

SHOP DRAWING TRANSMITTAL



Project: Turnbull School Music Room Addition Project No: 1705
Date: November 9, 2018
To: TALCO Building Innovations Ltd.
Attn: Farah Bano (fbano@tal-co.com)
From: Michelle Cataldo

- | | |
|--|--|
| <input type="checkbox"/> Approval | <input type="checkbox"/> Courier |
| <input checked="" type="checkbox"/> Distribution | <input type="checkbox"/> By Hand |
| <input type="checkbox"/> Information and Use | <input type="checkbox"/> Fax |
| <input type="checkbox"/> Review and Comment | <input type="checkbox"/> To Be Picked Up |
| <input type="checkbox"/> Other | <input checked="" type="checkbox"/> e-mail |

Partners

Barry J. Hobin
OAA, FRAIC, Hon. Fellow AIA

William A. Davis
OAA, MRAIC, Associate AIA

Gordon Lorimer
OAA, FRAIC, Associate AIA

Wendy Brawley
OAA, MRAIC, Associate AIA

Douglas Brooks
Senior Arch. Tech.

Directors

Marc Thivierge
OAA, MRAIC

Reinhard Vogel
Senior Arch. Tech.

Associates

Bryan Bonell
OAA, MRAIC, Associate AIA

William Ritcey
MRAIC

Dan Henhoeffler
Senior Arch. Tech.

Shop Drawing Submittal: Division 23 – RTU, Curb, & Vibration Rail
Submitted by: Ventilation S.M. Inc.
Drawing Title: RTU Spec Sheet, Curb Spec Sheets, Vibration Rail Spec Sheet
Revision No. N/A
Dated: Oct. 30, 2018

Comments:

Reviewed.

Note: Refer to CCO-007 for ESI-02 regarding breaker size.

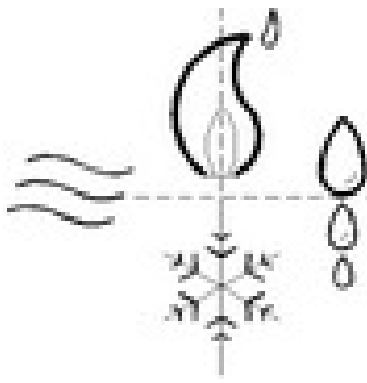
Hobin Architecture Incorporated

63 Pamilla Street
Ottawa, Ontario
Canada K1S 3K7

t 613-238-7200

f 613-235-2005

hobinarc.com



BEKOLAY & Associates. Ltd.

Consulting Engineers

November 6, 2018

Architect: **Hobin Architecture Incorporated**
63 Pamila Street, Ottawa

Project: **Turnbull Music Rm Addition**

Att: **R. Vogel**

BAL No.: **2018-10**

email: reinhard@hobinarc.com

Mech Shop Drawing Review Comments

1 General:

The documents in the list have been examined for general conformance with the Contract Documents prepared by Bekolay & Associates Ltd. (BAL) for this project. This review may not be extended to any other contract, trade, division or project. Review by BAL does not imply approval or verification of information presented in these drawings and the responsibility for installation and performance, submitting the documents (including dimensional conformance) and co-ordination with other trades, lies solely with the Contractor. All changes, comments and notes by BAL shall be incorporated (at no cost to the Owner) into actual installation when indicated "Reviewed As Follows" or be included in a re-submission (when requested).

2 Shop Drawings: submitted in the attached files

Item	Description	Submitted File	Comments
2.1	Rooftop Unit w/ Vibration Isolation rail	4010953-Turnbull School Music Room Addition.pdf	Reviewed

3 Additional Notes:

3.1

cc: Turnbull RTU.sdr.wpd



Project: 4010953 - Turnbull School
Music Room Addition

Client: VENTILATION S.M. INC

DRAWING FOR APPROVAL

Date: 10/30/2018

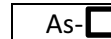
Revision Number: 00

Quote # 4089083-5

Prepared By: Sean Laframboise
Inside Sales Representative
Telephone: (613) 829-2816
Email: slaframboise@master.ca



