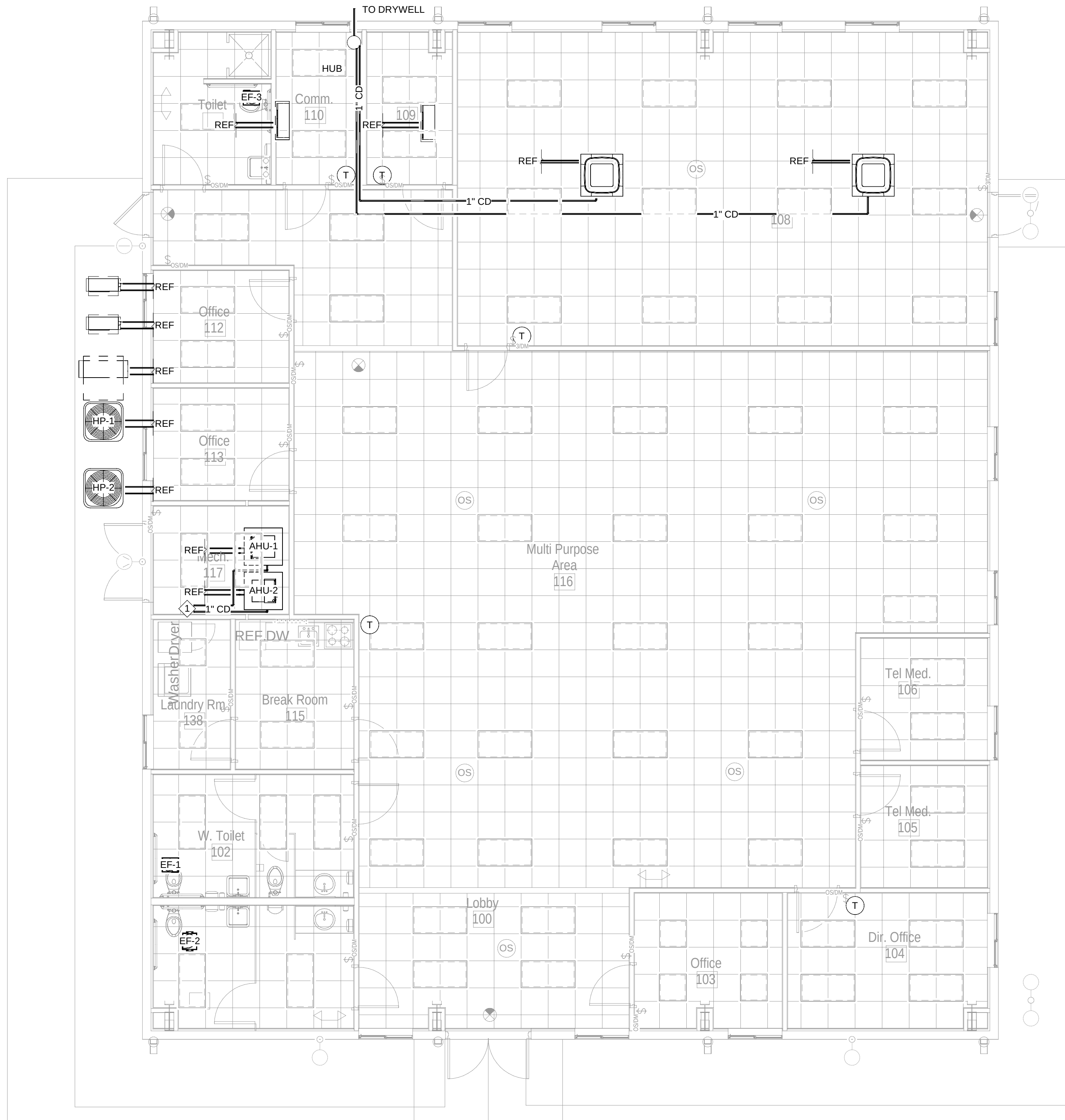


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LEGEND (ALL MAY NOT APPLY)					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SA/R A TAKE-OFF WITH RIGID DUCT TAKE-OFF W/ DAMPER		DEMOLITION KEYNOTE		MOTORIZED CONTROL VALVE
	SA/R A TAKE-OFF WITH FLEX TAKE-OFF W/ DAMPER		KEYNOTE		BALANCING VALVE
	BACKDRAFT DAMPER		AIR HANDLING UNIT (VERTICAL/HORIZONTAL)		SHUT-OFF/ISOLATION VALVE
	DUCT MOUNTED BAROMETRIC DAMPER		CEILING RECESSED AIR HANDLER		CHECK VALVE
	DUCT MOUNTED TEMPERATURE SENSOR		WALL MOUNT AIR HANDLER		STRAINER
	DUCT MOUNTED SMOKE DAMPER		1 OR 4-WAY CEILING MOUNT CASSETTE AIR HANDLER		PUMP
	DUCT MOUNTED MOTORIZED DAMPER		BC CONTROLLER		TEMPERATURE SENSOR
	DUCT MOUNTED HUMIDITY SENSOR		CONDENSING UNIT HEAT PUMP		DOOR GRILLE AND 1" UNDERCUT
	DUCT MOUNTED FIRE DAMPER		CONDENSING UNIT HEAT PUMP		CONDENSATE DRAIN PIPE
	COMBINATION FIRE/SMOKE DAMPER		CEILING MOUNTED EXHAUST FAN		CLEAN-OUT IN CD
	DUCT FLOW METER		CONNECT TO EXISTING AT THIS POINT		CD TRAP (REFER TO DETAIL)
	DUCT MOUNTED SMOKE DETECTOR		DEMOLISH BACK TO THIS POINT		INSULATED REFRIGERANT LINES
	DUCT CONTINUES UP		ACCESS PANEL		THERMOMETER
	DUCT CONTINUES UP (ALT)		UNION		PRESSURE GAUGE
	SUPPLY DIFFUSER		FLEXIBLE CONNECTION		THERMOSTAT
	RETURN GRILLE				SENSOR - ZONE SENSOR
	EXHAUST GRILLE				TEMPERATURE SENSOR
	SQUARE TO ROUND ROUND TRANSITION				CARBON MONOXIDE SENSOR
					CARBON DIOXIDE SENSOR
SUPPLY/RETURN DUCT FIRST DIMENSION = WIDTH SECOND DIMENSION = HEIGHT		DEMOLITION HATCH INDICATION		AIR DISTRIBUTION DEVICE TAG	
SUPPLY/RETURN DUCT ROUND PIPE D=INSIDE DIAMETER DIMENSION		EQUIPMENT, PIPE, DUCT, FITTINGS, ETC TO BE DEMOLISHED WILL BE INDICATED SPECIFICALLY OR BY HATCHED CONNECTION.		A 110 6x6	
ABBREVIATIONS (ALL MAY NOT APPLY)					
AHU	AIR HANDLING UNIT	EA	EXHAUST AIR	MBH	1,000 BTUS PER HOUR
BTU	BRITISH THERMAL UNIT	EAT	ENTERING AIR TEMPERATURE	MG	MANUFACTURER
CD	CONDENSATE	EF	EXHAUST FAN	OA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	ESP	EXTERNAL STATIC PRESSURE (IN W.C.)	RA	RETURN AIR
CHWS	CHILLED WATER SUPPLY	EWTR	ENTERING WATER TEMPERATURE	RAG	RETURN AIR GRILLE
CHWR	CHILLED WATER RETURN	EX	EXISTING	RND	ROUND
CRAH	COMPUTER ROOM AIR HANDLER	FD	FIRE DAMPER	RPM	REVOLUTIONS PER MINUTE
CRCU	COMPUTER ROOM CU	FPI	FINS PER INCH	SA	SUPPLY AIR
CHS	CONDENSING UNIT	GPM	GALLONS PER MINUTE	SD	SMOKE DAMPER
