

SPLIT SYSTEM HEAT PUMP WITH DX COOLING SCHEDULE																			
UNIT NO.	LOCATION	AREA SERVED	SUPPLY - FAN DATA				COOLING CAPACITY			HEATING CAPACITY	REFRIG. LINES		ELECTRICAL DATA			WEIGHT (LBS.)	CARRIER MANUFACTURER & MODEL AHU/HP	EFFICIENCY EER IEEER	NOTES
			TOTAL CFM	MIN/MAX O.A. CFM	MIN.EXT. S.P. (N.WG)	FAN RPM	MOTOR BHP	TOTAL MBH	SENSIBLE MBH	CAPACITY KW	SUCTION	LIQUID	VOLT/PH	MCA	MCCP				
AH-1 HP-1	SEE PLANS	SEE PLANS	4000	SEE SCH	0.94	BY MFG.	2.4	120.5	89.4	25	BY MFG.	BY MFG.	208/3 208/3	73.1 39	80 50	410 519	40RFQ12 38AUQD12	11.0 15.3	SEE BELOW

NOTES:
1. SECONDARY DRAIN PAN WITH FLOAT SWITCH
2. PROVIDE MANUFACTURERS AUTOMATIC CHANGEOVER HEAT/COOL 7 DAY PROGRAMMABLE THERMOSTAT.
3. DISCONNECT SWITCHES BY E.C.
4. PROVIDE CONDENSATE PUMP, IF REQUIRED
5. SINGLE CIRCUIT, DUAL STAGE REFRIGERANT OPTIONS.
6. 2 SPEED FAN CONTROLLER (VAF)
7. PROVIDE WITH MOTORIZED DAMPER AND OUTSIDE AIR TEMPERATURE SENSOR.

TABLE 403.3 OA REQUIREMENTS								
ROOM	AREA (SF)	AREA RATE	AREA CFM	PEOPLE CALCULATION BASIS	NO. OF PEOPLE	PEOPLE RATE	PEOPLE CFM	REQUIRED CFM
OFFICE	833	0.06 CFM/SF	50	5 P / 1000 SF	5	5 CFM / 1 P	15	65
CORR/UTIL	336	0.06 CFM/SF	20	-	-	-	-	20
BREAKROOM	1108	0.06 CFM/SF	67	50 P / 1000 SF	55	5 CFM / 1 P	275	342
STORAGE	201	0.12 CFM/SF	24	-	-	-	-	24

TOTAL OUTSIDE AIR REQUIRED = 451 CFM / 0.8 ZONE EFFECTIVENESS = 564 CFM
AH-1 SYSTEM: 955 CFM
TOTAL OUTSIDE AIR PROVIDED = 955 CFM

FAN SCHEDULE												
TAG	SERVICE	AREA SERVED	MANUFACTURER & MODEL #	FAN TYPE & ARRANGEMENT	AIRFLOW (CFM)	S.P.	RPM	DRIVE TYPE	ELECTRICAL DATA		CONTROL	NOTES
									HP/W	VOLT/PH		
EF-1,2	EXHAUST	SEE PLANS	GREENHECK SP-A110	CEILING	75	0.3	BY MFG.	DIRECT	18 W	120/1Ø	A	1-7
EF-3	EXHAUST	SEE PLANS	GREENHECK SP-A110	CEILING	75	0.3	BY MFG.	DIRECT	18 W	120/1Ø	B	1-7
EF-4	EXHAUST	MEN'S TOILET	GREENHECK SP-A390	CEILING	280	0.3	BY MFG.	DIRECT	135 W	120/1Ø	A	1-7
EF-5	EXHAUST	MEN'S LOCKER	GREENHECK SP-B150	CEILING	100	0.3	BY MFG.	DIRECT	83 W	120/1Ø	A	1-7
EF-6	EXHAUST	STORAGE 113	GREENHECK SP-A510	CEILING	350	0.3	BY MFG.	DIRECT	224 W	120/1Ø	C	1-7

NOTES:
1. GRAVITY TYPE BACKDRAFT DAMPER
2. COLOR BY ARCHITECT
3. INTEGRAL DISCONNECT
4. PROVIDE ROOF OR WALL CAP (SEE PLANS)
5. UL
6. VIBRATION ISOLATION
7. PROVIDE WITH SPEED CONTROLLER

CONTROL:
A. INTERLOCK W/ LIGHTS
B. SEPARATE SWITCH BY EC
C. THERMOSTAT

ELECTRIC WALL HEATER SCHEDULE					
TAG	AREA SERVED	MANUFACTURER & MODEL #	HEATING CAP. (KW)	ELECTRICAL DATA VOLT/PH	NOTES
EH-1	STORAGE 113	MARKEL F1F5103N	3.3	208V/1Ø	SEE BELOW

NOTES:
1. PROVIDE WITH MFG'S WALL MOUNT BRACKET
2. INTEGRAL TAMPER-RESISTANT THERMOSTAT
3. INTEGRAL DISCONNECT
4. FAN DELAY
5. UL RATED
6. COORDINATE SELECTION WITH OWNER AND ELECTRICAL CONTRACTOR PRIOR TO PRICING AND INSTALLATION

DIFFUSER SCHEDULE											
SYMBOL	CFM	NECK SIZE	MODULE SIZE	FRAME TYPE	PATTERN	DAMPER	MATERIAL	SERVICE	FINISH	MANUFACTURER & MODEL No.	NOTES
(A)	AS NOTED	AS NOTED	AS NOTED	MATCH CEILING	4-WAY UNO	NO	ALUM.	SUPPLY	NOTE 2	TITUS TDC	1-4
(B)	AS NOTED	AS NOTED	AS NOTED	MATCH CEILING	PERFORATED	NO	ALUM.	RETURN	NOTE 2	TITUS PAR	1-4

NOTES:
1. DIFFUSER DESIGNATIONS ON PLANS AS FOLLOWS:
DIFFUSER OR NECK SIZE: $\frac{12 \times 12}{300}$ (A) DIFFUSER TYPE AS NOTED ABOVE
AIR QUANTITY
2. COORDINATE COLOR WITH ARCHITECT/OWNER PRIOR TO ORDERING.
3. ALL EXPOSED DUCT AND DIFFUSERS TO BE PAINTED AS DIRECTED BY ARCHITECT.
4. PROVIDE PROPER MOUNT FOR CEILING TYPE LAY-IN OR GYPSUM CEILING.