For
Approval



As-
Built



Revision



PERFORMANCE & DRAWINGS



RTU-1

SHOP DRAWING REVIEW

REVIEWED

REVIEWED AS NOTED

REVISE AND RESUBMIT



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By: Michelle Cataldo Date: Nov. 9, 2018

HOBIN ARCHITECTURE INCORPORATED



SUBMITTAL DATA

For: Approval

Order #: _____ **Date:** 10/23/2018
Project: Turnbull School Music Room Addition
Project #: _____
Location: _____

SHOP DRAWING REVIEW

REVIEWED
REVIEWED AS NOTED
REVISE AND RESUBMIT



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By: Michelle Cataldo Date: Nov. 9, 2018
HOBIN ARCHITECTURE INCORPORATED

Date

10/23/2018

Project Name

Turnbull School Music Room Addition

Project Number

Client / Purchaser



Submittal Summary Page

Qty	Tag #	Model #	Description
1		ZE048H12B2C5AAA2A1	<p>4 Ton, Single Stage Cooling, York Small Sunline Single Packaged R-410A Air Conditioner, 12.0 EER / 14.0 SEER, 125 MBH Input, Single Stage Gas Aluminum Steel, 208/230-3-60</p> <ul style="list-style-type: none"> • Dry Bulb Economizer and Hood (No Barometric Relief Damper) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511) • 1.5 HP Standard Static Belt Drive Blower • 2" Pleated Filters (MERV 8) • Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors. • Non Powered Convenience Outlet (110 VAC) • HACR Circuit Breaker/Disconnect • Microchannel All Aluminum Condenser Coil, Copper tube/Aluminum fin Evaporator Coil • Galvanized Steel Drain Pan • Standard Access Doors

CO2 SENSOR:
CDD4A200
BRACKET

Equipment start-up and commissioning by a factory trained technician is recommended.
Contact your supplying distributor or sales representative for additional information & guidance.

 WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Project Name: **Turnbull School Music Room Addition**

 Unit Model #: **ZE048H12B2C5AAA2A1**

 Quantity: **1**

 System: **ZE048H12B2C5AAA2A1**

Cooling Performance

Total gross capacity	50.8 MBH
Sensible gross capacity	36.7 MBH
Seasonal Efficiency (at ARI)	14.00 SEER
Efficiency (at ARI)	12.00 EER
Ambient DB temp.	95.0 °F
Entering DB temp.	80.0 °F
Entering WB temp.	67.0 °F
Leaving DB temp.	58.8 °F
Leaving WB temp.	56.9 °F
Power input (w/o blower)	3.49 kW
Sound power	80 dB(A)

Refrigerant

Refrigerant type	R-410A
Sys1	5 lbs 6 oz

Gas Heating Performance

Entering DB temp.	60 °F
Heating output capacity (Max)	100 MBH
Supply air	1600 CFM
Heating input capacity (Max)	125 MBH
Leaving DB temp.	117.9 °F
Air temp. rise	57.9 °F
SSE	80.0 %
Stages	1

Supply Air Blower Performance

Supply air	1600 CFM
Ext. static pressure	0.6 IWG
Addl. Unit Losses (Options/Accessories)	0.11 IWG
Blower speed	1030 RPM
Max BHP of Motor (including service factor)	1.73 HP
Duct location	Bottom
Motor rating	1.50 HP
Actual required BHP	0.80 HP
Power input	0.75 kW
Elevation	0 ft.
Drive type	BELT

Electrical Data

Power supply	208-3-60
Unit min circuit ampacity	23.7 Amps
Unit max over-current protection	30 Amps

Dimensions & Weight

Hgt	33 in.	Len	83 in.	Wth	45 in.
Weight with factory installed options					728 lbs.

Clearances

Right	24 in.	Front	32 in.	Back	36 in.
Top	72 in.	Bottom	0 in.	Left	36 in.

Note: Please refer to the tech guide for listed maximum static pressures



4 Ton

- York Units are Manufactured at an ISO 9001 Registered Facility and Each Rooftop is Completely Computer-Run Tested Prior to Shipment.