CWS	CHILLED WATER SUPPLY	HHWS	HEATING HOT WATER SUPPLY	SM	SURFACE MOUNTED
AP	DIFFERENCE IN PRESSURE	HHWR	HEATING HOT WATER RETURN	SS	STAINLESS STEEL
AT	DIFFERENCE IN TEMPERATURE	HP	HEAT PUMP	TSP	TOTAL STATIC PRESSURE
DB	DRY BULB TEMPERATURE (DEG. F)	HWS	HOT WATER SUPPLY	UNO	UNLESS NOTED OTHERWISE
DEG. F	DEGREES FAHRENHEIT	In W.C.	INCHES OF WATER COLUMN	V/PZ	VOLT/PHASE
DDC	DISTRIBUTED DIGITAL CONTROLS	LAT	LEAVING AIR TEMPERATURE	VF	VARIABLE FREQUENCY DRIVE
DN	DOWN	LWT	LEAVING WATER TEMPERATURE	WBD	WET BULB TEMPERATURE (DEG. F)
DUCT INSULATION SCHEDULE					
DUCT TYPE	OUTDOORS	CONCEALED INDOORS, ABOVE CEILINGS, IN PLENUMS, OR IN SHAFTS	EXPOSED INDOORS	NOTES	
SUPPLY / OA / MUA	R-8 + OUTDOOR PROTECTION	R-4.2	R-4.2 INTERNAL LINER	1-4	
RA / TOILET EX. / GENERAL EX.	R-8 + OUTDOOR PROTECTION	NONE, UNO	NONE, UNO	1-5	
STAIR / ELEVATOR PRESSURIZATION MUA	2 HR FIREWRAP + OUTDOOR PROTECTION	2 HR FIREWRAP	N/A	1.2, 6.7	
GREASE / GENERATOR RADIATOR EX.	2 HR FIREWRAP + OUTDOOR PROTECTION	2 HR FIREWRAP	N/A	1.2, 6.7	
SMOKE EX.	N/A	NONE	N/A	--	
FIREPLACE FLUE EX.	COORD. WITH FIREPLACE FLUE MAN.	COORD. W/ MANU.	N/A	8	
FLEX DUCT (ANY)	N/A	R-4.2	N/A	--	
NOTES:					
1. FIBERGLASS DUCT INSULATION CHARACTERISTICS SHALL BE AS NOTED IN GENERAL NOTES.					
2. INSULATION THICKNESS AND DENSITY CAN VARY. R-VALUES ARE MINIMUM "INSTALLED" VALUES, NOT "OUT OF PACKAGE" VALUES AND MUST BE MET OR EXCEEDED.					
3. ALL EXPOSED DUCTWORK LOCATED IN CONDITIONED SPACES SHALL BE INTERNALLY LINED, NOT EXTERNALLY INSULATED, UNO. SEE ADDITIONAL NOTES AND DETAILS ON THESE PLANS FOR MORE INFORMATION.					
4. PROVIDE DUCT LINER WHERE NOTED ON THESE PLANS.					
5. INSULATED ANY EXHAUST DUCTS LOCATED WITHIN 10 FEET OF THE EXTERIOR TERMINATION (WALL/ROOF CAP/ LOUVER) WITH MIN. R-4.2 DUCT WRAP. EXHAUST DUCTS LOCATED INSIDE SHAFTS CAN BE UNINSULATED, UNO. INSULATED PLENUMS BEHIND WALL LOUVERS WITH SAME R-VALUE INSULATION AS EXHAUST DUCT.					
6. SEE GREASE DUCT AND INSULATION NOTES ON THIS SHEET FOR ADDITIONAL REQUIREMENTS FOR 2 HR FIREWRAP INSULATION.					
7. OUTDOOR DUCTWORK REQUIRED TO HAVE 2 HOUR FIRE WRAP SHALL REPLACE THE EXTRUDED POLYSTYRENE INSULATION WITH FIREWRAP INSULATION. THE WEATHER PROTECTION COATING (POLYGUARD) SHALL BE APPLIED TO OUTER SURFACE OF FIRE WRAP.					
8. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS AND OTHER REQUIREMENTS FOR FLUE EXHAUST.					



