



DOWNES
CONSTRUCTION COMPANY

CHANGE ORDER PROPOSAL NO.: 9

TO: Mark Allen
Jacunski Humes Architects, LLC
15 Massirio Drive
Suite 101
Berlin, CT 06037
Ph: 860-828-9221 Fax: 860-828-9223

DATE: 01/03/2024

PROJECT: Bethel PD Training Range

JOB NUMBER: 25-01-0502

DESCRIPTION:

COP #009 - RFI #009 - Enable Installation of MAU Duct Supports

This COP includes all labor, and material to hand dig a trench, install filter fabric, and place crushed stone at (4) locations, As explained by Action Target's HVAC subcontractor, the 34x32 MAU duct work supports get mounted to H-block rubber sleepers, and it's not recommended to bear directly on topsoil. Instead of concrete, crushed stone is a suitable alternate. Layout of trench locations will need to be provided by others.

Exclusions:

Material testing
Premium time

REASON: None

Description	Vendor	Comments	Amount
Carpentry	Downes Construction Co., LLC		\$ 1,810.13
General Liability Insurance	Downes Construction Co., LLC	Insurance (0.70%)	\$ 12.67
Construction Management Fee	Downes Construction Co., LLC	CM Fee (3.00%)	\$ 54.68
TOTAL COST OF THIS CHANGE ORDER PROPOSAL IS:			1,877.48

STATUS:

This Change Order Proposal was reviewed by Downes Construction and found to be acceptable.
If you have any questions or concerns regarding this COP please advise us in writing within five (5) business days.

Submitted by:
Downes Construction Company, LLC

Architect:
Jacunski Humes Architects, LLC

Owner:
Town of Bethel

Kevin Guite

Brian Humes

Daniel E. Carter

1/5/24

Date

Date

Date

CC:

**Bethel Police Department
Fire Arms Training Range
Change Order Proposal Workbook**

To: Evan Pfenninger

Date: 1/3/2024

From: Kevin Guite

Downes COP Number: 9

Description: This PCO is for hand digging, placing filter fabric and crushed stone at (4) locations for the MAU ductwork supports, as discussed and documented in RFI #009.

Quantity	Unit	Proposed Material and/or Equipment	Unit Cost	Item Cost
1	Roll	Filter Fabric	\$ 100.00	\$ 100.00
3	Ton	3/8" Crushed Stone	\$ 50.00	\$ 150.00
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
Line 1		Material and Equipment Total		\$ 250.00

Crew Size	Labor Classification	Hours	Base Rate	FICA & Med Care	FUTA & SUTA	G/L, WC, Insurance	Benefits	Total Rate	Labor Cost
	General Foreman	8.0	\$ 52.88	\$ 19.30	Included	Included	\$ 29.70	\$ 101.88	\$ 815.05
	Laborer	8.0	\$ 33.50	\$ 2.56	\$ 1.34	\$ 6.57	\$ 28.59	\$ 72.57	\$ 580.52
Line 2								Labor Total	\$ 1,395.57

Lower-Tier Subcontractor Cost (Attach Proposals)			
Trade	Name of Subcontractor	Total	
Line 3	Subcontractor Total		\$ -

Line 4	Total Labor, Materials, and Equipment		\$ 1,645.57
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Contractor Overhead and Profit	Allowed OH&P %	Amount	Total
Net Value of Self Performed Work (Amount = Lines 1+2)	10%	\$ 1,645.57	\$ 164.56
Net Value of Subcontract Work (Amount = Line 3)	5%	\$ -	\$ -
Line 5	Contractor Overhead and Profit Total		\$ 164.56

Line 6	Total Proposed Change Order Amount (Lines 3+4+5)		\$ 1,810.13
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To: Mark Allen
Jacunski Humes Architects, LLC
15 Massirio Drive
Suite 101
Berlin, CT 06037
Ph: 860-828-9221 Fax: 860-828-9223

RFI #: 009
Date: 12/21/2023
Job: 25-01-0502 Bethel PD Training Range
Phone:

CC:

Subject: Exterior Ductwork Support

Drawing:
Cost Impact: TBD

Spec Section:
Schedule Impact: TBD

Request:

Date Required: 12/28/2023

See attached drawing showing exterior ductwork supports. Since the existing MAU slab is not being expended to their desired dimensions, the recommendation was made to place 4" of #4 stone at the indicated locations, to provide bearing capacity for the H-Blocks. Based upon the provided weights please review and advise if there are any concerns with the amount of stone be proposed. Are there any drainage concerns? Should filter fabric be installed under the gravel base?

