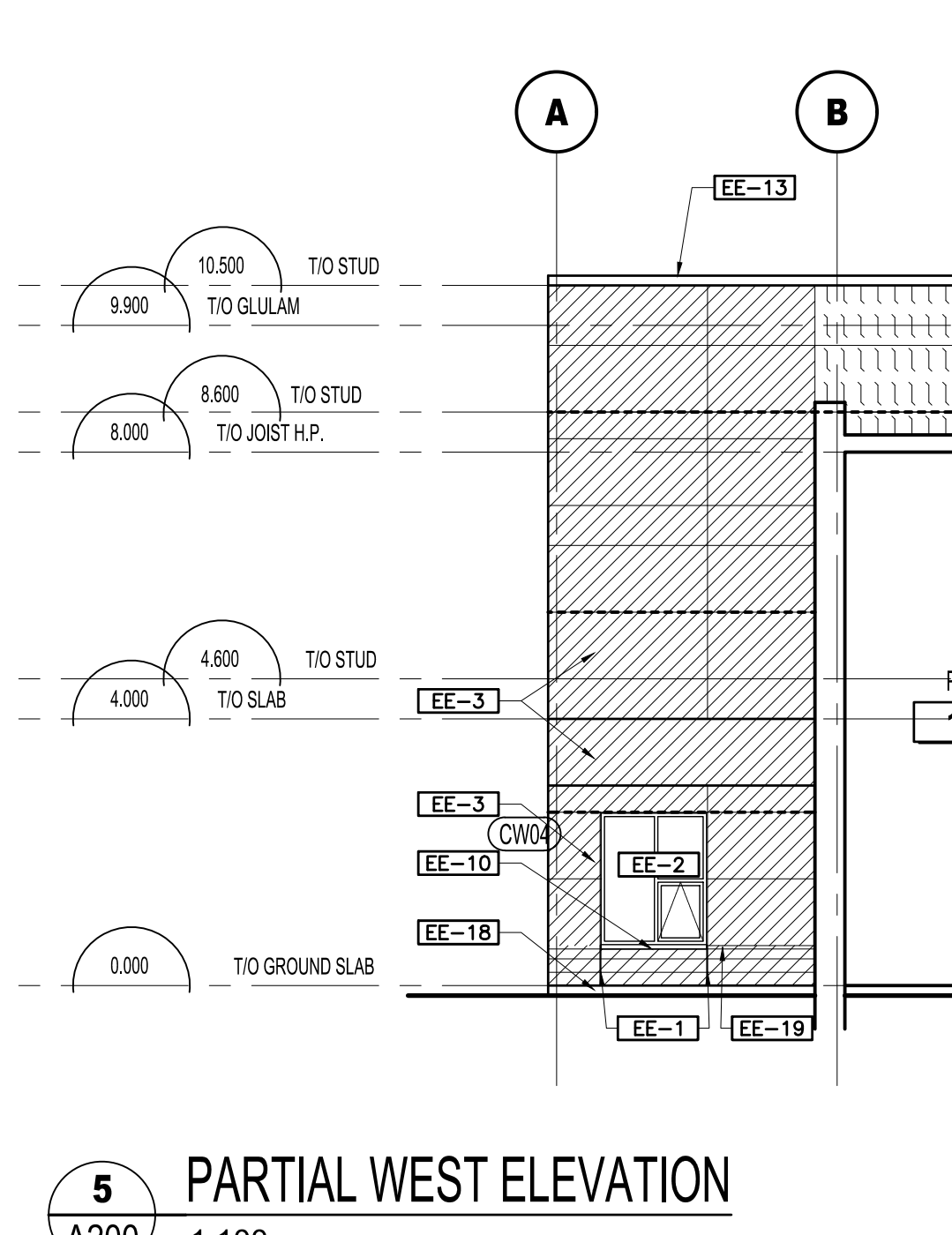
2 EAST ELEVATION
A200 1:100



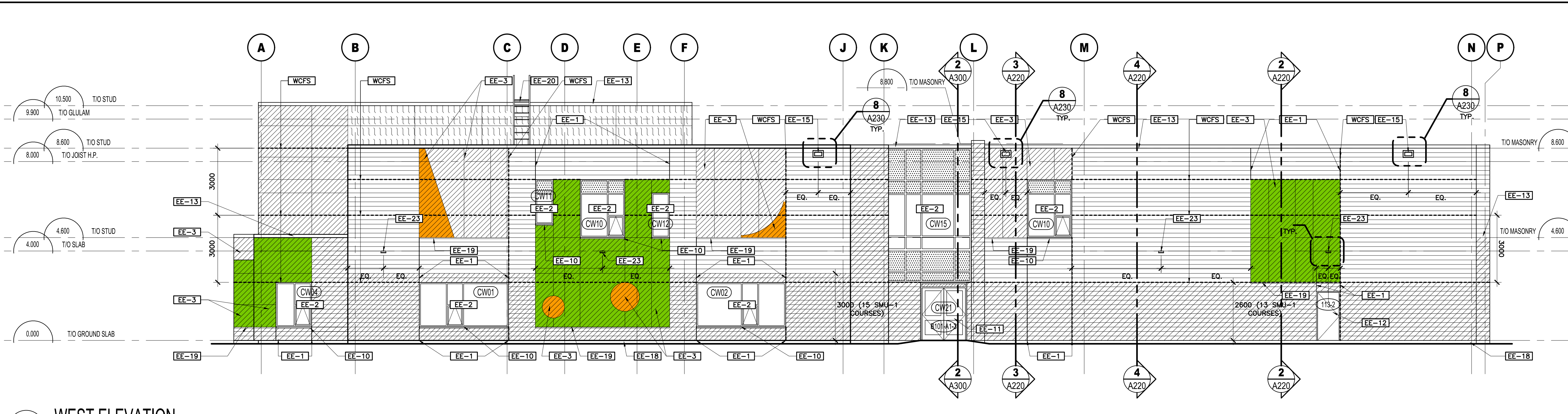
3 PARTIAL EAST ELEVATION
A200 1:100



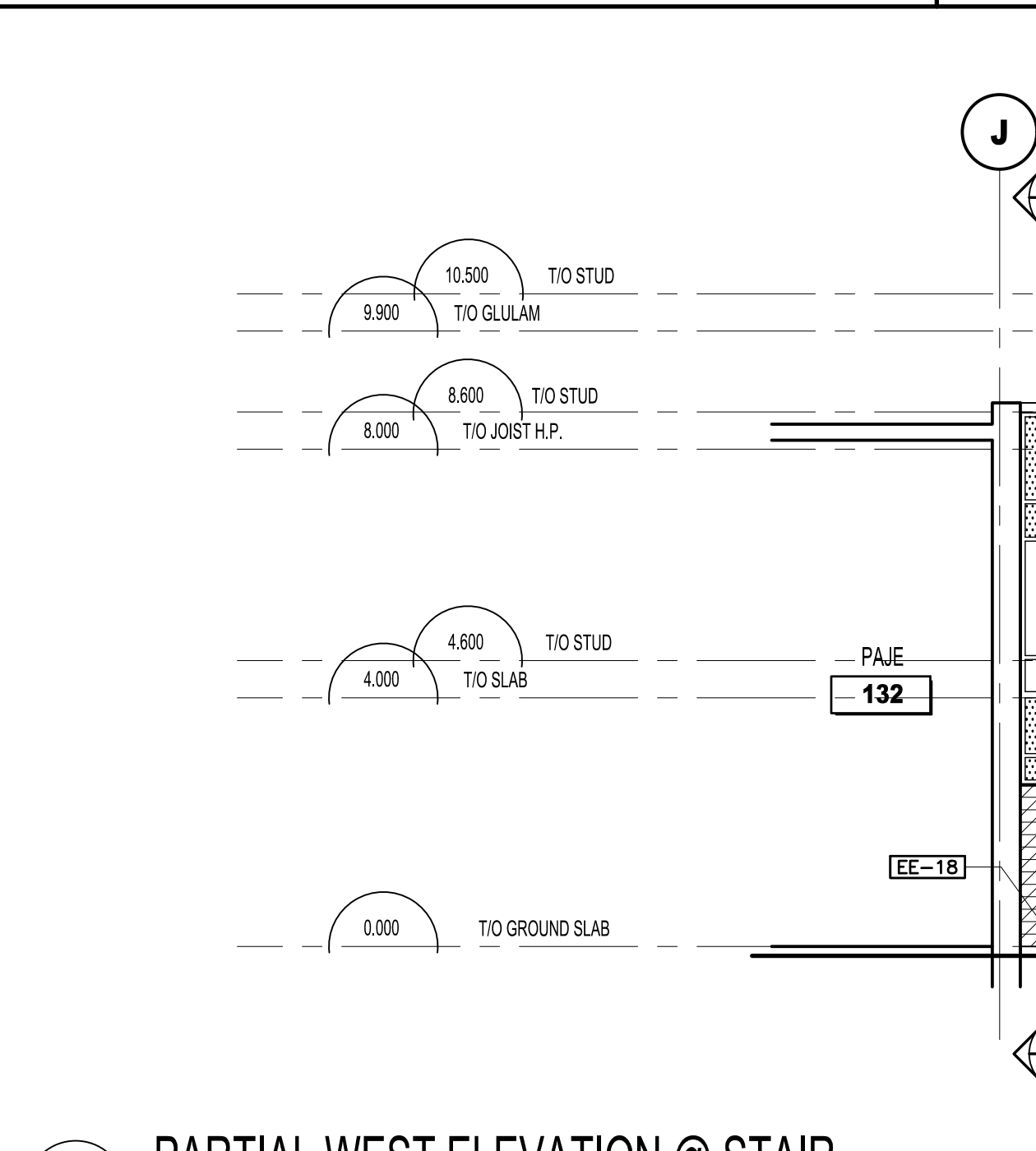
4 SOUTH ELEVATION
A200 1:100



5 PARTIAL WEST ELEVATION
A200 1:100



6 WEST ELEVATION
A200 1:100



7 PARTIAL WEST ELEVATION @ STAIR
A200 1:100

KEY NOTES	
EE-1	MASONRY CONTROL JOINT
EE-2	ALUMINUM CURTAIN WALL SYSTEM
EE-3	COMPOSITE ALUMINUM PANEL
EE-4	RESERVED
EE-5	RESERVED
EE-6	TYP. JOINT LOCATION BETWEEN COMPOSITE ALUMINUM PANELS
EE-7	RESERVED
EE-8	RESERVED
EE-9	PREFORMED 3mm ALUMINUM CLOSURE
EE-10	2mm ALUMINUM WINDOW SILL
EE-11	ALUMINUM SWING DOOR
EE-12	PRESSED HOLLOW METAL DOOR AND FRAME
EE-13	PREFINISHED METAL CAP FLASHING
EE-14	EXTERIOR WALL MOUNTED LIGHTING FIXTURE
EE-15	ROOF OVERFLOW SCUPPER
EE-16	RESERVED
EE-17	RESERVED
EE-18	EXPOSED FOUNDATION WALL - ARCHITECTURAL CONCRETE FINISH
EE-19	PREFINISHED METAL FLASHING
EE-20	ROOF ACCESS LADDER AND PLATFORM
EE-21	LOUVER REFER TO MECHANICAL
EE-22	ROOF OVERFLOW DRAIN SPOUT
EE-23	TYP. WALL MOUNT LIGHT FIXTURE
WFPS	WALL CAVITY FIRE-STOP

MATERIALS LEGEND	
[Pattern]	SPECIAL MASONRY UNITS SMU-1
[Pattern]	SPECIAL MASONRY UNITS SMU-2
[Pattern]	EXTERIOR COMPOSITE ALUMINUM PANEL SYSTEM COLOUR 1
[Pattern]	EXTERIOR COMPOSITE ALUMINUM PANEL SYSTEM COLOUR 2
[Pattern]	EXTERIOR COMPOSITE ALUMINUM PANEL SYSTEM COLOUR 3
[Pattern]	INSULATED SPANDREL GLAZING WITH INSULATED BACK PAN BEHIND IN ALUMINUM CURTAIN WALL
[Pattern]	VISION INSULATED GLASS UNITS CLEAR IN ALUMINUM CURTAIN WALL
[Pattern]	VISION INSULATED GLASS UNITS CERAMIC FRIT PATTERN IN ALUMINUM CURTAIN WALL
[Pattern]	VISION INSULATED GLASS UNITS TRANSLUCENT IN ALUMINUM CURTAIN WALL
[Pattern]	PREFINISHED METAL SIDING

3	0	2024/03/14	ISSUED FOR TENDER
2	0	2024/03/14	ISSUED FOR 60% SUBMISSION
1	0	2024/03/14	ISSUED FOR 60% SUBMISSION
REV	NO.	DATE	ISSUE

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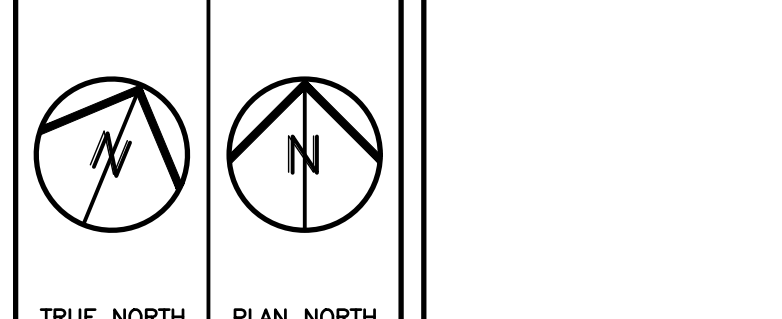
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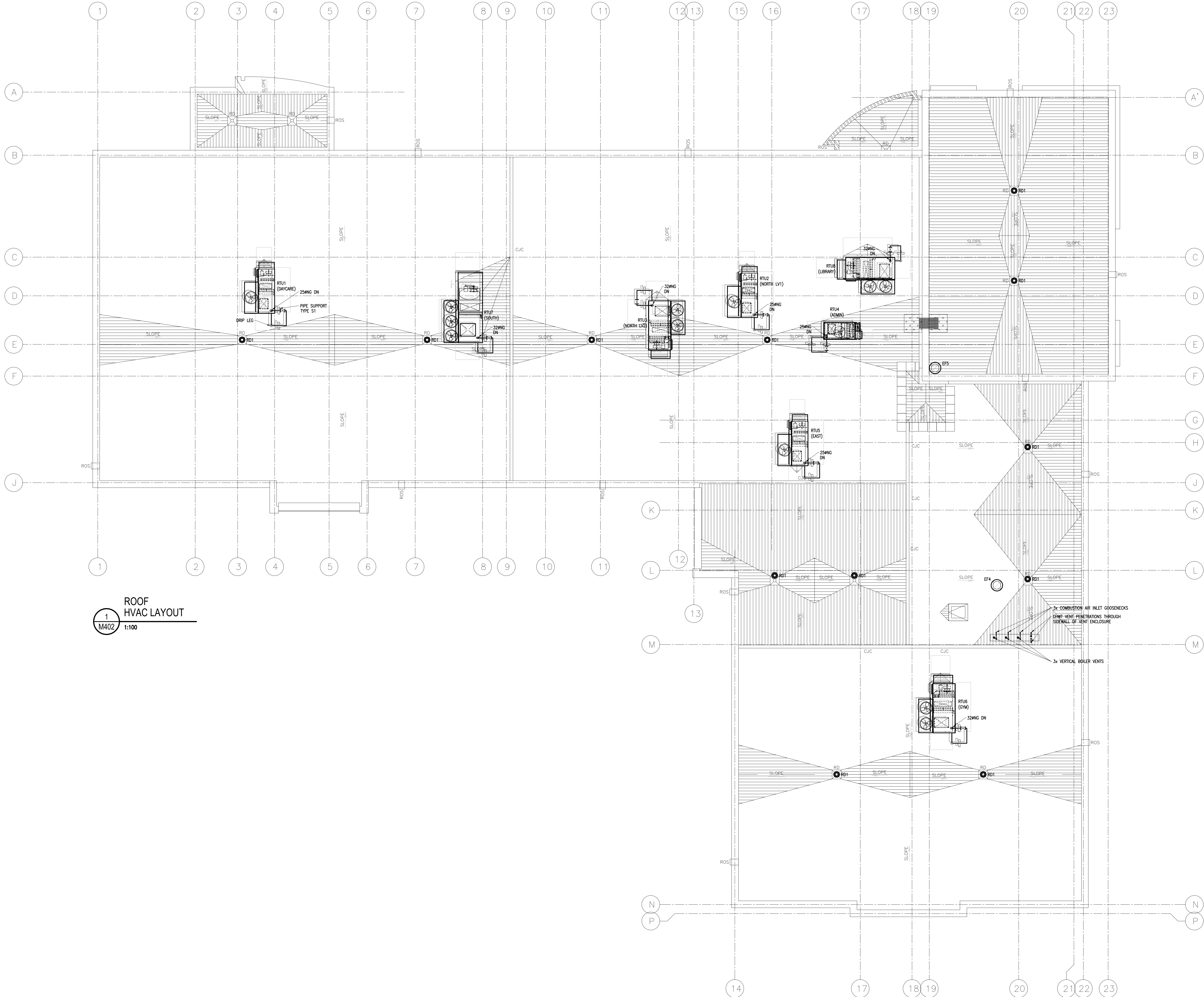
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1111 St-John St. Suite 100, Ottawa, Ontario, K1N 6H7
Tel: (613) 238-5848 Fax: (613) 238-7125 Email: info@ejcuhaci.com

PROJET/TITRE DU PROJET
ÉCOLE ÉLÉMENTAIRE CATHOLIQUE AVALON III
2666 TENTH LINE ROAD
OTTAWA, ONTARIO
CECCE
4000 LABELLE STREET
OTTAWA, ONTARIO, K1J 1A1

DRAWING/TITRE DU DESSIN
ELEVATIONS

SCALE	1:100	PROJ. NO.	2215	ISSUE NO.	3	REV. NO.	0
ÉCHELLE	1:100	PROJ. NO.	2215	ISSUE NO.	3	REV. NO.	0
DRAWN BY	S.P.	DRAWING/DESSIN					
DESIGNED BY	S.P.						
CHECKED BY	J.J.						
VERIFIED BY							
DATE	MAY 2023	ACAD FILE/FICHER	2215-A200.DWG				

A200



REV	NO	DATE	ISSUE
4	0	2024/02/16	ISSUED FOR TENDER
3	0	2023/07/21	ISSUED FOR BUILDING PERMIT
2	0	2023/07/14	ISSUED FOR PERMIT REVIEW
1	0	2023/06/25	ISSUED FOR 60% REVIEW

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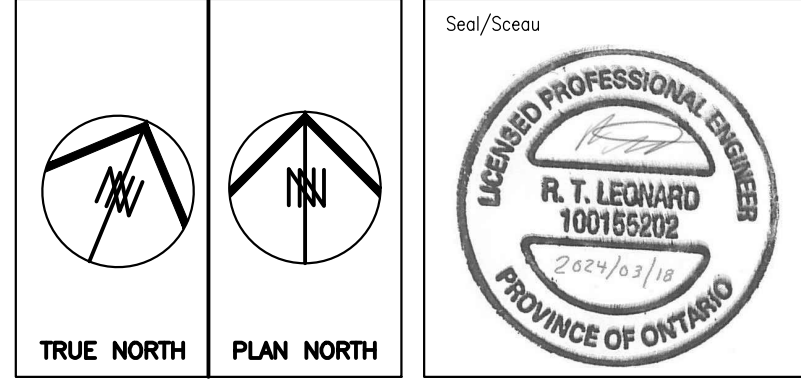
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**Goodkey Weedmark
Consulting Engineers**

GOODKEY WEEDMARK & ASSOCIATES LIMITED
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Ottawa, Ontario 613 727-5115 Fax
Canada K2C 3R8 www.gweal.com Web



**EDWARD J CUHACI
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1771 Statter St, Suite 100, Ottawa, Ontario, K1P 5H7
Fax: (613) 236-1944 Telephone: (613) 236-7155 E-mail: info@cuhaci.com

PROJECT TITLE/TITRE DU PROJET
ÉCOLE ÉLÉMENTAIRE CATHOLIQUE
AVALON III
TENTH LINE ROAD
OTTAWA, ONTARIO

CECCE
4000 LABELLE STREET
OTTAWA, ONTARIO, K1J 1A1

DRAWING TITLE/TITRE DU DESSIN
MECHANICAL
ROOF PLAN

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DESIGNED BY				
CHECKED BY	R. LEONARD			
VERIFIED BY				
DATE	MAY 2023	ACAD FILE/FICHIER: 21023-183MECH		

ROOFTOP UNIT SCHEDULE																																								
TAG	LOCATION	AREA SERVED	SUPPLY FAN			EXHAUST/RETURN FAN			GAS HEAT SECTION			DX COOLING COIL DATA						WHEEL AIR FLOW L/s (cfm)	SUMMER				WINTER				SOUND POWER LEVEL (dB)								ELECTRICAL DATA		BASIS OF DESIGN	REMARKS		
			OUTDOOR AIR L/s (cfm)	AR FLOW L/s (cfm)	EXTERNAL STATIC PRESSURE Pa (in w.c.)	MOTOR SIZE (HP)	AR FLOW (cfm)	EXTERNAL STATIC PRESSURE Pa (in w.c.)	MOTOR SIZE (HP)	INPUT kW (MBH)	OUTPUT (MBH)	E.A.T. (08/MB) (°F)	L.A.T. (08/MB) (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	E.A.T. (08/MB) (°F)	L.A.T. (08/MB) (°F)		TOTAL CAPACITY kW (MBH)	SENS. CAPACITY kW (MBH)	E.A.T. (08/MB) (°F)	L.A.T. (08/MB) (°F)	TOTAL CAPACITY kW (MBH)	SENS. CAPACITY kW (MBH)	E.A.T. (08/MB) (°F)	L.A.T. (08/MB) (°F)	OCTAVE BAND (dB)	63	125	250	500	1000	2000	4000	8000	FLA/MCA/MOC			V/PH/Hz	
RTU-1	ROOF	DAYCARE	566 (1200)	1415 (3000)	249 (1.0)	3	637 (1347)	62 (0.25)	1	26 (90)	21 (73)	64.9/56.2	87.4/64.4	26 (90)	21 (72)	76.57/63.27	55.75/53.41	635 (1347)	8.1 (27.8)	3.9 (13.4)	90/70	76.57/63.27	32.7 (111.7)	23.6 (80.5)	-25/-25	64.9/56.2	DISCHARGE/RETURN	86/82	84/80	88/78	83/70	75/67	73/64	70/57	65/52	20/22/30	208/3/60	ACON RN-008-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH AND 1% PURGE WITH SPLIT PATH RETURN/EXHAUST PLenum FOR DEDICATED WASHROOM EXHAUST DUTY.	
RTU-2	ROOF	NORTH LEVEL 1	542 (1150)	1085 (2300)	249 (1.0)	2	602 (1276)	62 (0.25)	1	26 (90)	21 (73)	62.6/54.8	91.9/65.5	18 (63)	16 (54)	76.94/63.54	56.81/54.68	602 (1276)	7.8 (26.8)	3.7 (12.8)	90/70	76.94/63.54	31.3 (107.0)	22.5/76.8)	-25/-25	62.6/54.8	DISCHARGE/RETURN	83/79	82/78	85/75	79/67	71/64	70/62	67/56	61/52	13/14/20	575/3/60	ACON RN-006-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH AND 1% PURGE WITH SPLIT PATH RETURN/EXHAUST PLenum FOR DEDICATED WASHROOM EXHAUST DUTY.	
RTU-3	ROOF	NORTH LEVEL 2	1085 (2300)	2170 (4600)	249 (1.0)	5	2170 (4600)	62 (0.25)	2	57 (195)	46 (156)	62.1/54.0	93.5/65.5	36 (123)	30 (104)	77.01/63.83	57.71/55.36	1122 (2379)	14.5 (49.5)	7.4 (25.3)	90/70	77.01/63.83	59.8 (204.4)	44.6 (152.3)	-25/-25	62.1/54.0	DISCHARGE/RETURN	94/90	91/87	98/89	88/78	81/76	78/73	76/69	70/64	24/26/30	575/3/60	ACON RN-011-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH AND 1% PURGE WITH SPLIT PATH RETURN/EXHAUST PLenum FOR DEDICATED WASHROOM EXHAUST DUTY.	
RTU-4	ROOF	ADMIN	212 (450)	849 (1800)	311 (1.25)	2	849 (1800)	62 (0.25)	1	29 (100)	24 (81)	53/49.6	94.6/65.5	15 (52)	13 (45)	78.75/64.71	57.56/55.58	-	-	-	-	-	-	-	-	-	-	DISCHARGE/RETURN	86/83	84/80	86/77	82/71	74/69	72/67	70/63	64/59	12/14/15	575/3/60	ACON RN-004-4-0-EOE-32B/CNBC-EOO-SUB-ADA-DOWHDS-00-00000009	* C/W WEATHERPROOF DISCONNECT SWITCH
RTU-5	ROOF	EAST LEVELS 1 & 2	708 (1500)	1415 (3000)	249 (1.0)	3	1415 (3000)	62 (0.25)	2	44 (150)	35 (120)	62.3/54.2	99.3/67.4	27 (91)	21 (72)	76.99/63.75	56.28/53.87	769 (1631)	9.6 (32.8)	4.8 (16.5)	90/70	76.99/63.75	39.3 (134.3)	29.0 (99.1)	-25/-25	62.3/54.2	DISCHARGE/RETURN	87/86	86/85	89/82	85/77	77/74	74/71	71/69	65/65	21/23/30	575/3/60	ACON RN-008-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH	
RTU-6	ROOF	GYM	943 (2000)	1887 (4000)	249 (1.0)	3	1887 (4000)	62 (0.25)	2	57 (195)	46 (156)	62.3/54.4	98.4/67.3	35 (120)	28 (97)	76.97/63.69	55.9/53.84	980 (2078)	13.1 (44.6)	6.5 (22.1)	90/70	76.97/63.69	53.1 (181.2)	38.9 (132.7)	-25/-25	62.3/54.4	DISCHARGE/RETURN	91/88	89/85	96/87	85/75	78/73	76/70	73/66	67/61	22/24/25	575/3/60	ACON RN-011-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH	
RTU-7	ROOF	SOUTH LEVELS 1 & 2	1482 (3100)	2925 (6200)	249 (1.0)	7.5	2925 (6200)	62 (0.25)	5	57 (195)	46 (156)	62.9/55.3	95.1/66.8	45 (152)	37 (125)	76.9/63.5	54.8/53.3	1497 (3174)	21.3 (72.8)	9.9 (34.0)	90/70	76.9/63.5	84.3 (288.0)	59.8 (204.2)	-25/-25	62.9/55.3	DISCHARGE/RETURN	90/89	90/87	91/84	90/77	87/75	86/74	86/68	82/61	29/31/35	575/3/60	ACON RN-013-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH	
RTU-8	ROOF	LIBRARY	472 (1000)	1604 (3400)	249 (1.0)	3	1604 (3400)	62 (0.25)	1	57 (195)	46 (156)	68.1/58.5	110.6/72.3	28 (96)	24 (82)	76.08/62.7	54.9/53.21	514 (1088)	7.2 (24.6)	3.2 (11.0)	90/70	76.08/62.7	28.0 (96.6)	19.2 (66.2)	-25/-25	68.1/58.5	DISCHARGE/RETURN	88/84	88/83	92/83	81/71	75/70	72/67	69/62	63/56	19/21/25	575/3/60	ACON RN-009-4-0-EOE-32B/CNBC-EOO-NCE-ADA-DOWHDS-00-0000H00X	* C/W WEATHERPROOF DISCONNECT SWITCH	
NOTES:	1. FOR DETAILS REFER TO SPECIFICATIONS. 2. MANUFACTURER NAME & MODEL NUMBER REPRESENTS ACCEPTABLE QUALITY STANDARD ONLY. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER. 3. ALL ROTO PERFORMANCE ON GAS BASED ON SPECIFIC OUTDOOR AIR FLOW REQUIREMENT. ALL ROTO IN ACCORDANCE TO DOE 57.04. 4. ALL ROTOS SHALL BE PREMIUM & INJECTED DUTY WITH W/F CLAS INSULATION. 5. ALL ROTO 600MM HIGH SENSIC CURS WITH PLenum BASE (UNLESS INDICATED OTHERWISE). SW BURNER, ENTALPHY WHEEL, VARIABLE CAPACITY ON LEAD COMPRESSOR, STARTER/DOE SWITCH, HIGH EFF MOTORS, 100% ECONOMIZERS WITH POWER EXHAUST, FULLY MODULATING ACTUATORS, PHASE AND BROWN OUT PROTECTION, GFI WEATHER PROOF POWER RECEPTACLE WITH STEP DOWN TRANSFORMER VFD CONDENSED FANS - VARIABLE SPEED, ALL CONTROLS TERMINATING ON TERMINAL STOP FOR REGULAR/DEADLINE CONNECTION. EQUIPPED WITH DIRECT DRIVE SUPPLY & EXHAUST FANS WITH VFD'S. ALL VFD SHALL HAVE INPUT REACTOR PROTECTION, UNLESS OTHERWISE NOTED. 6. RTU OF 6 OR IN ADDITION TO OPERATING AS LATER ABOVE, RTU SHALL HAVE EXTRA FLEX TO BE PROVIDED ON THE EXHAUST SIDE OF EVR. 7. EXHAUST FAN AIRFLOW OF SHALL BE SIZE OF O/A VOLUME TO MAINTAIN BUILDING PRESSURE, TAB CONTRACTOR. 8. TAB CONTRACTOR SHALL MAKE FAN SPEED ADJUSTMENT BASED ON OCCUPIED MINIMUM O/A CONDITIONS; REDUCE SPEED OF EXHAUST FANS TO STATED MINIMUM EXHAUST AIR FLOW TO MAINTAIN POSITIVE BUILDING PRESSURE, COORDINATE WITH CONTROLS CONTRACTOR AND RTU START-UP TECHNICIAN.																																							