1 RENOVATION PIPING PLAN - HVAC
M1.2 Scale: 3/16" = 1'-0"

PIPING GENERAL NOTES - M1.2

1. RESERVED.



PIPING KEYED NOTES

1

ROUTE CONDENSATE PIPING TO HUB DRAIN.



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150 John Knox Road
Tallahassee, FL 32303
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GADSDEN CO. BOCC

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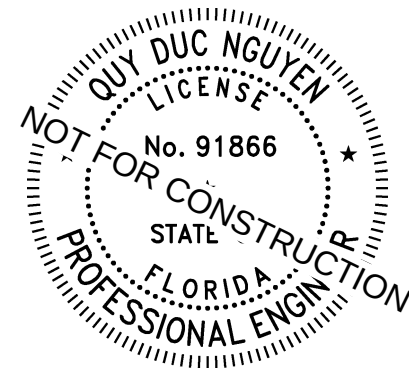
Clemons, Rutherford,
& Associates, Inc.

Architects
Planners
Interior Designers
Construction Managers

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Quy Duc Nguyen, PE#91866

Submittal

Phase	Date	Drw	Chk
SCHEMATIC DESIGN	03/10/26	LJ	BK
50% CONSTRUCTION DOC.	03/27/26	LJ	BK
90% CONSTRUCTION DOC.	04/06/26	LJ	BK
100% CONSTRUCTION DOC.			
PERMIT DOCS.			

Revision

#	Description	Date
1		

CRA Project # 23065

Phase: 90% CD

SHEET TITLE

HVAC PIPING FLOOR
PLAN
M1.2



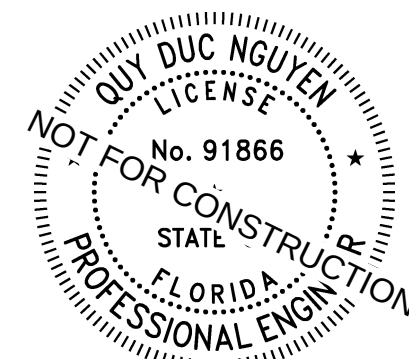
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CRA ARCHITECTS

Architects
Planners
Interior Designers
Construction Managers

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90% CONSTRUCTION DOC.	04/06/26	LJ	BR
100% CONSTRUCTION DOC.			
PERMIT DOCS.			

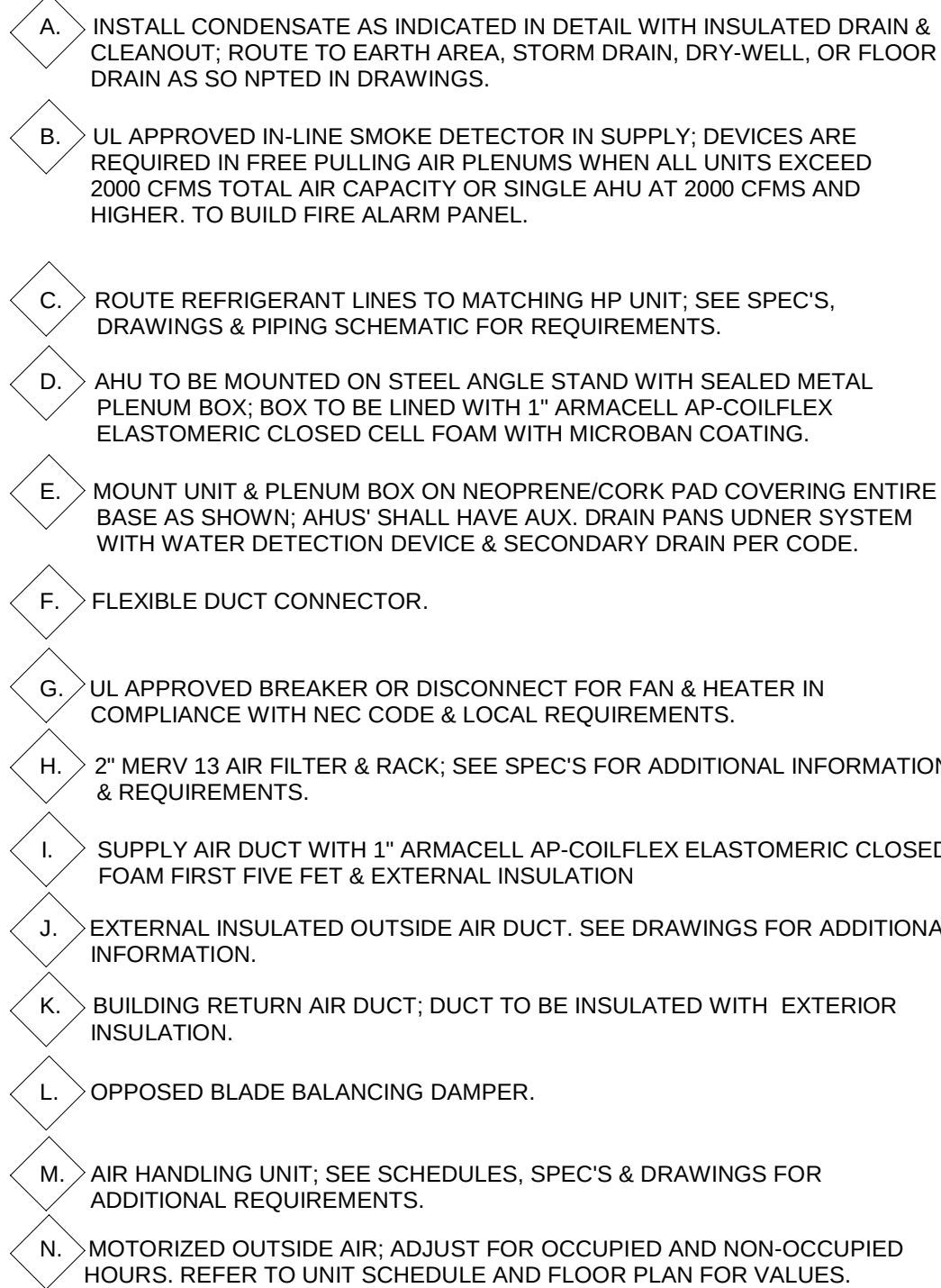
Revision		
#	Description	Date
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Phase: **90% CD**