Please review and advise.

Requested by: Kevin Guite
Downes Construction Co., LLC

Response:

The scope of the signed Architectural/Engineering Services agreement between Jacunski Humes Architects, LLC and the Town of Bethel, dated March 3, 2022 does not include Site nor Structural services to accomplish this request. The agreement specifically excludes Consulting Services not included in the Proposal.

The Action Target drawings specifically state the support of the unit's ductwork is the responsibility of the Owner.

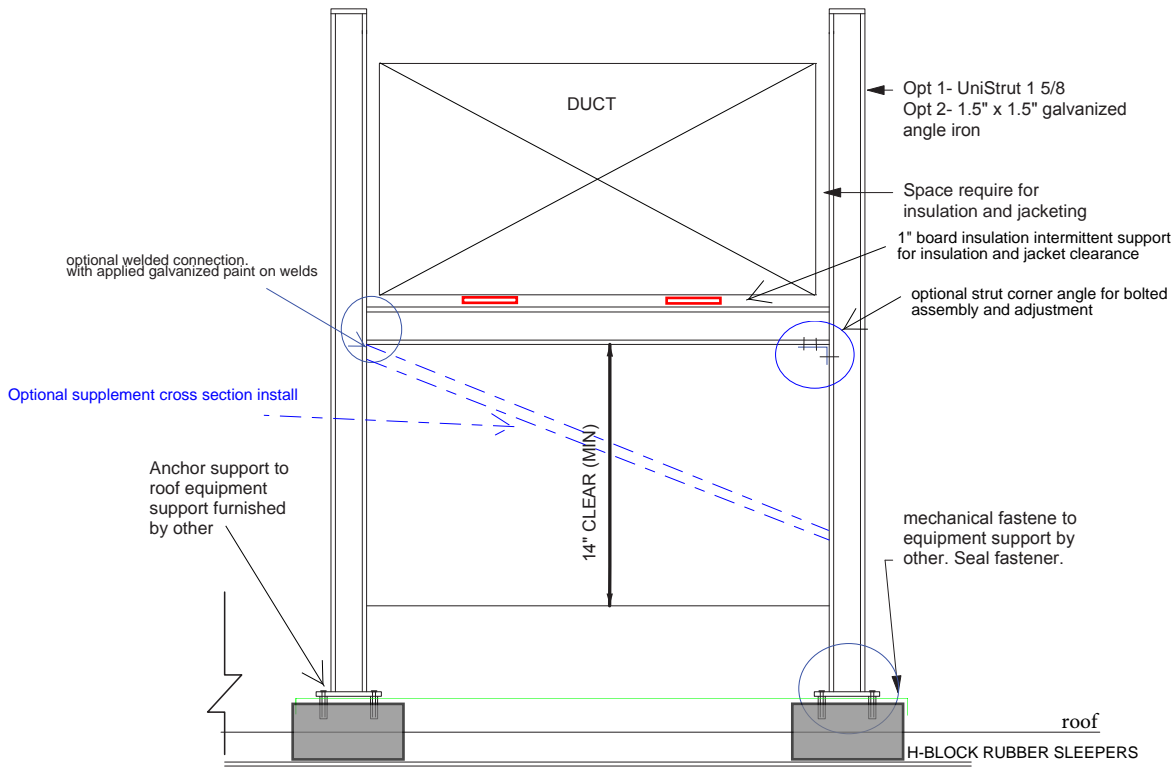
MA

Answered by

12-21-23

Company

Date



NOTES:

1. MATERIAL TO BE HOT DIPPED GALVANIZED.
2. REPAIR ALL DAMAGED GALVANIZING WITH COLD GALVANIZING PAINT

ROOF DUCT SUPPORT DETAIL

Notes

REV. NO. <u> </u>	REV. DESC. _____	REV. DATE _____
REV. NO. <u> </u>	REV. DESC. _____	REV. DATE _____

East Coast Sheet Metal LLC

141 woodruff St. Litchfield CT. 06759
P: 860-283-1126 F: 860-283-0262

JOB _____

SHEET NO. 1 OF _____

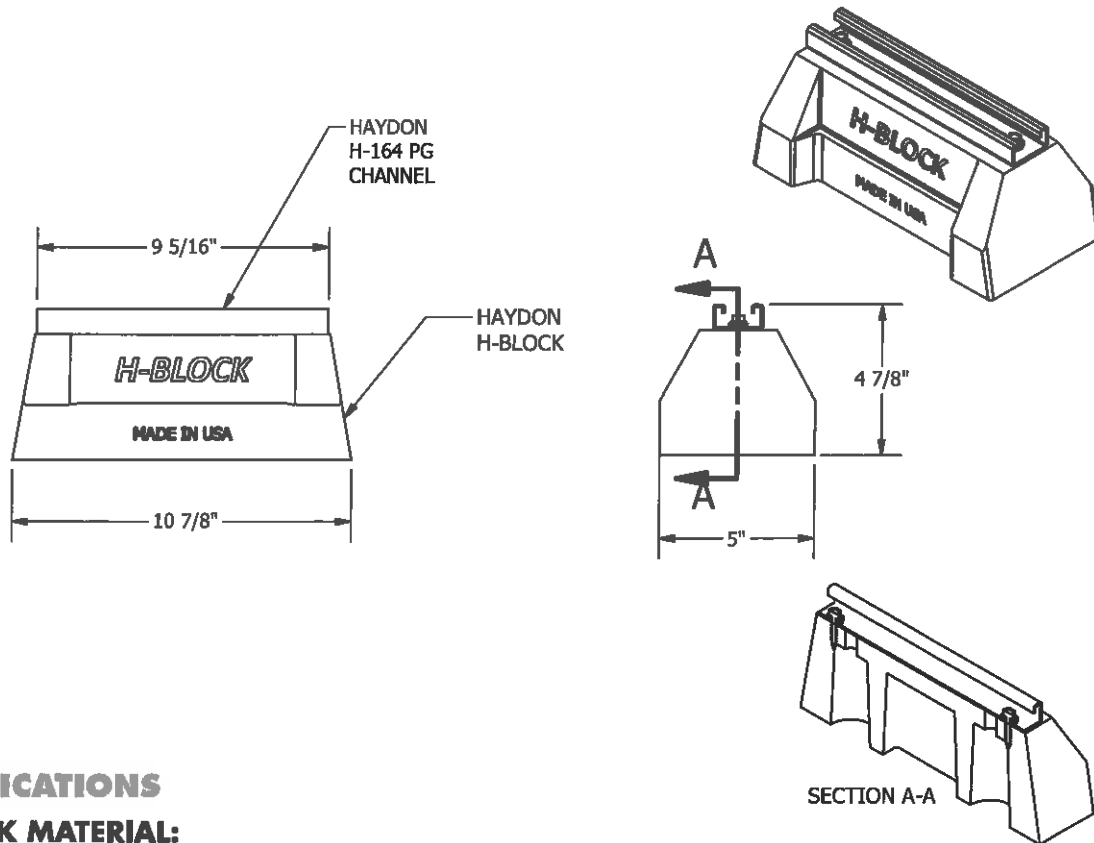
CALCULATED BY _____ TP _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____ NTS

H-BLOCK HBS-Support With 13/16" H-164 Pre-Galv. Steel Channel

HBS-10-H-164-PG



SPECIFICATIONS

H-BLOCK MATERIAL:

100% RECYCLED RUBBER TIRES- UV RESISTANT

CHANNEL:

All components are produced from steel covered by the following specification:

PRE-GALVANIZED STEEL ASTM A-653

LOAD CAPACITY:

UNIFORM LOAD2500 LBS*

* THIS LOAD IS ONLY FOR THE CAPACITY OF THE COMPONENTS IN THIS ASSEMBLY.
PLEASE CONSULT ROOFING MANUFACTURER OR ENGINEER FOR ROOF LOAD CAPACITY.

