

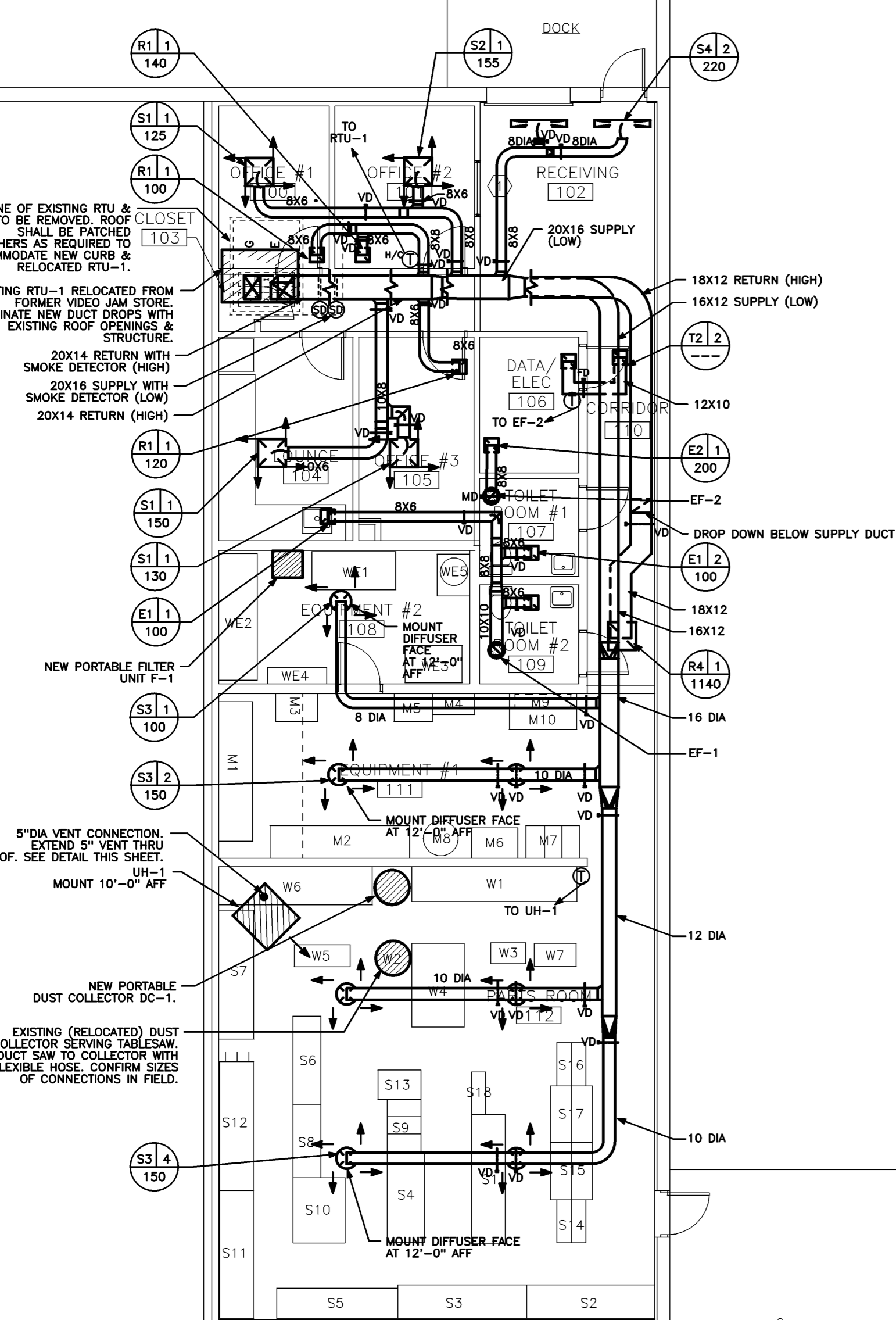
EQUIPMENT SPECIFICATIONS

UH-1
 REZOR MODEL UDAP175 GAS FIRED UNIT HEATER, OR EQUAL,
 175,000 BTUH INPUT, 145,250 BTUH OUTPUT,
 1.2" GAS CONNECTION, 2" DIA VENT STACK, 115/1/60,
 1.2" GAS CONNECTION, 2" DIA VENT STACK, 115/1/60,
 INTERLOCK UNIT WITH SPACE THERMOSTAT.

DC-1
 SOURCECET MODEL SDC-800 PORTABLE DUST COLLECTOR, OR EQUAL,
 100-200 LONG POWER CORO,
 PROVIDE WITH 3/4" DIA FLEXIBLE HOSE, ON/OFF SWITCH,
 WHEEL BASE, 50 PSI RESISTANT WHEELS, 10 FEET OF REPLACEMENT FILTERS,
 AND FITTINGS FOR 2" DIA, 3" DIA AND 4" DIA EQUIPMENT CONNECTIONS.
 WHEEL BASE SHALL BE REMOVED AND (3) REPLACEMENT FILTERS AT SOURCE.
 QUICK CONNECTION TO 6" DIA DUST COLLECTOR HOSE. FIELD VERIFY QUANTITY
 OF FILTERS TO BE PROVIDED.
 THIS UNIT SHALL BE CONNECTED TO INDIVIDUAL PIECES OF EQUIPMENT TO
 COLLECT DEBRIS BY WOODWORKING AND GRINDING EQUIPMENT DURING USE.
 OPERATOR SHALL BE RESPONSIBLE FOR EQUIPMENT CONNECTIONS AT TIME OF USE.

F-1
 SOURCECET MODEL SV-700 PORTABLE FILTER UNIT, OR EQUAL,
 1 HP, 110/1/60, 725 CFM, 2000 RPM, PROVIDE WITH 10'-0" EXTERNAL
 SUPPORT ARM WITH 6" DIA HOSE, 10" POWER CORO, SELF-CLEANING
 MECHANISM, WHEEL BASE, AND (3) REPLACEMENT FILTER CARTRIDGES.
 WHEEL BASE SHALL BE REMOVED AND (3) REPLACEMENT FILTER CARTRIDGES
 DURING WELDING OPERATIONS. OPERATOR IS RESPONSIBLE FOR LOCATING
 INLET TO FILTER AT FUME/SMOKE SOURCE.