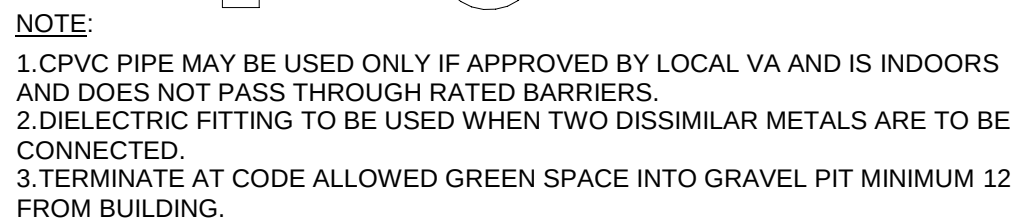
SHEET TITLE

HVAC DETAILS

M5.1

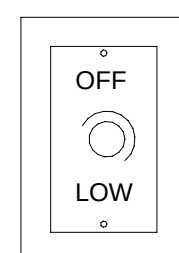


M5.1



WHERE X = STATIC PRESSURE IN PAM

M5.1



SPEED CONTROL (SOLID STATE
MOUNT ADJACENT TO FAN)





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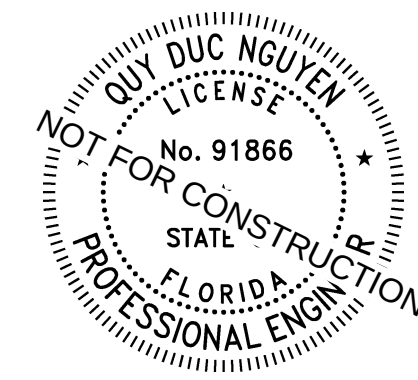
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Submittal

Phase	Date	Drw	Chk
SCHEMATIC DESIGN	03/10/26	LJ	BK
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PERMIT DOCS.			