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. MANUFACTURER NAME & MODEL NUMBER REPRESENTS ACCEPTABLE QUALITY STANDARD ONLY. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER.
3. WHEEL PERFORMANCE ON RTU BASED ON SPECIFIC OUTDOOR AIR FLOW REQUIREMENT; ALL WHEEL TO ACCOMMODATE 100% SF VALUE.
4. ALL MOTORS SHALL BE PREMIUM & INVERTER DUTY WITH MIN F CLASS INSULATION.
5. ALL RTU 600mm HIGH SEISMIC CURB WITH PLenum BASE (UNLESS INDICATED OTHERWISE), SS BURNER, EXHAUST WHEEL, VARIABLE CAPACITY ON LEAD COMPRESSOR, STARTER/DISC SWITCH, HIGH EFF MOTORS, 100% ECONOMIZERS WITH POWER EXHAUST, FULLY MODULATING ACTUATORS, PHASE AND BROWN OUT PROTECTION, GFI WEATHER PROOF POWER RECEPTACLE WITH STEP DOWN TRANSFORMER VFD CONDENSER FANS - VARIABLE SPEED, ALL CONTROLS TERMINATING ON TERMINAL STRIP FOR REGULAR/Delta CONTROL CONNECTION. EQUIPPED WITH DIRECT DRIVE SUPPLY & EXHAUST FANS WITH VFD'S; ALL VFD SHALL HAVE INPUT REACTOR PROTECTION, UNLESS OTHERWISE NOTED.
6. RTU 06 & 08 IN ADDITION TO OPTIONS AS LISTED ABOVE, RTU SHALL HAVE EXTRA FILTER TO BE PROVIDED ON THE EXHAUST SIDE OF ECV.
7. EXHAUST FAN AIRFLOW OF SHALL BE SIZE OF O/A VOLUME TO MAINTAIN BUILDING PRESSURE; RATIO CONTRACTOR.
8. THE CONTRACTOR SHALL MAKE FAN SPEED ADJUSTMENT BASED ON OCCUPIED MINIMUM O/A CONDITIONS; REDUCE SPEED OF EXHAUST FANS TO STATED MINIMUM EXHAUST AIR FLOW TO MAINTAIN POSITIVE BUILDING PRESSURE; COORDINATE WITH CONTROLS CONTRACTOR AND RTU START-UP TECHNICIAN.

FAN POWERED TERMINAL UNIT SCHEDULE															
TAG	LOCATION	MAX. PRIMARY AIR L/s (cfm)	MIN. PRIMARY AIR L/s (cfm)	MAX. RETURN AIR L/s (cfm)	TOTAL SUPPLY AIR L/s (cfm)	INLET DIAMETER mm (in)	FILTERS	HEATING COIL		ELECTRICAL DATA			BASIS OF DESIGN	REMARKS	
								HEATING CAPACITY (kW)	L.W.T. °C (°F)	MOTOR SIZE (HP)	V/PH/Hz				
FPB1	SALLE D'ACTIVITE POUR LOUERS 135	248 (525)	236 (500)	94 (200)	330 (700)	350 (14)	25mm THICK	3.34 (11.4)	54.4 (130)	37.8 (100)	1/2	115/1/60	EH PRICE FDCLP2 3008	C/W ECM MOTOR, INLET & DISCHARGE SILENCER, ISOLATION KIT & RETURN FILTER ASSEMBLY	
FPB2	SALLE D'ACTIVITE BAMBINS 140	399 (845)	354 (830)	118 (250)	472 (1000)	350 (14)	25mm THICK	5.37 (18.3)	54.4 (130)	37.8 (100)	1/2	115/1/60	EH PRICE FDCLP2 5010	C/W ECM MOTOR, INLET & DISCHARGE SILENCER, ISOLATION KIT & RETURN FILTER ASSEMBLY	
FPB3	SALLE D'ACTIVITE PRESCHOOLAIRES 139	524 (1090)	472 (1000)	142 (300)	613 (1300)	400 (16)	25mm THICK	7.05 (24.1)	54.4 (130)	37.8 (100)	1/2	115/1/60	EH PRICE FDCLP2 5010	C/W ECM MOTOR, INLET & DISCHARGE SILENCER, ISOLATION KIT & RETURN FILTER ASSEMBLY	
NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS. 2. ALL FTR SIGNAL WAVE & SINGLE POINT POWER SUPPLY.															

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. ALL FPB SHALL HAVE A SINGLE POINT POWER SUPPLY.

RANGE HOOD SCHEDULE											
TAG	LOCATION	MOUNTING LOCATION (WALL / ISLAND / CABINET)	AIR FLOW (L/M/H)(CFM)	STATIC PRESSURE (N/NG)	SIZE (INCH) (WIDTH x DEPTH)	DUCT CONNECTION (INCH)	SONNES	ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
								V/PH/Hz	AMPS		
RH1	AS INDICATED	WALL	300	0.1	30 x 20	7" ROUND	5.0	120/1/60	1.4	BROWN BKH31035	* STAINLESS STEEL, TWO SPEED CONTROL
NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.											

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.

FAN SCHEDULE													
TAG	LOCATION	FUNCTION	FAN DATA							BASIS OF DESIGN		REMARKS	
			TYPE	DRIVE (BELT/DIRECT)	AIR FLOW L/s (cfm)	ESP Pa (in WC)	FAN SPEED (RPM)	SONES	MOTOR SIZE (HP)	V/PH/Hz			
EF-1	TOILETTE 100C	WASHROOM EXHAUST	INLINE FAN	DIRECT	106 (225)	125 (0.5)	1422	-	79W	115/1/60	LOREN COOK GEMINI 08-422	MOTION SENSOR CONTROLLED BY DIV. 26	
EF-2	TOILETTE HOMMES 112	WASHROOM EXHAUST	INLINE FAN	DIRECT	71 (150)	125 (0.5)	936	-	72W	115/1/60	LOREN COOK GEMINI 08-186	MOTION SENSOR CONTROLLED BY DIV. 26	
EF-3	CONCIERGE 202	EXHAUST	INLINE FAN	DIRECT	130 (275)	125 (0.5)	1221	-	92	115/1/60	LOREN COOK GEMINI 08-422	MOTION SENSOR CONTROLLED BY DIV. 26	
EF-4	SALLE MECHANIQUE ET ELECTRIQUE 202A	EXHAUST	ROOF MOUNTED UPBLAST	DIRECT	189 (400)	125 (0.5)	1040	7.7	1/8	115/1/60	LOREN COOK ACE-3 800150H	CONTROLLED BY SPACE TEMPERATURE	
EF-5	ROOF	ELEVATOR MACHINE ROOM	ROOF MOUNTED DOWNBLAST	DIRECT	153 (325)	125 (0.5)	1448	7	1/8	115/1/60	LOREN COOK ACE-3 800150H	C/W 800mm HIGH INSULATED SEISMIC CURB. OPERATE CONTINUOUSLY.	
TF-1	SALLE ELECTRIQUE 134	TRANSFER	CEILING FAN	DIRECT	297 (630)	125 (0.5)	1569	-	290W	115/1/60	LOREN COOK GEMINI 08-740	C/W DISCONNECT, BOTTOM MOUNTED GRILLE, ON/OFF VIA BAS TEMPERATURE SENSOR AND RELAY	
TF-2	SERVERIUS 130	TRANSFER	INLINE FAN	DIRECT	101 (215)	125 (0.5)	1392	3.5	76W	115/1/60	LOREN COOK GEMINI 08-422	CONTROLLED BY SPACE TEMPERATURE	
BF1	BLANDIERE 136	DRYER EXHAUST	INLINE BLOWER	DIRECT	60 (127)	125 (0.5)	2650	2.5	55W	115/1/60	REVERSOMATIC R-200-PS	CONTROLLED BY BUILT-IN PRESSURE SWITCH; C/W UNBLOCK LT-250-45 & DRYER WALL COM.	
NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS. 2. DISCONNECT SWITCH BY DIV. 26. 3. SPEED SWITCHES SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.													

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. DISCONNECT SWITCH BY DV. 26.
3. SPEED SWITCHES SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.

PROPELLER FAN SCHEDULE								
TAG	LOCATION	FAN DIA. mm (in)	AIR FLOW L/s (cfm)	FAN SPEED (RPM)	ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
					MOTOR SIZE (HP)	V/Ph/Hz		
PF1	GYM	1422 (56)	16,274 (34,500)	350	75 W	120/1/60	BANVAL 2000-160C7	REVERSIBLE MOTOR & SPEED CONTROLLER, INDUSTRIAL GUARD F60C, 250mm DOWNROD, COLOUR WHITE.
PF2	GYM	1422 (56)	16,274 (34,500)	350	75 W	120/1/60	BANVAL 2000-160C7	REVERSIBLE MOTOR & SPEED CONTROLLER, INDUSTRIAL GUARD F60C, 250mm DOWNROD, COLOUR WHITE.
NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS 2. PROVIDE SPEED CONTROLLER MOUNT WITHIN GYM OFFICE 1138								

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. PROVIDE SPEED CONTROLLER, MOUNT WITHIN GYM OFFICE 113B.

SILENCER SCHEDULE																			
TAG	SYSTEM	TYPE (NOTE 1)	DIMENSIONS mm (in)			AIR FLOW m³/s (cfm)	VELOCITY m/s (ft/min)	PD (Pa)	MAX. PD WITH SYS. EFF. (Pa)	MINIMUM DYNAMIC INSERTION LOSS, dB							BASIS OF DESIGN	REMARKS	
			WIDTH OR DIA.	HEIGHT	LENGTH					OCTAVE BAND CENTRE FREQUENCY, Hz									
										63	125	250	500	1000	2000	4000			8000
SIL1A	RTU-1	RD	500 (20)	500 (20)	914 (36)	1415 (3000)	6 (1200)	18	-	5	10	14	18	15	10	11	7	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL1B	RTU-1	RD	500 (20)	450 (18)	914 (36)	849 (1800)	4 (800)	8	-	9	12	15	19	14	10	9	5	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL2	RTU-2	RD	500 (20)	450 (18)	914 (36)	1085 (2300)	5 (1000)	2	-	3	4	8	14	7	8	6	3	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL3A	RTU-3	RD	800 (32)	450 (18)	1829 (72)	2170 (4600)	6 (1200)	43	-	10	13	24	31	30	21	15	11	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL3B	RTU-3	RD	750 (30)	350 (14)	954 (38)	1524 (60)	991 (2100)	4 (800)	40	-	15	19	30	37	35	24	19	VW SYSTEMS MODEL RSA-DW	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL5A	RTU-5	RD	750 (30)	350 (14)	1219 (48)	1415 (3000)	4 (800)	55	-	8	12	19	26	25	19	16	11	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL5B	RTU-5	RD	800 (32)	400 (16)	914 (36)	1415 (3000)	4 (800)	61	-	12	13	23	28	26	22	16	11	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL6A	RTU-6	RD	900 (36)	300 (12)	1829 (72)	1887 (4000)	7 (1400)	51	-	12	14	25	30	28	20	14	11	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL6B	RTU-6	RD	750 (30)	500 (20)	1219 (48)	1887 (4000)	6 (1200)	13	-	8	10	14	18	14	11	9	6	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL7A	RTU-7	RD	750 (30)	400 (16)	2134 (84)	1811 (3840)	5 (1000)	29	-	6	14	27	40	51	44	26	17	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL7B	RTU-7	RD	600 (24)	300 (12)	914 (36)	1113 (2300)	5 (1000)	13	-	11	14	16	20	13	9	7	4	VW SYSTEMS MODEL RSA	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL8A	RTU-8	RD	600 (24)	500 (20)	3048 (120)	1604 (3400)	5 (1000)	57	-	20	28	48	55	54	46	35	25	VW SYSTEMS MODEL RSA-DW	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
SIL8B	RTU-8	RD	700 (28)	500 (20)	3048 (120)	1604 (3400)	5 (1000)	46	-	20	25	44	52	52	41	32	21	VW SYSTEMS MODEL RSA-DW	CASING: 22GA GALV., PERF: 22GA GALV., MEDIA: FIBERGLASS
NOTES:-																			
- LENGTH SHOWN FOR ELBOW SILENCERS IS CENTRAL LINE LENGTH																			
- VELOCITY SHOWN IS AVERAGE FLOW OR - REVERSE FLOW AS DEFINED BY ASTM E477-06A																			
- PRESSURE DROP, DYNAMIC INSERTION LOSS AND SELF GENERATED NOISE FOR ASTM E477-06A																			
- MAXIMUM PRESSURE DROP WITH SYSTEM EFFECTS = SILENCER PRESSURE DROP PER ASTM E477-06A + SYSTEM EFFECTS FOR NEARBY DUCT ELEMENTS																			
1. RD = RECTANGULAR DISSIPATIVE																			
2. RED = RECTANGULAR ELBOW DISSIPATIVE																			
3. GUNNIZED CONSTRUCTION																			
4. FLOW SILENCER																			
5. PROVIDE FOR APPROVAL, ACOUSTICAL CALCULATIONS FOR ALL SYSTEMS WITH SILENCERS TO DEMONSTRATE THAT THE RESULTANT DUCTWORK FAN SOUND LEVEL, INCLUDING AIRBORNE AND BREAKOUT NOISE, IN THE OCCUPIED SPACES MEET: NC 35: FOR CLASSROOMS, CORRIDORS, ADMINISTRATION, GYM, DAYCARE, NC 25 - 30: FOR LIBRARY.																			
6. HTL CASING																			

APPENDIX B

Traffic Data

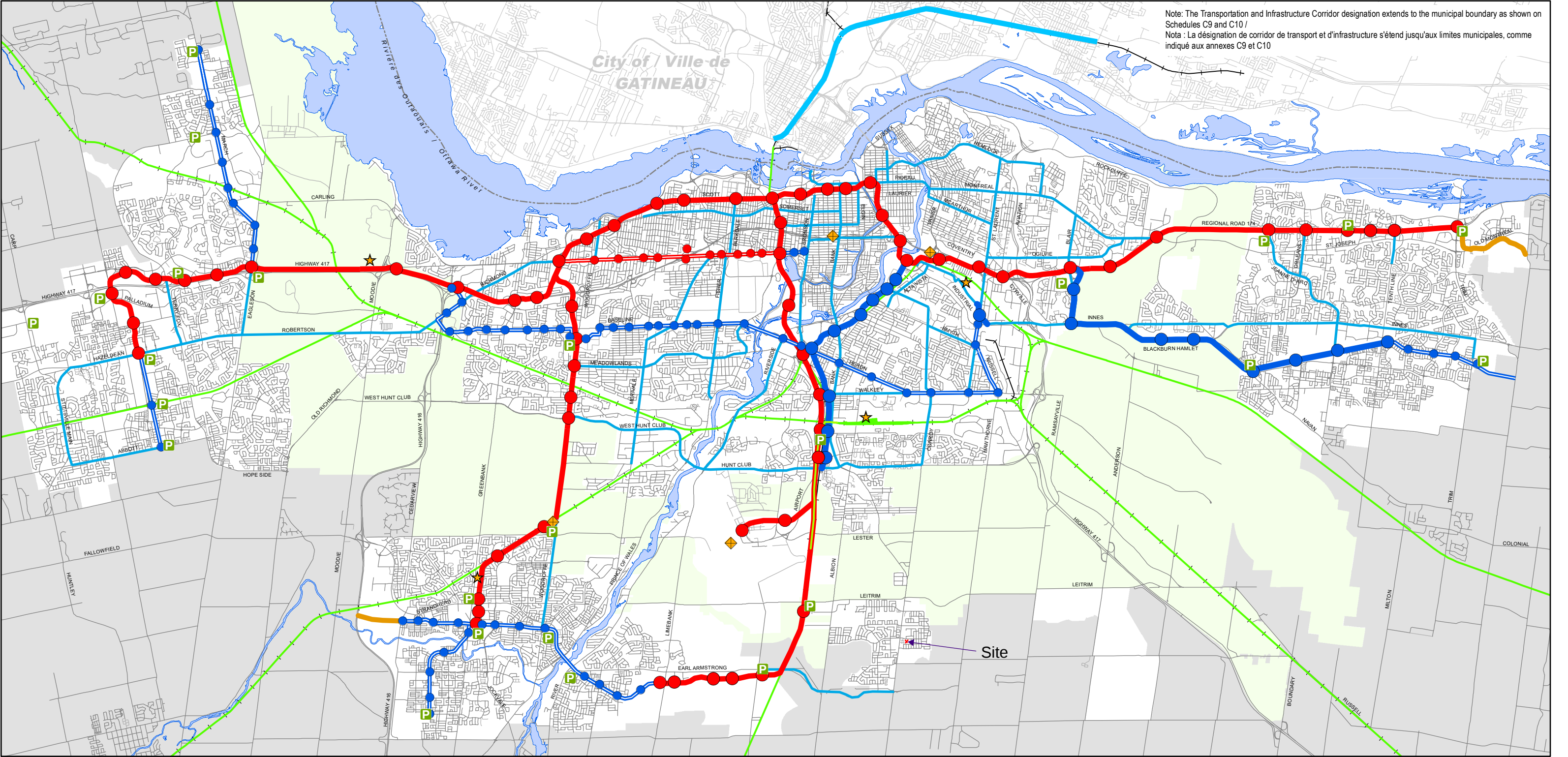
Appendix B: Table of Traffic and Road Parameters To Be Used For Sound Level Predictions

Table B1 Traffic And Road Parameters To Be Used For Sound Level Predictions

Row Width (m)	Implied Roadway Class	AADT Vehicles/Day	Posted Speed Km/Hr	Day/Night Split %	Medium Trucks %	Heavy Trucks % ¹
NA ²	Freeway, Queensway, Highway	18,333 per lane	100	92/8	7	5
37.5-44.5	6-Lane Urban Arterial-Divided (6 UAD)	50,000	50-80	92/8	7	5
34-37.5	4-Lane Urban Arterial-Divided (4-UAD)	35,000	50-80	92/8	7	5
23-34	4-Lane Urban Arterial-Undivided (4-UAU)	30,000	50-80	92/8	7	5
23-34	4-Lane Major Collector (4-UMCU)	24,000	40-60	92/8	7	5
30-35.5	2-Lane Rural Arterial (2-RAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Urban Arterial (2-UAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Major Collector (2-UMCU)	12,000	40-60	92/8	7	5
30-35.5	2-Lane Outer Rural Arterial (near the extremities of the City) (2-RAU)	10,000	50-80	92/8	7	5
20-30	2-Lane Urban Collector (2-UCU)	8,000	40-50	92/8	7	5

¹ The MOE Vehicle Classification definitions should be used to estimate automobiles, medium trucks and heavy trucks.

² The number of lanes is determined by the future mature state of the roadway.



Note: The Transportation and Infrastructure Corridor designation extends to the municipal boundary as shown on Schedules C9 and C10 /
Nota : La désignation de corridor de transport et d'infrastructure s'étend jusqu'aux limites municipales, comme indiqué aux annexes C9 et C10

**RAPID TRANSIT
TRANSIT LEVEL OF SERVICE 'A'**

O-Train - Grade Separated Crossings
Transitway - Grade Separated Crossings

TRANSIT LEVEL OF SERVICE 'B'

O-Train - At-Grade Crossings
Transitway - At-Grade Crossings

TRANSIT PRIORITY

Transit Priority Corridor

**TRANSPORT EN COMMUN RAPIDE
NIVEAU DE SERVICE A**

O-Train - passages étagés
Transitway - passages étagés

NIVEAU DE SERVICE B

O-Train - passages à niveau
Transitway - passages à niveau

PRIORITÉ AU TRANSPORT EN COMMUN

Corridor donnant priorité au transport en commun

Park and Ride
O-Train Station
Transitway Station
Conceptual Future Transit Corridor
Transportation and Infrastructure Corridor
Inter-regional Stations
Rail Yard
Rail Corridor
Gatineau RapiBus - grade-separated

Parc-O-Bus
Station de l'O-Train
Station de la Transitway
Avenir conceptuel - Couloir de transport en commun
Corridor de transport et d'infrastructure
Stations interrégionales
Cour de tirage pour trains
Couloir ferroviaire
RapiBus de Gatineau en site propre



Official Plan / Plan officiel

Schedule C2 - Transit Network
ULTIMATE

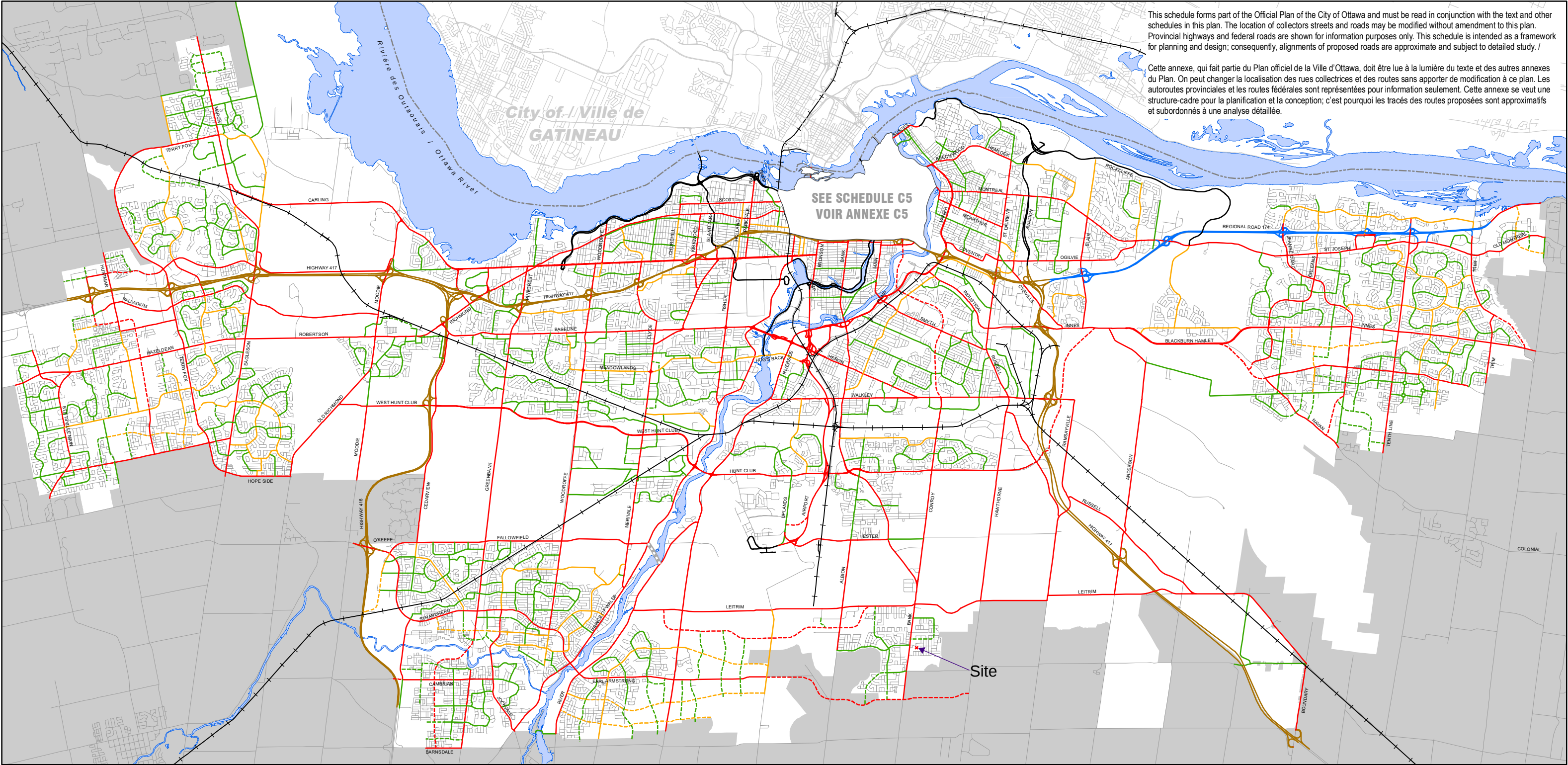
Annexe C2 Réseau de Transport
ABSOLU

Consolidation and Amendments / Consolidation et amendements	
#5 (09/2023)	#34 12/2024)



*Note: The intensity of transit priority (e.g., continuous bus lanes or isolated transit priority measures) shall be as designated in the Transportation Master Plan.