RTU-1
 EXISTING 5 TON ROOF TOP, GAS-FIRED HVAC UNIT, RELOCATED FROM THE
 FORMER VIDEO JAM STORE.
 FRAME MODEL YC0900000000 SERIAL #316150544
 129,000 BTUH INPUT, 100,000 BTUH OUTPUT, 2000 CFM, 208/3/60,
 1 1/2" GAS CONNECTION,
 PROVIDE NEW INSULATED ROOF CURB AND LOCATE TO UTILIZE EXISTING
 ROOF OPENING. EXISTING ROOF OPENING SHALL BE ALTERED AS REQUIRED
 TO ACCOMMODATE NEW DUCT DROP LOCATIONS FROM RELOCATED UNIT. ENSURE
 THAT RELOCATED UNIT AND ALTERED ROOF PENETRATIONS ARE PROPERLY
 SUPPORTED.
 BALANCE OUTSIDE AIR DAMPER TO 500 CFM.
 SEQUENCE OF OPERATION:
 UNIT SHALL BE CONTROLLED BY SPACE HEATING AND COOLING THERMOSTAT
 SETPOINTS. HEATING SETPOINT SHALL BE 68 DEG. F., COOLING SET POINT
 SHALL BE 72 DEG. F.



MECHANICAL DUCTWORK PLAN
 1/8" = 1'-0" REF: NA **A5**

FAN SCHEDULE

FAN NUMBER	MANUFACTURER	MODEL	SERVICE	CFM	EXTERNAL STATIC (IN WG)	RPM	SIZE	HP	PHASE	VOLTS	MOTOR CONTROL	DRIVE	DAMPER	NOTES
EF-1	DOCK	80C105H	TOILET/LOUNGE EXHAUST	300	0.30	1405	4.8	3/4	1	120	RUNS CONTINUOUSLY	DIRECT	MOD.	SEE NOTE 2
EF-2	DOCK	80C105H	DATA/ELECT. EXHAUST RM 108	200	0.30	1324	5.8	7/8	1	120	SOLID STATE SPD CONT.	DIRECT	MOD.	SEE NOTE 2

NOTES: 1. CONNECT TO THERMOSTAT SET TO ENERGIZE FAN WHEN SPACE TEMPERATURE EXCEEDS 90 DEG. F. 2. PROVIDE INSULATED ROOF CURB, DAMPER, SOLID STATE CONTROLLER & DISCONNECT SWITCH.