WEIGHT: 5.8 LBS

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

KEYED NOTES (SHEET ZM101)

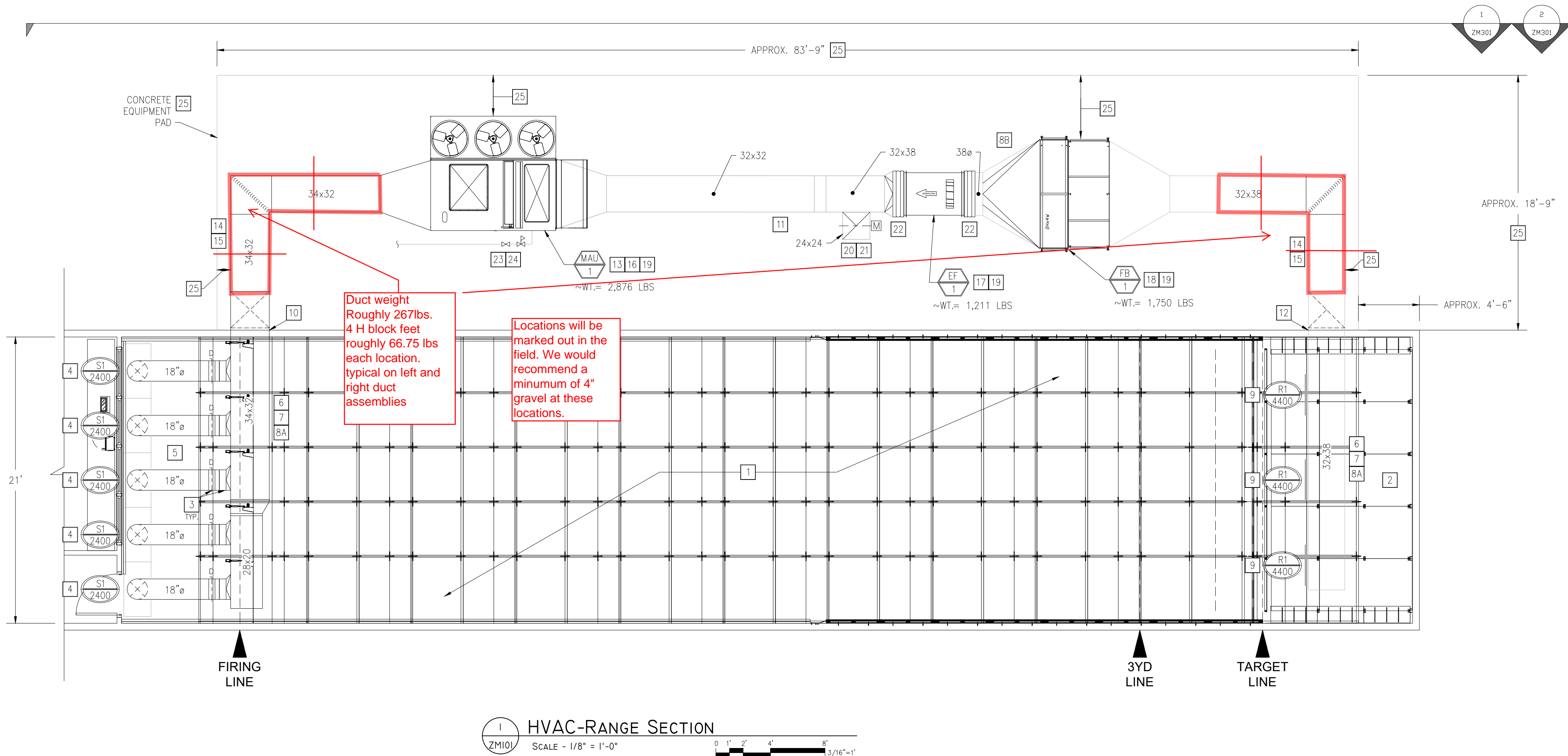
- 1 BALLISTIC CEILING (TYP.). SEE ATI RANGE DRAWINGS (Z SERIES) FOR DETAILS.
- 2 BULLET TRAP (TYP.). SEE ATI RANGE DRAWINGS (Z SERIES) FOR DETAILS.
- 3 HIGH EFFICIENCY TAKEOFF (HET) SUPPLIED BY ATI CONTRACTOR. (TYP). MANUAL VOLUME DAMPER SUPPLIED BY ACTION TARGET. (TYP)
- 4 RADIAL SUPPLY AIR (SA) DIFFUSER SUPPLIED BY ATI AND INSTALLED BY ATI CONTRACTOR. INSTALL RADIAL DIFFUSER UNIFORMLY, PLUMB AND LEVEL, AND SYMMETRICAL ACROSS WIDTH OF RANGE. RADIAL DIFFUSER FACE SHALL BE A MINIMUM OF 7'-0" A.F.F. SEE DETAILS AT 07.01 AND AT 08.04 WITHIN ZM60X SERIES SHEETS. DIFFUSER SHALL BE FIELD BALANCED TO SUPPLY CFM STATED ON PLANS.
- 5 T-BAR LAY-IN CEILING SHALL BE PROVIDED BY OWNER OR GENERAL CONTRACTOR. T-BAR CEILING SHALL BE INSTALLED BETWEEN TOP OF RADIAL DIFFUSER AND THE STEEL SAFETY CEILING. SEE DETAIL AT 08.04 WITHIN ZM60X SERIES SHEETS.
- 6 ALL SUPPLY/RETURN/EXHAUST AIR DUCTWORK INSTALLED ABOVE CEILINGS, OR HUNG HIGH WITHIN SPACE SHALL BE SUPPORTED FROM OVERHEAD STRUCTURE (TYP). OWNER SHALL BE RESPONSIBLE FOR STRUCTURAL INTEGRITY REQUIRED TO SUPPORT ALL DUCTWORK IN ACCORDANCE WITH CODE AND INDUSTRY STANDARDS.
- 7 DUCTWORK HANGERS/SUPPORTS BY ATI CONTRACTOR ALL SUPPORTS SHALL BE ABLE TO CARRY THE WEIGHT OF THE SECTION OF DUCT PLUS 15% SAFETY FACTOR. ATI CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTS FINAL DESIGN AND LOCATION IN COORDINATION WITH FINAL DUCTWORK LAYOUT. ALL SUPPORTS SHALL BE FABRICATED OF RUST RESISTANT MATERIALS.
- 8A ALL DUCTWORK (SA, RA, & EA) SHALL BE CROSS BRACED AND REINFORCED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE' LATEST EDITION FOR THE FOLLOWING STATED STATIC PRESSURE RATINGS:
 • SUPPLY AIR (SA) DUCTWORK = 2.5"W.C.
 • RETURN AIR (RA) DUCTWORK = 2.5"W.C.
 • EXHAUST AIR (EA) DUCTWORK = 2.5"W.C. (SEE EXCEPTION BELOW)
- 8B ***EXHAUST AIR EXCEPTION*** THE SEGMENT OF EXHAUST DUCT, INCLUDING THE TRANSITION, BETWEEN THE FILTER BANK (FB) AND THE EXHAUST FAN (EF) SHALL BE DESIGNED TO HANDLE A STATIC PRESSURE OF -8"W.C.
- 9 M.C. TO PROVIDE LOUVER GRILLE WITH INTEGRAL OPPOSED BLADE BALANCE DAMPER. SEE AIR DEVICE SCHEDULE WITHIN ZM60X SERIES SHEETS. LOUVER SHALL BE FIELD BALANCED TO EXHAUST CFM STATED ON PLANS.
- 10 34"x42" SUPPLY AIR (SA) DUCT THROUGH WALL TO EQUIPMENT PAD. ATI CONTRACTOR SHALL TRANSITION SA DUCT FROM 34"x42" TO MATCH SA DUCT CONNECTION AT 36" PLENUM CURB. SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.