Revision

#	Description	Date
1		

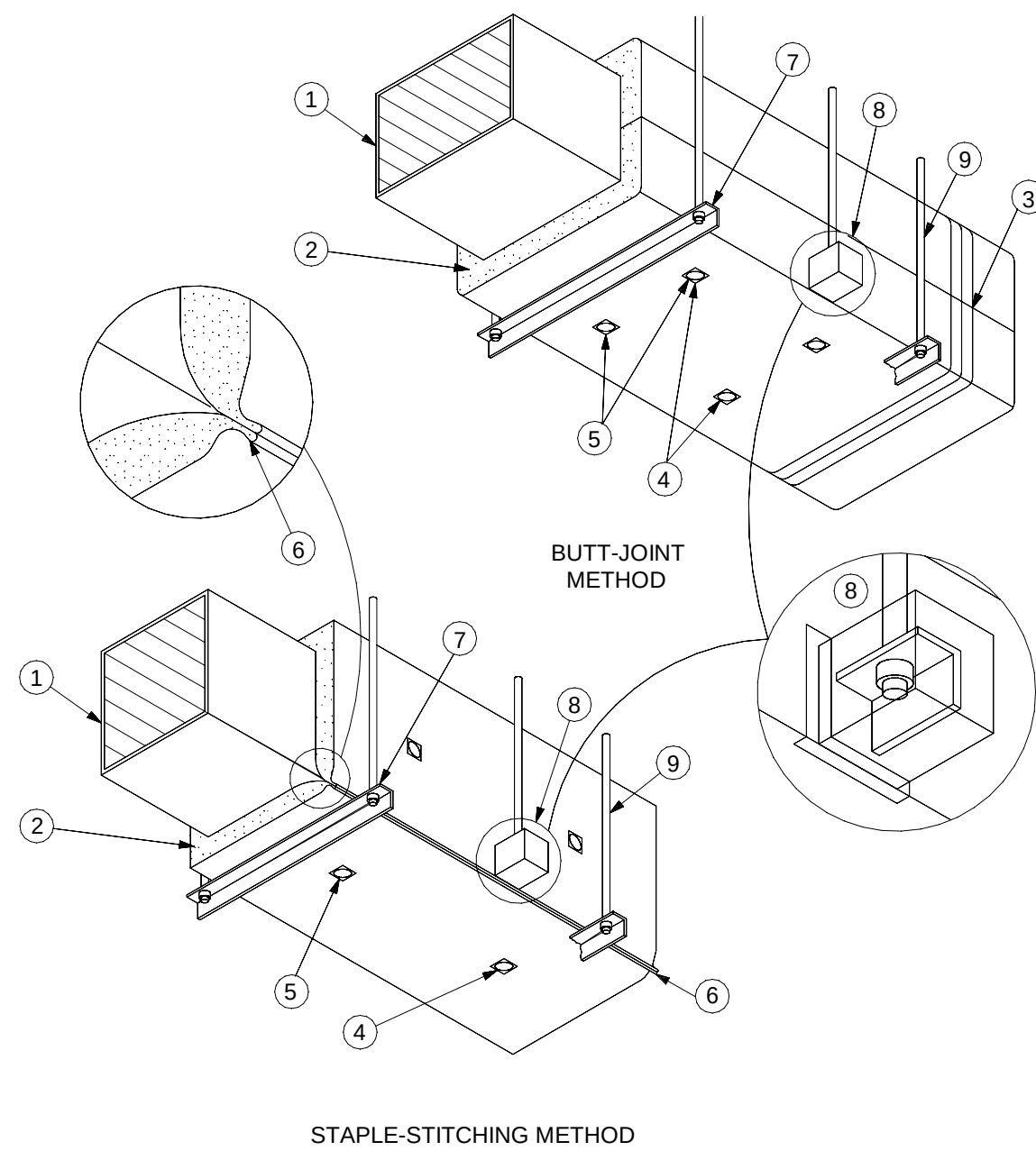
CRA Project # 23065

Phase: 90% CD

SHEET TITLE

HVAC DETAILS

M5.2



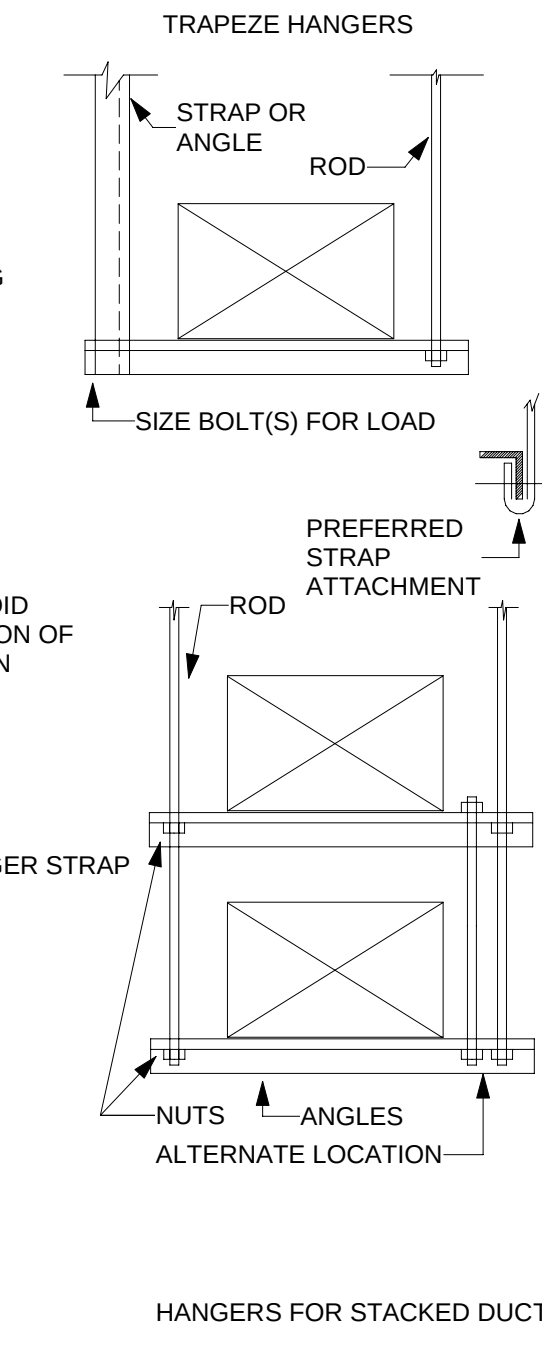
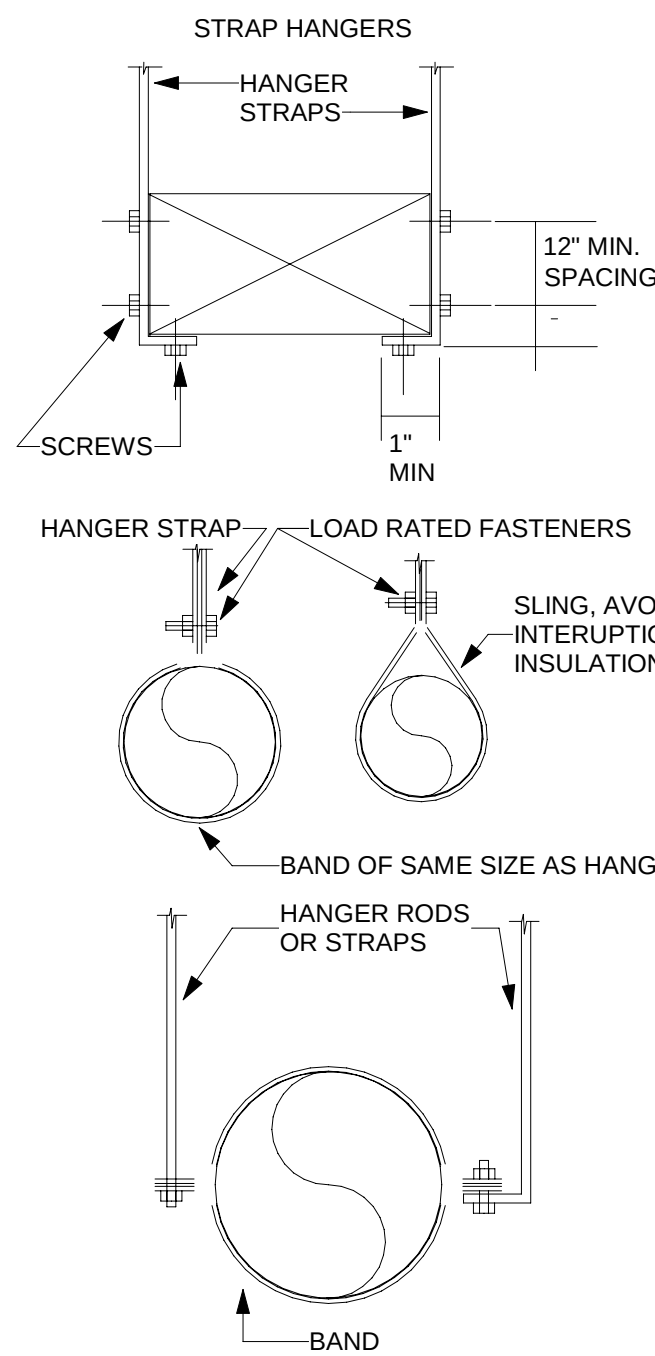
NOTES:

- 1 GALVANIZED METAL DUCT WITH SEALED SEAMS AND JOINTS USING PS-S POLY TYPE NO.P-301 PRODUCT.
- 2 BLANKET INSULATION WITH FACTORY-APPLIED VAPOR-RETARDER JACKET, 2" THICK R-6, 3/4 LB. CU. FT. DENSITY.
- 3 FACTORY LAP ALL SEALS (SEALED WITH ADHESIVE AND/OR STAPLES AND VAPOR-RETARDER TAPE). TAPE ALLOWS ALL JOINTS WITH FASON (SMACNA) ALUMINUM REINFORCED PRESSURE SENSITIVE TAPE, COAT EDGES, SEAMS, AND JOINTS WITH INSUL-COUSTIC PRODUCT BY "SURE-COAT M1-110" PRODUCT FIRE RESISTANT MASTIC.
- 4 MECHANICAL FASTENERS SUPPORTING INSULATION ON UNDERSIDE OF DUCTS OVER 24" WIDE (SPACE 3" MAXIMUM FROM THE BUTT JOINT).
- 5 VAPOR-RETARDER TAPE OVER TEARS AND PENETRATIONS OF THE VAPOR-RETARDER JACKET TO KEEP AIR TIGHT CONDITION.
- 6 ALTERNATE METHOD OF LAP SEAL - LONGITUDINAL JOINT LAPPED AND FOLDED, THEN STAPLED SECURELY IN PLACE.
- 7 HANGER ON EXTERIOR OF INSULATION, ENCAPSULATE EXPOSED END OF ANGLE. SEAL WITH ADHESIVE OR VAPOR-RETARDER TAPE.
- 8 HANGER EMBEDDED IN INSULATION. ENCAPSULATE EXPOSED END OF ANGLE. SEAL WITH ADHESIVE OR VAPOR RETARDER TAPE.
- 9 COMPLETELY ENCAPSULATE HANGER ROD AND ANGLE. SEAL TOP PENETRATION. ENCAPSULATE AND SEAL STRAP HANGERS IN A SIMILAR MANNER.