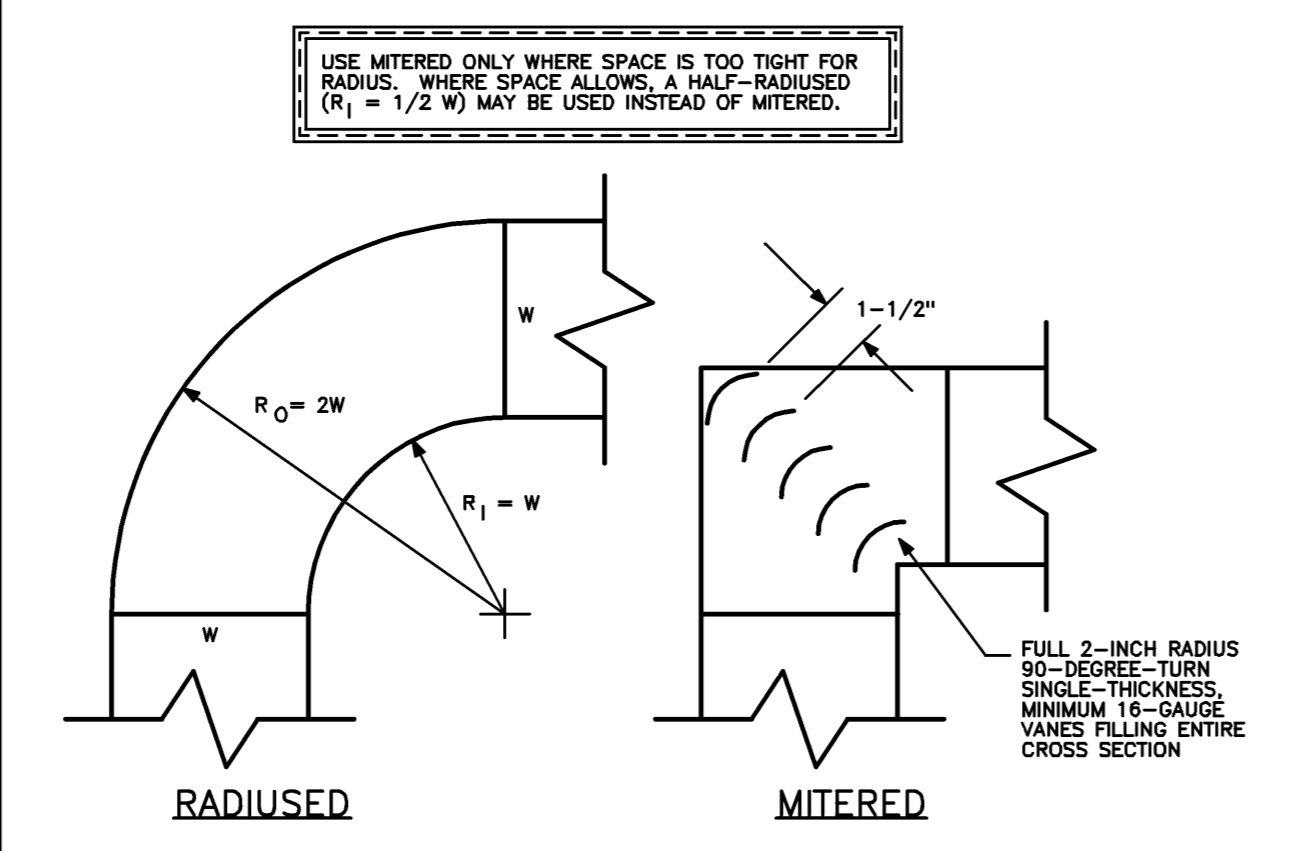
REGISTERS, GRILLES & DIFFUSERS SCHEDULE

TAG	TYPE	MANUFACTURER	MODEL	REG. SIZE	CFM RANGE	DIRECTION OF FLOW	MAX. INC.	MAX. SP.	REMARKS	NOTES
S1	CEILING DIFFUSER	TITUS	TDC	6x6	0 - 150	SEE PLANS	20	10"	OBD NOT REQUIRED	1,2
S2	CEILING DIFFUSER	TITUS	TDC	9x9	151 - 250	SEE PLANS	20	10"	OBD NOT REQUIRED	1,2
S3	CEILING DIFFUSER	TITUS	TDC	8 DIA	125 - 225	SEE PLANS	20	10"	OBD NOT REQUIRED	1,3
S4	SLOT DIFFUSER	TITUS	ML-38 (3/4" slots)	48" x 4 slots	220	SEE PLANS	20	10"	OBD NOT REQUIRED	1,13,15
R/E/71	RETURN/EXHAUST/TRANSFER GRILLE	TITUS	50F	6x6	0 - 150	---	20	<0.1"	OBD NOT REQUIRED	1,3,4
R/E/72	RETURN/EXHAUST/TRANSFER GRILLE	TITUS	50F	8x8	151 - 250	---	20	<0.1"	OBD NOT REQUIRED	1,3,4
R/E/73	RETURN/EXHAUST/TRANSFER GRILLE	TITUS	50F	10x10	251 - 400	---	20	<0.1"	OBD NOT REQUIRED	1,3,4
R/E/74	RETURN/EXHAUST/TRANSFER GRILLE	TITUS	50F	22x22	1000 - 1300	---	20	<0.1"	OBD NOT REQUIRED	1,3,4
R/E/75	RETURN/EXHAUST/TRANSFER GRILLE	TITUS	---	---	---	---	20	<0.1"	OBD NOT REQUIRED	1,3,4