COOLING ONLY MINISPLIT																
SYMBOL	DESCRIPTION	SUPPLY FAN	COOLING				FILTERS	CONDENSER SECTION			ELECTRICAL	COOLING TONNAGE	UNIT WEIGHT	NOTES		
			E.A.T.		MBH			TYPE	SUMMER TEMP	WINTER TEMP					COMPRESSOR	
			DB	WB	TH	SH									SEER	KW
AH-2	MITSUBISHI AIR HANDLER PKA-A12HA7	420-530	80.0	67.0	12.0	10.1	PERM	95	55	20.8		SEE NOTE 1	1	46		
CU-2	MITSUBISHI CONDENSING UNIT PUY-A12NKA7							95	55		0.4	208/1	1	92	MCA=11; MCCP=15	

NOTES:
1. INDOOR UNIT POWER IS PROVIDED VIA LOW VOLTAGE WIRING FROM OUTDOOR UNIT TO INDOOR UNIT, INSTALL PER MANUFACTURE'S RECOMMENDATIONS.

MECHANICAL GENERAL NOTES

- FURNISH ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH RECOMMENDED PRACTICE AND ALL APPLICABLE CODES.
- DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS & REFLECTED CEILING PLANS FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- ALL MECHANICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
- MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR, EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER. REFRIGERANT COMPRESSORS SHALL BE GUARANTEED FOR FIVE YEARS.

DRAWINGS ARE DIAGRAMMATIC AND MAY NOT SHOW ALL REQUIRED FITTINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TYPE, SIZE AND LOCATION OF ALL AIR DEVICES, DUCTWORK, PIPING AND EQUIPMENT WITH THE CEILING PLAN, LIGHTS, STRUCTURAL ELEMENTS AND OTHER TRADES. CONTRACTOR TO FURNISH AND INSTALL ALL BENDS, OFFSETS, ELBOWS, ETC. AS REQUIRED. VERIFY ALL CLEARANCES PRIOR TO FABRICATING DUCTWORK OR ORDERING EQUIPMENT.

- CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS AND INSTALLING THE WORK IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.
- DUCTWORK
 - ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS WITH A MINIMUM PRESSURE CLASSIFICATION OF 2", SEAL CLASS C, WITH A MAXIMUM LEAKAGE RATE OF 5%.
 - ALL SQUARE ELBOWS SHALL HAVE TURNING VANES. ALL RECTANGULAR ELBOWS SHALL BE LONG RADIUS UNLESS SPACE LIMITATIONS REQUIRE SQUARE ELBOWS.
 - ALL DUCT DIMENSIONS SHOWN ARE INTERIOR CLEAR DIMENSIONS.
 - PROVIDE A MANUAL BALANCING DAMPER AT ALL SUPPLY AND RETURN BRANCH TAKEOFFS.
 - FLEXIBLE DUCT, IF SHOWN ON DRAWINGS, SHALL BE INSULATED ROUND DUCT WITH AN OUTER GLASS REINFORCED SILVER NYLAR JACKET ENCLOSING MIN. 1-1/2" THICK GLASS FIBER INSULATION AROUND A CONTINUOUS INNER LINER, AND SHALL CONFORM TO THE REQUIREMENTS OF U.L. 181 FOR CLASS 1 FLEXIBLE AIR DUCTS. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 6 FEET. "R" VALUE TO MEET/EXCEED ENERGY CODE (R=5)
 - ALL DUCT SYSTEMS ARE TO BE PER U.L. STANDARDS. DUCTS ARE TO BE INSTALLED WITH NO RESTRICTIONS AND AN ABSOLUTE MINIMUM AMOUNT OF AIR LEAKAGE.
 - ALL DUCT INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS AND PARTITIONS.
- PIPING
 - CONDENSATE DRAINS SHALL BE SCHEDULE 40 PVC OR TYPE L COPPER WITH SOLDERED JOINTS.
- INSULATION
 - DUCT LINER - FIBROUS GLASS DUCT LINER, MINIMUM 1-1/2" THICK WITH R-VALUE TO MEET LOCAL ENERGY CODE, WITH COATED SURFACE EXPOSED TO AIR STREAM. APPLY WITH MECHANICAL FASTENERS AND 100% COVERAGE OF ADHESIVE.
 - DUCT WRAP - MINERAL FIBER BLANKET, MINIMUM 2" THICK WITH R-VALUE TO MEET LOCAL ENERGY CODE, WITH REINFORCED FOIL AND PAPER VAPOR RETARDANT JACKET. APPLY WITH MECHANICAL FASTENERS AND ADHESIVE.
 - INTERIOR CONDENSATE DRAINS - INSULATE WITH 1/2" THICK FLEXIBLE ELASTOMERIC PIPE INSULATION.
 - AIR DISTRIBUTION - INSULATE TOP-SIDE AS REQUIRED PER CODE
- ALL PIPING, DUCTS, VENTS, ETC., EXTENDING THROUGH WALLS & ROOF SHALL BE FLASHED & COUNTER-FLASHED IN A WATERPROOF MANNER.
- EXTEND ALL CONDENSATE DRAINS TO JANITORS SINK, FLOOR DRAIN, SPLASH BLOCK OR AS REQUIRED PER CODE. DRAINS FROM AHU'S SHALL BE TRAPPED. SLOPE 1/8" PER FOOT.
- LOCATE ALL THERMOSTATS AND SWITCHES 4'-0" ABOVE FINISHED FLOOR. FURNISH A THERMOSTAT FOR EVERY DEVICE REQUIRING ONE WHETHER SHOWN ON DRAWINGS OR NOT.
- ALL EQUIPMENT SHALL BE INSTALLED PER CODE & MANUFACTURER'S REQUIREMENTS FOR SERVICE AND ACCESS CLEARANCES.
- ALL EQUIPMENT SHALL BE U.L. LISTED.
- MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE A COMPLETE BALANCING REPORT IN ACCORDANCE WITH NEBB OR AABC STANDARDS.
- ALL CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR.
- DUCT SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY AND RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS OR DECONTAMINATION EQUIPMENT UPON ACTIVATION THE SMOKE DETECTOR SHALL SHUT DOWN THE AIR HANDLING UNIT. * IF THERE IS A FIRE ALARM SYSTEM: DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR. ACTIVATION OF A DUCT SMOKE DETECTORS SHALL INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION. * IF THERE IS NOT A FIRE ALARM SYSTEM: DETECTORS SHALL BE FURNISHED AND WIRED AND INSTALLED BY THE MECHANICAL CONTRACTOR. ACTIVATION OF A DUCT SMOKE DETECTORS SHALL INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
- MAINTAIN A MINIMUM 10'-0" BETWEEN OUTDOOR AIR INTAKES AND EXHAUST FAN DISCHARGE AND PLUMBING VENTS, ETC. FIELD COORDINATE.
- PROVIDE 4" THICK CONCRETE PAD FOR ALL GROUND MOUNTED OUTDOOR HVAC UNITS. PADS SHALL BE MINIMUM 6" LARGER THAN UNIT ON ALL SIDES.
- RUN DUCT UP WITHIN STRUCTURE OR THROUGH JOIST WEBS WHERE POSSIBLE & WHERE REQUIRED TO MAINTAIN CEILING HEIGHTS. PROVIDE OFFSETS IN DUCT WHERE REQ'D WITH MAX. 45° ELBOWS. MAKE BRANCH TAPS OFF TOP, SIDES OR BOTTOM AS REQ'D. NO BACK TO BACK 90° ELBOWS ALLOWED.
- REFRIGERANT PIPING SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
- ALL EQUIPMENT SHALL BE LABELED ACCORDING TO NUMBERING / IDENTIFICATION SYSTEM PER PLANS.
- ALL EQUIPMENT SUPPORT IS REQUIRED TO MEET 1621 NCSBC.
- ON MAKING PIPE CONNECTIONS TO EQUIPMENT, CARE SHOULD BE TAKEN TO ARRANGE PIPES SO AS NOT TO INTERFERE WITH OPENING OF ACCESS DOORS.
- ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO CONDENSING UNITS AND AIR HANDLERS. ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR.
- PRIOR TO BEGINNING ANY WORK, MECHANICAL CONTRACTOR IS RESPONSIBLE TO NOTIFY THE OWNER'S REPRESENTATIVE, ARCHITECT OR ENGINEER IF THE MECHANICAL DESIGN CONFLICTS WITH EXISTING OR UNFORESEEN FIELD CONDITIONS.
- PROVIDE A CLEAN SET OF FILTERS FOR ALL AIR HANDLING EQUIPMENT AT SUBSTANTIAL COMPLETION.