Unit Features

- Single Stage Gas Aluminum Steel
- Single Stage Cooling
- 125 MBH Input
- Full Perimeter Base Rails with Built in Rigging Capabilities
- Unit Cabinet Constructed of Powder Painted Steel, Certified At 750 Hours Salt Spray Test (ASTM B-117 Standards)
- Either Supply and/or Return can be Field Converted from Vertical to Horizontal Configuration without Cutting Panels.
- Scroll Compressor
- Dry Bulb Economizer and Hood (No Barometric Relief Damper) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511)
- 1.5 HP Standard Static Belt Drive Blower
- 2" Pleated Filters (MERV 8)
- Solid Core Liquid Line Filter Driers
- Replacement Filters: 2 - (15" x 20" x 1" or 2") and 1 - (14" x 25" x 1" or 2"). Unit accepts 1" or 2" wide filters.
- Non Powered Convenience Outlet (110 VAC)
- Through-the-Curb and Through-The-Base Utility Connections
- HACR Circuit Breaker/Disconnect
- Single Point Power Connection
- Short Circuit Current: 5kA RMS Symmetrical
- Microchannel All Aluminum Condenser Coil, Copper tube/Aluminum fin Evaporator Coil
- Galvanized Steel Drain Pan
- Standard Access Doors

Standard Unit Controller: Smart Equipment Control Board

- An Integrated Low-Ambient Control, Anti-Short Cycle Protection, Lead-Lag, Fan On and Fan off Delays, Low Voltage Protection, On-Board Diagnostic and Fault Code Display. Allows all units to operate in the cooling mode down to 0 °F outdoor ambient without additional components or intervention.
- Safety Monitoring - Monitors the High and Low-Pressure Switches, the Freezestats, the Gas Valve, if Applicable, and the Temperature Limit Switch on Gas and Electric Heat Units. The Unit Control Board will Alarm on Ignition Failures, Safety Lockouts and Repeated Limit Switch Trips.

BAS Controller

- Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.

Warranty

- One (1) Year Limited Warranty on the Complete Unit
- Five (5) Year Warranty - Compressors and Electric Heater Elements
- Ten (10) Year Warranty - Aluminized Heat Exchanger



Small Sunline (3-6 Ton Package) N543

Single Package R-410A Air Conditioner

Project Name: Turnbull School Music Room Addition

Unit Model #: ZE048H12B2C5AAA2A1

Quantity: 1

System: ZE048H12B2C5AAA2A1

Factory Installed Options

ZE048H12B2C5AAA2A1

Equipment Options	Option(s) Selected	
Product Category:	ZE	York Small Sunline Single Packaged R-410A Air Conditioner 12.0 EER / 14.0 SEER
Nominal Cooling Capacity:	048	4 Ton Single Stage Cooling
Heat Type and Nominal Heat Capacity:	H12	Single Stage Gas Aluminum Steel 125 MBH Input
Blower Option:	B	1.5 HP Standard Static Belt Drive Blower
Voltage:	2	208/230-3-60
Outside Air Option:	C	Dry Bulb Economizer and Hood (No Barometric Relief Damper) with Economizer Fault Detection & Diagnostic (Meets ASHRAE 90.1-2013, IECC 2015, California Title 24, AMCA 511)
Service Options:	5	Non Powered Convenience Outlet (110 VAC) HACR Circuit Breaker/Disconnect
Sensor Options:	A	
Controls:	A	Smart Equipment Controller including Discharge Air, Return Air, and Outdoor Air Temperature Sensors.
Refrigeration:	A	Microchannel All Aluminum Condenser Coil, Copper tube/Aluminum fin Evaporator Coil
Additional Options:	2	2" Pleated Filters (MERV 8)
Cabinet Options:	A	Galvanized Steel Drain Pan Standard Access Doors
Product Generation:	1	