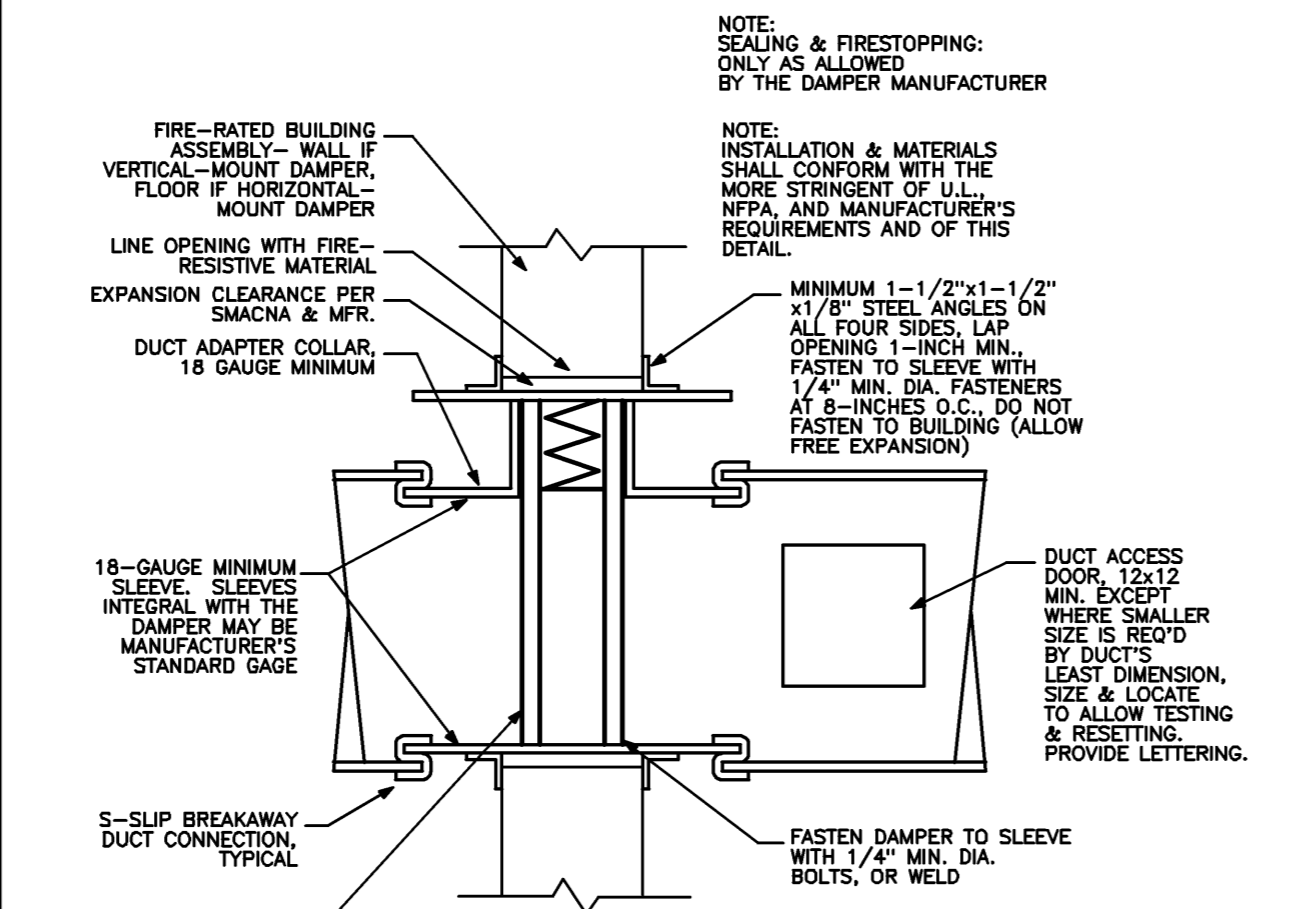
NOTES: 1. BAKED ENAMEL WHITE FINISH
 2. BORDER TYPE 3 (LAY-IN)
 3. BORDER TYPE 1 (SURFACE MOUNT)
 4. 1/2" x 1/2" x 1/2" GRID
 5. PRIME COAT FINISH (FIELD PAINTED)
 6. CURVED BORDER FOR INSTALLATION ON INTERNALLY LINED ROUND DUCT. COORDINATE WITH OUTSIDE DUCT DIAMETER.
 7. PROVIDE FACTORY DUCT COVER TO 8'-0" AFF.
 8. PROVIDE FACTORY DUCT COVER TO ONE INCH ABOVE CEILING.
 9. CLOSE OFF RIGHT HAND SIDE OF DIFFUSER TO CREATE 2-SIDE DISCHARGE DIFFUSER.
 10. CLOSE OFF LEFT HAND SIDE OF DIFFUSER TO CREATE 2-SIDE DISCHARGE DIFFUSER.
 11. BORDER TYPE 77 WITH INSULATED PLENUM
 12. PROVIDE FACTORY 4" BASE
 13. PROVIDE ACCOUTRICALLY LINED CONTINUOUS PLENUM
 14. PROVIDE BORDER TYPE 11 FOR SIDE WALL INSTALLATION WITH HIDDEN FLANGE
 15. PROVIDE BORDER TYPE 28 (FLANGE BORDER, CONCEALED MOUNTING)

PATTERN ADJUSTMENT: AT INSTALLATION AND DURING TESTING AND BALANCING, SET ADJUSTABLE PATTERN VANES AS APPROPRIATE FOR THE SPACE TO PROVIDE EFFECTIVE AIR DISTRIBUTION WITHOUT DISCOMFORT TO THE OCCUPANTS.