*Nota : D'autres renseignements sur la priorité accordée au transport en commun (p. ex. voies d'autobus continues ou mesures prioritaires de transport en commun isolées) seront publiés dans le Plan directeur des transports.



This schedule forms part of the Official Plan of the City of Ottawa and must be read in conjunction with the text and other schedules in this plan. The location of collectors streets and roads may be modified without amendment to this plan. Provincial highways and federal roads are shown for information purposes only. This schedule is intended as a framework for planning and design; consequently, alignments of proposed roads are approximate and subject to detailed study. /

Cette annexe, qui fait partie du Plan officiel de la Ville d'Ottawa, doit être lue à la lumière du texte et des autres annexes du Plan. On peut changer la localisation des rues collectrices et des routes sans apporter de modification à ce plan. Les autoroutes provinciales et les routes fédérales sont représentées pour information seulement. Cette annexe se veut une structure-cadre pour la planification et la conception; c'est pourquoi les tracés des routes proposées sont approximatifs et subordonnés à une analyse détaillée.

- | | | | | | |
|---------------------------------------|-------|---|----------------------|---|------------------------------|
| Arterial - Existing | — | Artère - Établie | Provincial Highway | — | Route provinciale |
| Arterial - Future (alignment defined) | - - - | Artère - Future (alignement déterminée) | Federally Owned Road | — | Chemins de propriété fédéral |
| Major Collector - Existing | — | Grande collectrice - Établie | City Freeway | — | Autoroute municipale |
| Major Collector - Future | - - - | Grande collectrice - Future | | | |
| Collector - Existing | — | Collectrice - Établie | | | |
| Collector - Future | - - - | Collectrice - Future | | | |
| River Crossing (corridor undefined) | - - - | Traversée de rivière (couloir non défini) | | | |



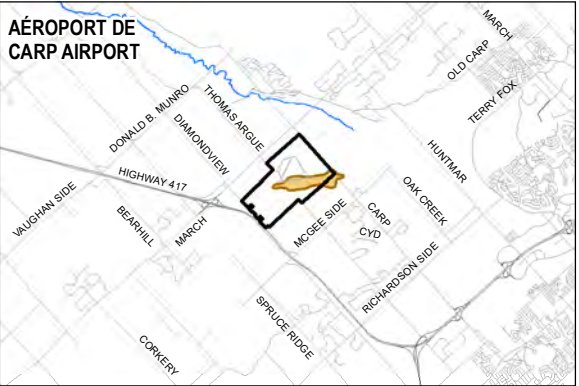
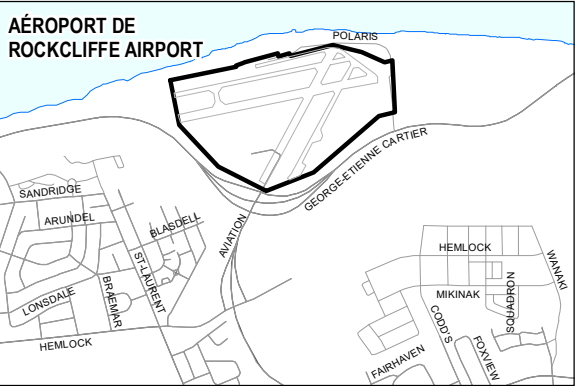
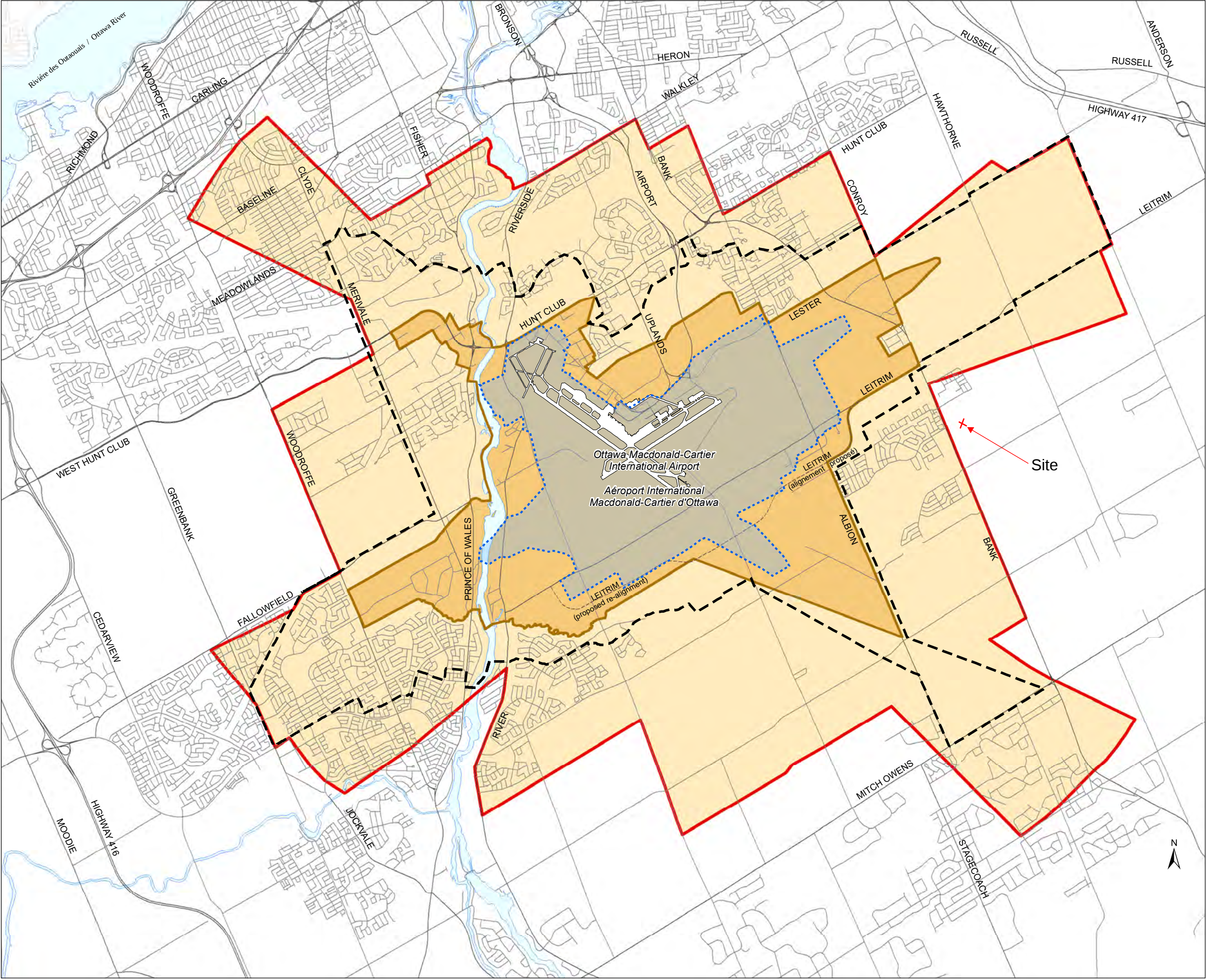
Official Plan / Plan officiel

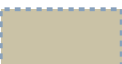
Schedule C4 - Urban Road Network Annexe C4 Réseau routier urbain

Consolidation and Amendments / Consolidation et amendements
#34 12/2024)

0 0.5 1 2 3 4 5 km

Planning, Development and Building Services, Geospatial Analytics, Technology and Solutions
Direction générale des services de planification, de l'aménagement se du bâtiment, Analyse géospatiale, technologie et solutions



-  Airport Vicinity Development Zone
Zone d'aménagement dans le voisinage de l'aéroport
-  25 Line (Composite of 25 NEF/NEP)
Ligne 25 (ensemble des courbes NEF et NEP 25)
-  35 Line (Composite of 35 NEF/NEP)
Ligne 35 (ensemble des courbes NEF et NEP 35)
-  Airport Zoning Regulations
Règlements de zonage applicables à de l'Aéroport
-  Airport Operating Influence Zone
Zone d'influence d'exploitation de l'aéroport

NOTE:
The boundaries of the Ottawa Airport Operating Influence Zone and the Airport Vicinity Development Zone, are not subject to interpretation and their precise locations should be read from a map at a scale of 1:50,000 available from the City of Ottawa and the Ottawa International Airport Authority.

NOTE:
Les limites de la Zone d'influence d'exploitation de l'aéroport Ottawa et de la Zone d'aménagement dans le voisinage de l'aéroport ne sont sujettes à aucune interprétation. Pour connaître leur emplacement exact, il faut se reporter à la carte qui les définit à une échelle de 1 : 50 000, que l'on peut se procurer auprès de la Ville d'Ottawa et de l'Administration de l'Aéroport international d'Ottawa.



Official Plan / Plan officiel

Schedule C14 - Land Use Constraints Annexe C14 - Contraintes limitant l'utilisation en raison du bruit des avions

Approved on November 4, 2022
Approuvé le 4 novembre 2022

Consolidation and Amendments / Consolidation et amendements

APPENDIX C

STAMSON Validation Files

Filename: Leitrim.te Time Period: 16 hours
 Description: Stamson Validation

Road data, segment # 1: Findlay

```
-----
Car traffic volume   : 6477 veh/TimePeriod  *
Medium truck volume : 515 veh/TimePeriod   *
Heavy truck volume  : 368 veh/TimePeriod   *
Posted speed limit  : 40 km/h
Road gradient       : 0 %
Road pavement      : 1 (Typical asphalt or concrete)
```

Data for Segment # 1: Findlay

```
-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth          : 0           (No woods.)
No of house rows    : 0
Surface             : 2           (Reflective ground surface)
Receiver source distance : 19.50 m
Receiver height     : 4.50 m
Topography          : 1           (Flat/gentle slope; no barrier)
Reference angle     : 0.00
```

FF

Segment # 1: Findlay

Source height = 1.50 m

ROAD (0.00 + 62.82 + 0.00) = 62.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	63.96	0.00	-1.14	0.00	0.00	0.00	0.00	62.82

Segment Leq : 62.82 dBA

Total Leq All Segments: 62.82 dBA

FF

TOTAL Leq FROM ALL SOURCES: 62.82

FF

FF

APPENDIX D

Supporting Information

AAON Standard Condenser Fan Radiated Sound Levels

Updated 10/26/2018

						Sound Power Level										Sound Pressure Level in a Hemispherical Free Field										Dist (ft)
		Fans	Dia	RPM	63	125	250	500	1000	2000	4000	8000	LwA	63	125	250	500	1000	2000	4000	8000	dBA	5			
RQ 2 & 3 Ton	Inlet	1	30	850	79	74	72	70	66	62	59	59	72	68	62	60	58	54	51	48	47	60				
	Outlet				81	77	71	71	67	62	59	58	73	69	66	59	59	55	51	48	46	61				
	Total				83	79	74	73	69	65	62	61	75	72	67	63	62	58	54	51	50	63				
RQ 4-6 Ton & RN 6 & 7 Ton	Inlet	1	30	1085	85	79	77	75	71	68	65	64	77	73	67	66	63	59	56	53	52	65				
	Outlet				86	83	76	76	72	68	65	63	78	75	71	64	65	60	56	53	52	66				
	Total				89	84	80	79	75	71	68	67	80	77	73	68	67	63	59	56	55	69				
RN 8 & 10 Ton	Inlet	1	30	1085	92	86	85	82	78	75	72	71	84	80	75	73	70	66	63	60	60	73				
	Outlet				94	90	83	83	79	75	72	71	85	82	78	71	72	68	63	60	59	73				
	Total				96	91	87	86	82	78	75	74	88	84	80	75	74	70	66	63	62	76				
RN 09 & 11 Ton	Inlet	2	30	1085	88	82	80	78	74	71	68	67	80	76	70	69	66	62	59	56	55	68				
	Outlet				89	86	79	79	75	71	68	66	81	78	74	67	68	63	59	56	55	69				
	Total				92	87	83	82	78	74	71	70	83	80	76	71	70	66	62	59	58	72				
RN 13-20 Ton	Inlet	2	30	1085	95	89	88	85	81	78	75	74	87	83	78	76	73	69	66	63	63	76				
	Outlet				97	93	86	86	82	78	75	74	88	85	81	74	75	71	66	63	62	76				
	Total				99	94	90	89	85	81	78	77	91	87	83	78	77	73	69	66	65	79				
RN 25 & 30 Ton	Inlet	3	30	1085	97	91	89	87	83	80	77	76	89	85	79	78	75	71	68	65	64	77				
	Outlet				98	95	88	88	84	80	77	75	90	87	83	76	76	72	68	65	64	78				
	Total				101	96	92	91	86	83	80	79	92	89	85	80	79	75	71	68	67	81				
RN 26,31 & 40 Ton	Inlet	4	30	1085	98	92	91	88	84	81	78	77	90	86	81	79	76	72	69	66	66	79				
	Outlet				100	96	89	89	85	81	78	77	91	88	84	77	78	74	69	66	65	79				
	Total				102	98	93	92	88	84	81	80	94	90	86	81	80	76	72	69	68	82				
RN 50,60 & 70 Ton	Inlet	6	30	1085	100	94	92	90	86	83	80	79	92	88	82	81	78	74	71	68	67	80				
	Outlet				101	98	91	91	87	83	80	78	93	90	86	79	79	75	71	68	67	81				
	Total				104	99	95	94	89	86	83	82	95	92	88	83	82	78	74	71	70	84				
RN E 55,65 & 75 Ton LN & LZ 45-60 Ton RZ 45-75	Inlet	4	30	1170	92	86	87	87	86	85	85	78	92	88	83	82	78	74	73	73	66	80				
	Outlet				92	86	87	87	86	85	85	78	92	88	83	82	78	74	73	73	66	80				
	Total				95	89	90	90	89	88	88	81	95	92	88	83	83	82	81	81	74	88				
RN E 90-140 Ton LN & LZ 75-140 Ton RZ 90-140	Inlet	8	30	1170	95	89	90	90	89	88	88	81	95	92	88	83	83	82	81	81	74	88				
	Outlet				95	89	90	90	89	88	88	81	95	92	88	83	83	82	81	81	74	88				
	Total				98	92	93	93	92	91	91	84	98	95	91	92	92	91	90	89	88	91				
RZ 145-180	Inlet	12	30	1170	97	91	92	92	91	90	90	83	97	94	90	88	80	79	78	78	71	85				
	Outlet				97	91	92	92	91	90	90	83	97	94	90	88	80	79	78	78	71	85				
	Total				100	94	95	95	94	93	93	86	100	97	93	93	93	92	91	90	89	92				
RZ 200-240	Inlet	16	30	1170	98	92	93	93	92	91	91	84	98	95	91	92	92	91	90	89	88	91				
	Outlet				98	92	93	93	92	91	91	84	98	95	91	92	92	91	90	89	88	91				
	Total				101	95	96	96	95	94	94	87	101	98	94	94	94	93	92	91	90	93				

Tested in Accordance with AMCA 300 - Updated 6-15-15



Total HVAC Inc.

Unit #4, 1050 Baxter Rd, Ottawa, ON, K2C 3P1

E-mail: jacob.hough@totalhvac.com

Tel: (613) 723-4611 ext. 102

TRANSMITTAL

SHOP DRAWINGS

Contractor: 3V Mechanical
 Job: CECCE Avalon III
 Order No.: 5379-24
 Consultant: GWAL
 Date: 03 October 2024

EQUIPMENT			PAGES
QTY. 1	AAON Model # RNA-008-A-A-8-GJB0A-CB1L0	Tag: RTU-1 Daycare	102
QTY. 1	AAON Model # RNA-006-A-A-4-GJA0A-CB1L0	Tag: RTU-2 N Level 1	
QTY. 2	AAON Model # RNA-011-B-A-4-GJA0C-CB1L0	Tags: RTU-3 N Level 3 & RTU-6 Gym	
QTY. 1	AAON Model # RQA-004-A-A-4-GJB0A-CB3L0	Tag: RTU-4 Admin	
QTY. 1	AAON Model # RNA-008-A-A-4-GJB0A-CB2L0	Tag: RTU-5 Admin	
QTY. 1	AAON Model # RNA-016-C-A-4-GJB0C-CB1L0	Tag: RTU-7 S Levels 1 & 2	
QTY. 1	AAON Model # RNA-009-B-A-4-GJA0C-CB1L0	Tag: RTU-8 Library	
Notes:			
• Contractor to confirm curb height • Contractor to confirm toilet exhaust handing for RTU-1, 2, & 3 • Seismic roof curb submittal to follow under a separate cover after height is confirmed • Non-fused disconnect shipped loose for field installation by others on RTU-1, 2, & 5 • See next page for deviations from originally tendered units			

XXX For Approval

These drawings require approval and equipment will not be released until written authorization to release into production has been received by Total HVAC from mechanical contractor.

Jacob Hough / Mark Korodetz - Total HVAC Inc.



RNA-008-A-A-8-GJB0A-CB1L0:00-0ACAG-QBA-00000-ABHBE-EC-CB0
A-D0-00-A-000-EB-N000-00-000-A000B0-G00AAB-000000X

Tag: RTU-1 Daycare ✓

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 678

lower than specified 1347cfm

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.42 in. w.g.
Filters Clean: 0.28 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	124.8 MBH	118.7 MBH
Total Capacity:	95.5 MBH	89.4 MBH
Sensible Capacity:	78.9 MBH	72.9 MBH
Latent Capacity:	16.6 MBH	
HW Total Cooling Capacity:	29.3 MBH	
Mixed Air Temp (DB/WB):	76.4 °F / 63.1 °F	
Entering Air Temp (DB/WB):	76.4 °F / 63.1 °F	
Lv Air Temp (Coil) (DB/WB):	52.0 °F / 51.8 °F	
Lv Air Temp (Unit) (DB/WB):	53.8 °F / 52.6 °F	

Supply Air Fan: 1 x RNA185 @ 2.14 BHP Ea.
SA Fan RPM / Width: 1761 RPM / 4.140 in
SA Fan FEI: 1.30
Exhaust Air Fan: 1 x RM150-RN @ 0.28 BHP Ea.
EA Fan RPM / Width: 1134 RPM / 5.160 in
EA Fan FEI: 1.74

Evaporator Coil: 8.8 ft² / 6 Rows / 14 FPI
Evaporator Face Velocity: 342.9 fpm
Energy Recovery: 1 x ERC-3019C

Rating Information

Listing Model: RN-008-3-0-GBBC-V0-21-000-A
Cooling Capacity: 94.0 MBH
Cooling EER: 11.37 BTU/h-W
Cooling IEER: 14.1 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 13.2 BTU/h-W
Application COP @ Op. Conditions: 8.99 W/W
Application COPH @ Op. Conditions: 3.4 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**
Approx. Op./Ship Weights: 1688 lbs / 1688 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 337.5 fpm / 4
Min. Room Area/Height/Airflow**: 636.0 ft² / 7.2 ft / 1147 SCFM
Exhaust Airflow/ESP/TSP: 1228 SCFM / 0.25 in. w.g. / 0.85 in. w.g.
Supply Airflow/ESP: 3000 SCFM / 1.00 in. w.g.
Outside Airflow: 1200 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.09 in. w.g.
Heating: 0.02 in. w.g.
Cabinet: 0.06 in. w.g.
Energy Recovery: 0.64 in. w.g.
Total: 2.86 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 3000 SCFM
Total Capacity: 72.9 MBH
Entering Air Temp (DB/WB): 65.7 °F / 56.9 °F
Leaving Air Temp (DB/WB): 87.9 °F / 64.9 °F
Input: 90 MBH
Consumption: 90.0 MBH
Total Turndown Ratio: 10.0:1

Heating High Temp Capacity: 85.0 MBH
Heating High Temp COP: 3.4 W/W
Heating Low Temp Capacity: 48.96 MBH
Heating Low Temp COP: 2.328 W/W

✓ = HEIN REVIEW



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 208V/3Ø/60Hz
Unit FLA: 48
SCCR: 10 KAIC

Minimum Circuit Amp: 55
Maximum Overcurrent: 80

RTU1 Elec.

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		208	3			26.9
Condenser Fan:	2	0.33	208	1	1100	2.8	
Supply Fan:	1	3.00	208	3	1760	10.6	
Exhaust Fan:	1	1.00	208	3	1760	4.6	
Combustion:	1	0.09	208	1	3000	1.3	
Energy Recovery:	1	0.05	230	1	1050	0.3	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	86	83	87	83	75	73	70	64
Return LW (dB):	77	76	75	68	63	60	55	50

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.
**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.8	61.5	108.2	72.4	111.8	111.8	14.6	4.09
57.0	51.6	73.3	61.0	106.1	71.6	106.7	106.7	24.9	4.14
52.0	47.1	72.8	60.6	104.1	70.8	101.9	101.9	34.1	4.21
47.0	42.6	72.3	60.3	102.3	70.1	97.6	97.6	42.5	4.28
42.0	38.0	71.8	59.9	100.5	69.5	93.7	93.7	50.6	4.37
37.0	33.5	71.3	59.6	95.0	67.7	90.1	77.4	57.9	4.03
32.0	28.8	70.7	59.3	94.0	67.2	86.7	75.8	65.3	4.19
27.0	24.3	70.2	59.0	92.9	66.8	83.5	74.1	71.9	4.34
22.0	19.7	69.7	58.7	91.8	66.4	80.6	72.4	78.3	4.50
17.0	15.0	69.1	58.4	90.8	66.0	77.8	70.8	84.4	4.66
12.0	10.4	68.6	58.2	89.6	65.6	75.2	69.0	90.0	4.82
7.0	5.7	68.0	57.9	*	*	*	*	*	*
2.0	0.1	67.5	57.6	*	*	*	*	*	*

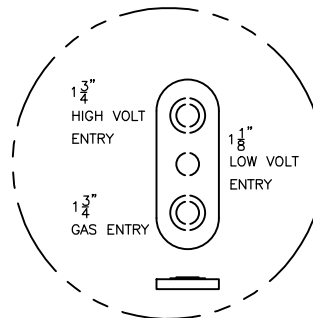
*Invalid operation point - Compressor operating outside of operating envelope
**Electric preheat is used to maintain the entering air temperature when applicable.

RN SERIES A - CABINET ECONOMIZER, ENERGY RECOVERY SECTION, POWER EXHAUST AND TOILET EXHAUST ~ 6-10 TON

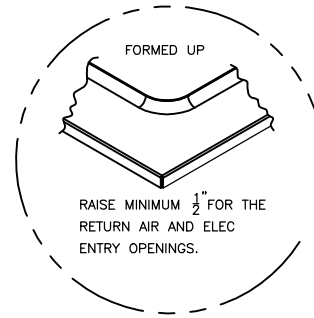
RETURN AIR OPENING - 15" x 13" (LEFT SIDE)
EXHAUST AIR OPENING - 15" x 13" (RIGHT SIDE)

CLEARANCES	
LOCATION	• UNIT SIZE • 6 - 10 TON
OUTSIDE AIR (BACK)	36
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED

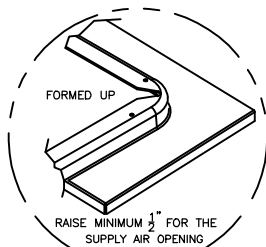
NOTE: THE RNA UNIT IS NOT COMPATIBLE WITH PREVIOUS GENERATIONS OF AAON CURBS. AN ADAPTER CURB IS AVAILABLE IN ECAT.