MECHANICAL SHEET INDEX	
MO.1	MECHANICAL NOTES AND SCHEDULES
M1.1	MECHANICAL FLOOR PLAN AND NOTES
M2.1	MECHANICAL DETAILS

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DESIGNED: GWA
DRAWN: GWA
CHECKED: GWA
DATE: 8-13-24
PROJECT NO: 24.080

NORFOLK SOUTHERN CORPORATION
CAMBRIA YARD
CHRISTIANSBURG, VIRGINIA

MECHANICAL NOTES AND SCHEDULES

SHEET NO.
MO.1

**STORAGE
EXHAUST CALCULATION**

STORAGE ROOM 113 (BASED ON 10 AIR CHANGES PER HOUR)
 155 SQFT x 11.5 FT CEILING HEIGHT = 1783 CUBIC FEET.
 1783 CUBIC FEET x 10 AIR CHANGES PER HOUR = 17830 CUBIC FEET PER HOUR REQUIRED.
 17830 CUBIC FEET PER HOUR / 60 MINUTES PER HOUR = 297 CFM MINIMUM REQUIRED, 350 CFM IS PROVIDED VIA EF-6.

STORAGE ROOM 113 (BASED ON 2 CFM PER SQFT)
 155 SQFT x 2 = 310 CFM
 310 CFM MINIMUM REQUIRED, 350 CFM IS PROVIDED VIA EF-6.