LINEAR SLOT DIFFUSER
 NO SCALE REF: NA **C4**

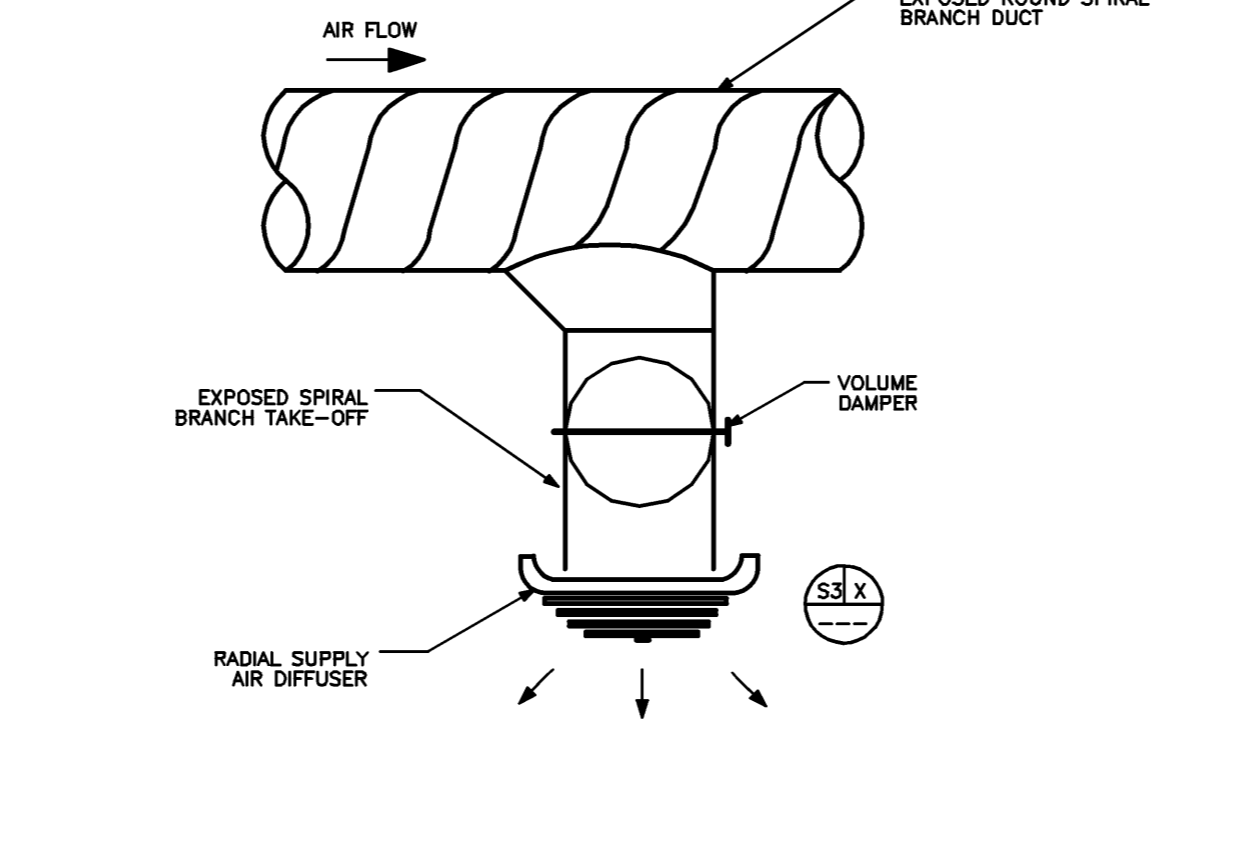


DUCT ELBOW
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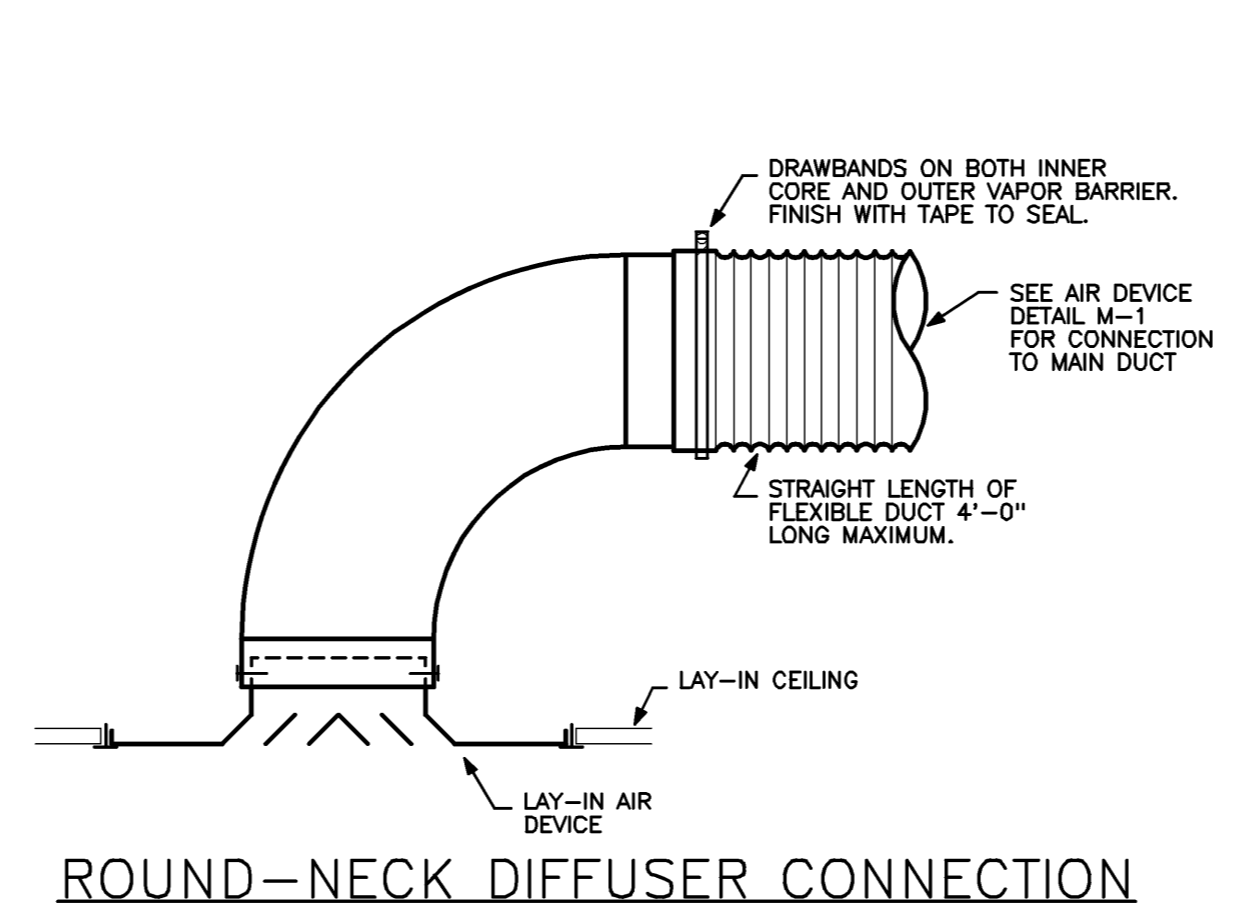