Field Installed Accessories

CO2 SENSOR;
CDD4A200
BRACKET

Project Name: **Turnbull School Music Room Addition**

Unit Model #: **ZE048H12B2C5AAA2A1**

Quantity: **1**

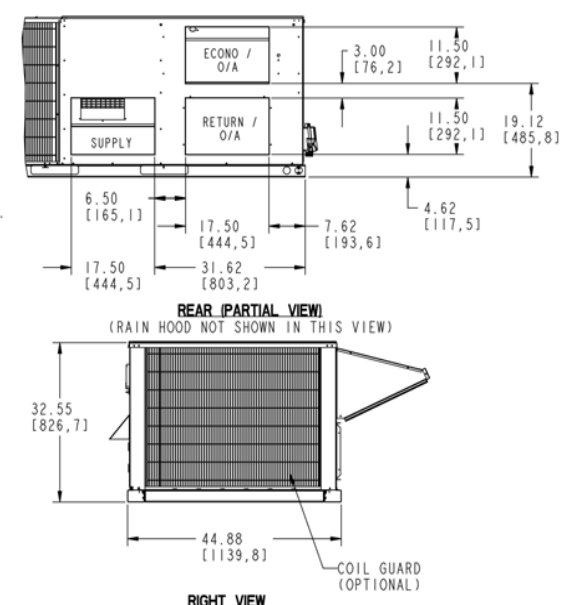
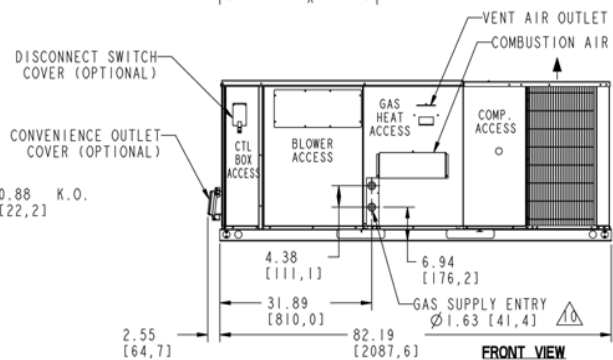
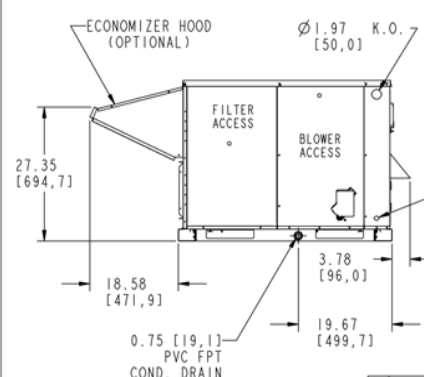
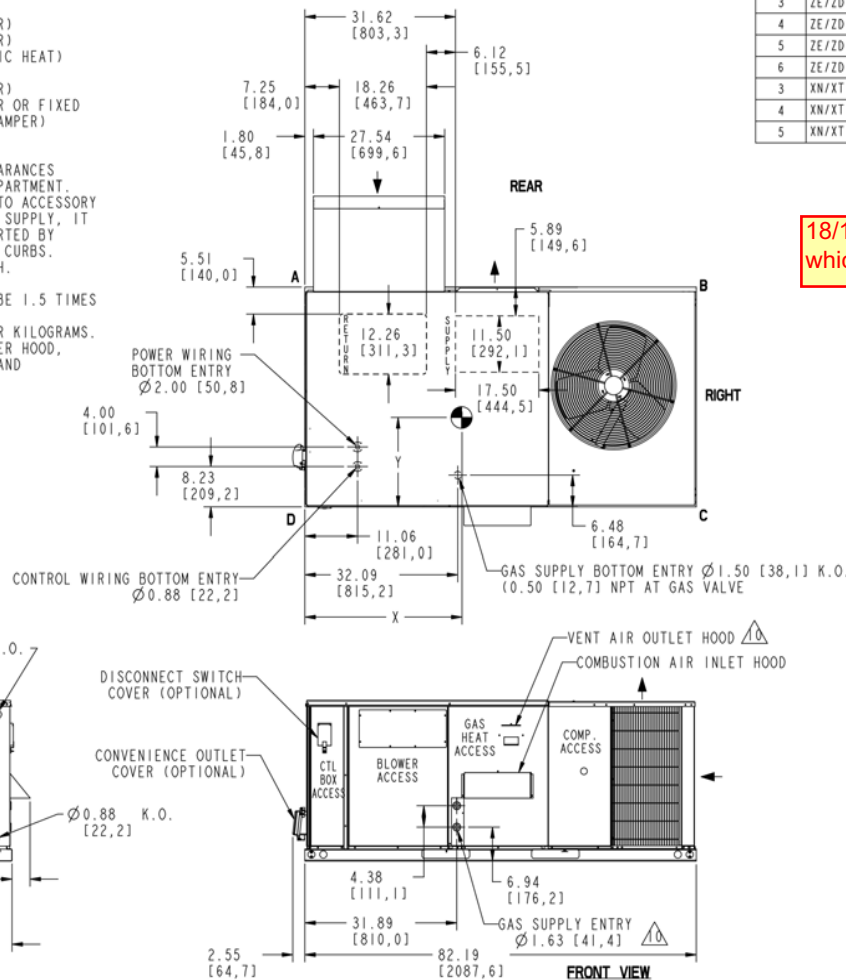
System: **ZE048H12B2C5AAA2A1**