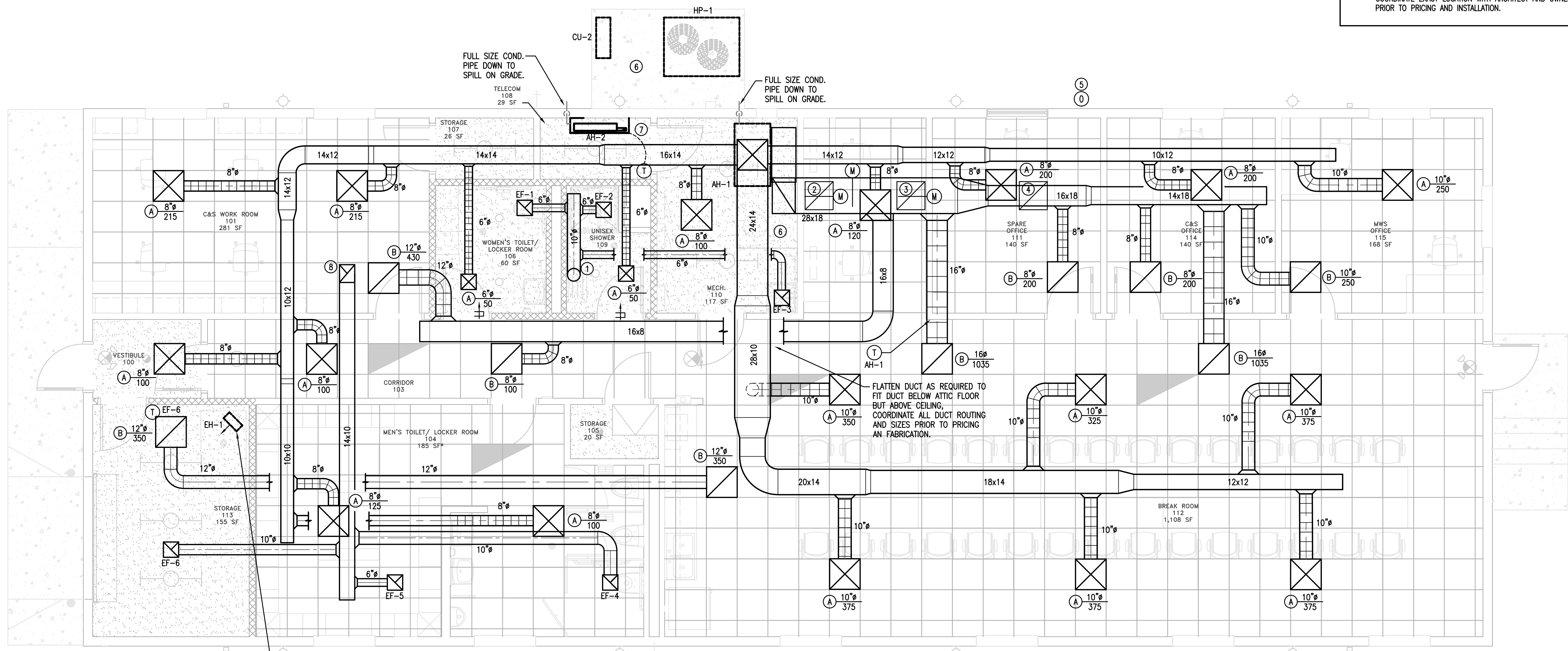
KEYED NOTES

- ① 10" EXHAUST AIR DUCT UP TO APPROVED ROOF CAP. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO PRICING AND INSTALLATION.
- ② 20x20 OUTSIDE AIR DUCT DOWN FROM APPROVED ROOF CAP. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO PRICING AND INSTALLATION.
- ③ 20x20 RELIEF AIR DUCT CONNECTION AT RETURN DUCT.
- ④ APPROXIMATE LOCATION OF 20x20 RELIEF AIR DUCT UP TO APPROVED ROOF CAP AT LEAST 10 FEET FROM OUTSIDE AIR ROOF CAP. DUCT IN ATTIC SPACE TO RETURN AIR DUCT NOTED AT 3 SEE DETAIL ON SHEET M2.1.
- ⑤ OUTSIDE AIR TEMPERATURE SENSOR APPROXIMATE LOCATION MOUNTED AT BOTTOM SIDE OF ROOF EVE FOR MOTORIZED DAMPER ECONOMIZER FUNCTION. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO PRICING AND INSTALLATION.
- ⑥ COORDINATE 4" EQUIPMENT PAD DIMENSIONS WITH ARCHITECT / OWNER. ENSURE MANUFACTURER'S RECOMMENDED CLEARANCES ARE PROVIDED.
- ⑦ WALL MOUNTED MINI-SPLIT MOUNTED HIGH ON WALL, COORDINATE EXACT LOCATION WITH OWNER PRIOR TO PRICING AND INSTALLATION.
- ⑧ 14x10 EXHAUST AIR DUCT UP TO APPROVED ROOF CAP. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO PRICING AND INSTALLATION.

MECHANICAL LEGEND

	CEILING SUPPLY AIR DIFFUSER
	CEILING RETURN AIR DIFFUSER
	EXHAUST FAN
	EXISTING THERMOSTAT / UNIT CONTROL
	NEW ROUND METAL DUCT
	NEW ROUND FLEX DUCT
	DUCT ELBOW W/TURNING VANES
	CONNECT TO EXISTING
	NEW TRANSFER GRILLE
	CONDENSATE PIPE
AHU	AIR HANDLING UNIT
CFM	CUBIC FEET PER MINUTE
AFF	ABOVE FINISHED FLOOR
EER	ENERGY EFFICIENCY RATIO
SP	STATIC PRESSURE
	DOOR UNDER CUT 3/4"
BDD	BACK DRAFT DAMPER
	DUCT SMOKE DETECTOR
	MOTORIZED DAMPER
	OUTSIDE AIR TEMPERATURE SENSOR
V.D.	VOLUME DAMPER
	TURNING VANES

- NOTES:**
- 1 COORDINATE EXACT THERMOSTAT LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO PRICING AND INSTALLATION.
 - 2 ENSURE ALL EQUIPMENT HAS PROPER CLEARANCE AS REQUIRED BY THE MANUFACTURER.
 - 3 COORDINATE EXACT LOCATION OF WALL HEATER WITH OWNER AND OTHER TRADES PRIOR TO PRICING AND INSTALLATION.



1 MECHANICAL FLOOR PLAN
 SCALE: 1/4" = 1'-0"

SUSPENDED HEATER ON MFG'S WALL MOUNT, MOUNTED HIGH. COORDINATE EXACT LOCATION WITH OWNER AND ELECTRICAL CONTRACTOR PRIOR TO PRICING AND INSTALLATION.