FIRE DAMPER
 NO SCALE REF: NA **A4**

TRANSFER DUCT DETAILS
 NO SCALE REF: NA **C3**



EXPOSED ROUND BRANCH TO DIFFUSER DETAIL
 NO SCALE REF: NA **B3**



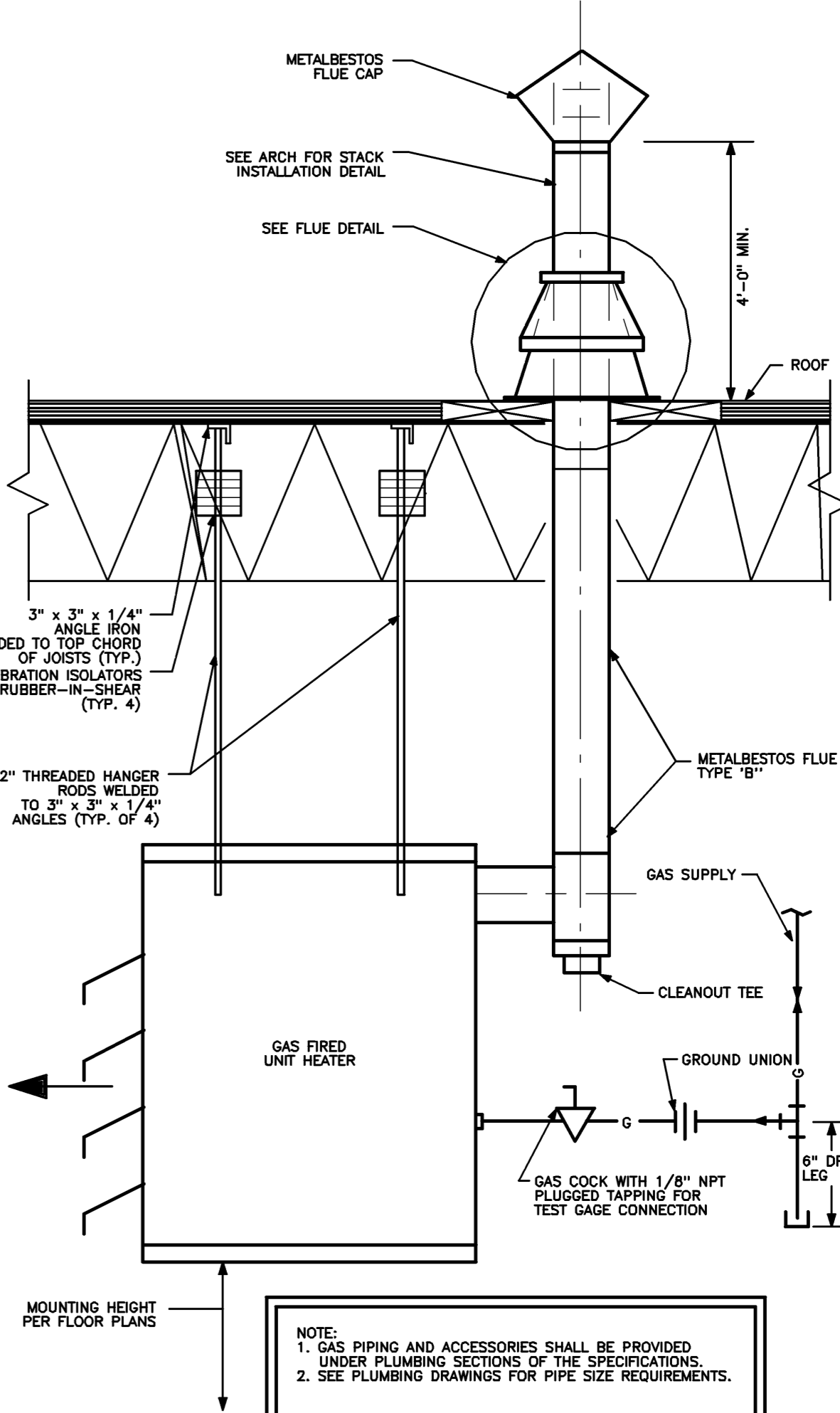
CEILING AIR DEVICE DETAILS
 NO SCALE REF: NA **A3**

LEGEND

- AFB ABOVE FINISHED FLOOR
- BOD BOTTOM OF DUCT
- BTUH CUBIC FEET PER MINUTE
- EF EXHAUST FAN
- EXH EXHAUST
- FD FIRE DAMPER
- GPM GALLONS PER MINUTE
- MESH METAL MESH
- MD MOTORIZED DAMPER
- RET RETURN
- RPM REVOLUTIONS PER MINUTE
- RTOF ROOF TOP HVAC UNIT
- SUP SUPPLY
- UH UNIT HEATER
- VD VOLUME DAMPER
- DUCT SECTION - SUPPLY
- DUCT SECTION - RETURN/EXHAUST
- DUCT TURNING VANES
- EQUIPMENT
- FD FIRE DAMPER (1 1/2 HOUR RATED)
- FLEXIBLE DUCT
- MD MOTORIZED DAMPER
- RETURN AIR
- RETURN AIR DUCT
- SMOKE DAMPER
- RTOF ROOF TOP HVAC UNIT
- SUP SUPPLY AIR
- SUPPLY AIR DUCT
- THERMOSTAT
- TH/THERMOSTAT - HEATING/COOLING
- VD VOLUME DAMPER
- S (SUPPLY) R (RETURN) E (EXHAUST) T (TRANSFER) SUPPLY DIFFUSER (TYPE 2)
- DIFFUSER DESCRIPTION (SEE REG., GRILLES & DIFF. SCHEDULE)
- QUANTITY
- 400 CFM EA