1 BLANKET FIBERGLASS INSULATION DETAIL

No Scale

DUCT HANGER DETAILS



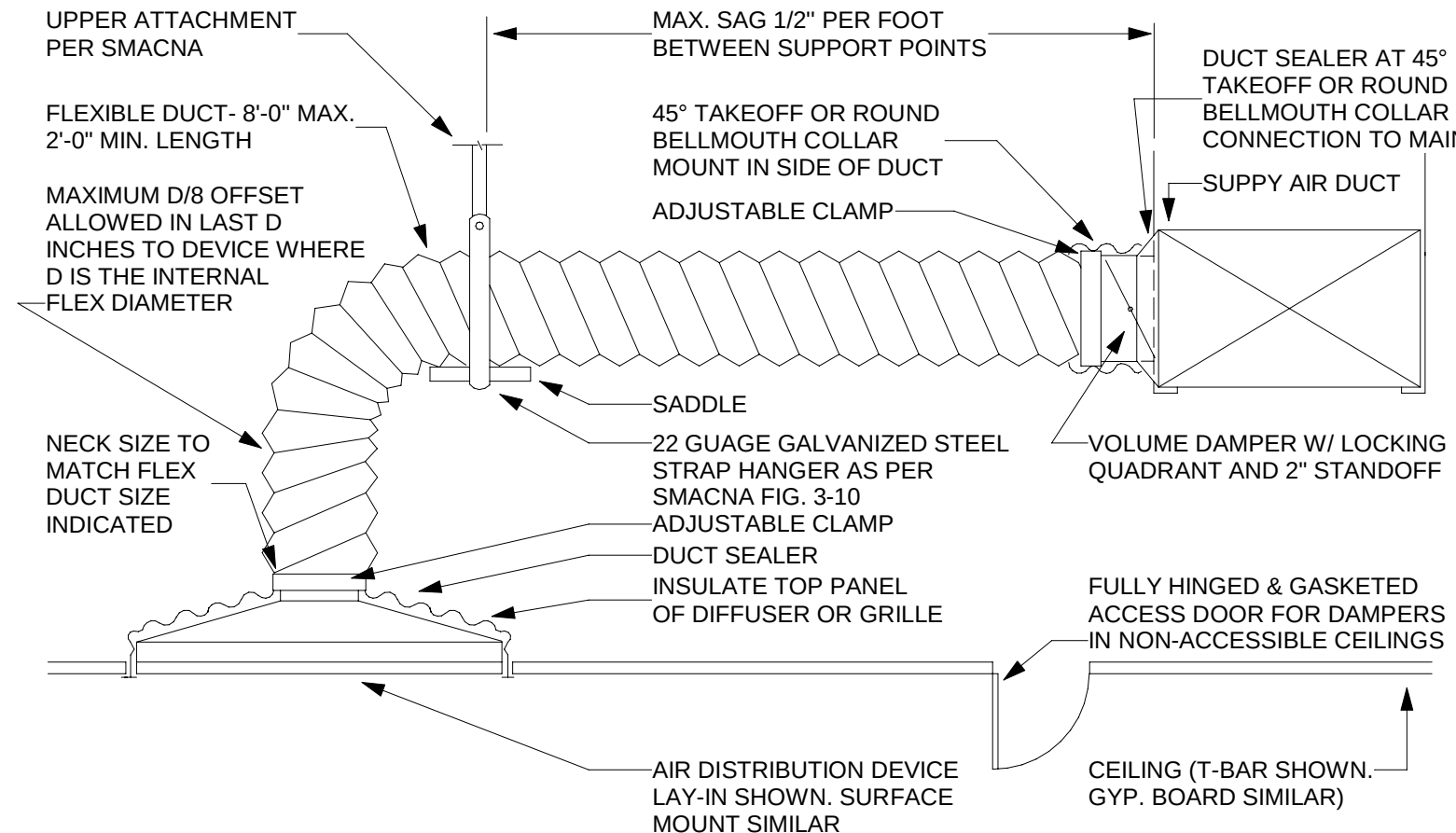
HANGERS FOR STACKED DUCTS

REINFORCEMENT MAY BE USED FOR ATTACHMENT IF IT QUALIFIES FOR BOTH DUCTS

DO NOT EXCEED LOAD RATING FOR METHOD USED.

2 HANGER DETAILS

No Scale

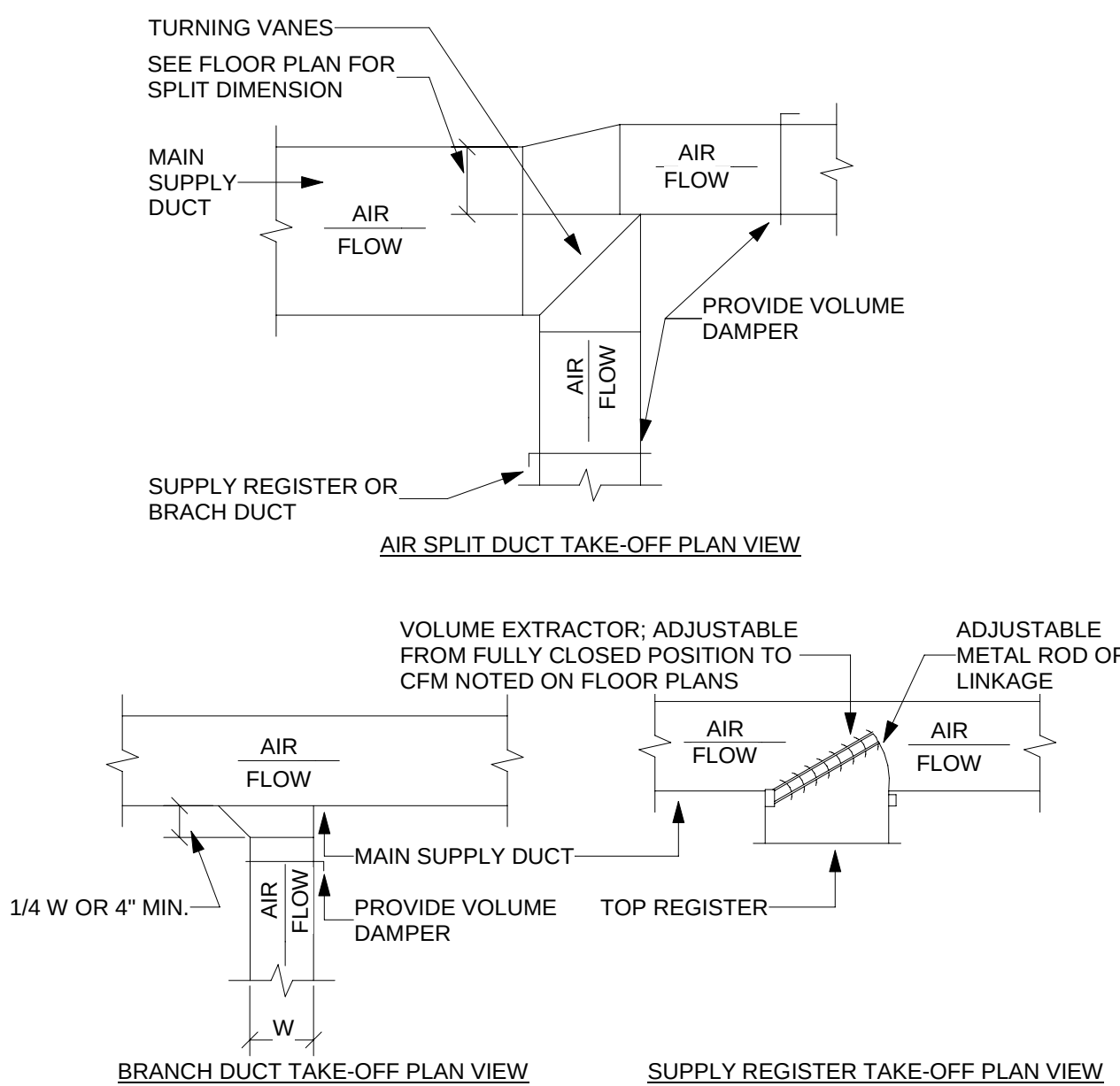


NOTES:

1. FLEXIBLE DUCTS SHALL BE IN ONE PIECE AND SHALL NOT BE SPLICED TOGETHER.
2. EXTEND FLEXIBLE DUCT INSULATION TO DUCT/DIFFUSER PANEL INSULATION AND SEAL WITH MASTIC.
3. FLEXIBLE AIR DUCT SHALL NOT EXCEED 8 FT. WHEN EXTENDED. ELBOW RADIUS SIZED FOR NO LESS THAN R/D = 1.0.
4. FLEXIBLE AIR DUCT SHALL NOT BE LESS THAN 5 FEET FOR ACOUSTICAL PURPOSES.