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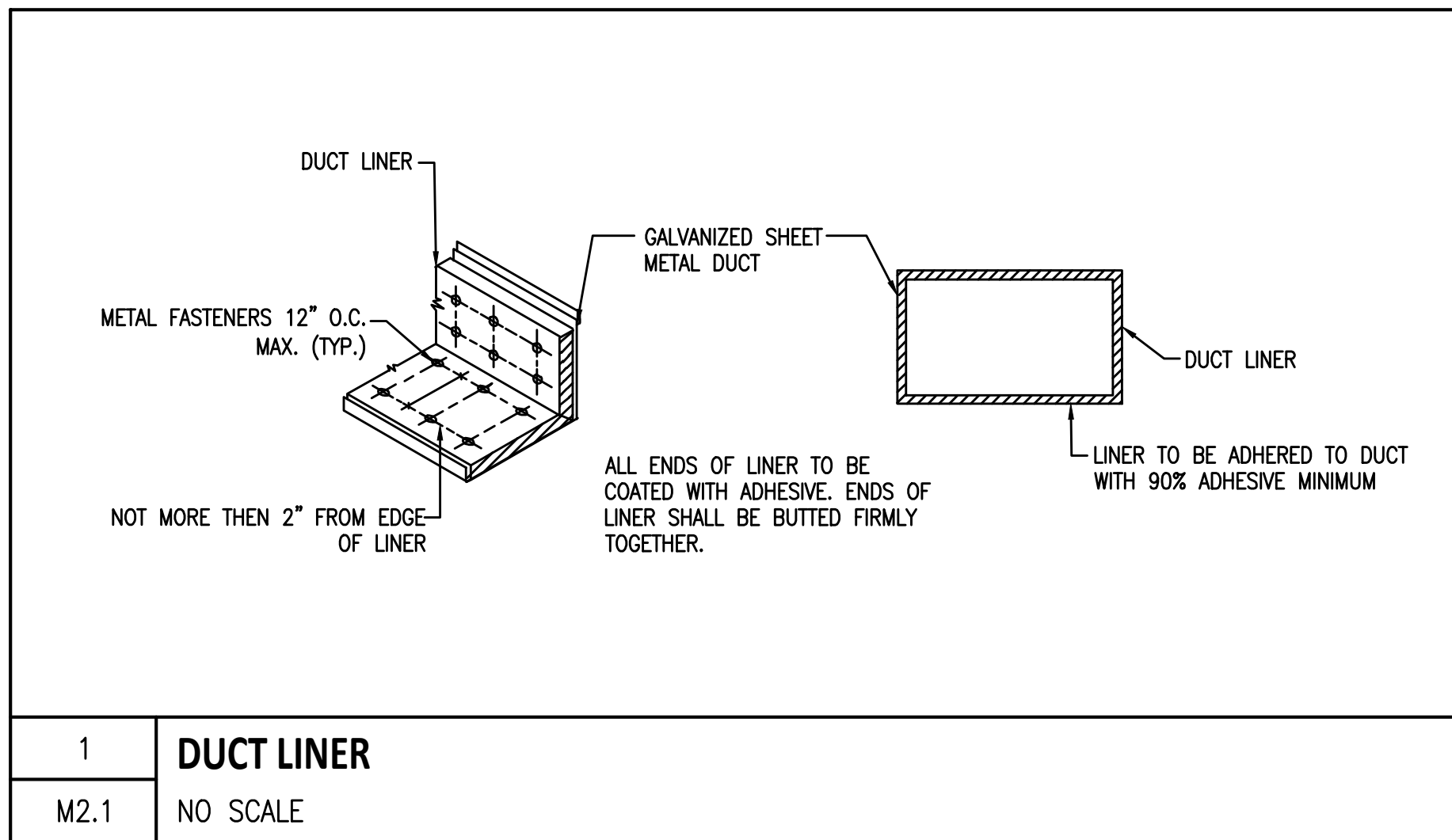
L.A. GATES Company
 BECKLEY, HURRICANE, & BLUEFIELD WEST VIRGINIA
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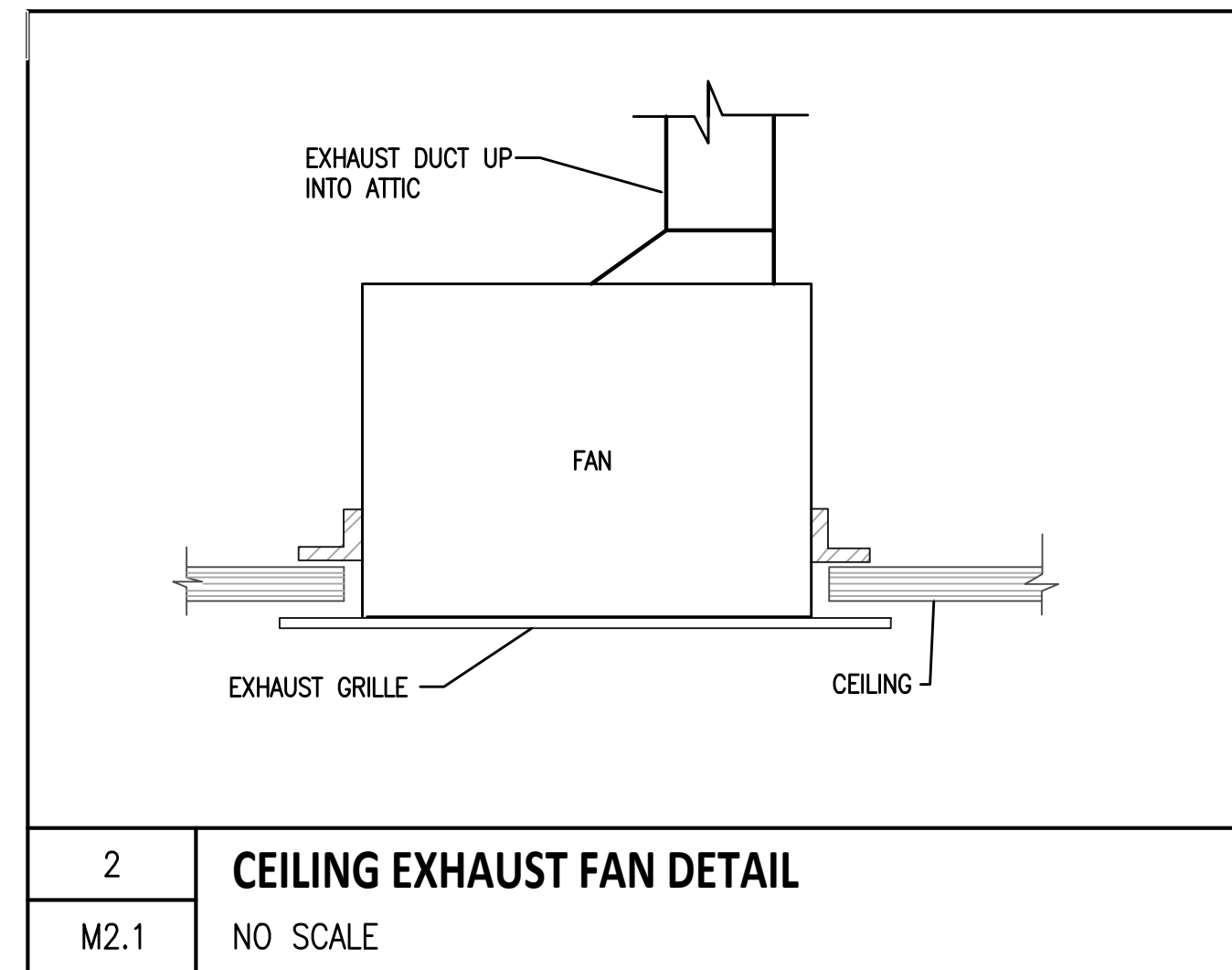
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MECHANICAL FLOOR PLAN
 AND NOTES