Consolidated Drawing

- NOTES:**
- FOR OUTDOOR USE ONLY.
 - WEIGHTS SHOWN ARE FOR COOLING ONLY UNITS.
 - MIN. CLEARANCES TO BE:
 - RIGHT SIDE: 24 [609,6]
 - LEFT SIDE: 24 [609,6] (LESS ECONOMIZER)
 - 36 [914,4] (WITH ECONOMIZER)
 - FRONT: 24 [609,6] (COOLING/ELECTRIC HEAT)
 - 32 [812,8] (GAS HEAT)
 - REAR: 12 [304,8] (LESS ECONOMIZER)
 - 36 [914,4] (WITH ECONOMIZER OR FIXED AIR/MOTORIZED DAMPER)
 - TOP: 72 [1828,8]
 - BOTTOM: 0 [0]
 - FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES CONTACT YOUR APPLICATION ENGINEERING DEPARTMENT.
 - DOWNFLOW DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT IS RECOMMENDED THAT THE DUCTS ARE SUPPORTED BY CROSS BRACES, AS DONE ON ACCESSORY ROOF CURBS.
 - SIDE DUCT FLANGES ARE 0.875" [22,2] HIGH. BOTTOM DUCTS DO NOT HAVE FLANGES.
 - MINIMUM CONDENSATION TRAP HEIGHT SHALL BE 1.5 TIMES THE LOWEST NEGATIVE STATIC.
 - DIMENSIONS IN [] ARE IN MILLIMETERS OR KILOGRAMS.
 - OPTIONAL COIL GUARD, GAS HEAT, ECONOMIZER HOOD, DISCONNECT SWITCH, CONVENIENCE OUTLET, AND OUTLET/INLET HOOD SHOWN.

EXCEPT XN/XT (HEAT PUMP) UNITS.

- ➔ DIRECTION OF AIRFLOW
- CENTER OF GRAVITY



TONNAGE	UNIT	OPERATING WEIGHT (LBS) (BASE UNIT)	CENTER OF GRAVITY LOCATION (BASE UNIT)		4 POINT CORNER LOADS (LBS) (BASE UNIT)			
			X	Y	A	B	C	D
3	ZE/ZD	470 [213]	34.5 [876,3]	18.25 [463,6]	111 [50]	80 [36]	117 [53]	162 [73]
4	ZE/ZD	598 [271]	36 [914,4]	18.50 [469,9]	139 [63]	108 [49]	154 [70]	198 [90]
5	ZE/ZD	632 [287]	37.5 [952,5]	18.2 [462,3]	139 [63]	117 [53]	171 [78]	204 [93]
6	ZE/ZD	665 [302]	35.5 [901,7]	17.75 [450,8]	150 [68]	114 [52]	173 [78]	228 [103]
3	XN/XT	610 [277]	38.3 [972,8]	18.75 [476,3]	136 [62]	119 [54]	165 [75]	190 [86]
4	XN/XT	616 [279]	38.2 [970,3]	18.4 [467,4]	135 [61]	117 [53]	169 [77]	195 [88]
5	XN/XT	620 [281]	38.6 [980,4]	18 [457,2]	132 [60]	117 [53]	174 [79]	197 [89]