- 11 32"x32" RETURN AIR (RA) DUCT. ATI CONTRACTOR SHALL TRANSITION RA DUCT FROM 32"x32" TO MATCH RA DUCT CONNECTION AT 36" PLENUM CURB. SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.
- 12 32"x38" EXHAUST AIR (EA) DUCT THROUGH WALL TO EQUIPMENT PAD. EA DUCT SHALL CONNECT TO FB-1 (EF-1 SUCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.
- 13 ACTION TARGET TO SUPPLY 36" TALL PLENUM ROOF CURB. ATI CONTRACTOR SHALL INSTALL PLENUM CURB ON CONCRETE EQUIPMENT PAD IN THIS LOCATION. ROOF CURB SHALL BE SECURELY ANCHORED AND BRACED TO EQUIPMENT PAD IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SHALL MEET ALL SEISMIC REQUIREMENTS WHERE APPLICABLE.
- 14 GROUND APPLIED DUCTWORK SUPPORTS BY ATI CONTRACTOR ALL SUPPORTS SHALL BE ABLE TO CARRY THE WEIGHT OF THE SECTION OF DUCT PLUS 15% SAFETY FACTOR. ATI CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTS FINAL DESIGN AND LOCATION IN COORDINATION WITH FINAL DUCTWORK LAYOUT AND CODE. ALL SUPPORTS SHALL BE FABRICATED OF RUST RESISTANT MATERIALS.
- 15 ALL EXTERIOR DUCTWORK SHALL BE CONSTRUCTED TO PEAK ON TOP TO PREVENT STANDING WATER. DUCTWORK SHALL BE SEALED WATER-TIGHT, INSULATED WITH A CODE MINIMUM R-8 INSULATION, AND JACKETED OR WRAPPED WITH A UV PROTECTIVE COATING.
- 16 INSTALL MAKE UP AIR UNIT (MAU) ON PLENUM CURB IN THIS LOCATION. SEE ZM60X-SERIES SHEETS FOR EQUIPMENT SPECIFICATIONS. MAU SHALL BE SECURELY ANCHORED AND BRACED TO EQUIPMENT PAD AND/OR ROOF CURB IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SHALL MEET ALL SEISMIC REQUIREMENTS WHERE APPLICABLE.
- 17 INSTALL EXHAUST FAN (EF) ON EQUIPMENT RAILS ON CONCRETE EQUIPMENT PAD IN THIS LOCATION. SEE SCHEDULES WITHIN ZM60X SERIES SHEETS FOR EQUIPMENT SPECIFICATIONS. ATI CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) RAILS BELOW EXHAUST FAN (EF). APPLIED EQUIPMENT RAILS SHALL BE INSTALLED IN COORDINATION WITH THE EXHAUST FAN APPLIED EQUIPMENT SUPPORTS FROM MANUFACTURER.
- 18 INSTALL 2-STAGE FILTER BANK (FB) ON EQUIPMENT RAILS ON EQUIPMENT PAD IN THIS LOCATION. SEE SCHEDULES WITHIN ZM60X SERIES SHEETS FOR EQUIPMENT SPECIFICATIONS. ATI CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) RAILS BELOW FILTER BANK (FB). SUPPORTS SHALL BE INSTALLED IN PARALLEL TO SHORT SIDE DIMENSION (I.E. SAME DIRECTION AS AIRFLOW). RAILS SHALL BE PLACED ON THE EDGES AND IN THE MIDDLE OF THE FILTER BANK.