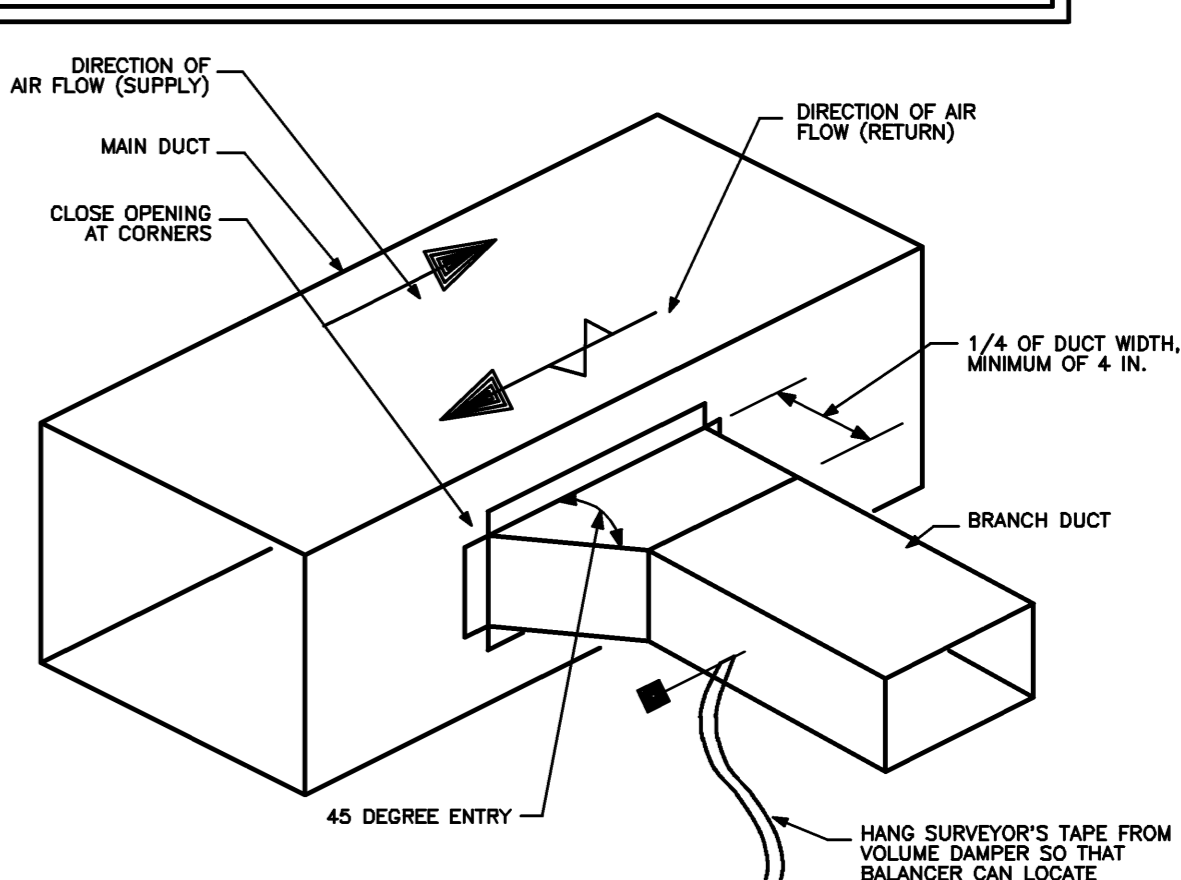
GENERAL NOTES

1. COORDINATE WORK OF MECHANICAL SUBCONTRACTOR WITH WORK OF OTHER TRADES.
2. DUCTWORK, PIPING AND EQUIPMENT ARE INDICATED DIAGRAMMATICALLY. FIELD-VERIFY LOCATIONS.
3. FOR ROOF TOP EQUIPMENT COORDINATE PENETRATIONS WITH LOCATIONS OF ROOF STEEL AND OTHER UTILITIES.
4. PRIOR TO FABRICATING DUCTWORK, COORDINATE WITH OTHER TRADES TO ENSURE THAT THE DUCTWORK CAN BE INSTALLED WITH THE INDICATED SIZES AND LOCATIONS. SUBMIT ANY DISCREPANCIES OR PROPOSED CHANGES.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF CEILING DIFFUSERS AND REGISTERS.
6. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF ROOF OPENINGS.
7. COORDINATE ROOF OPENING DIMENSIONS WITH OTHER TRADES. VERIFY BEFORE SUBMITTING AND PURCHASING THESE ITEMS.
8. PROVIDE VOLUME DAMPERS SO THAT EVERY REGISTER, GRILLE AND DIFFUSER (SUPPLY, RETURN, AND EXHAUST) CAN BE INDIVIDUALLY BALANCED. VERIFY INSTALLATION OF EXISTING VOLUME DAMPERS AT EACH BRANCH IN EXISTING SUPPLY DUCT. PROVIDE ADDITIONAL VOLUME DAMPERS WHERE REQUIRED.
9. LOCATE VOLUME DAMPERS AS FAR AWAY FROM REGISTERS, GRILLES, AND DIFFUSERS AS POSSIBLE TO MINIMIZE NOISE. LOCATE TO BE UNRESTRICTED AND EASILY ACCESSIBLE FOR TESTING AND BALANCING. LOCATE ABOVE ACCESSIBLE SUPPORTED CEILING WHERE POSSIBLE. WHERE VOLUME DAMPERS MUST BE LOCATED ABOVE CEILING, PROVIDE ACCESS PANELS AS SPECIFIED AND NOTIFY ARCHITECT BEFORE INSTALLING ACCESS PANELS. OBTAIN PERMISSION FROM THE ARCHITECT BEFORE INSTALLING ACCESS PANELS.
10. DUCT ELBOWS SHALL BE LONG-RADIUS TYPE (THREAT RADIUS EQUAL TO OR GREATER THAN DUCT WIDTH IN THE PLANE OF THE TURN) UNLESS OTHERWISE SPECIFIED. IF SPACE IS NOT ADEQUATE, PROVIDE MITERED ELBOWS WITH TURNING VANES.
11. PROVIDE 16 GAUGE SINGLE-THICKNESS TURNING VANES AT MITERED DUCT ELBOWS. VANE EDGES LEADING AND TRAILING SHALL BE TANGENTIAL TO AERLOW.
12. FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 5'-0". NO FLEXIBLE DUCT SHALL BE ALLOWED ON SYSTEM RETURNS TO ROOF TOP UNIT OR ON EXHAUST SYSTEMS TO ROOF FANS.
13. PAINT DUCTWORK VISIBLE THRU CEILING OPENINGS, DUCT OPENINGS, AND REGISTERS, GRILLES AND DIFFUSERS WITH BLACK PAINT.
14. SEAL DUCTWORK THROUGH WALLS, FLOORS AND PARTITIONS WITH FIRE-RATED ASSEMBLIES WITH FIRESTOPPING MATERIAL AS SPECIFIED. ALL FIRE DAMPERS, USE ONLY AS DIRECTED BY THE DAMPER MANUFACTURER.
15. MOUNT ROOM THERMOSTATS AT 4'-0" AFF TO CONTINUE OF DEVICE. DO NOT INSTALL ABOVE LIGHT SWITCHES OR DIMMERS.
16. WHERE THERMOSTATS ARE LOCATED NEAR LIGHT SWITCHES, INSTALL THERMOSTAT SO THAT LIGHT SWITCHES ARE CLOSER TO DOOR JAMBS. THE INTENT IS TO LOCATE THERMOSTATS SO THEY DO NOT INTERFERE WITH ACCESSIBILITY TO LIGHT SWITCHES.