18/11/09 HOBIN: Refer to CCO-007 for ESI-02 which states 30A 208V three pole circuit breaker

REV	DATE	REVISION RECORD	EC	DR	CK	ENG
A	12-21-10	NEW DRAWING	---	LO	RDH	---
B	09-08-11	CHANGED OPERATING & CORNER WEIGHTS FOR 3, 4 & 5T (GEN 2)	19126	LO	RCF	KMC
C	11-25-14	ADDED ZE/ZD & XN/XT MODELS	30683	LO	RDH	KMC
D	07-30-18	ADDED ZE/ZD 6 TON MODEL & REMOVED OBSOLETE DATA	60489	SMD	LOP	CB

NAME	DATE
DRN L. OSM	12-21-10
CHK T. PERKINS	12-21-10
ENG	---
MFG	---

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DRAWING PER ASME Y14.5-2005 TOLERANCES UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL = ±.1 TWO PLACE DECIMAL = ±.03 THREE PLACE DECIMAL = ±.010 ANGLES = ±° DIMENSIONS ARE IN INCHES DO NOT SCALE PRINT		MATERIAL: NOT APPLICABLE ENG SPEC: NOT APPLICABLE SIZE: NOT APPLICABLE DWG NO.: UST-SSL-10DF32H PART NO.: SHT NO. 1 OF 1
SUBMITTAL DWG, SM SUNLINE, 3-6 TONS		JOHNSON CONTROLS UNITARY PRODUCTS GROUP NORMAN, OK 73069



LES ATELIERS FABTECH INC.