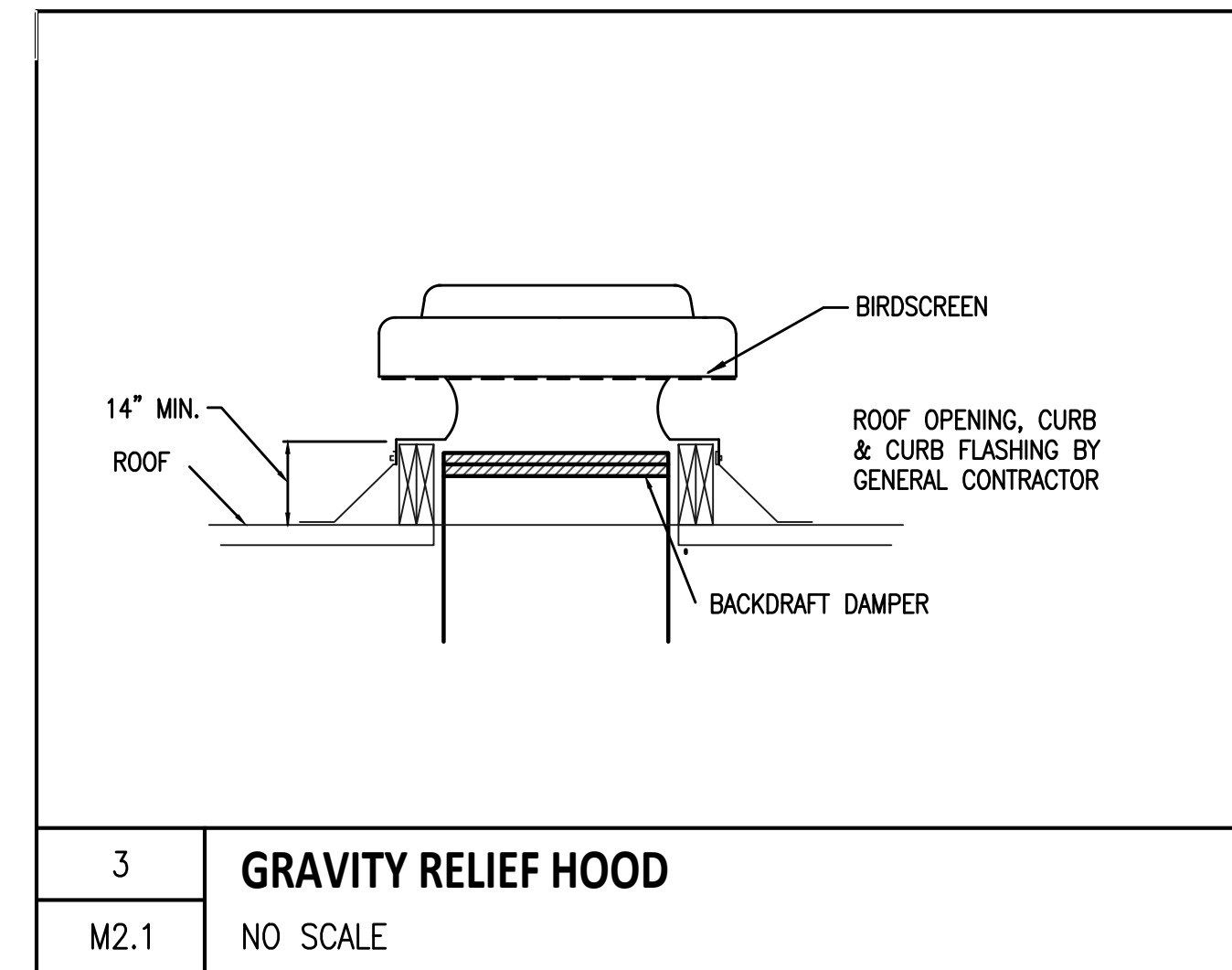
SHEET NO.
M1.1



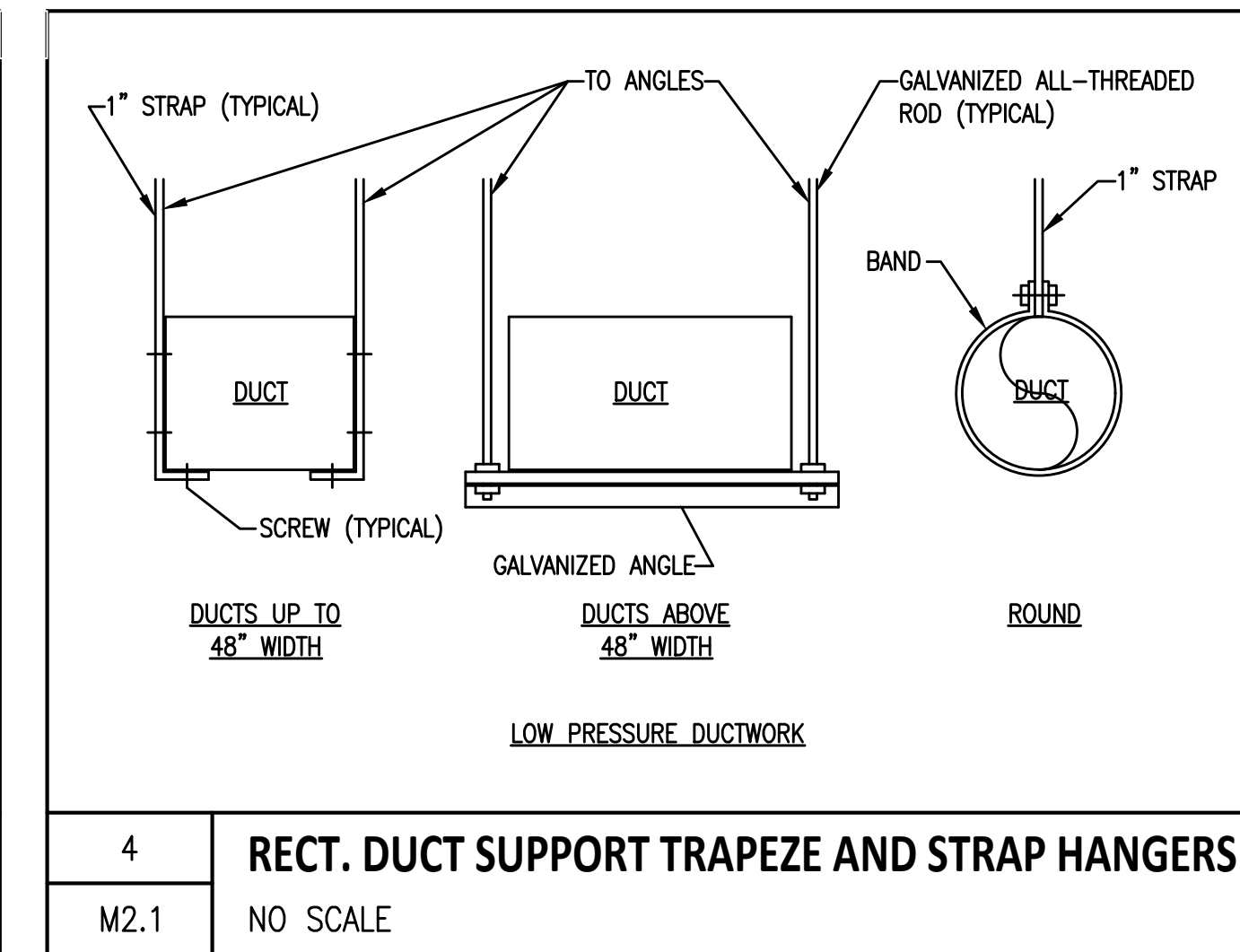
1 DUCT LINER