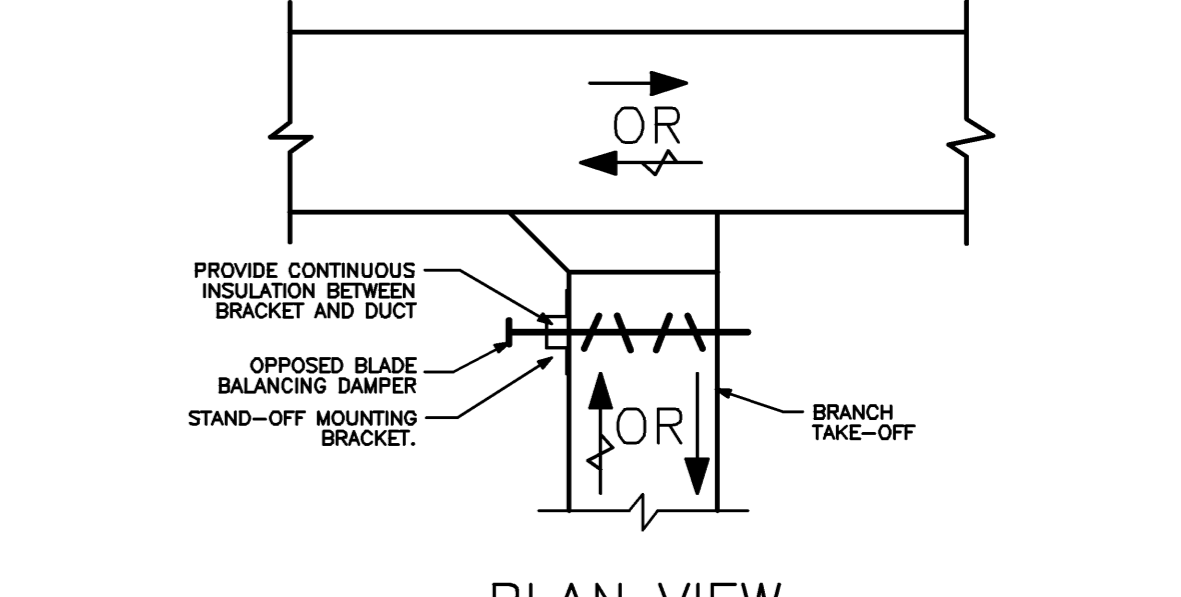


GAS UNIT HEATER DETAIL
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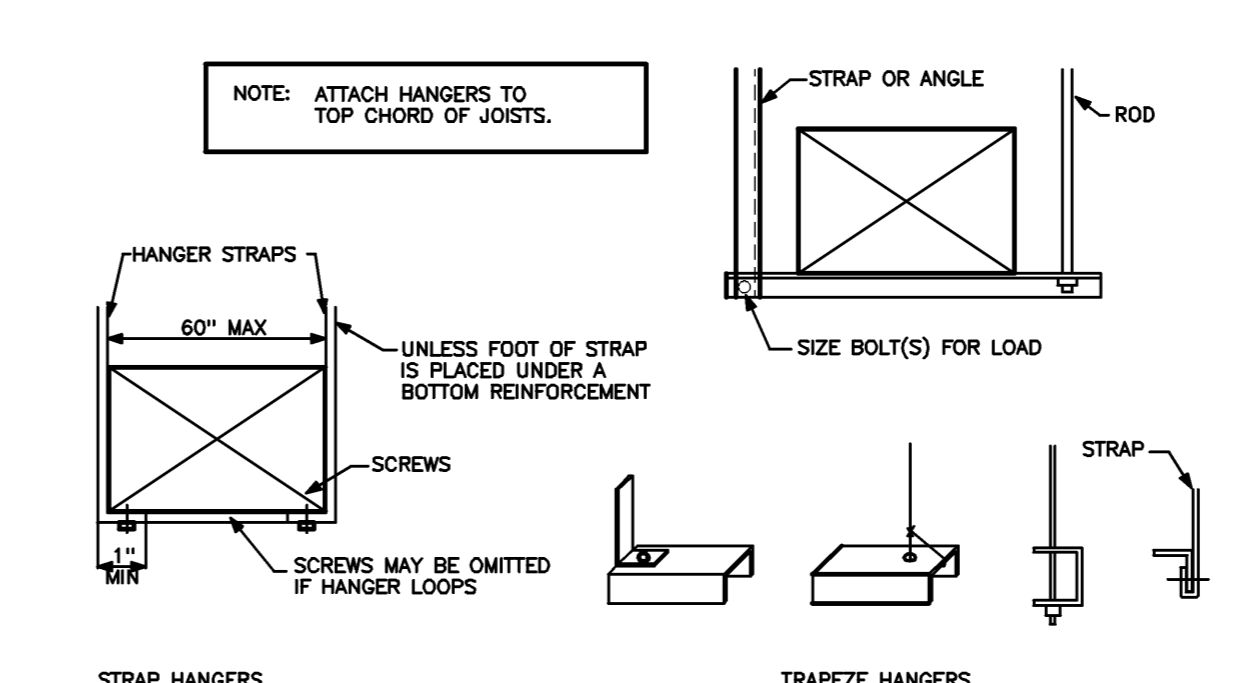
INSULATED SUPPLY AND RETURN DUCTWORK SHALL BE INSTALLED WITH STAND-OFF MOUNTING BRACKETS FOR VOLUME/BALANCING DAMPER OPERATORS. ALLOW CLEARANCE BETWEEN DUCT AND OPERATOR OF NOT LESS THAN INSULATION THICKNESS.



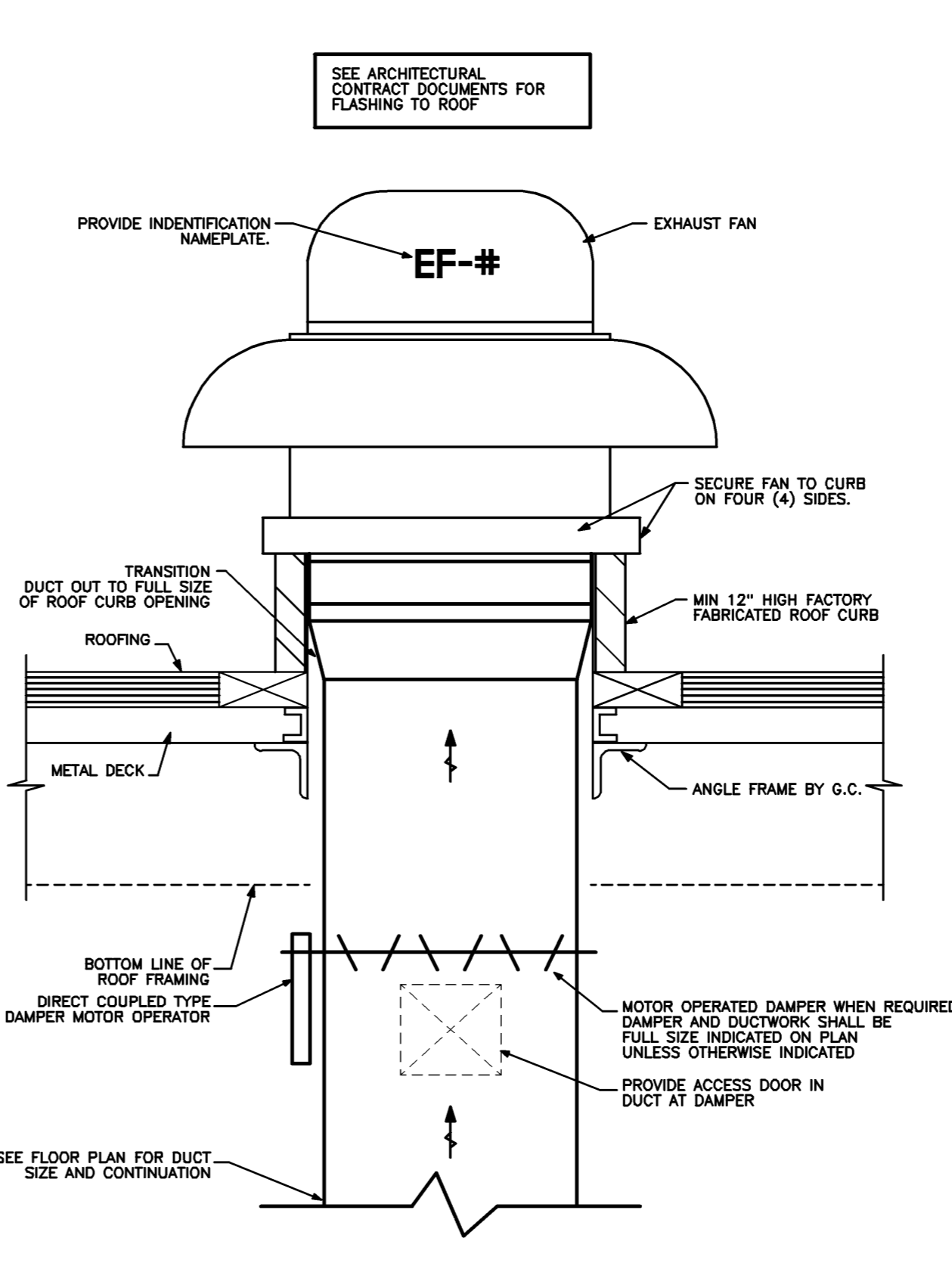
ISOMETRIC VIEW



RECTANGULAR DUCT TAKE-OFF
 NO SCALE REF: NA **A1**



LOWER HANGER ATTACHMENT
 NO SCALE REF: NA **C2**



ROOFTOP EXHAUST FAN
 NO SCALE REF: NA **A2**

Project Title
WESTGATE SHOPPING CENTER SHAW'S MAINTENANCE
 PORTLAND, ME

NA Project No. **07182**

Key Plan

05-16-08 ISSUED FOR BID

Mark	Date	Description

Drawing Title
MECHANICAL FLOOR PLAN, DETAILS AND SCHEDULES

PA / PE: **RDM** Drawn By: **MED**

Drawing Number
M10.1