Tél : 450-967-9880, Fax : 514-858-0624

No. Production : _____

Client : _____

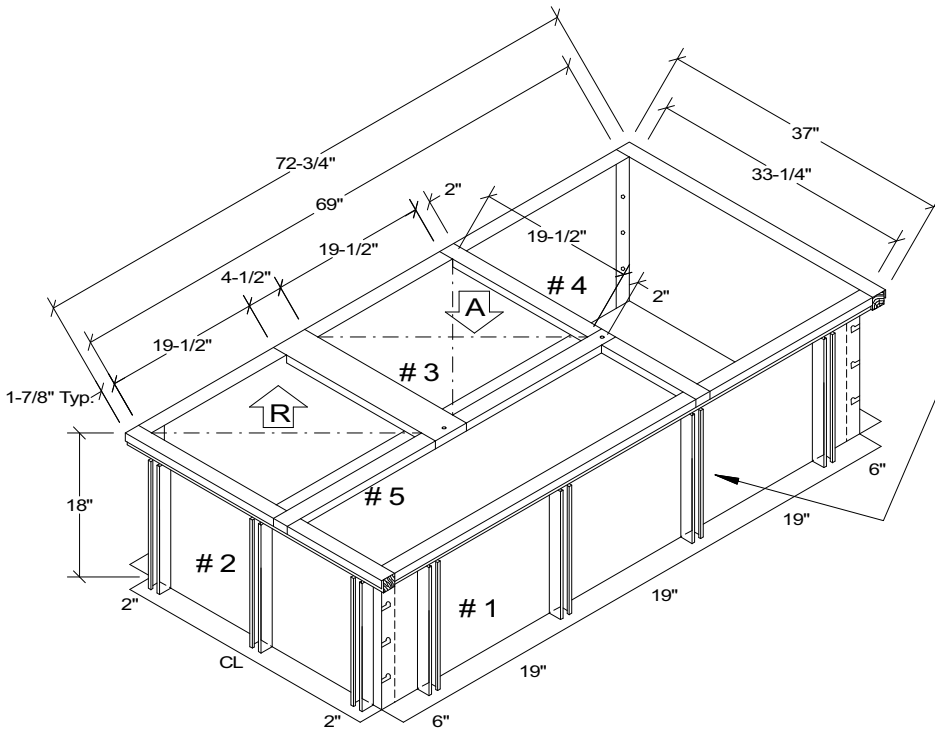
Date requis : _____

Projet : _____

Date reçu : _____

Feuille ___ de ___

QUALITÉ
&
SERVICE



Unistrut P-100, 1-5/8" x 1-5/8"
Tack-welded 1" aux 2" c/c
et stagger

SHOP DRAWING REVIEW

REVIEWED

REVIEWED AS NOTED

REVISE AND RESUBMIT



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By: Michelle Cataldo Date: Nov. 9, 2018

HOBIN ARCHITECTURE INCORPORATED

Inclus dans le sac
8- Vis teck # 10 X 3/4"
1- Boulon 1/4" X 1/2"
25'-0"- Gasket 1 1/2" X 1/2"

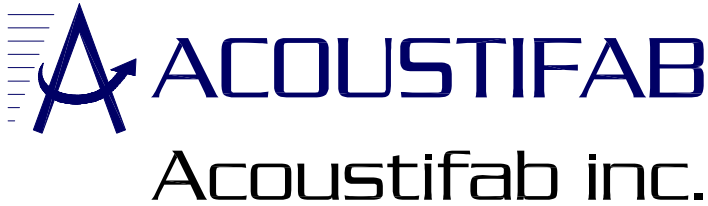
IRCO-427-18 Para-seismic

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QTÉ :

MAT :

ISOL :



677, de la Sablière
Bois-des-Filion, Qc, J6Z 4T2
Téléphone (450) 621-8392
Télécopieur (450) 621-0473

PROJECT : TURNBULL ELEMENTARY SCHOOL
CLIENT : MASTER
ORDER : SEAN LAFRAMBOISE
DATE : NOV 05 2018
FILE : 18-3903

LIST OF EQUIPMENT

Vibration isolation Rail System:

The supply of 1 vibration isolation rail for roof curb. Rail is of the mark ACOUSTIFAB, model AF-1. The Rail system consist of two steel profiles galvanized of calibre 16, upper and lower sections separated by springs anti-vibration arranged in the perimeter of the roof curb. A flexible air and weather seal between profiles will be assured by $\frac{3}{4}$ "Ø in EPDM. The static deflection is 1'' nominal.

Isolation springs shall be designed as laterally stable and properly selected to provide minimum specified deflection with 50% additional travel to solid.

High-quality, that is of design to resist the seismic loads and the wind loads in any lateral direction.

All dimensions must be validated before production.

SHOP DRAWING REVIEW

REVIEWED
REVIEWED AS NOTED
REVISE AND RESUBMIT



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By: Michelle Cataldo Date: Nov. 9, 2018

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ACOUSTIFAB INC.

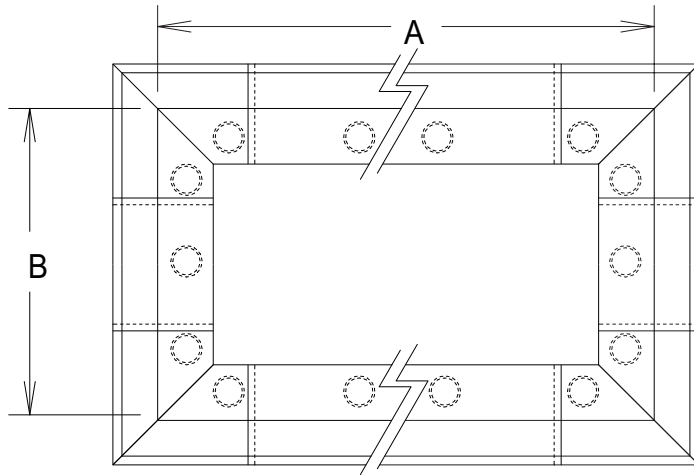
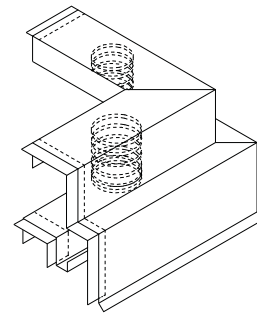
677, de la Sablière
Bois-Des-Filiions (Québec) J6Z 4T2
tél: 450-621-8392 fax: 450-621-0473