DETAIL A

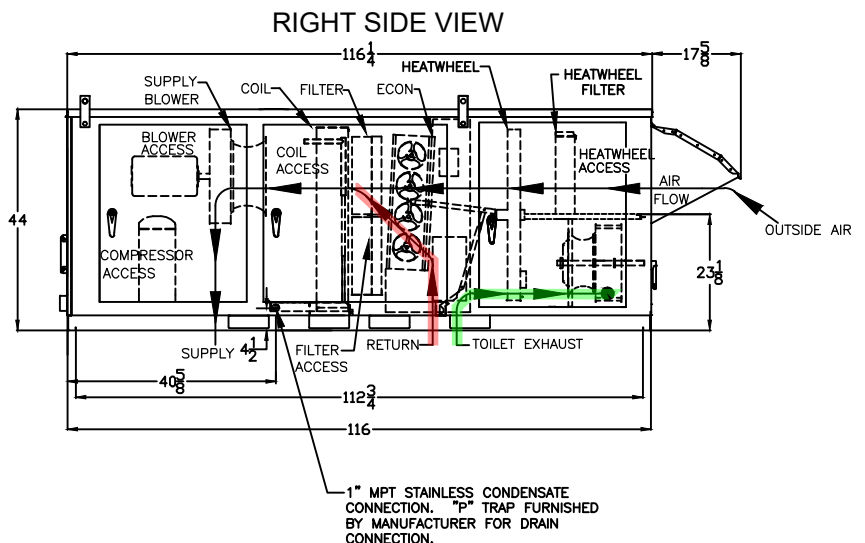
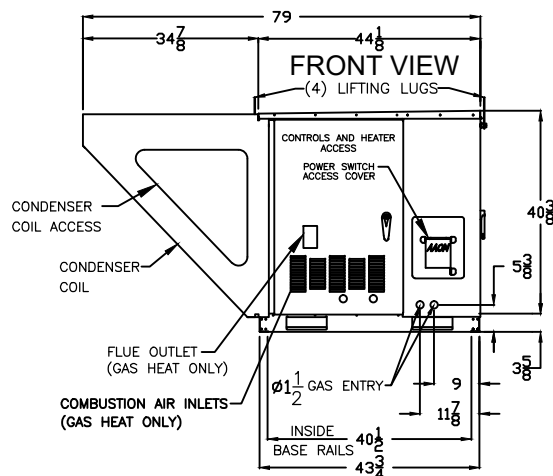
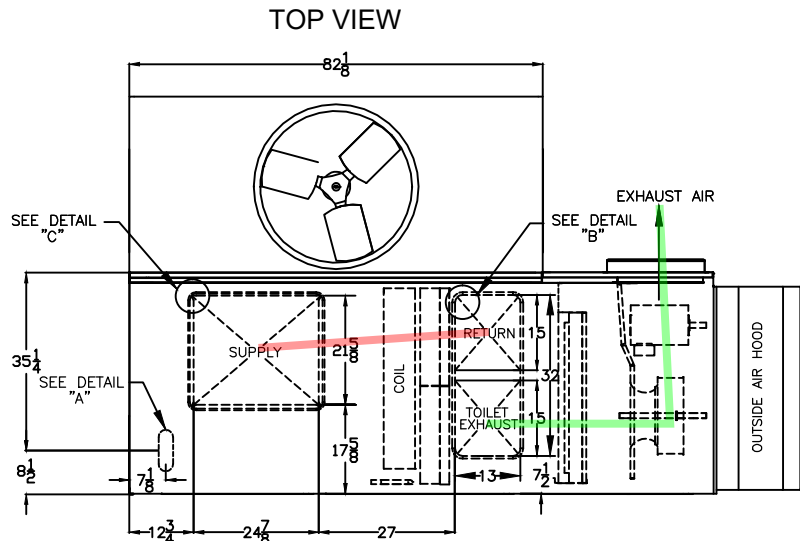


DETAIL B

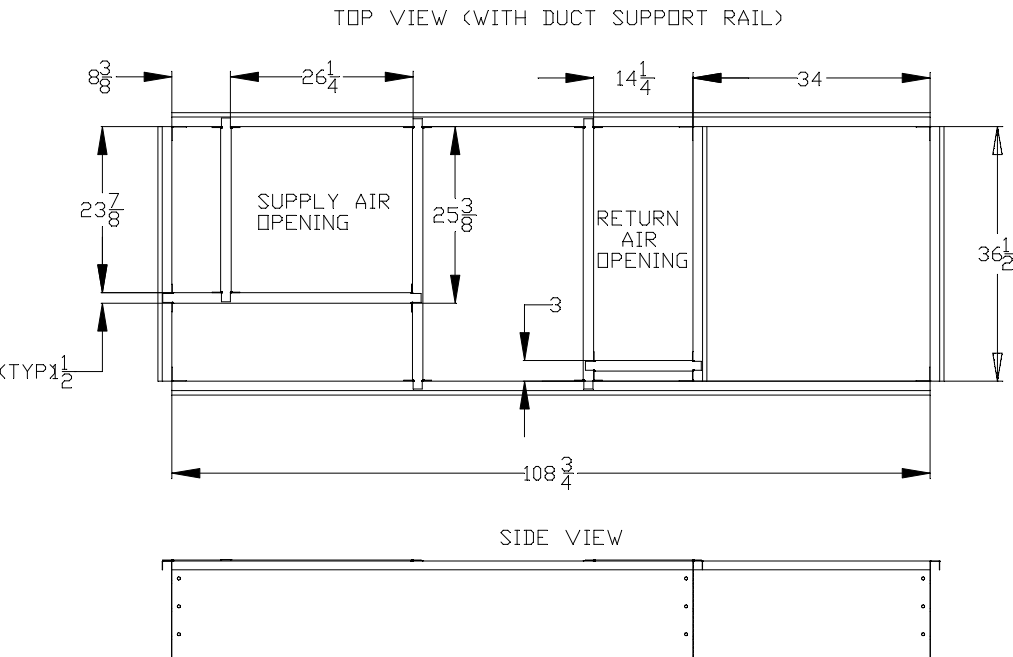


DETAIL C

Contractor to confirm
Toilet Exhaust /
Return Air Stream
handing

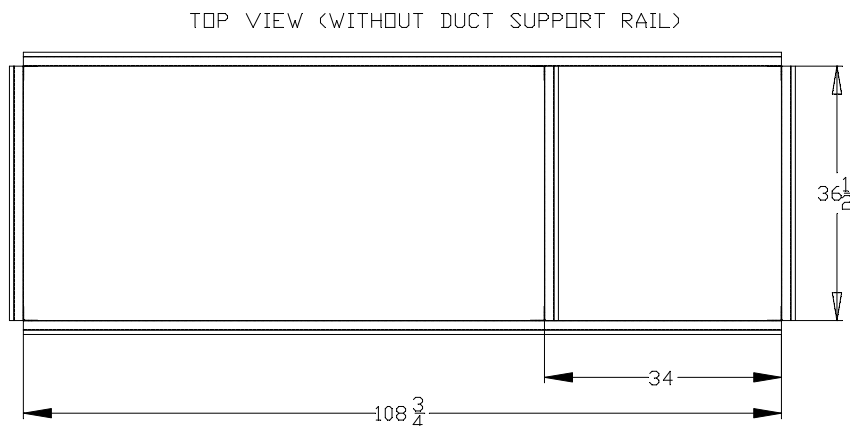
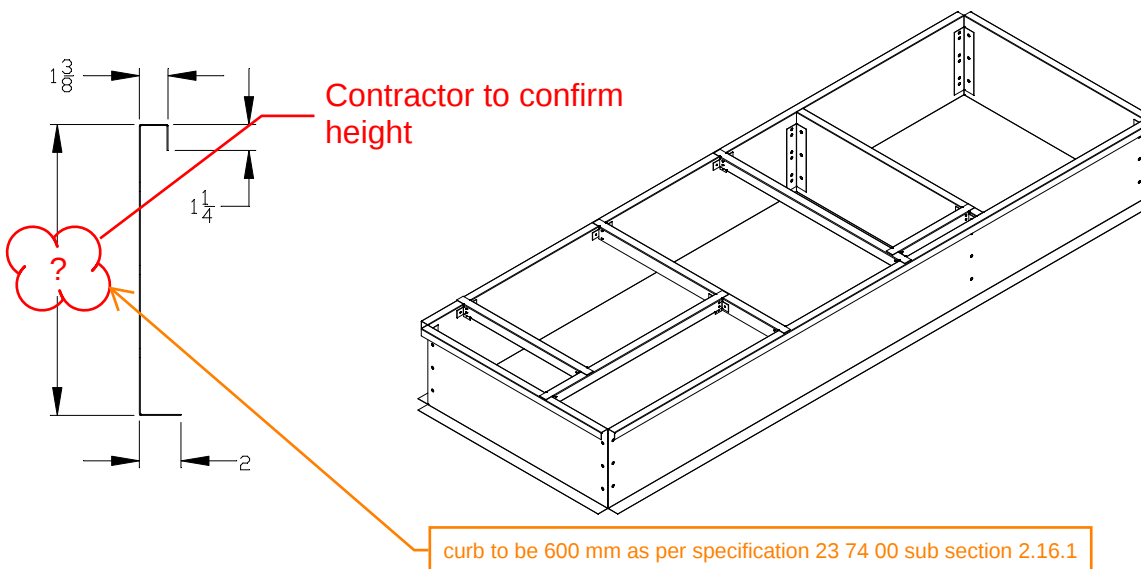


RNA SERIES A-CABINET KNOCKDOWN ENERGY RECOVERY CURB ~ 6-10 TON



Tag: RTU-1 Daycare
-Seismic fully welded roof curb with 2" acoustic insulation
-Curb height to be confirmed by contractor prior to seismic design
-Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang





RNA-006-A-A-4-GJA0A-CB1L0:00-0FBAF-QBA-00000-ABHBE-EC-CB0
A-D0-00-A-000-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-2 North Level
1

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 515

lower than specified 1276cfm

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.19 in. w.g.
Filters Clean: 0.18 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	97.6 MBH	92.7 MBH
Total Capacity:	69.4 MBH	64.4 MBH
Sensible Capacity:	58.1 MBH	53.1 MBH
Latent Capacity:	11.3 MBH	
HW Total Cooling Capacity:	28.2 MBH	
Mixed Air Temp (DB/WB):	76.7 °F / 63.4 °F	
Entering Air Temp (DB/WB):	76.7 °F / 63.4 °F	
Lv Air Temp (Coil) (DB/WB):	53.2 °F / 52.7 °F	
Lv Air Temp (Unit) (DB/WB):	55.1 °F / 53.6 °F	

Supply Air Fan: 1 x RN170D70 @ 1.69 BHP Ea.
SA Fan RPM / Width: 2012 RPM / 2.670 in
SA Fan FEL: 1.17
Exhaust Air Fan: 1 x RM150-RN @ 0.26 BHP Ea.
EA Fan RPM / Width: 1098 RPM / 5.160 in
EA Fan FEL: 1.75

Evaporator Coil: 8.5 ft² / 4 Rows / 14 FPI
Evaporator Face Velocity: 270.4 fpm
Energy Recovery: 1 x ERC-3019C

Rating Information

Listing Model: RN-006-3-0-GBAC-V0-21-000-A
Cooling Capacity: 65.0 MBH
Cooling EER: 12.74 BTU/h-W
Cooling IEER: 14.5 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 14.6 BTU/h-W
Application COP @ Op. Conditions: 12.05 W/W
Application COPH @ Op. Conditions: 3.78 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 1573 lbs / 1573 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 258.7 fpm / 4
Min. Room Area/Height/Airflow**: 483.0 ft² / 7.2 ft / 871 SCFM
Exhaust Airflow/ESP/TSP: 1176 SCFM / 0.25 in. w.g. / 0.80 in. w.g.
Supply Airflow/ESP: 2300 SCFM / 1.00 in. w.g.
Outside Airflow: 1150 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.09 in. w.g.
Heating: 0.02 in. w.g.
Cabinet: 0.04 in. w.g.
Energy Recovery: 0.61 in. w.g.
Total: 2.48 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 2300 SCFM
Total Capacity: 72.9 MBH
Entering Air Temp (DB/WB): 63.8 °F / 55.7 °F
Leaving Air Temp (DB/WB): 92.7 °F / 66.1 °F
Input: 90 MBH
Consumption: 90.0 MBH
Total Turndown Ratio: 10.0:1

Heating High Temp Capacity: 535.0 MBH
Heating High Temp COP: 3.78 W/W
Heating Low Temp Capacity: 29.5 MBH
Heating Low Temp COP: 2.522 W/W



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz
Unit FLA: 13
SCCR: 5 KAIC
Minimum Circuit Amp: 15
Maximum Overcurrent: 20

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			7.7
Condenser Fan:	1	0.33	460	1	1100	1.6	
Supply Fan:	1	2.00	575	3	1760	2.7	
Exhaust Fan:	1	1.00	575	3	1760	1.7	
Combustion:	1	0.09	460	1	3000	0.7	
Energy Recovery:	1	0.05	230	1	1050	0.3	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	82	81	83	80	73	69	67	62
Return LW (dB):	77	76	72	66	63	59	54	50

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

RTU2 Elec.

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.5	61.3	104.3	71.2	76.7	76.7	14.1	4.36
57.0	51.6	72.9	60.8	101.1	70.0	70.4	70.4	24.0	4.41
52.0	47.1	72.3	60.4	98.2	68.9	64.6	64.6	32.8	4.47
47.0	42.6	71.7	59.9	95.5	67.9	59.4	59.4	41.0	4.55
42.0	38.0	71.1	59.5	93.0	67.0	54.8	54.8	48.8	4.65
37.0	33.5	70.5	59.1	87.8	65.2	50.6	43.5	55.8	4.39
32.0	28.8	69.8	58.7	86.1	64.5	46.8	40.9	62.9	4.59
27.0	24.3	69.2	58.3	84.5	63.8	43.2	38.3	69.3	4.79
22.0	19.7	68.6	58.0	82.9	63.1	40.0	35.9	75.5	5.00
17.0	15.0	67.9	57.6	81.3	62.5	37.0	33.7	81.3	5.23
12.0	10.4	67.2	57.3	79.7	61.9	34.3	31.5	86.8	5.46
7.0	5.7	66.6	57.0	78.2	61.3	31.8	29.2	92.1	5.71
2.0	0.1	65.9	56.6	76.5	60.6	29.1	26.7	98.1	5.98

*Invalid operation point - Compressor operating outside of operating envelope

**Electric preheat is used to maintain the entering air temperature when applicable.

RNA-006-A-A-4-GJA0A-CB1L0:00-0FBAF-QBA-00000-ABHBE-EC-CB0
A-D0-00-A-000-EB-N000-00-000-A00B0-G00AA0-000000X

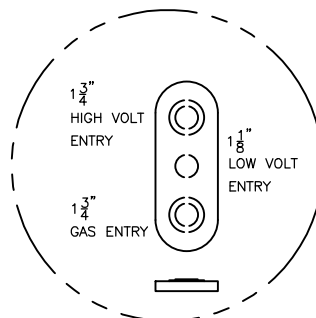
Tag: RTU-2 North
Level 1

RN SERIES A - CABINET ECONOMIZER, ENERGY RECOVERY SECTION, POWER EXHAUST AND TOILET EXHAUST ~ 6-10 TON

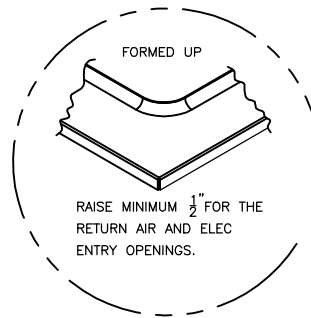
RETURN AIR OPENING - 15" x 13" (LEFT SIDE)
EXHAUST AIR OPENING - 15" x 13" (RIGHT SIDE)

CLEARANCES	
LOCATION	• UNIT SIZE • 6 - 10 TON
OUTSIDE AIR (BACK)	36
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED

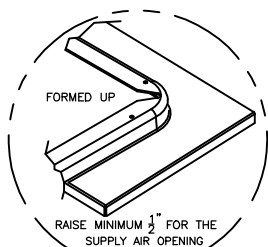
NOTE: THE RNA UNIT IS NOT COMPATIBLE WITH PREVIOUS GENERATIONS OF AAON CURBS. AN ADAPTER CURB IS AVAILABLE IN ECAT.



DETAIL A

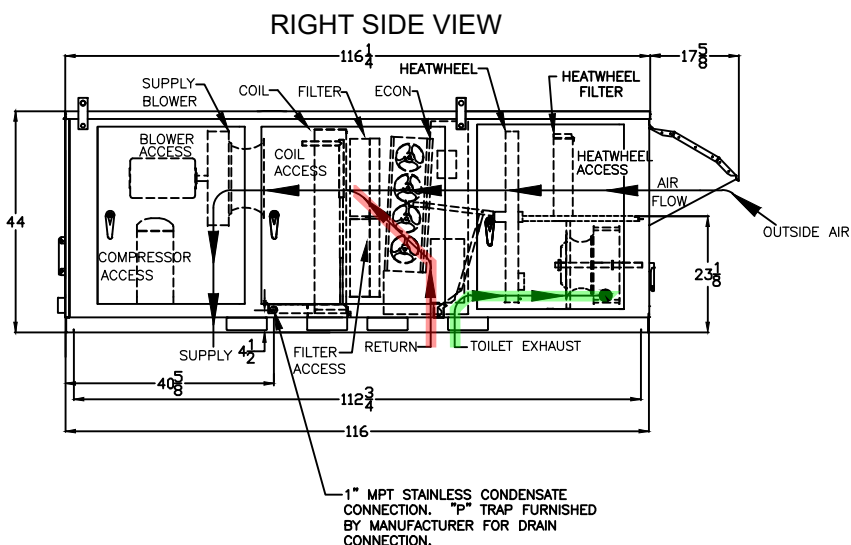
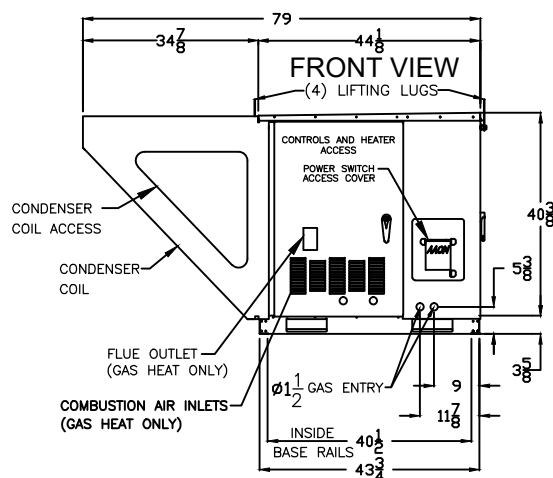
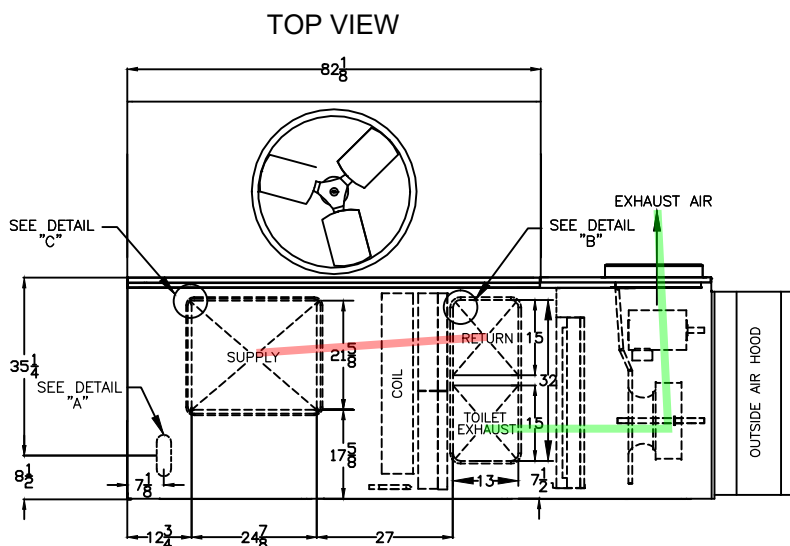


DETAIL B



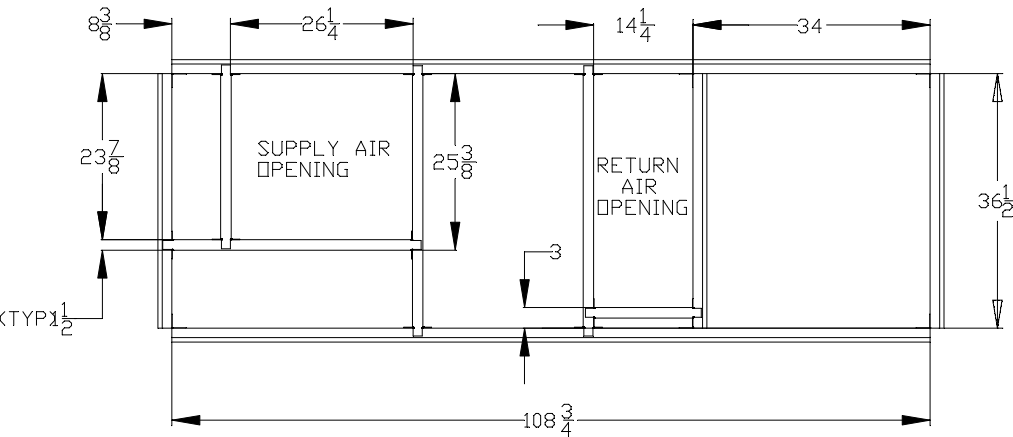
DETAIL C

Contractor to confirm
Toilet Exhaust /
Return Air Stream
handing



RNA SERIES A-CABINET KNOCKDOWN ENERGY RECOVERY CURB ~ 6-10 TON

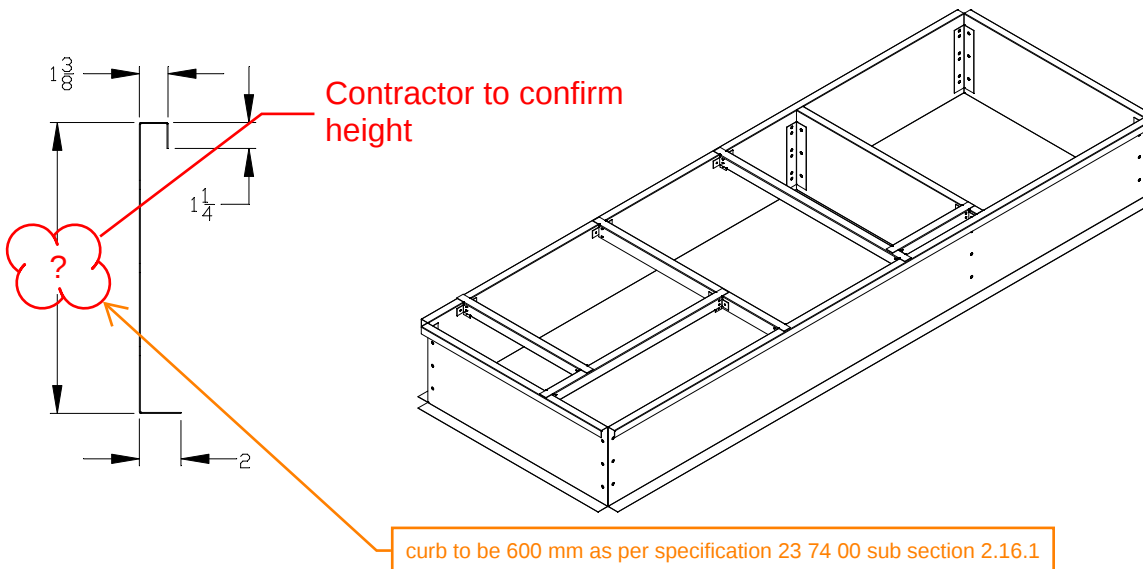
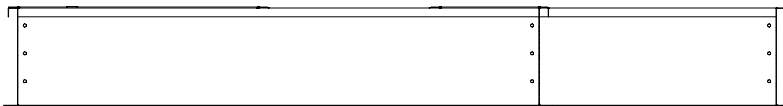
TOP VIEW (WITH DUCT SUPPORT RAIL)



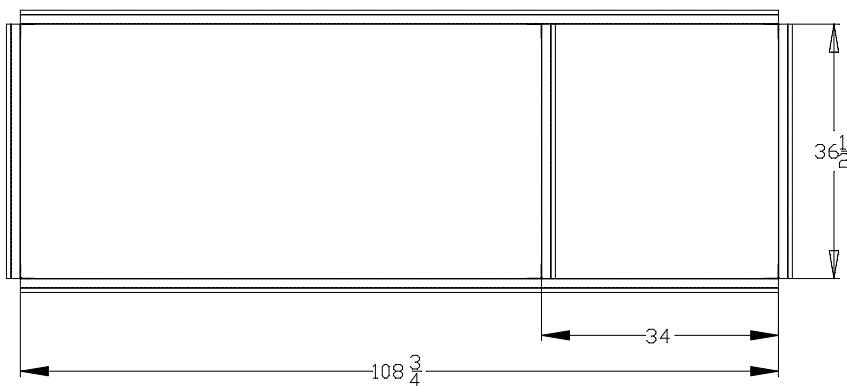
Tag: RTU-2 North Level 1
 -Seismic fully welded roof curb with 2" acoustic insulation
 -Curb height to be confirmed by contractor prior to seismic design
 -Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang

SIDE VIEW



TOP VIEW (WITHOUT DUCT SUPPORT RAIL)





Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

RNA-011-B-A-4-GJA0C-CB1L0:00-0FEAH-QBB-00000-ABJBG-EC-CB0
A-D0-00-A-AN0-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-3 North Level
2

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 334 / 334

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.24 in. w.g.
Filters Clean: 0.27 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	181.1 MBH	171.4 MBH
Total Capacity:	128.8 MBH	119.1 MBH
Sensible Capacity:	111.7 MBH	102.0 MBH
Latent Capacity:	17.1 MBH	
HW Total Cooling Capacity:	52.3 MBH	
Mixed Air Temp (DB/WB):	77.1 °F / 63.7 °F	
Entering Air Temp (DB/WB):	77.1 °F / 63.7 °F	
Lv Air Temp (Coil) (DB/WB):	54.5 °F / 53.9 °F	
Lv Air Temp (Unit) (DB/WB):	56.4 °F / 54.7 °F	

Supply Air Fan: 1 x 220D70 @ 3.41 BHP Ea.
SA Fan RPM / Width: 1694 RPM / 3.450 in
SA Fan FEI: 1.27
Exhaust Air Fan: 1 x RM185-RN @ 1.66 BHP Ea.
EA Fan RPM / Width: 1471 RPM / 6.290 in
EA Fan FEI: 1.19

Evaporator Coil: 14.6 ft² / 4 Rows / 14 FPI
Evaporator Face Velocity: 315.4 fpm
Energy Recovery: 1 x ERC-3628C

Rating Information

Listing Model: RN-011-3-0-GBAC-V0-21-000-A
Cooling Capacity: 117.0 MBH
Cooling EER: 12.54 BTU/h-W
Cooling IEER: 15.78 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 14.1 BTU/h-W
Application COP @ Op. Conditions: 8.76 W/W
Application COPH @ Op. Conditions: 3.4 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 2336 lbs / 2336 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 331.2 fpm / 4
Min. Room Area/Height/Airflow**: 314.0 ft² / 7.2 ft / 565 SCFM
Exhaust Airflow/ESP/TSP: 4600 SCFM / 0.25 in. w.g. / 1.28 in. w.g.
Supply Airflow/ESP: 4600 SCFM / 1.00 in. w.g.
Outside Airflow: 2300 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.19 in. w.g.
Heating: 0.07 in. w.g.
Cabinet: 0.09 in. w.g.
Energy Recovery: 0.90 in. w.g.
Total: 3.10 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 4600 SCFM
Total Capacity: 158.0 MBH
Entering Air Temp (DB/WB): 61.0 °F / 54.2 °F
Leaving Air Temp (DB/WB): 92.4 °F / 65.7 °F
Input: 195 MBH
Consumption: 195.0 MBH
Total Turndown Ratio: 10.0:1

Heating High Temp Capacity: 101.0 MBH
Heating High Temp COP: 3.4 W/W
Heating Low Temp Capacity: 59.52 MBH
Heating Low Temp COP: 2.328 W/W



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz Minimum Circuit Amp: 29
Unit FLA: 27 Maximum Overcurrent: 35
SCCR: 5 KAIC

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			6.4
Compressor 2:	1		575	3			5.8
Condenser Fan:	2	1.00	460	1	1100	3.6	
Supply Fan:	1	5.00	575	3	1760	6.1	
Exhaust Fan:	1	2.00	575	3	1760	2.7	
Combustion:	1	0.09	460	1	3000	0.7	
Energy Recovery:	1	0.08	460	1	825	0.4	

Cabinet Sound Power Levels*

RTU3 Elec.