3 FLEXIBLE DUCT TAKEOFF DETAIL

No Scale

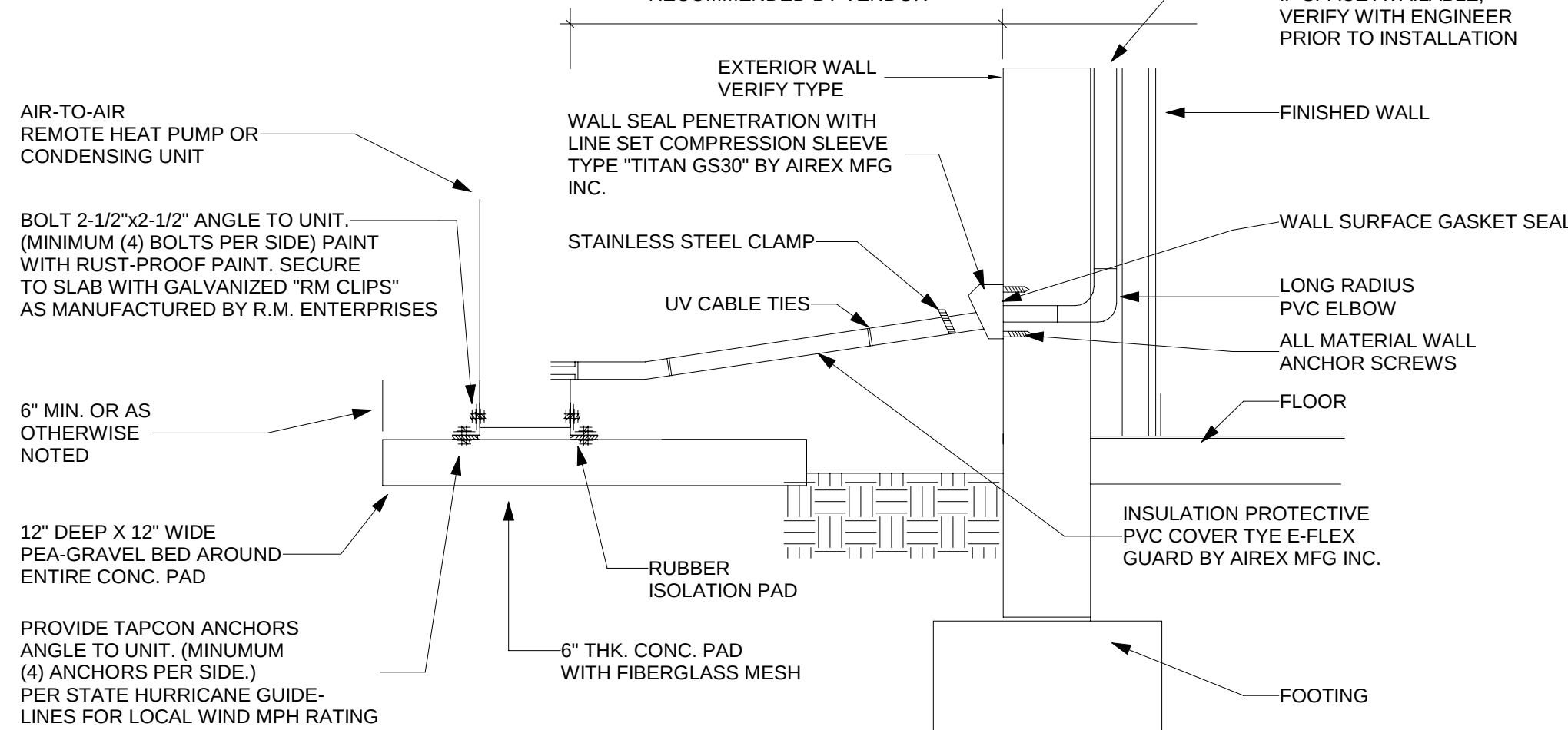


4 SUPPLY DUCTWORK TAKE-OFF DETAIL

No Scale

NOTE:

SEAL PIPE PENETRATION INTO EXTERIOR WALL WATER TIGHT. 6" MINIMUM WITH BACK OF UNIT TO WALL OR AS RECOMMENDED BY VENDOR. INSTALL REFRIGERANT PIPING IN ALUMINUM JACKET.



5 MINI SPLIT UNIT OUTDOOR INSTALLATION DETAIL

No Scale



HAVANA MEDICAL CENTER



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AIR HANDLER REMARKS:

1. INSTALL WITH MERV13 FILTER.
2. MANUFACTURER'S WIRED THERMOSTAT.
3. MOTORIZED OUTSIDE AIR DAMPER.
4. DRAIN PAN OVERFLOW SWITCH.
5. PROVIDE SINGLE POINT POWER CONNECTION WITH INTEGRAL DISCONNECT.
6. INCLUDE 5 KW ELECTRIC HEAT KIT.
7. UNOCCUPIED SETBACK AND OPTIMAL START SEQUENCES.

HEAT PUMP REMARKS:

1. SINGLE-POINT POWER.
2. INTEGRAL DISCONNECT.
3. FOLLOW EQUIPMENT MANUFACTURER'S GUIDELINES FOR UNIT CLEARANCE AND REFRIGERANT LINE SIZING.
4. COMPRESSOR SOUND BLANKET, CRANKCASE HEATER.
5. SECURED FOR LOCAL WIND RATING, SEE FRONT PAGE NOTE DESIGN CRITERIA.
6. UNITS' SEER MUST BE 16.7 OR GREATER TO MAINTAIN ECONOMIZER EXEMPTION.

985 SF X 8% = 80 SF
80 SF / 4 WINDOWS = 20 SF OPENING PER OPERABLE WINDOW

AIR DEVICE REMARKS:
1. PROVIDE MEANS OF THROUGH-FACE BALANCING WHERE MANUAL DAMPER WOULD OTHERWISE BE INACCESSIBLE, VCR9 OR EQUIVALENT.