- 19 EQUIPMENT RAILS/SUPPORTS BY ATI CONTRACTOR ALL RAILS/SUPPORTS SHALL BE ABLE TO CARRY THE WEIGHT OF THE EQUIPMENT PLUS 15% SAFETY FACTOR. ATI CONTRACTOR SHALL BE RESPONSIBLE FOR RAILS/SUPPORTS FINAL DESIGN AND LOCATION IN COORDINATION WITH FINAL EQUIPMENT LOCATION AND CODE. ALL RAILS/SUPPORTS SHALL BE FABRICATED OF RUST RESISTANT MATERIALS.
- 20 ATI CONTRACTOR SHALL PROVIDE 24"x24" DUCT OPENING WITH MINIMUM 24" SLEEVE TO ATMOSPHERE. PROVIDE DOWNWARD ANGLED (TOWARDS GROUND) WEATHERHOOD WITH 1/2" MESH BIRDSCREEN INSTALLED AT SLEEVE TERMINATION.
- 21 MOTORIZED VOLUME DAMPER PROVIDED BY ATI, INSTALLED BY ATI CONTRACTOR ON EXHAUST RELIEF DUCT DIRECTLY AFTER TAP.
- 22 ATI CONTRACTOR SHALL PROVIDE FLEXIBLE FABRIC DUCT CONNECTOR INSTALLED BETWEEN DUCT AND MECHANICAL EQUIPMENT. (TYP).
- 23 GENERAL CONTRACTOR / PLUMBER SHALL PROVIDE A MINIMUM 1-1/4" NATURAL GAS PIPE, SERVICE VALVE AND PRESSURE REDUCING VALVE PRIOR TO CONNECTION TO MAU-1. PRV SHALL BE SET IN ACCORDANCE WITH MAU REQUIREMENTS. THE 1-1/4" PIPE SIZE IS ADEQUATE FOR GAS PRESSURES RANGING FROM 2 - 5 PSI, WITH A TOTAL DEVELOPED LENGTH NO GREATER THAN 1000' - GENERAL CONTRACTOR / PLUMBER SHALL BE RESPONSIBLE FOR THE FINAL SIZE OF GAS PIPE PROVIDED TO SERVE THE MAU IN ACCORDANCE WITH CODE. THE 1-1/4" PIPE SHALL BE CONNECTED TO THE EXISTING NATURAL GAS PIPING SYSTEM AT AN APPROPRIATE POINT TO PROVIDE THE MAU REQUIRED GAS INPUT OF 600 MBH. IF THE AVAILABLE GAS PRESSURE IS LESS THAN 2PSI, GENERAL CONTRACTOR / PLUMBER SHALL CONTACT ENGINEER FOR GUIDANCE WITH REGARD TO PIPE SIZE AND PRESSURE REGULATOR REQUIREMENTS.
- 24 ALL GAS PIPE ROUTING SHOWN ON PLANS IS SCHEMATIC. INTENT IS FOR GENERAL CONTRACTOR / PLUMBER TO ROUTE NEW GAS PIPE FROM MAU TO NEAREST ADEQUATELY SIZED GAS MAIN TO PROVIDE THE REQUIRED GAS VOLUME AND PRESSURE FOR THE MAU. GENERAL CONTRACTOR / PLUMBER SHALL BE RESPONSIBLE FOR THE FINAL DESIGN OF THE NATURAL GAS PIPE ROUTING. GENERAL CONTRACTOR / PLUMBER SHALL FIELD VERIFY EXISTING NATURAL GAS PIPING SYSTEM AND TO DETERMINE THE NECESSARY CONNECTION LOCATION OF THE NEW GAS PIPE FOR MAU.
- 25 EDGE OF EQUIPMENT PAD TO BE MINIMUM OF 3'-0" FROM HVAC EQUIPMENT AND 1'-0" FROM EXTERIOR DUCT. FINAL COORDINATION OF EQUIPMENT PAD DIMENSIONS SHALL BE BETWEEN ATI AND OWNER.