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	93	91	97	87	81	78	76	70
Return LW (dB):	88	86	88	77	75	72	68	63

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.1	61.2	99.8	69.9	132.9	132.9	26.1	3.71
57.0	51.6	72.4	60.5	96.9	68.7	122.5	122.5	44.4	3.77
52.0	47.1	71.6	60.0	94.2	67.6	113.0	113.0	60.9	3.83
47.0	42.6	70.9	59.4	91.7	66.6	104.2	104.2	76.1	3.91
42.0	38.0	70.1	58.9	89.4	65.6	96.9	96.9	90.4	4.02
37.0	33.5	69.3	58.4	84.7	63.9	89.9	77.2	103.5	3.81
32.0	28.8	68.5	57.9	83.1	63.2	83.5	73.0	116.7	3.99
27.0	24.3	67.7	57.4	81.4	62.4	77.5	68.8	128.6	4.17
22.0	19.7	66.9	57.0	79.8	61.7	72.0	64.7	140.0	4.35
17.0	15.0	66.1	56.6	78.2	61.1	66.7	60.7	151.0	4.54
12.0	10.4	65.3	56.2	76.5	60.4	61.8	56.7	161.1	4.73
7.0	5.7	64.5	55.8	*	*	*	*	*	*
2.0	0.1	63.6	55.3	*	*	*	*	*	*

*Invalid operation point - Compressor operating outside of operating envelope

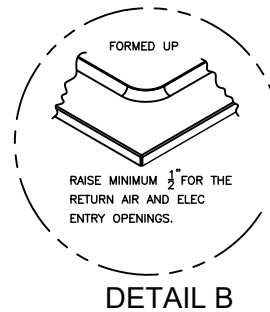
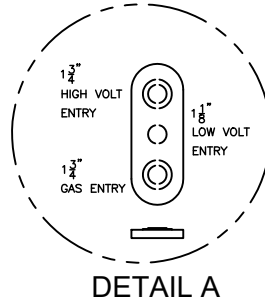
**Electric preheat is used to maintain the entering air temperature when applicable.

RNA-011-B-A-4-GJA0C-CB1L0:00-0FEAH-QBB-00000-ABJBG-EC-CB0
A-D0-00-A-AN0-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-3 North
Level 2

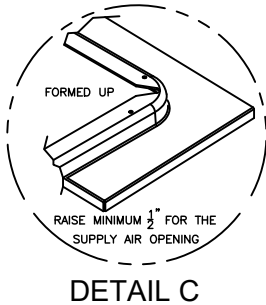
RN SERIES B-CABINET WITH ECONOMIZER ~ 9-15 TON ENERGY RECOVERY SECTION, POWER EXHAUST AND TOILET EXHAUST

CLEARANCES	
LOCATION	• UNIT SIZE • 9 - 15 TON
OUTSIDE AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED

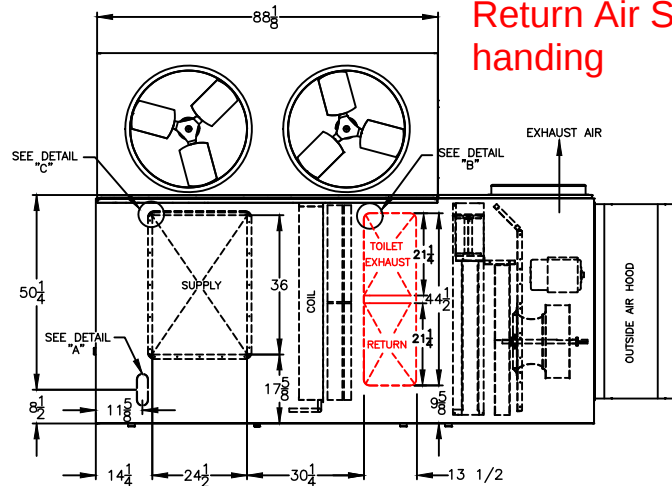


NUMBER OF CONDENSER FANS

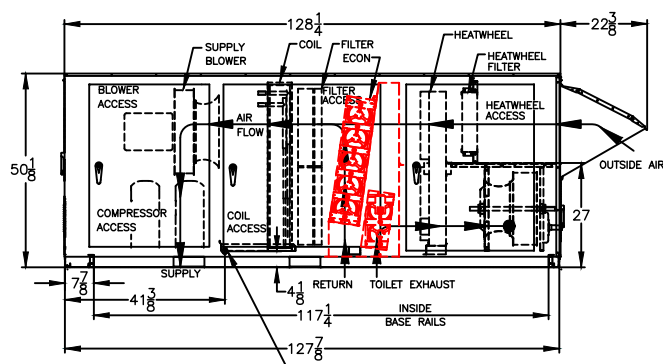
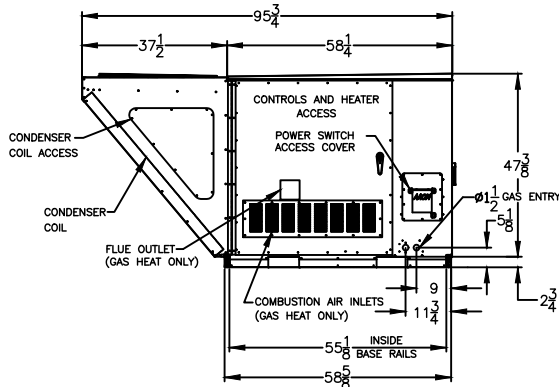
9 & 11 TON - 1 FAN
13 & 15 TON - 2 FANS



Contractor to confirm
Toilet Exhaust /
Return Air Stream
handing



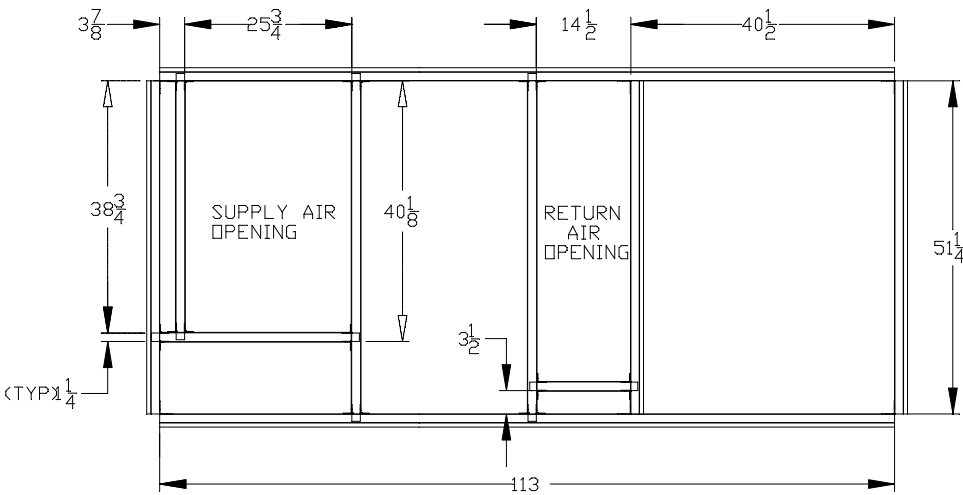
FRONT VIEW



1" MPT STAINLESS CONDENSATE CONNECTION. "P" TRAP FURNISHED BY MANUFACTURER FOR DRAIN CONNECTION.

RNB-SPECIAL REV.B 07/08/19 CAR
RNB-SPECIAL REV.A 08/23/17 AAS
NOTE: ALL DIMENSIONS ARE IN INCHES

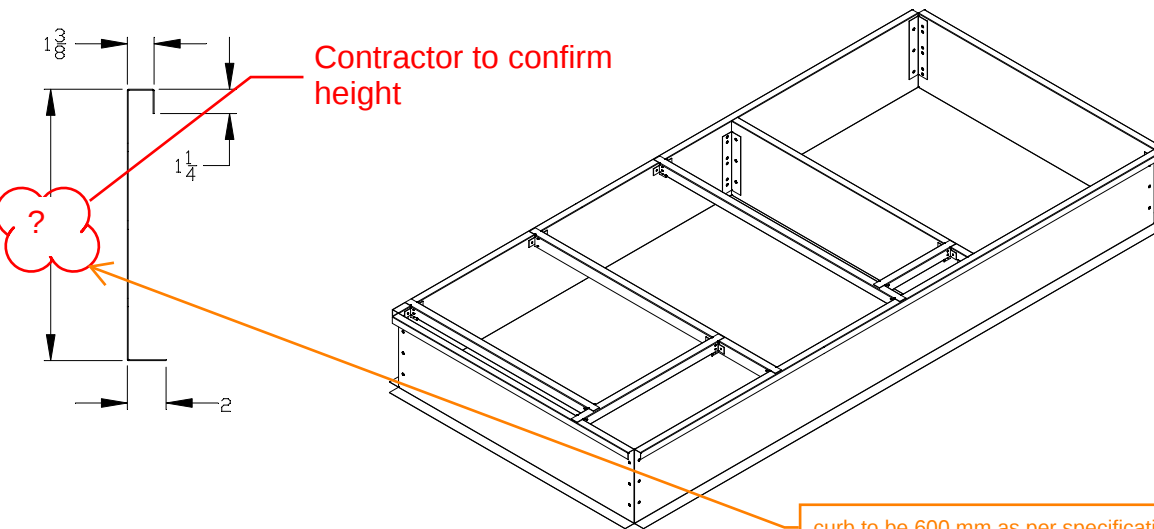
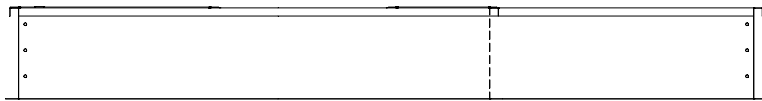
TOP VIEW (WITH DUCT SUPPORT RAIL)



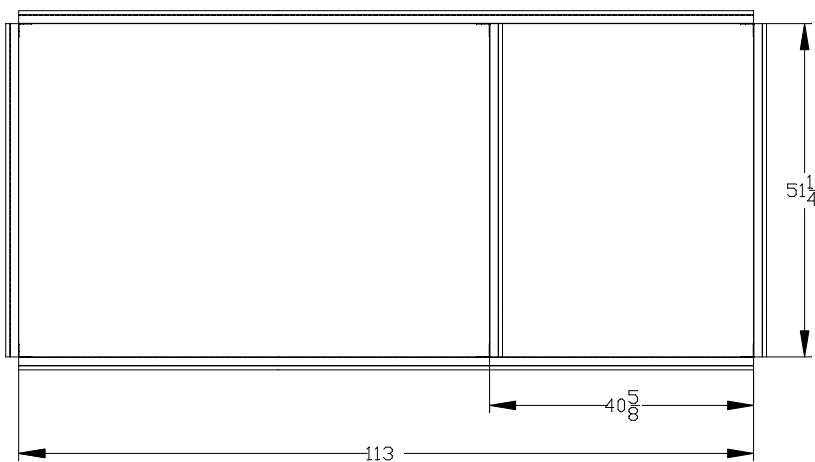
Tag: RTU-3 North Level 2
 -Seismic fully welded roof curb with 2" acoustic insulation
 -Curb height to be confirmed by contractor prior to seismic design
 -Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang

SIDE VIEW



TOP VIEW (WITHOUT DUCT SUPPORT RAIL)





Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

RQA-004-A-A-4-GJB0A-CB3L0:00-0ADAF-G00-00000-AAHE-EC-CB0
A-D0-00-A-AN0-EB-N000-00-000-A000B0-G000A0-000000X

Tag: RTU-4 - Admin

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 563

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 844 lbs / 844 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 324.0 fpm / 2
Min. Room Area/Height/Airflow**: 528.0 ft² / 7.2 ft / 953 SCFM
Exhaust Airflow/ESP/TSP: 450 SCFM / 0.25 in. w.g. / 0.30 in. w.g.
Supply Airflow/ESP: 1800 SCFM / 1.50 in. w.g.
Outside Airflow: 450 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

lower than specified 1800cfm

Static Pressure

External: 1.50 in. w.g.
Cooling Coil: 0.37 in. w.g.
Filters Clean: 0.33 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Economizer: 0.12 in. w.g.
Heating: 0.17 in. w.g.
Cabinet: 0.09 in. w.g.
Total: 2.93 in. w.g.

Cooling Section

	Gross	Net
Total Capacity:	52.0 MBH	47.0 MBH
Sensible Capacity:	45.9 MBH	40.8 MBH
Latent Capacity:	6.1 MBH	
Mixed Air Temp (DB/WB):	78.8 °F / 64.7 °F	
Entering Air Temp (DB/WB):	78.8 °F / 64.7 °F	
Lv Air Temp (Coil) (DB/WB):	55.0 °F / 54.8 °F	
Lv Air Temp (Unit) (DB/WB):	57.5 °F / 55.8 °F	

Supply Air Fan: 1 x RQ185 @ 1.61 BHP Ea.
SA Fan RPM / Width: 1790 RPM / 3.000 in
SA Fan FEI: 1.14
Exhaust Air Fan: 1 x MW1602-40-ECM-RQ @ 0.08 BHP Ea.
EA Fan RPM / Width: 863 RPM /
EA Fan FEI: 1.99

Evaporator Coil: 5.3 ft² / 6 Rows / 14 FPI
Evaporator Face Velocity: 342.9 fpm

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 1800 SCFM
Total Capacity: 81.0 MBH
Entering Air Temp (DB/WB): 53.0 °F / 49.6 °F
Leaving Air Temp (DB/WB): 94.2 °F / 65.3 °F
Input: 100 MBH
Consumption: 100.0 MBH
Total Turndown Ratio: 8.3:1

Rating Information

Listing Model	RQ-004-3-0-GBBC-V0-21-000-A	Heating High Temp Capacity:	44.0 MBH
Cooling EER2:	12.0 BTU/h-W	Heating HSPF2:	7.0 BTU/h-W
Cooling SEER2:	14.5 BTU/h-W	Heating High Temp COP2:	3.65 W/W

*Rated in accordance with AHRI 210/240

Application EER @ Op. Conditions: 10.0 BTU/h-W
Application COP @ Op. Conditions: 0.00 W/W

RTU4 Elec.

Electrical Data

Circuit 1

Rating:	575V/3Ø/60Hz	Minimum Circuit Amp:	15
Unit FLA:	14	Maximum Overcurrent:	20
SCCR:	5 KAIC		

	On	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			5.1
Condenser Fan:	2	0.33	460	1	1100	1.6	
Supply Fan:	1	2.00	575	3	1760	2.7	
Exhaust Fan:	1	1.00	575	1	1760	3.5	
Combustion:	1	0.09	460	1	3000	0.7	



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	86	83	87	80	72	69	67	61
Return LW (dB):	83	75	76	70	66	63	58	51

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

****The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).**

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	71.8	60.6	100.2	69.9	55.7	55.7		3.82
57.0	51.6	70.5	59.6	96.7	68.4	51.4	51.4		3.64
52.0	47.1	69.3	58.7	93.4	67.0	47.4	47.4		3.45
47.0	42.6	68.0	57.8	90.2	65.6	43.7	43.7		3.27
42.0	38.0	66.8	56.9	87.3	64.3	40.5	40.5		3.11
37.0	33.5	65.5	56.2	81.8	62.2	37.5	32.2		2.59
32.0	28.8	64.3	55.4	79.6	61.2	34.7	30.4		2.50
27.0	24.3	63.0	54.7	77.4	60.2	32.2	28.5		2.42
22.0	19.7	61.8	54.0	75.2	59.2	29.8	26.8		2.34
17.0	15.0	60.5	53.3	73.1	58.3	27.7	25.2		2.27
12.0	10.4	59.3	52.6	71.1	57.4	25.7	23.6		2.21
7.0	5.7	58.0	52.0	69.0	56.5	23.9	22.0		2.15
2.0	0.1	56.8	51.3	66.9	55.5	22.1	20.3		2.11

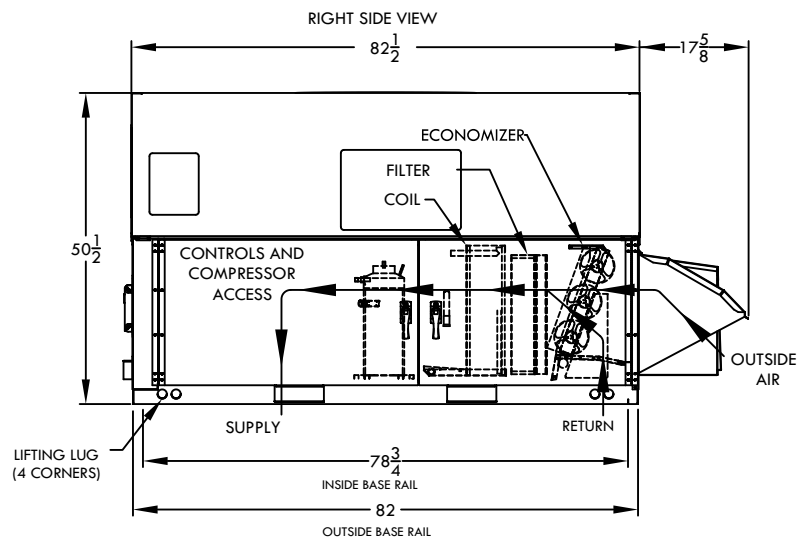
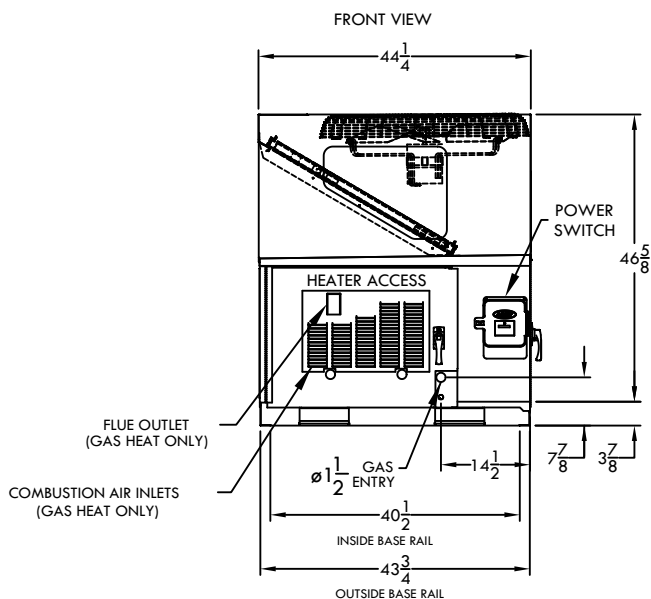
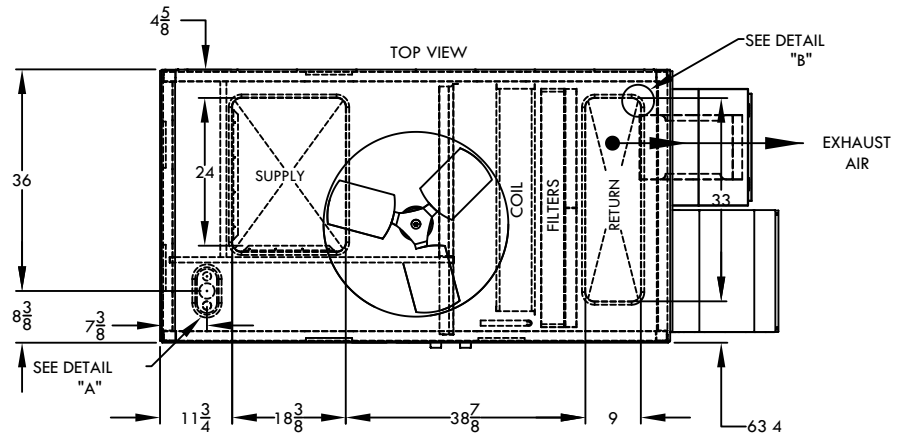
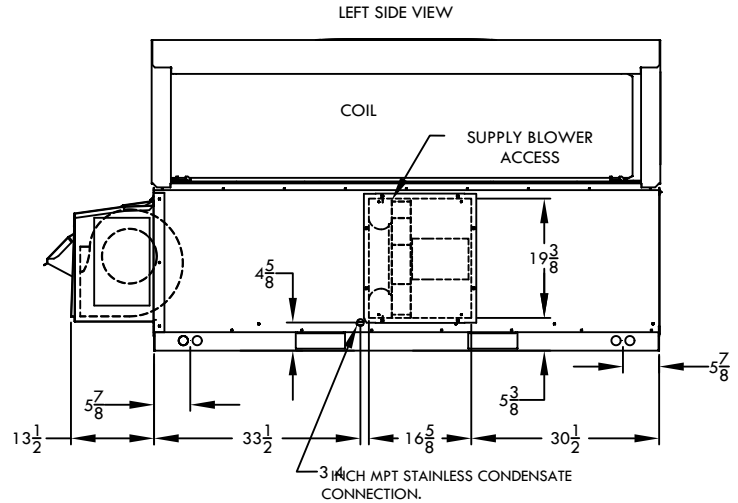
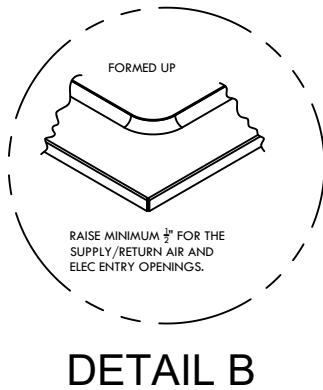
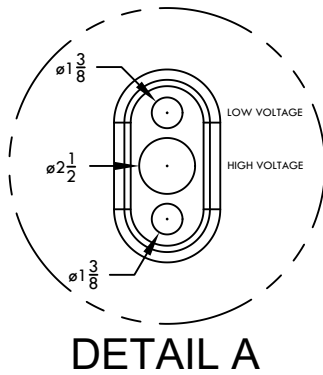
*Invalid operation point - Compressor operating outside of operating envelope

**Electric preheat is used to maintain the entering air temperature when applicable.

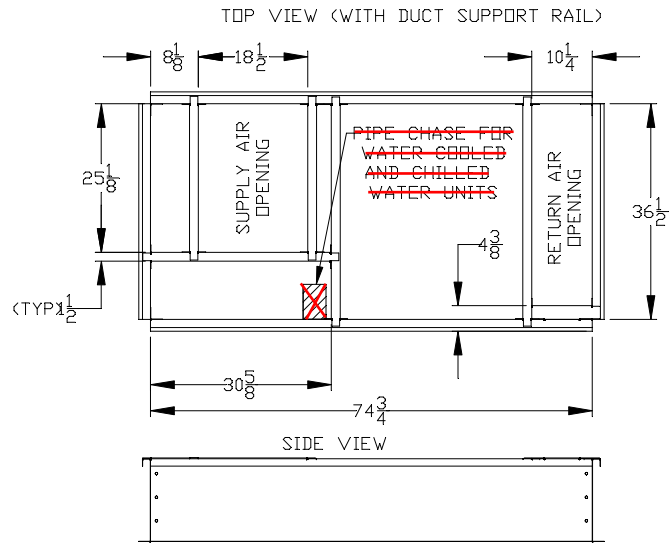
RQ CABINET ECONOMIZER POWER EXHAUST VERTICAL ~ 1-6 TON

CLEARANCES	
LOCATION	• UNIT SIZE • 1 - 6 TON
OUTSIDE AIR (BACK)	36*
HXC (FRONT)	36
LEFT SIDE	24
RIGHT SIDE	48
TOP	UNOBSTRUCTED