M2.1 NO SCALE



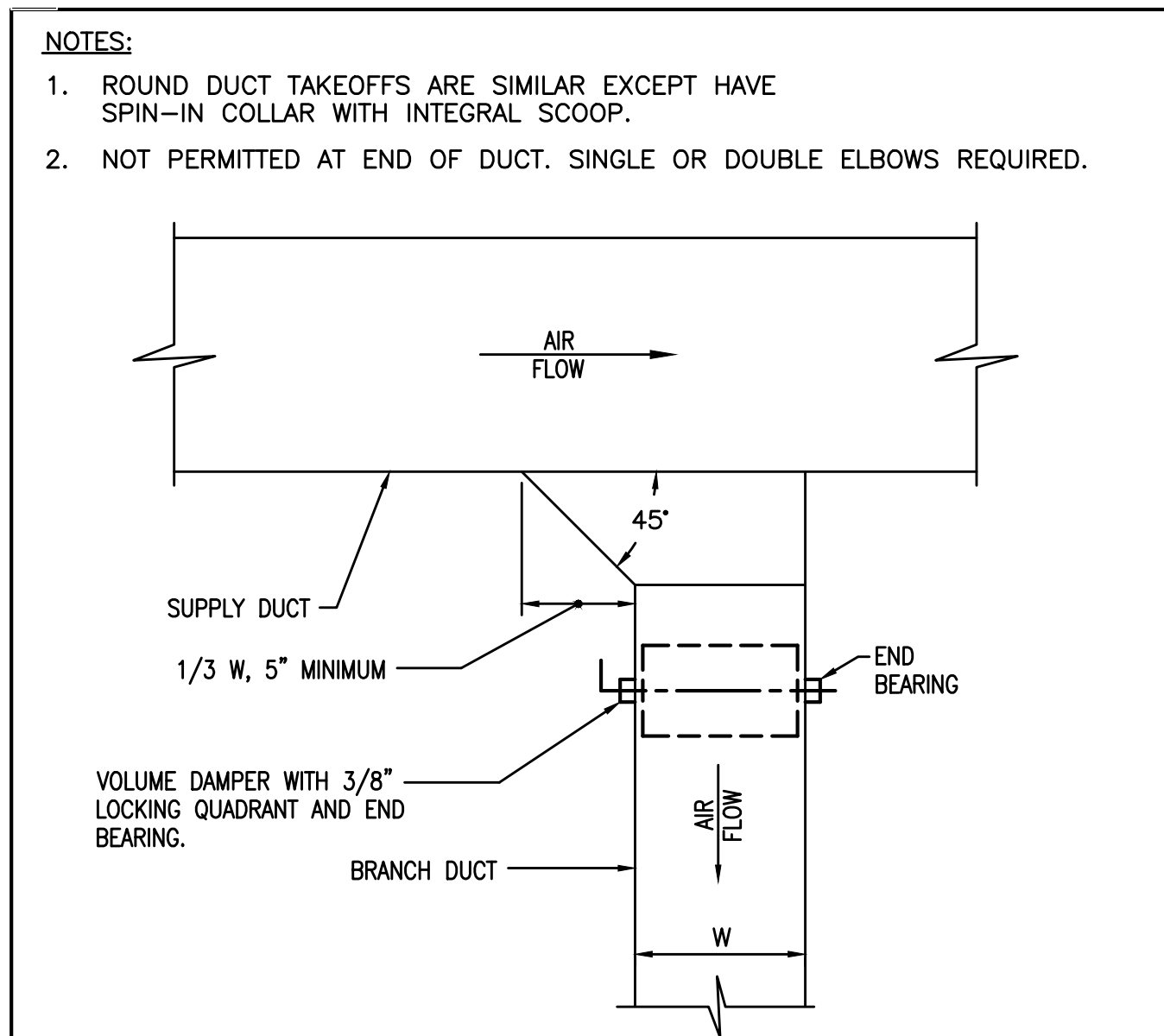
2 CEILING EXHAUST FAN DETAIL
M2.1 NO SCALE