GENERAL NOTES (SHEET ZM101)

1. DIMENSIONS SHOWN ON PLANS ARE APPROXIMATE AND BASED UPON MEASUREMENTS FROM THE BUILDINGS WALLS OR FINISHED FLOOR GENERATED IN A DIGITAL DRAWING. ATI CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND EQUIPMENT/DUCTWORK LOCATIONS PRIOR TO INSTALLATION (TYP.).
2. FRAMED WALL BETWEEN RANGE AND ADJACENT SPACES SHALL BE AIRTIGHT TO ENSURE PROPER AIR MOVEMENT OF RANGE VENTILATION SYSTEM.
3. PROVIDE ANGLE IRON DUCT TRAPEZE WHERE INDICATED ON PLANS. TRAPEZE PROVIDED BY ACTION TARGET.
4. REFER TO DETAILS WITH ZM60X SERIES SHEETS FOR DUCTWORK INSTALLATION REQUIREMENTS.
5. TURNING VANES SHALL BE USED ON ALL 90, 45, AND 22.5 DEGREE CHANGE IN DIRECTION FITTINGS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SQUARE/RECTANGULAR DUCTS.
6. GENERAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK FLOOR PENETRATIONS WITH STRUCTURAL ENGINEER TO ENSURE THE PROPER STRUCTURAL MODIFICATIONS HAVE BEEN MADE TO ACCOMMODATE PASSAGE.
7. ATI CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL SEE AND UNSEEN ARCHITECTURAL AND STRUCTURAL BUILDING FEATURES. FINAL DUCTWORK ROUTING SHALL BE THE RESPONSIBILITY OF THE ATI CONTRACTOR.
8. ATI CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS, INCLUDING DUCTWORK ROUTING, TO ATI FOR REVIEW PRIOR TO SYSTEM INSTALLATION.



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PROJECT STATUS

**100%
SUBMITTAL**

PROJECT NAME

BETHEL PD

Project Manager:	DAVID JOHNSON
Territory Manager:	REX SHIELDS
Project Engineer:	ROB DECOSTA
Drawn By:	CHRIS ANDRUS
Approved By:	WILLIAM LEWIS
Origination Date:	07/19/2022

No	BY	REVISION	DATE
1	JA	UPDATING TO AAO	01/30/23
2	JA	CONTRACTOR CALL OUTS	05/15/23

SHEET NAME

HVAC RANGE PLAN

DRAWING NUMBER

12559

SHEET NUMBER

ZM101

SCALED FOR ORIGINAL DRAWING AT 22" X 34"