*CLEARANCE IS MEASURED
FROM THE END OF THE
OUTSIDE AIR RAIN HOOD

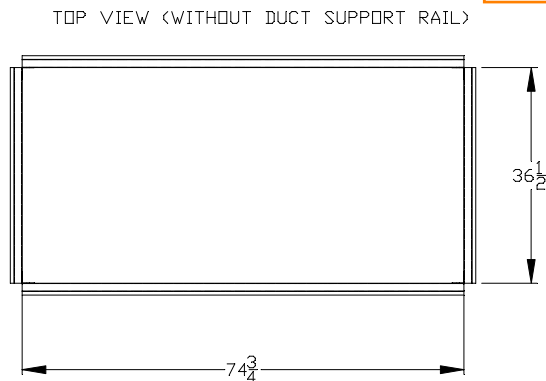
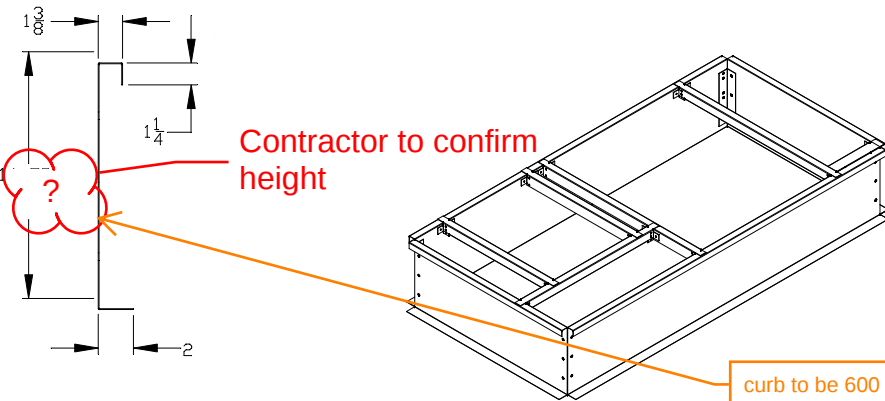


RQ CABINET
 KNOCKDOWN CURB STANDARD
 AND POWER EXHAUST ~ 1-6 TON



Tag: RTU-4 Admin
 -Seismic fully welded roof curb with 2"
 acoustic insulation
 -Curb height to be confirmed by
 contractor prior to seismic design
 -Seismic submittal to follow under
 separate cover

Exterior curb insulation and roofing by
 others to allow for 3-5/8" of unit overhang





RNA-008-A-A-4-GJB0A-CB2L0:00-0ABAG-QAA-00000-ABHBG-EC-CB0
A-D0-00-A-000-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-5 East

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 678

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.41 in. w.g.
Filters Clean: 0.28 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	130.7 MBH	123.5 MBH
Total Capacity:	96.0 MBH	88.7 MBH
Sensible Capacity:	79.3 MBH	72.0 MBH
Latent Capacity:	16.7 MBH	
HW Total Cooling Capacity:	34.7 MBH	
Mixed Air Temp (DB/WB):	77.0 °F / 63.6 °F	
Entering Air Temp (DB/WB):	77.0 °F / 63.6 °F	
Lv Air Temp (Coil) (DB/WB):	52.5 °F / 52.3 °F	
Lv Air Temp (Unit) (DB/WB):	54.6 °F / 53.2 °F	

Supply Air Fan: 1 x RN170 @ 2.56 BHP Ea.
SA Fan RPM / Width: 2051 RPM / 3.810 in
SA Fan FEI: 1.13
Exhaust Air Fan: 1 x RM150-RN @ 1.14 BHP Ea.
EA Fan RPM / Width: 1830 RPM / 5.160 in
EA Fan FEI: 1.05

Evaporator Coil: 8.8 ft² / 6 Rows / 14 FPI
Evaporator Face Velocity: 342.9 fpm
Energy Recovery: 1 x ERC-3019C

Rating Information

Listing Model: RN-008-3-0-GBBC-V0-21-000-A
Cooling Capacity: 94.0 MBH
Cooling EER: 11.37 BTU/h-W
Cooling IEER: 14.1 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 12.3 BTU/h-W
Application COP @ Op. Conditions: 7.76 W/W
Application COPH @ Op. Conditions: 3.4 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 1716 lbs / 1716 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 337.5 fpm / 4
Min. Room Area/Height/Airflow**: 636.0 ft² / 7.2 ft / 1147 SCFM
Exhaust Airflow/ESP/TSP: 3000 SCFM / 0.25 in. w.g. / 1.07 in. w.g.
Supply Airflow/ESP: 3000 SCFM / 1.00 in. w.g.
Outside Airflow: 1500 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.11 in. w.g.
Heating: 0.06 in. w.g.
Cabinet: 0.07 in. w.g.
Energy Recovery: 0.74 in. w.g.
Total: 3.02 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 3000 SCFM
Total Capacity: 121.5 MBH
Entering Air Temp (DB/WB): 61.7 °F / 54.6 °F
Leaving Air Temp (DB/WB): 98.7 °F / 67.7 °F
Input: 150 MBH
Consumption: 150.0 MBH
Total Turndown Ratio: 8.0:1

Heating High Temp Capacity: 85.0 MBH
Heating High Temp COP: 3.4 W/W
Heating Low Temp Capacity: 48.96 MBH
Heating Low Temp COP: 2.328 W/W



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz
Unit FLA: 20
SCCR: 5 KAIC
Minimum Circuit Amp: 23
Maximum Overcurrent: 30

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			10.9
Condenser Fan:	2	0.33	460	1	1100	1.6	
Supply Fan:	1	3.00	575	3	1760	3.9	
Exhaust Fan:	1	2.00	575	3	1760	2.7	
Combustion:	1	0.09	460	1	3000	0.7	
Energy Recovery:	1	0.05	230	1	1050	0.3	

RTU5 Elec.

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	85	85	87	84	76	73	70	65
Return LW (dB):	83	83	79	75	73	70	67	63

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.2	61.2	107.6	72.2	111.9	111.9	17.3	3.78
57.0	51.6	72.5	60.6	105.3	71.2	106.7	106.7	29.5	3.85
52.0	47.1	71.8	60.1	103.1	70.3	102.0	102.0	40.4	3.93
47.0	42.6	71.1	59.5	101.0	69.5	97.6	97.6	50.5	4.02
42.0	38.0	70.3	59.0	99.0	68.7	93.7	93.7	60.1	4.12
37.0	33.5	69.6	58.6	93.2	66.8	90.0	77.3	68.8	3.85
32.0	28.8	68.8	58.1	92.0	66.2	86.6	75.7	77.5	4.02
27.0	24.3	68.1	57.7	90.7	65.6	83.4	74.0	85.4	4.19
22.0	19.7	67.3	57.2	89.3	65.1	80.5	72.3	93.0	4.36
17.0	15.0	66.5	56.8	88.1	64.6	77.7	70.7	100.2	4.54
12.0	10.4	65.8	56.4	86.7	64.0	75.1	68.9	107.0	4.71
7.0	5.7	65.0	56.0	85.2	63.5	72.6	66.8	113.6	4.87
2.0	0.1	64.2	55.6	*	*	*	*	*	*

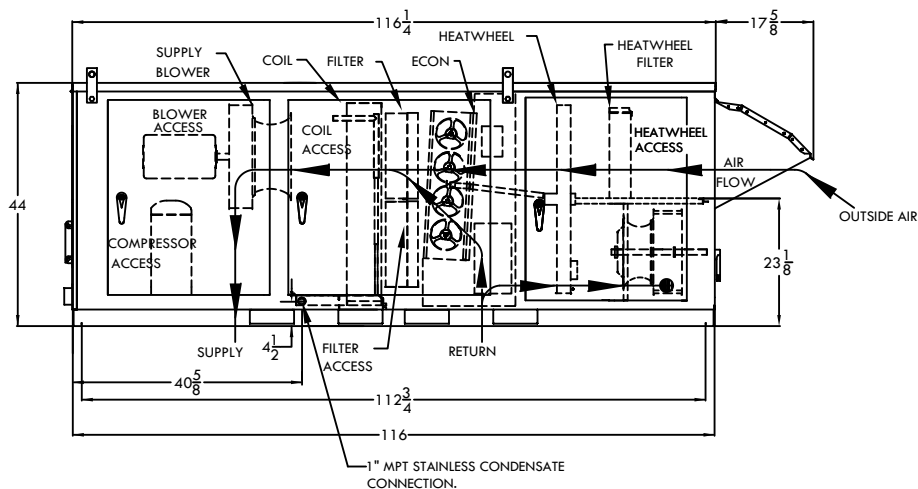
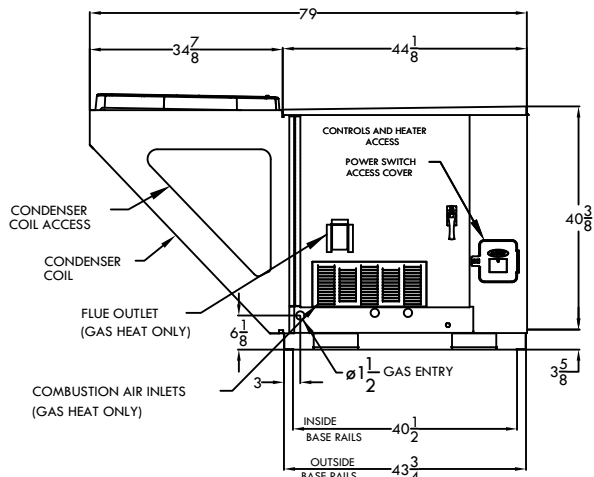
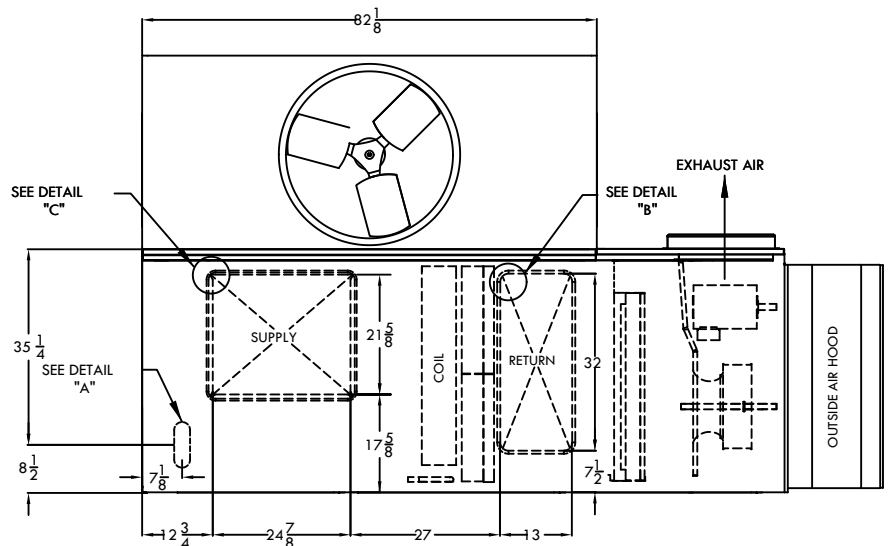
*Invalid operation point - Compressor operating outside of operating envelope

**Electric preheat is used to maintain the entering air temperature when applicable.

~ 6-10 TON

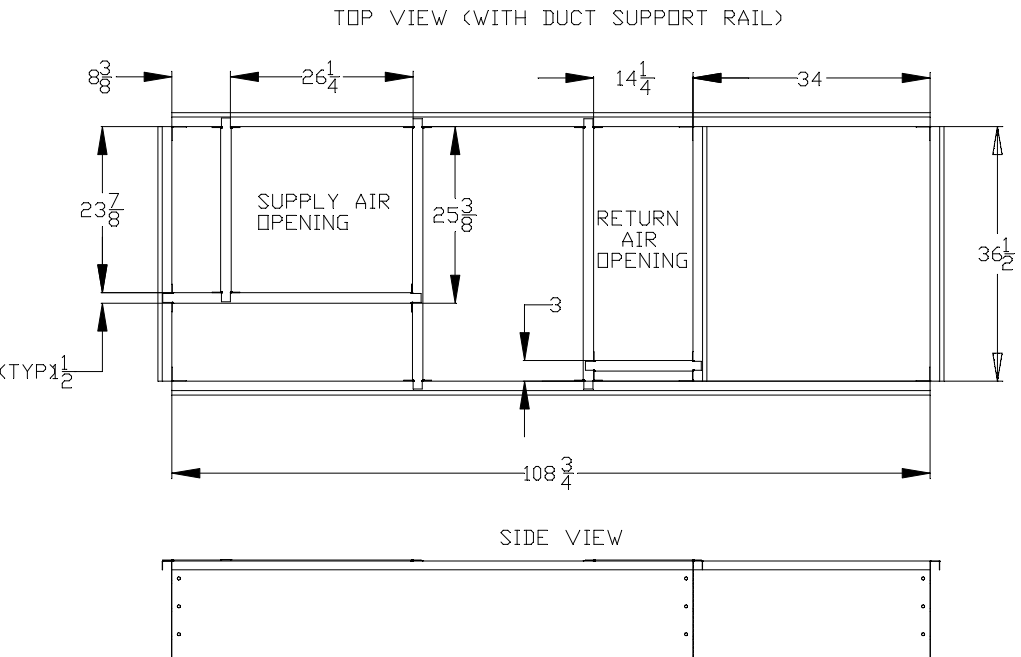
*CLEARANCE IS MEASURED FROM THE END OF THE OUTSIDE AIR RAIN HOOD

NOTE: THE RNA UNIT IS NOT COMPATIBLE WITH PREVIOUS GENERATIONS OF AAON CURBS. AN ADAPTER CURB IS AVAILABLE IN ECAT.



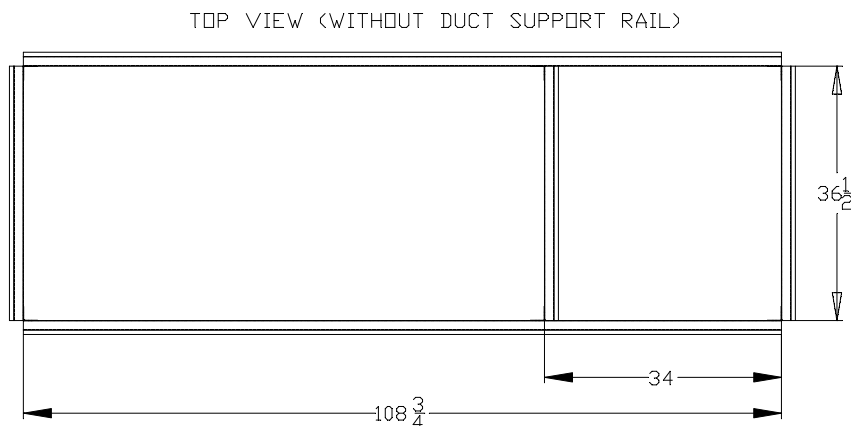
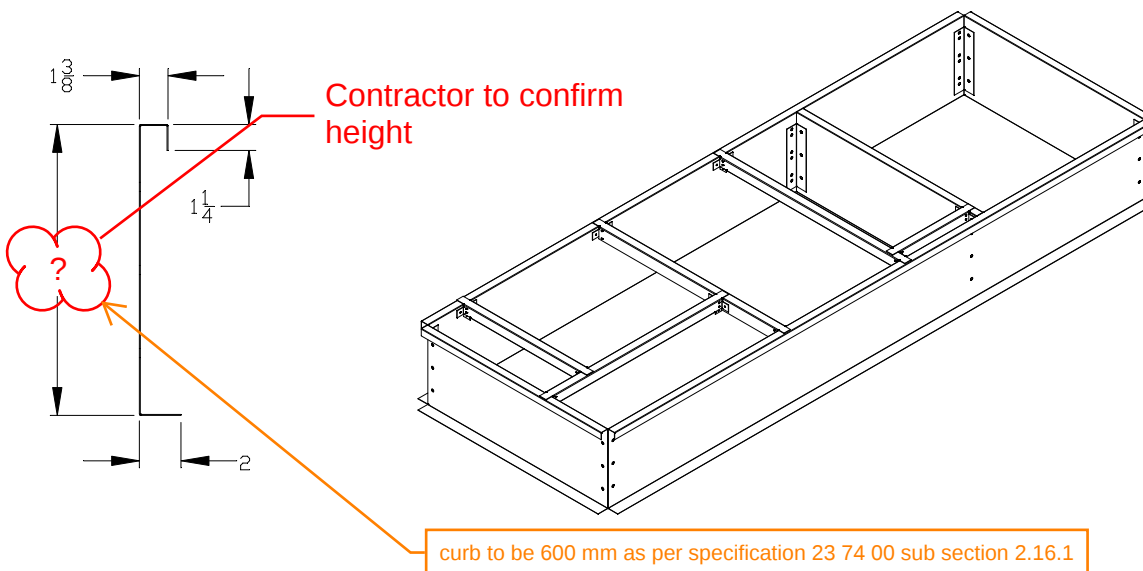
RNA-00027 REV:C 02/20/23 JWC
NOTE: ALL DIMENSIONS ARE IN INCHES

RNA SERIES A-CABINET KNOCKDOWN ENERGY RECOVERY CURB ~ 6-10 TON



Tag: RTU-5 East
-Seismic fully welded roof curb with 2" acoustic insulation
-Curb height to be confirmed by contractor prior to seismic design
-Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang





RNA-011-B-A-4-GJA0C-CB1L0:00-0FEAG-QAK-00000-ABJBG-EC-CB0
B-D0-00-A-AN0-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-6 Gym

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 334 / 334

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.20 in. w.g.
Filters Clean: 0.21 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	173.1 MBH	165.8 MBH
Total Capacity:	125.7 MBH	118.3 MBH
Sensible Capacity:	103.2 MBH	95.9 MBH
Latent Capacity:	22.5 MBH	
HW Total Cooling Capacity:	47.4 MBH	
Mixed Air Temp (DB/WB):	77.0 °F / 63.6 °F	
Entering Air Temp (DB/WB):	77.0 °F / 63.6 °F	
Lv Air Temp (Coil) (DB/WB):	53.0 °F / 52.5 °F	
Lv Air Temp (Unit) (DB/WB):	54.6 °F / 53.2 °F	

Supply Air Fan: 1 x 220D70 @ 2.59 BHP Ea.
SA Fan RPM / Width: 1537 RPM / 3.450 in
SA Fan FEL: 1.33
Exhaust Air Fan: 1 x RM185-RN @ 1.39 BHP Ea.
EA Fan RPM / Width: 1357 RPM / 6.290 in
EA Fan FEL: 1.29

Evaporator Coil: 14.6 ft² / 4 Rows / 14 FPI
Evaporator Face Velocity: 274.3 fpm
Energy Recovery: 1 x ERC-3628C

Rating Information

Listing Model: RN-011-3-0-GBAC-V0-21-000-A
Cooling Capacity: 117.0 MBH
Cooling EER: 12.54 BTU/h-W
Cooling IEER: 15.78 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 14.7 BTU/h-W
Application COP @ Op. Conditions: 9.51 W/W
Application COPH @ Op. Conditions: 3.4 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 2337 lbs / 2337 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 288.0 fpm / 4
Min. Room Area/Height/Airflow**: 314.0 ft² / 7.2 ft / 565 SCFM
Exhaust Airflow/ESP/TSP: 4000 SCFM / 0.25 in. w.g. / 1.33 in. w.g.
Supply Airflow/ESP: 4000 SCFM / 1.00 in. w.g.
Outside Airflow: 2000 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.17 in. w.g.
Heating: 0.05 in. w.g.
Cabinet: 0.07 in. w.g.
Energy Recovery: 0.71 in. w.g.
Total: 2.75 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 4000 SCFM
Total Capacity: 158.0 MBH
Entering Air Temp (DB/WB): 62.1 °F / 54.8 °F
Leaving Air Temp (DB/WB): 98.2 °F / 67.6 °F
Input: 195 MBH
Consumption: 195.0 MBH
Total Turndown Ratio: 10.0:1

Heating High Temp Capacity: 101.0 MBH
Heating High Temp COP: 3.4 W/W
Heating Low Temp Capacity: 59.52 MBH
Heating Low Temp COP: 2.328 W/W



Unit Rating

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Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz Minimum Circuit Amp: 26
Unit FLA: 25 Maximum Overcurrent: 30
SCCR: 5 KAIC

	Qty	HP	KVA	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			6.4
Compressor 2:	1		575	3			5.8
Condenser Fan:	2	1.00	460	1	1100	3.6	
Supply Fan:	1	3.00	575	3	1760	3.9	
Exhaust Fan:	1	2.00	575	3	1760	2.7	
Combustion:	1	0.09	460	1	3000	0.7	
Energy Recovery:	1	0.08	460	1	825	0.4	

RTU6 Elec.

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	91	88	95	85	78	76	73	67
Return LW (dB):	87	84	86	74	73	70	66	60

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.3	61.2	103.8	71.1	132.3	132.3	23.7	3.77
57.0	51.6	72.6	60.6	100.7	69.9	122.1	122.1	40.3	3.82
52.0	47.1	71.9	60.1	97.9	68.8	112.8	112.8	55.2	3.89
47.0	42.6	71.2	59.6	95.1	67.7	104.0	104.0	69.0	3.97
42.0	38.0	70.5	59.1	92.7	66.8	96.8	96.8	82.0	4.07
37.0	33.5	69.8	58.7	87.5	64.9	89.9	77.2	93.9	3.84
32.0	28.8	69.0	58.2	85.8	64.2	83.5	73.0	105.8	4.01
27.0	24.3	68.3	57.8	84.0	63.5	77.6	68.8	116.6	4.19
22.0	19.7	67.6	57.4	82.3	62.8	72.0	64.7	126.9	4.37
17.0	15.0	66.8	57.0	80.7	62.1	66.8	60.8	136.8	4.55
12.0	10.4	66.0	56.6	79.0	61.4	61.9	56.8	146.1	4.74
7.0	5.7	65.3	56.2	*	*	*	*	*	*
2.0	0.1	64.5	55.8	*	*	*	*	*	*

*Invalid operation point - Compressor operating outside of operating envelope

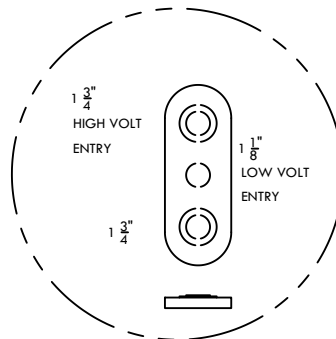
**Electric preheat is used to maintain the entering air temperature when applicable.

RN SERIES

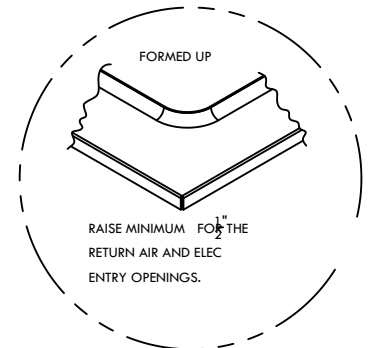
B - CABINET WITH ECONOMIZER ~ 9-15 TON

ENERGY RECOVERY SECTION RETURN AIR FILTER AND POWER EXHAUST

CLEARANCES	
LOCATION	• UNIT SIZE • 9 - 15 TON
OUTSIDE AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED



DETAIL A

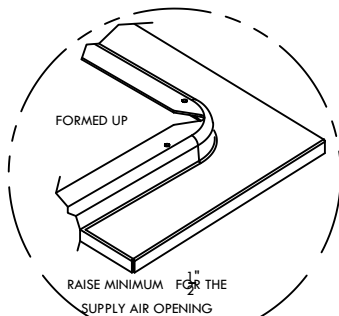


DETAIL B

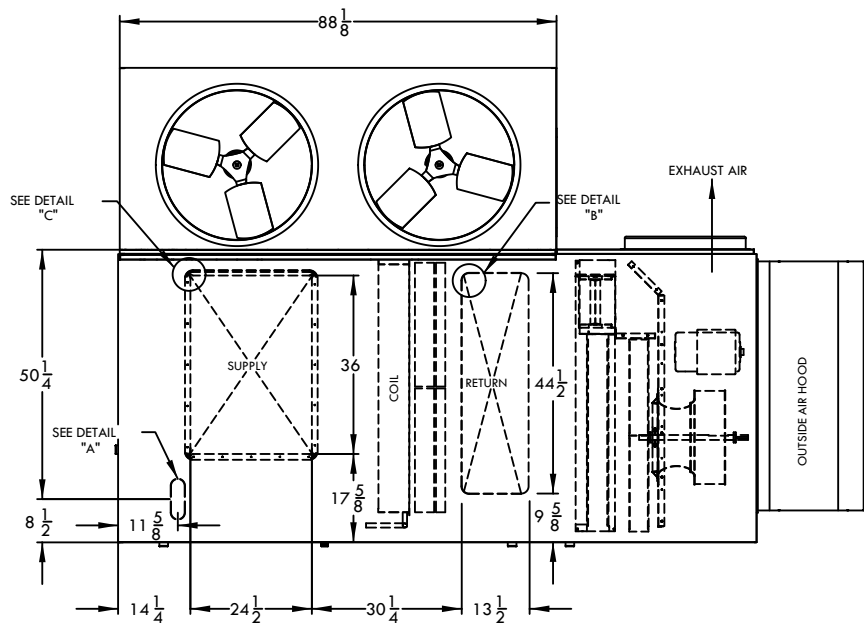
NUMBER OF CONDENSER FANS

9 & 11 TON - 1 FAN

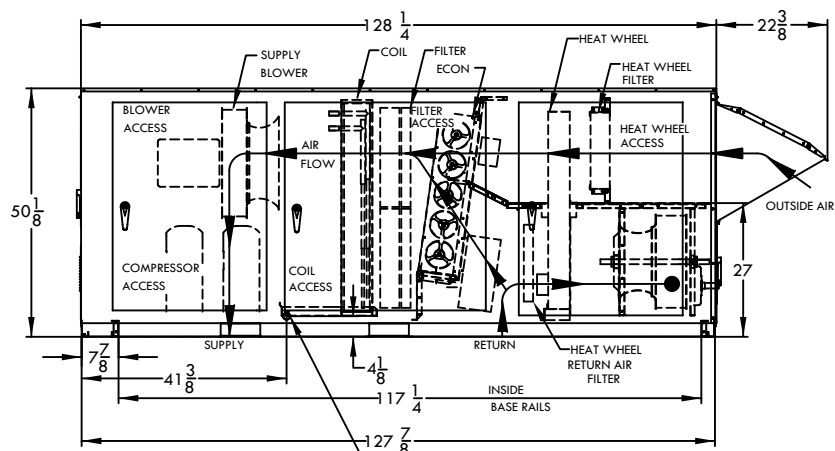
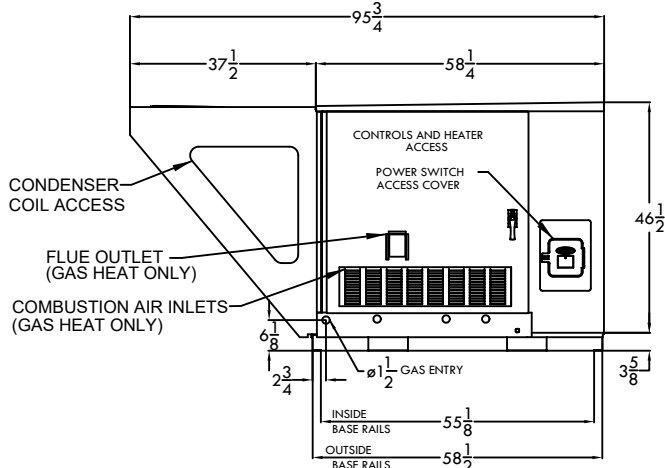
13 & 15 TON - 2 FANS