CLIENT : MASTER

DATE:05 NOV18 DESSIN: Modèle AF-1

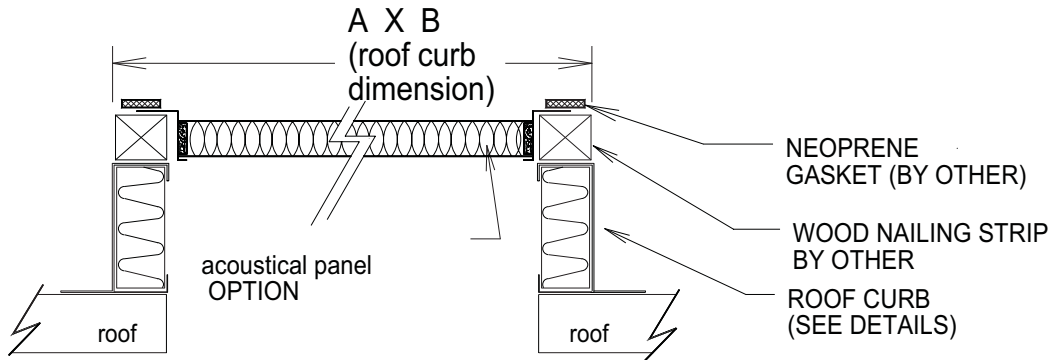
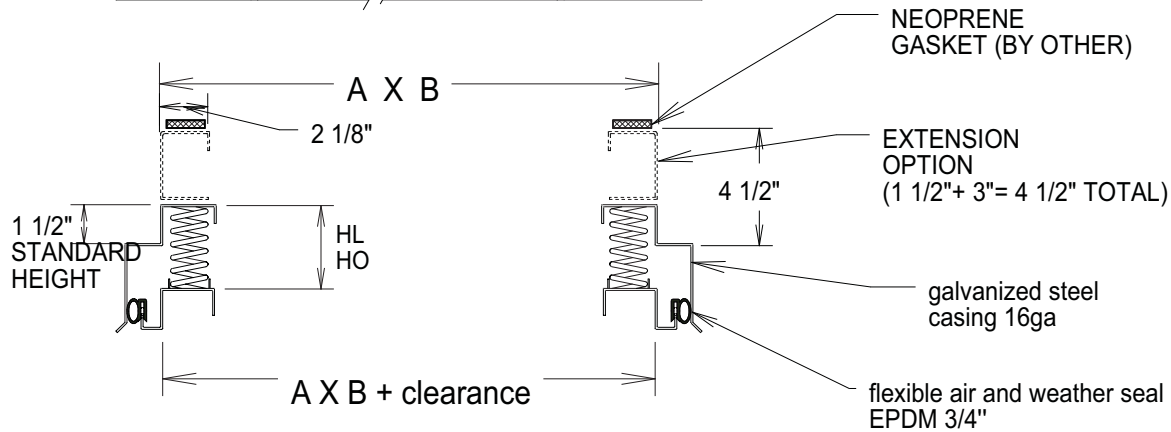
PROJECT: TURNBULL
ELEMENTARY SCHOOL

VIBRATION ISOLATION RAIL SYSTEM



OPTIONS:

- EXTENSION OF THE HEIGHT
1 1/2" TO 4 1/2".
- MANUFACTURING ACCORDING
SEISMIC SURVEY.
- ACOUSTICAL PANEL.



QTY	A X B	HL FREE HEIGHT	HO OPERATION HEIGHT	SYSTEM
1	73" X 37 1/4"	3"	2"	IRCO 427 (ZE048)