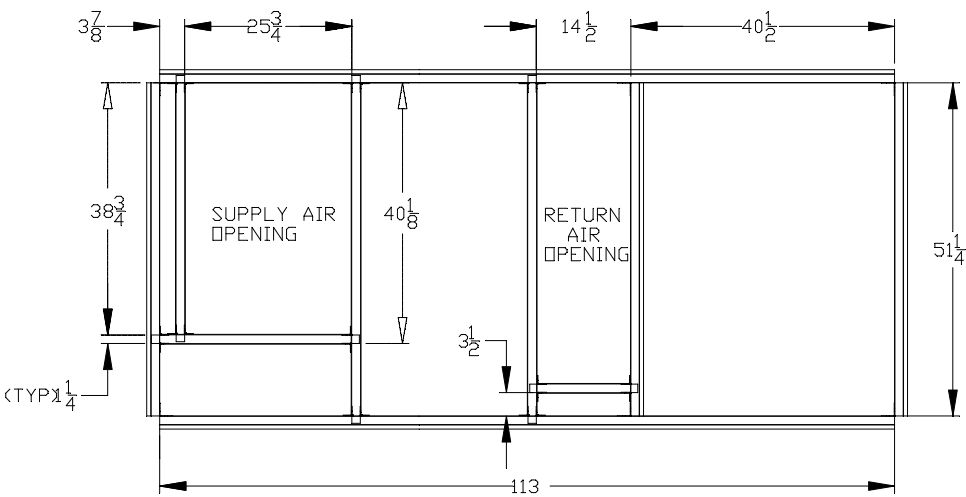
DETAIL C



FRONT VIEW



TOP VIEW (WITH DUCT SUPPORT RAIL)



Tag: RTU-6 Gym

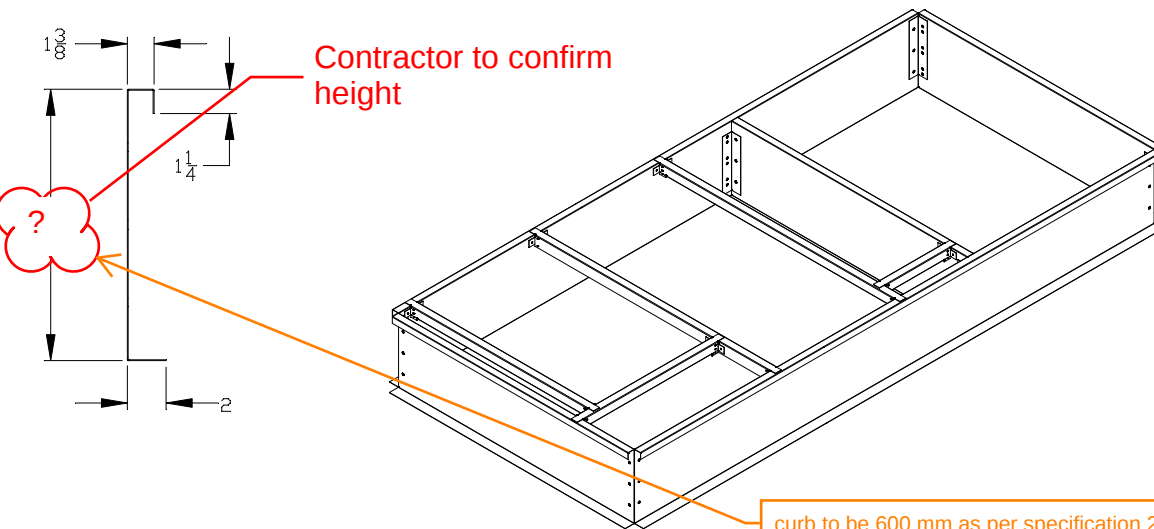
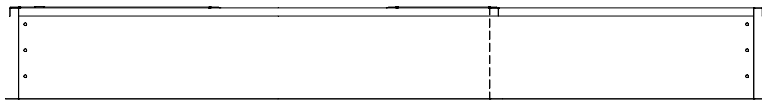
-Seismic fully welded roof curb with 2" acoustic insulation

-Curb height to be confirmed by contractor prior to seismic design

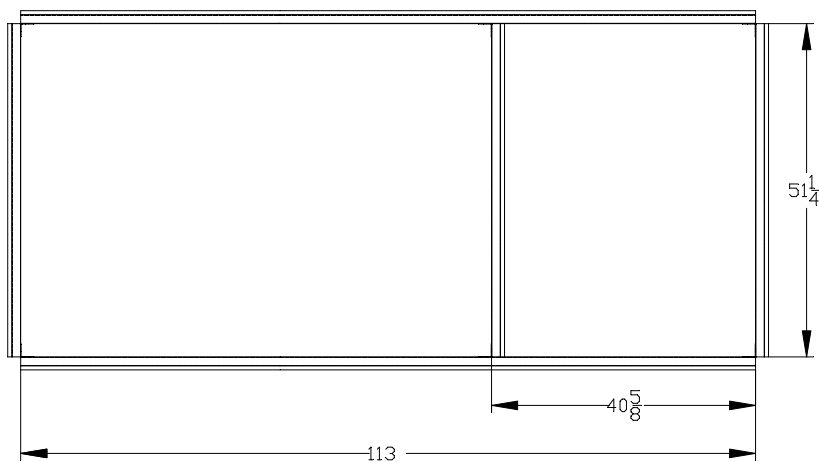
-Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang

SIDE VIEW



TOP VIEW (WITHOUT DUCT SUPPORT RAIL)





RNA-016-C-A-4-GJB0C-CB1L0:00-0FGAJ-QAA-00000-ABLBJ-EC-CB0
A-D0-00-A-AN0-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-7 South Levels
1 & 2

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 308 / 308

Static Pressure

External: 1.00 in. w.g.
Cooling Coil: 0.30 in. w.g.
Filters Clean: 0.34 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	273.7 MBH	260.6 MBH
Total Capacity:	198.4 MBH	185.4 MBH
Sensible Capacity:	162.3 MBH	149.2 MBH
Latent Capacity:	36.1 MBH	
HW Total Cooling Capacity:	75.3 MBH	
Mixed Air Temp (DB/WB):	76.7 °F / 63.5 °F	
Entering Air Temp (DB/WB):	76.7 °F / 63.5 °F	
Lv Air Temp (Coil) (DB/WB):	52.4 °F / 52.2 °F	
Lv Air Temp (Unit) (DB/WB):	54.2 °F / 52.9 °F	

Supply Air Fan: 1 x 270D60 @ 4.67 BHP Ea.
SA Fan RPM / Width: 1376 RPM / 3.680 in
SA Fan FEI: 1.22
Exhaust Air Fan: 1 x RM220A-RN @ 3.24 BHP Ea.
EA Fan RPM / Width: 1368 RPM / 4.930 in
EA Fan FEI: 0.74

Evaporator Coil: 19.9 ft² / 6 Rows / 12 FPI
Evaporator Face Velocity: 312.2 fpm
Energy Recovery: 1 x ERC-5245

Rating Information

Listing Model: RN-016-3-0-GBBC-V0-21-000-A
Cooling Capacity: 182.0 MBH
Cooling EER: 11.27 BTU/h-W
Cooling IEER: 13.92 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 12.9 BTU/h-W
Application COP @ Op. Conditions: 7.95 W/W
Application COPH @ Op. Conditions: 3.4 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 3784 lbs / 3784 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 297.6 fpm / 6
Min. Room Area/Height/Airflow**: 289.0 ft² / 7.2 ft / 521 SCFM
Exhaust Airflow/ESP/TSP: 6200 SCFM / 0.25 in. w.g. / 1.13 in. w.g.
Supply Airflow/ESP: 6200 SCFM / 1.00 in. w.g.
Outside Airflow: 3100 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.14 in. w.g.
Heating: 0.20 in. w.g.
Cabinet: 0.06 in. w.g.
Energy Recovery: 0.76 in. w.g.
Total: 3.14 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 6200 SCFM
Total Capacity: 218.7 MBH
Entering Air Temp (DB/WB): 63.8 °F / 55.5 °F
Leaving Air Temp (DB/WB): 96.0 °F / 66.9 °F
Input: 270 MBH
Consumption: 270.0 MBH
Total Turndown Ratio: 9.0:1

Heating High Temp Capacity: 164.0 MBH
Heating High Temp COP: 3.4 W/W
Heating Low Temp Capacity: 92.0 MBH
Heating Low Temp COP: 2.231 W/W



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz
Unit FLA: 41
SCCR: 5 KAIC

Minimum Circuit Amp: 44
Maximum Overcurrent: 50

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			10.9
Compressor 2:	1		575	3			9.2
Condenser Fan:	2	1.00	460	1	1100	3.6	
Supply Fan:	1	7.50	575	3	1760	9.0	
Exhaust Fan:	1	5.00	575	3	1760	6.1	
Combustion:	1	0.25	460	1	3200	0.9	
Energy Recovery:	1	0.17	460	1	1075	0.6	

Cabinet Sound Power Levels*

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	91	90	92	91	87	87	87	83
Return LW (dB):	89	87	85	77	75	74	69	62

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

****The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).**

RTU7 Elec.

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	73.5	61.3	106.4	71.8	221.1	221.1	38.1	3.46
57.0	51.6	72.9	60.8	103.8	70.8	207.6	207.6	64.4	3.52
52.0	47.1	72.3	60.3	101.3	69.8	194.9	194.9	88.1	3.58
47.0	42.6	71.7	59.8	98.9	68.9	183.0	183.0	110.0	3.65
42.0	38.0	71.1	59.3	96.5	68.0	171.6	171.6	130.7	3.73
37.0	33.5	70.4	58.9	91.0	66.1	161.1	138.4	149.7	3.49
32.0	28.8	69.8	58.5	89.3	65.4	150.9	131.9	168.7	3.63
27.0	24.3	69.2	58.1	87.7	64.7	141.1	125.2	186.0	3.76
22.0	19.7	68.5	57.8	86.0	64.0	131.8	118.4	202.5	3.89
17.0	15.0	67.9	57.4	84.4	63.4	122.8	111.7	218.4	4.03
12.0	10.4	67.2	57.1	82.7	62.7	114.7	105.2	233.2	4.16
7.0	5.7	66.5	56.7	81.0	62.1	106.9	98.3	247.6	4.28
2.0	0.1	65.9	56.3	*	*	*	*	*	*

*Invalid operation point - Compressor operating outside of operating envelope

**Electric preheat is used to maintain the entering air temperature when applicable.

RNA-016-C-A-4-GJB0C-CB1L0:00-0FGAJ-QAA-00000-ABLBj-EC-CB0
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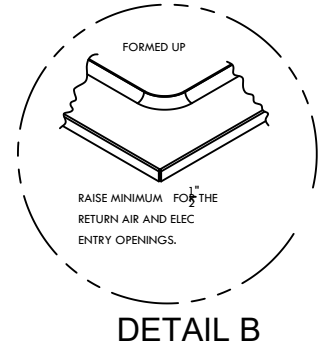
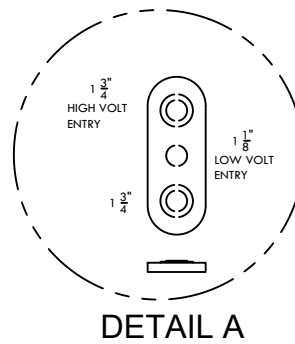
Tag: RTU-7 South
Levels 1 & 2

RN SERIES

C - CABINET WITH ECONOMIZER ~ 16-30 TON

ENERGY RECOVERY SECTION AND POWER EXHAUST

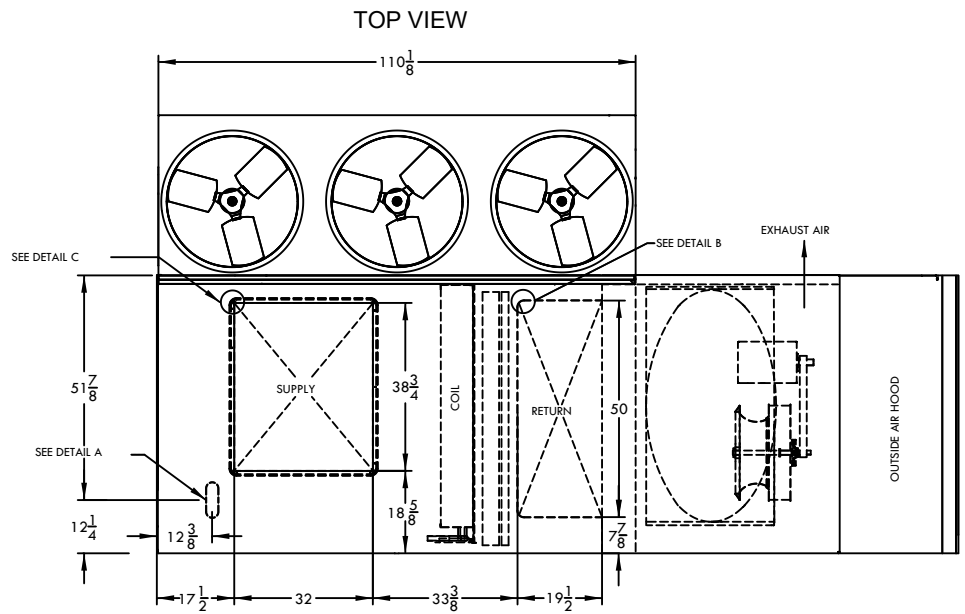
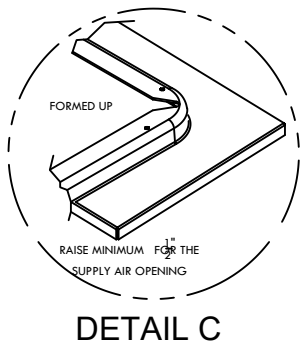
CLEARANCES	
LOCATION	• UNIT SIZE • 16 - 30 TON
OUTSIDE AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	60
TOP	UNOBSTRUCTED



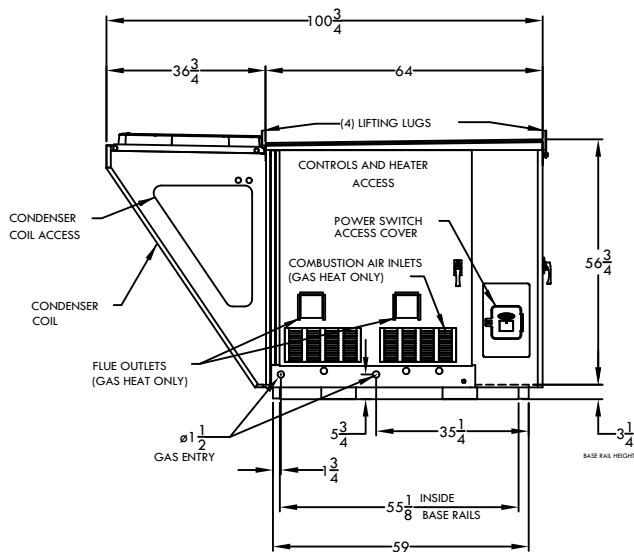
NUMBER OF CONDENSER FANS

16, 18 & 20 TON - 2 FANS

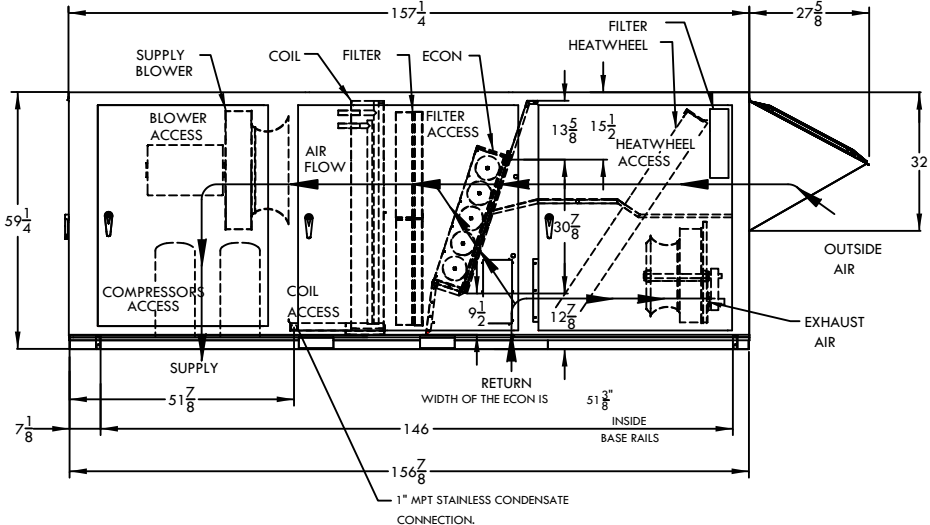
25 & 30 TON - 3 FANS



FRONT VIEW

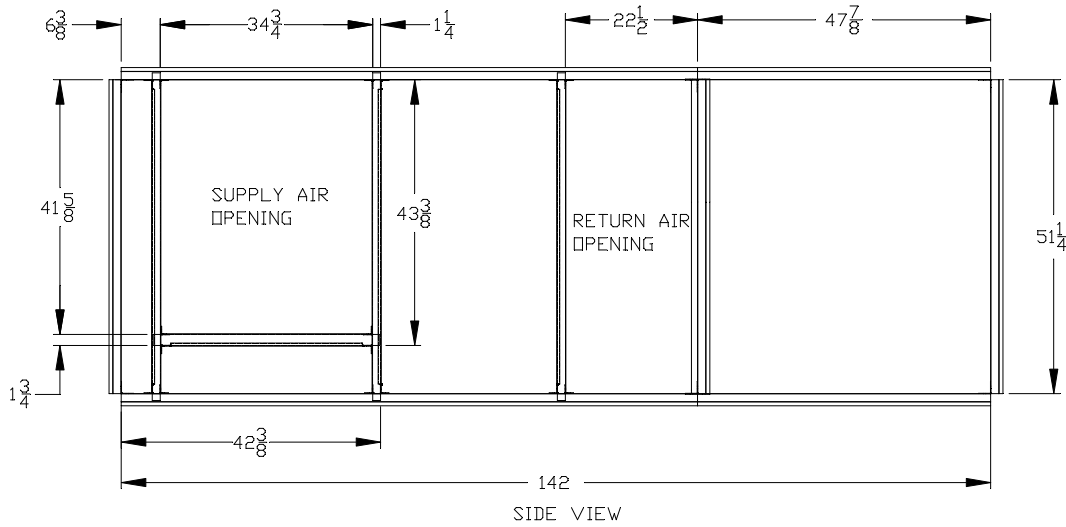


RIGHT SIDE VIEW



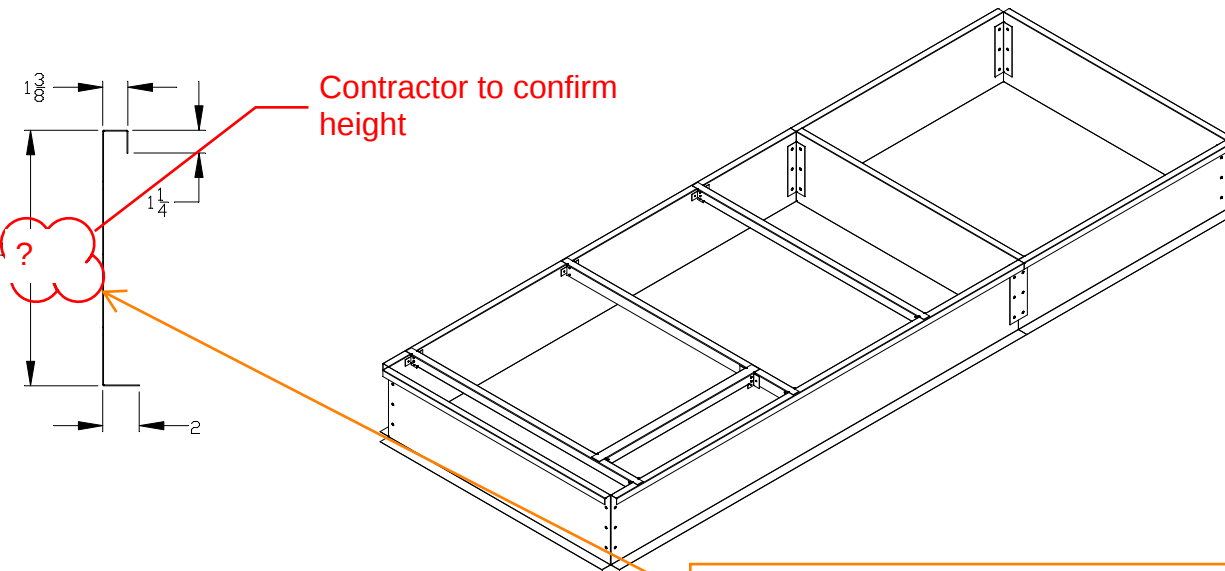
RNC-00005 REV:D 12/27/22
NOTE: ALL DIMENSIONS ARE IN INCHES

TOP VIEW (WITH DUCT SUPPORT RAIL)
KIT# K00783

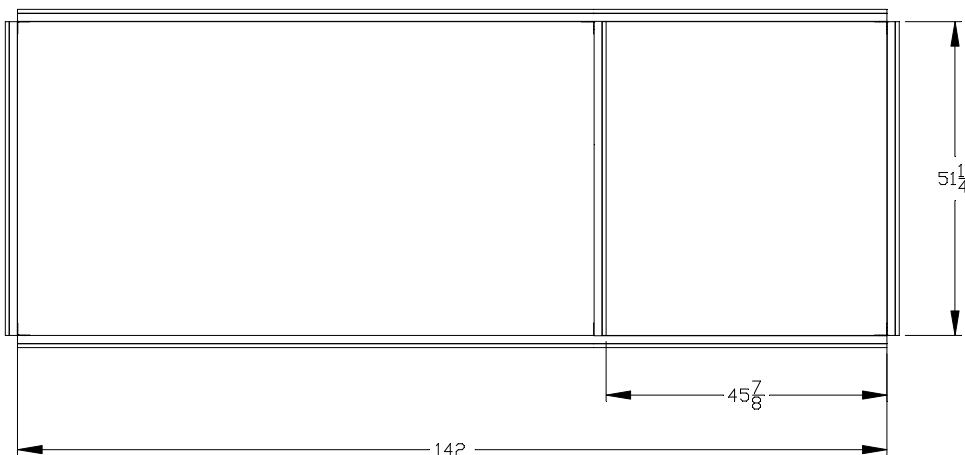


Tag: RTU-7 South Levels 1 & 2
 -Seismic fully welded roof curb with 2" acoustic insulation
 -Curb height to be confirmed by contractor prior to seismic design
 -Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang



TOP VIEW (WITHOUT DUCT SUPPORT RAIL)





RNA-009-B-A-4-GJA0C-CB1L0:00-0ACAG-QAK-00000-ABJBE-EC-CB0
B-D0-00-A-AN0-EB-N000-00-000-A000B0-G00AA0-000000X

Tag: RTU-8 Library

(Values do not account for changes described in SPA)

Job Information

Job Name: Avalon 3 Elementary School
Job Number: GWA 2023-183
Site Altitude: 0 ft
Refrigerant: R-454B
System Charges (oz): 378 / 378

Static Pressure

External: 1.25 in. w.g.
Cooling Coil: 0.14 in. w.g.
Filters Clean: 0.16 in. w.g.
Dirt Allowance: 0.35 in. w.g.

Cooling Section

	Gross	Net
Equivalent Total Capacity:	126.4 MBH	120.6 MBH
Total Capacity:	100.4 MBH	94.6 MBH
Sensible Capacity:	85.2 MBH	79.3 MBH
Latent Capacity:	15.3 MBH	
HW Total Cooling Capacity:	26.0 MBH	
Mixed Air Temp (DB/WB):	75.7 °F / 62.6 °F	
Entering Air Temp (DB/WB):	75.7 °F / 62.6 °F	
Lv Air Temp (Coil) (DB/WB):	52.5 °F / 52.1 °F	
Lv Air Temp (Unit) (DB/WB):	54.0 °F / 52.7 °F	

Supply Air Fan: 1 x RN185 @ 2.05 BHP Ea.
SA Fan RPM / Width: 1769 RPM / 4.140 in
SA Fan FEI: 1.27
Exhaust Air Fan: 1 x RM185-RN @ 0.74 BHP Ea.
EA Fan RPM / Width: 1110 RPM / 6.290 in
EA Fan FEI: 1.47

Evaporator Coil: 14.6 ft² / 4 Rows / 14 FPI
Evaporator Face Velocity: 233.1 fpm
Energy Recovery: 1 x ERC-3628C

Rating Information

Listing Model: RN-009-3-0-GBAC-V0-21-000-A
Cooling Capacity: 96.0 MBH
Cooling EER: 12.74 BTU/h-W
Cooling IEER: 16.56 BTU/h-W

*Rated in accordance with AHRI Standard 340/360 (I-P)

Application EER @ Op. Conditions: 13.8 BTU/h-W
Application COP @ Op. Conditions: 7.00 W/W
Application COPH @ Op. Conditions: 3.49 W/W

Electrical Data

Unit Information

****WEIGHT AND PERFORMANCE DO NOT INCLUDE SPA**

Approx. Op./Ship Weights: 2305 lbs / 2305 lbs (±5%)
Ambient Temperature (DB/WB): 90.0 °F / 72.0 °F
Coil Filter FV / Qty: 244.8 fpm / 4
Min. Room Area/Height/Airflow**: 355.0 ft² / 7.2 ft / 640 SCFM
Exhaust Airflow/ESP/TSP: 3400 SCFM / 0.25 in. w.g. / 0.80 in. w.g.
Supply Airflow/ESP: 3400 SCFM / 1.25 in. w.g.
Outside Airflow: 1000 SCFM
Return Temperature (DB/WB): 75.0 °F / 62.0 °F

Economizer: 0.24 in. w.g.
Heating: 0.02 in. w.g.
Cabinet: 0.15 in. w.g.
Energy Recovery: 0.33 in. w.g.
Total: 2.32 in. w.g.

Heating Section

Preheat Type: Std (No Preheat)
Primary Heat Type: Heat pump is not operational at the current conditions.
OA Temp (DB/WB): -13.0 °F / -13.0 °F
RA Temp (DB/WB): 75.0 °F / 62.0 °F
Auxiliary Heating Type: Nat. Gas Heat
Heating Airflow: 3400 SCFM
Total Capacity: 158.0 MBH
Entering Air Temp (DB/WB): 70.2 °F / 59.3 °F
Leaving Air Temp (DB/WB): 112.6 °F / 72.9 °F
Input: 195 MBH
Consumption: 195.0 MBH
Total Turndown Ratio: 10.0:1

Heating High Temp Capacity: 86.0 MBH
Heating High Temp COP: 3.49 W/W
Heating Low Temp Capacity: 48.0 MBH
Heating Low Temp COP: 2.328 W/W



Unit Rating

2425 South Yukon Ave • Tulsa, OK 74107 • Ph: (918) 583-2266
Ecat Version: 352.0

Circuit 1

Rating: 575V/3Ø/60Hz
Unit FLA: 18
SCCR: 5 KAIC
Minimum Circuit Amp: 20
Maximum Overcurrent: 20

	Qty	HP	VAC	Phase	RPM	FLA	RLA
Compressor 1:	1		575	3			5.1
Compressor 2:	1		575	3			4.8
Condenser Fan:	2	0.33	460	1	1100	1.6	
Supply Fan:	1	3.00	575	3	1760	3.9	
Exhaust Fan:	1	1.00	575	3	1760	1.7	
Combustion:	1	0.09	460	1	3000	0.7	
Energy Recovery:	1	0.08	460	1	825	0.4	

Cabinet Sound Power Levels*

RTU8 Elec.

Octave Bands:	63	125	250	500	1000	2000	4000	8000
Discharge LW (dB):	86	84	88	83	75	74	70	64
Return LW (dB):	82	79	78	70	68	65	60	55

*Sound power levels are given for informational purposes only. The sound levels are not guaranteed.

**The minimum floor area for the Lower Flammability Limit (LFL) is calculated in accordance with UL60335-2-40 4th ed. (operating or storage).

Performance Data Table

Outside Air		Mixed Air		Leaving Air		Heat Pump Capacity	Heat Pump Integrated Capacity	Heat Wheel Heating Capacity	Heating COP
DB °F	WB °F	DB °F	WB °F	DB °F	WB °F	MBH	MBH	MBH	W/W
62.0	56.2	74.4	61.7	103.1	70.9	105.7	105.7	13.0	3.59
57.0	51.6	74.1	61.5	100.7	70.1	97.6	97.6	22.1	3.57
52.0	47.1	73.9	61.3	98.4	69.3	90.1	90.1	30.3	3.56
47.0	42.6	73.6	61.1	96.2	68.6	83.2	83.2	37.8	3.56
42.0	38.0	73.3	60.9	94.3	67.9	77.3	77.3	44.9	3.58
37.0	33.5	73.1	60.7	89.8	66.4	71.7	61.6	51.4	3.27
32.0	28.8	72.8	60.5	88.6	66.0	66.6	58.2	57.9	3.36
27.0	24.3	72.5	60.4	87.4	65.5	61.9	54.9	63.8	3.46
22.0	19.7	72.3	60.2	86.3	65.1	57.5	51.7	69.5	3.56
17.0	15.0	72.0	60.1	85.2	64.7	53.5	48.7	74.9	3.67
12.0	10.4	71.7	60.0	84.1	64.3	49.9	45.7	79.9	3.79
7.0	5.7	71.4	59.8	*	*	*	*	*	*
2.0	0.1	71.1	59.7	*	*	*	*	*	*

*Invalid operation point - Compressor operating outside of operating envelope

**Electric preheat is used to maintain the entering air temperature when applicable.

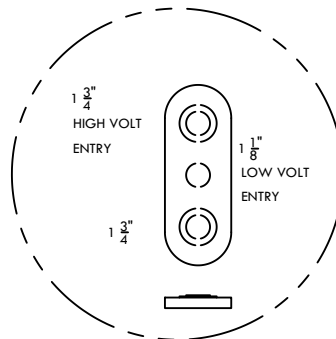
RN SERIES

B - CABINET WITH ECONOMIZER ~ 9-15 TON

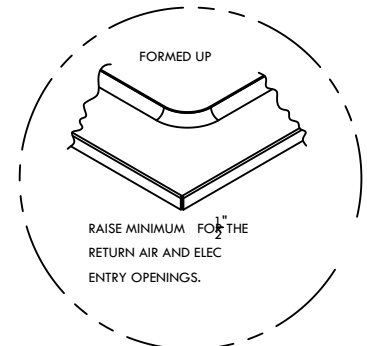
ENERGY RECOVERY SECTION RETURN AIR FILTER AND POWER EXHAUST

CLEARANCES

LOCATION	• UNIT SIZE • 9 - 15 TON
OUTSIDE AIR (BACK)	48
CONTROLS SIDE (FRONT)	48
LEFT SIDE	6
RIGHT SIDE	48
TOP	UNOBSTRUCTED



DETAIL A

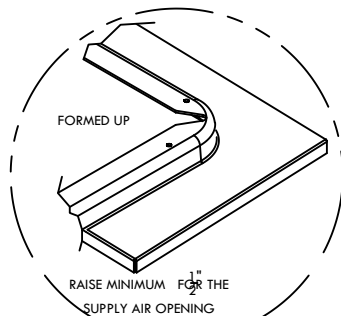


DETAIL B

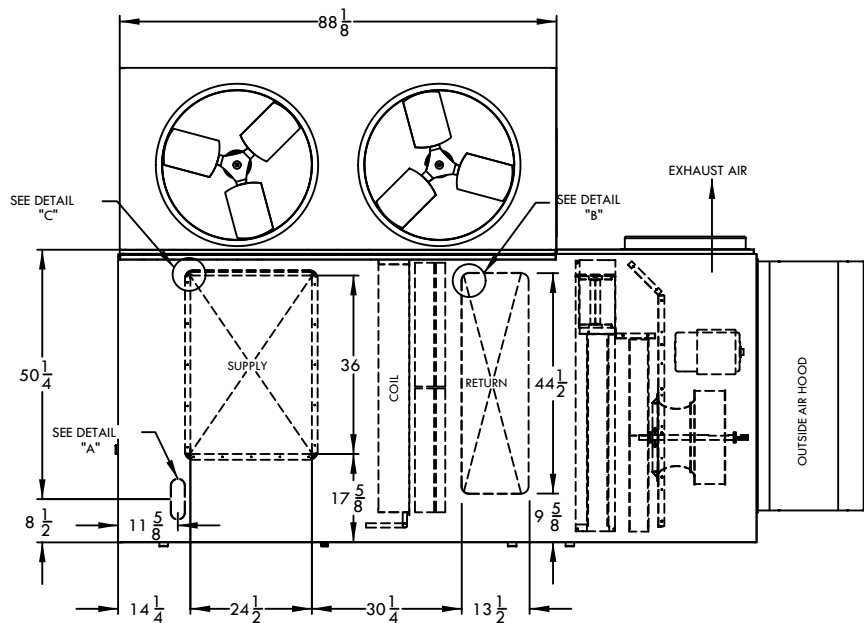
NUMBER OF CONDENSER FANS

9 & 11 TON - 1 FAN

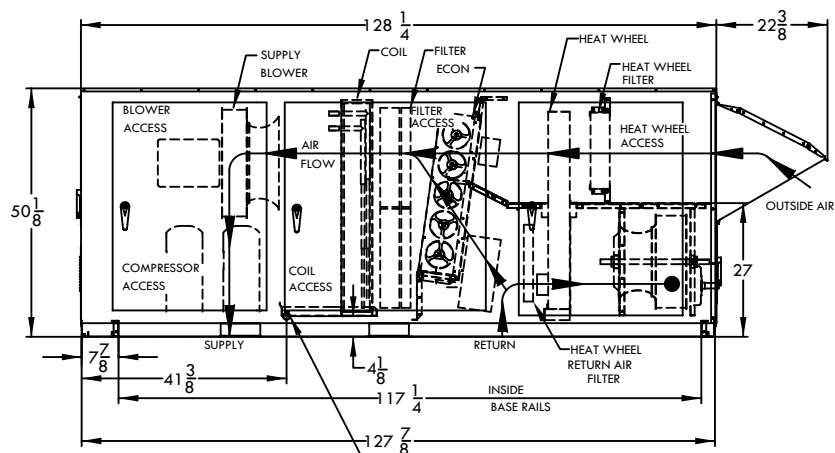
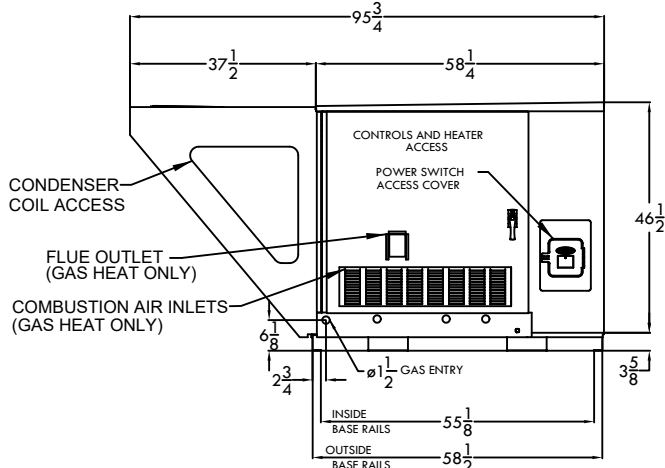
13 & 15 TON - 2 FANS



DETAIL C

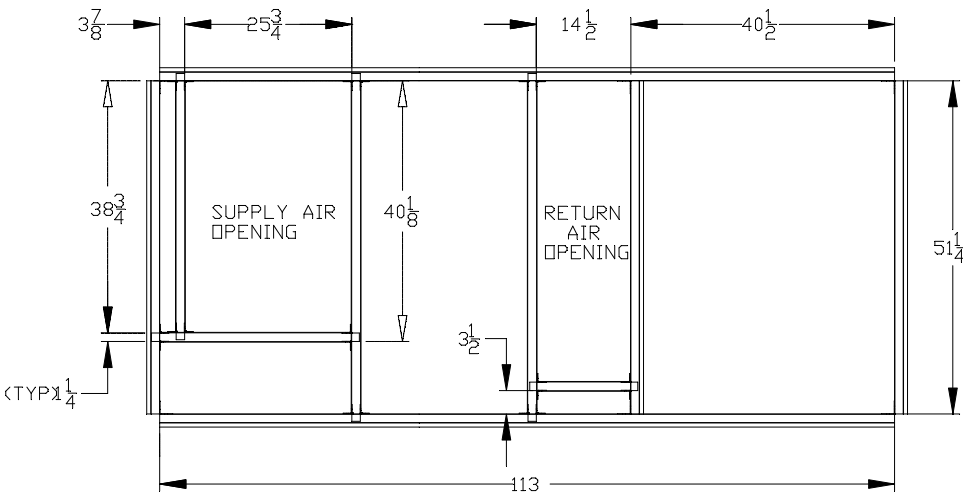


FRONT VIEW



RN SERIES B-CABINET KNOCKDOWN ENERGY RECOVERY CURB ~ 9-15 TON

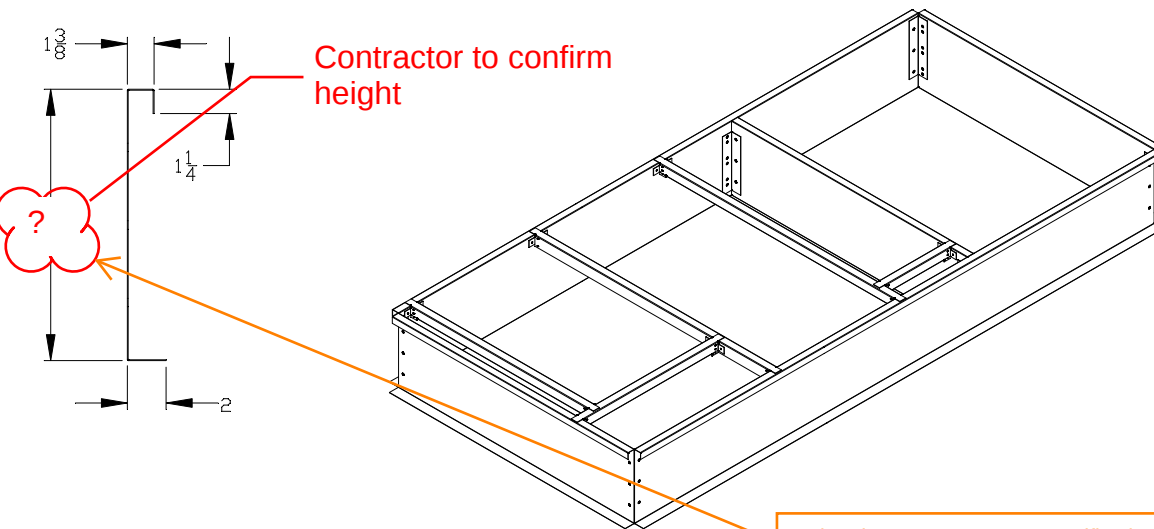
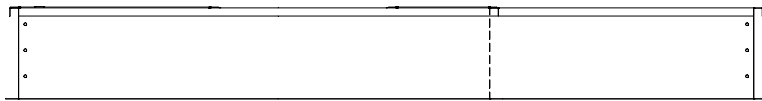
TOP VIEW (WITH DUCT SUPPORT RAIL)



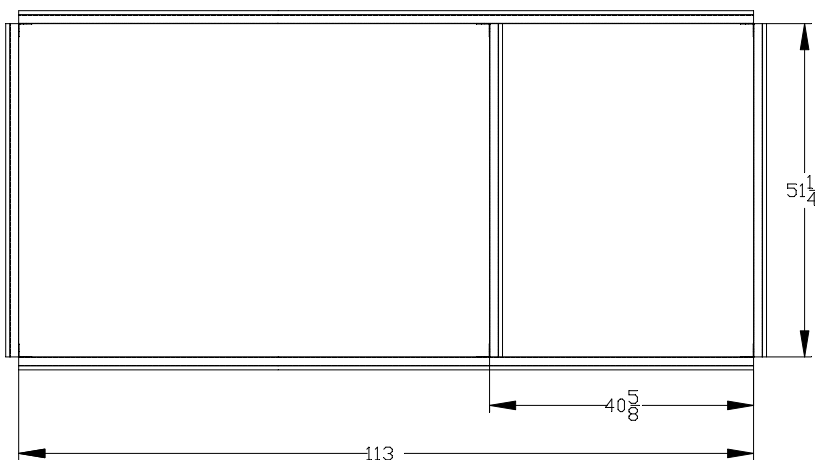
Tag: RTU-8 Library
 -Seismic fully welded roof curb with 2" acoustic insulation
 -Curb height to be confirmed by contractor prior to seismic design
 -Seismic submittal to follow under separate cover

Exterior curb insulation and roofing by others to allow for 3-5/8" of unit overhang

SIDE VIEW



TOP VIEW (WITHOUT DUCT SUPPORT RAIL)



APPENDIX E

Cadna Output

Receivers

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height	Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type		X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(m)	(m)	(m)	(m)
Plane of Window R01			SSOFF_R01_w	43.9	38.1	50.5	45.5				7.50	453609.99	5018801.95	7.50
Plane of Window R02			SSOFF_R02_w	46.5	40.5	50.5	45.5				4.50	453650.15	5018819.69	4.50
Outdoor Point of Reception R02			SSOFF_R02_o	42.2	36.2	50.5	45.5				1.50	453660.82	5018829.83	1.50
Plane of Window R03			SSOFF_R03_w	49.6	43.6	50.5	45.5				4.50	453685.85	5018842.27	4.50
Plane of Window R04			SSOFF_R04_w	49.6	43.6	50.5	45.5				4.50	453702.03	5018851.14	4.50
Plane of Window R05			SSOFF_R05_w	47.7	41.8	50.5	45.5				4.50	453729.92	5018866.21	4.50
Plane of Window R06			SSOFF_R06_w	45.0	39.0	50.5	45.5				4.50	453753.75	5018879.64	4.50
Plane of Window R07			SSOFF_R07_w	41.7	36.0	50.5	45.5				4.50	453795.43	5018902.61	4.50
Plane of Window R08			SSOFF_R08_w	40.8	36.0	50.5	45.5				4.50	453802.50	5018850.94	4.50
Plane of Window R09			SSOFF_R09_w	42.6	37.7	50.5	45.5				4.50	453817.17	5018826.92	4.50
Plane of Window R10			SSOFF_R10_w	41.7	36.9	50.5	45.5				4.50	453832.42	5018799.82	4.50
Plane of Window R11			SSOFF_R11_w	40.7	35.6	50.5	45.5				4.50	453846.35	5018776.61	4.50
Plane of Window R12			SSOFF_R12_w	45.4	40.2	50.5	45.5				4.50	453815.63	5018745.33	4.50
Plane of Window R13			SSOFF_R13_w	46.6	41.0	50.5	45.5				4.50	453770.37	5018718.39	4.50
Plane of Window R14			SSOFF_R14_w	44.0	38.4	50.5	45.5				4.50	453720.75	5018692.16	4.50
Plane of Window R15			SSOFF_R15_w	41.4	35.7	50.5	45.5				4.50	453671.48	5018663.07	4.50
Plane of Window R16			SSOFF_R16_w	39.8	34.0	50.5	45.5				7.50	453640.78	5018647.49	7.50
Plane of Window R17			SSOFF_R17_w	40.4	34.7	50.5	45.5				7.50	453621.34	5018679.78	7.50
Plane of Window R18			SSOFF_R18_w	41.5	35.7	50.5	45.5				7.50	453599.91	5018744.28	7.50
Outdoor Point of Reception R12			SSOFF_R12_o	40.8	35.5	50.5	0.0				1.50	453813.42	5018748.84	1.50
Outdoor Point of Reception R14			SSOFF_R14_o	44.5	38.9	50.5	0.0				1.50	453718.92	5018695.52	1.50
Outdoor Point of Reception R15			SSOFF_R15_o	41.7	36.1	50.5	0.0				1.50	453668.57	5018667.03	1.50
Outdoor Point of Reception R13			SSOFF_R13_o	44.8	39.0	50.5	0.0				1.50	453767.12	5018722.67	1.50

Point Sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li		Correction				Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height	Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night	(dB)	(Hz)		(m)	X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)					(m)	(m)	(m)
RTU1 Condenser (1 fan) (Daycare)			SS_RTU1	87.8	87.8	87.8	Lw	COND_RTU_RN008		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453725.92	5018805.39	9.82
RTU7 Condenser (3 fan) (South)			SS_RTU7	90.8	90.8	90.8	Lw	COND_RTU_RN013		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453738.25	5018810.49	10.20
RTU3 Condenser (2 fan) (North Lv2)			SS_RTU3	83.8	83.8	83.8	Lw	COND_RTU_RN011		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453751.31	5018818.17	9.97
RTU2 Condenser (1 fan) (North Lv1)			SS_RTU2	80.8	80.8	80.8	Lw	COND_RTU_RN006		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453754.07	5018820.72	9.82
RTU8 Condenser (2 fan) (Library)			SS_RTU8	83.8	83.8	83.8	Lw	COND_RTU_RN011		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453762.04	5018826.40	9.97
RTU4 Condenser (1 fan) (Admin)			SS_RTU4	80.8	80.8	80.8	Lw	COND_RTU_RN006		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453761.21	5018822.49	9.98
RTU5 Condenser (1 fan) (East)			SS_RTU5	80.8	80.8	80.8	Lw	COND_RTU_RN006		0.0	0.0	0.0				60.00	0.00	15.00	0.0	(none)	0.10	g	453761.92	5018813.94	9.82
RTU6 Condenser (2 fan) (Gym)			SS_RTU6	83.8	83.8	83.8	Lw	COND_RTU_RN011		0.0	0.0	0.0				60.00	0.00	30.00	0.0	(none)	0.10	g	453778.87	5018803.19	9.97

Sound Level Library

Name	ID	Type	1/3 Octave Spectrum (dB)											Source	
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Roof Top Unit Condenser Fan	COND_RTU_RN006	Lw			89.0	84.0	80.0	79.0	75.0	71.0	68.0	67.0	80.8	91.1	AAON RN 6 & 7 ton
Roof Top Unit Condenser Fan	COND_RTU_RN008	Lw			96.0	91.0	87.0	86.0	82.0	78.0	75.0	74.0	87.8	98.1	AAON RN 8 & 10 ton
Roof Top Unit Condenser Fan	COND_RTU_RN011	Lw			92.0	87.0	83.0	82.0	78.0	74.0	71.0	70.0	83.8	94.1	AAON RN 9 & 11 ton
Roof Top Unit Condenser Fan	COND_RTU_RN013	Lw			99.0	94.0	90.0	89.0	85.0	81.0	78.0	77.0	90.8	101.1	AAON RN 13-20 ton

Roadways

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit	SCS	Surface	Gradient	Mult.	Reflection			
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)	(%)	(dB)	(m)	(m)	
Finday Creek Road (west)	~		RD_FIN_W	60.0		0.0	52.4		460.0	0.0	80.0	12.0	0.0	12.0	50		w8	0.0	1	0.0	0.0		
Finday Creek Road (east)	~		RD_FIN_E	59.1		0.0	51.5		460.0	0.0	80.0	12.0	0.0	12.0	40		8	0.0	1	0.0	0.0		

Receiver

Name: Plane of Window R03

ID: SSOFF_R03_w

X: 453685.85 m

Y: 5018842.27 m

Z: 4.50 m

Point Source, ISO 9613, Name: "RTU7 Condenser (3 fan) (South)", ID: "SS_RTU7"

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)
10	453738.25	5018810.49	10.20	0	D	A	90.8	0.0	0.0	0.0	0.0	46.8	0.4	-3.0	0.0	0.0	0.0	0.0	0.0	46.6

Point Source, ISO 9613, Name: "RTU1 Condenser (1 fan) (Daycare)", ID: "SS_RTU1"

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)
18	453725.92	5018805.39	9.82	0	D	A	87.8	0.0	0.0	0.0	0.0	45.8	0.4	-3.0	0.0	0.0	0.0	0.0	0.0	44.6

Point Source, ISO 9613, Name: "RTU3 Condenser (2 fan) (North Lv2)", ID: "SS_RTU3"

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)
21	453751.31	5018818.17	9.97	0	D	A	83.8	0.0	0.0	0.0	0.0	47.9	0.5	-3.0	0.0	0.0	4.8	0.0	0.0	33.7
24	453751.31	5018818.17	9.97	1	D	A	83.8	0.0	0.0	0.0	0.0	50.5	0.6	-3.0	0.0	0.0	0.0	0.0	5.5	30.2

Point Source, ISO 9613, Name: "RTU8 Condenser (2 fan) (Library)", ID: "SS_RTU8"

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)
48	453762.04	5018826.40	9.97	0	D	A	83.8	0.0	0.0	0.0	0.0	48.8	0.5	-3.0	0.0	0.0	4.8	0.0	0.0	32.6
59	453762.04	5018826.40	9.97	1	D	A	83.8	0.0	0.0	0.0	0.0	49.4	0.5	-3.0	0.0	0.0	0.0	0.0	2.0	34.9

Point Source, ISO 9613, Name: "RTU6 Condenser (2 fan) (Gym)", ID: "SS_RTU6"

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)
62	453778.87	5018803.19	9.97	0	D	A	83.8	0.0	0.0	0.0	0.0	51.1	0.6	-3.0	0.0	0.0	5.4	0.0	0.0	29.7

Point Source, ISO 9613, Name: "RTU2 Condenser (1 fan) (North Lv1)", ID: "SS_RTU2"

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)
65	453754.07	5018820.72	9.82	0	D	A	80.8	0.0	0.0	0.0	0.0	48.1	0.5	-3.0	0.0	0.0	0.0	0.0	0.0	35.2
68	453754.07	5018820.72	9.82	1	D	A	80.8	0.0	0.0	0.0	0.0	50.2	0.6	-3.0	0.0	0.0	4.8	0.0	2.1	26.2

Point Source, ISO 9613, Name: "RTU4 Condenser (1 fan) (Admin)", ID: "SS_RTU4"

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)
71	453761.21	5018822.49	9.98	0	D	A	80.8	0.0	0.0	0.0	0.0	48.9	0.5	-3.0	0.0	0.0	0.0	0.0	0.0	34.4
87	453761.21	5018822.49	9.98	1	D	A	80.8	0.0	0.0	0.0	0.0	49.8	0.5	-3.0	0.0	0.0	4.9	0.0	2.0	26.6

Point Source, ISO 9613, Name: "RTU5 Condenser (1 fan) (East)", ID: "SS_RTU5"

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	453761.92	5018813.94	9.82	0	D	A	80.8	0.0	0.0	0.0	0.0	49.2	0.5	-3.0	0.0	0.0	6.7	0.0	0.0	27.4
115	453761.92	5018813.94	9.82	1	D	A	80.8	0.0	0.0	0.0	0.0	50.5	0.6	-3.0	0.0	0.0	6.8	0.0	2.1	23.7



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