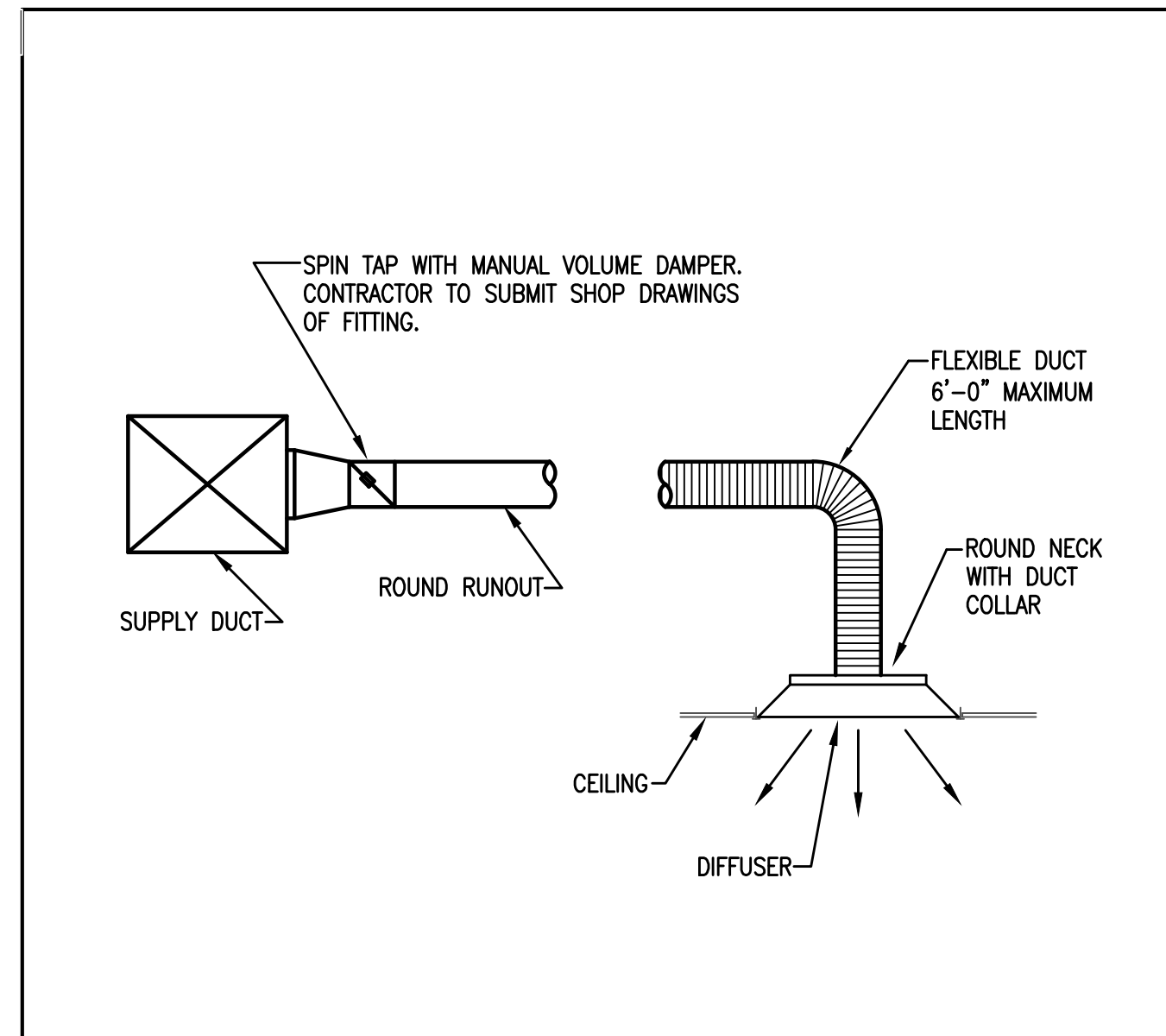
3 GRAVITY RELIEF HOOD
M2.1 NO SCALE



4 RECT. DUCT SUPPORT TRAPEZE AND STRAP HANGERS
M2.1 NO SCALE



5 RECTANGULAR SUPPLY TAKEOFF w/ SHOE TAP
M2.1 NO SCALE



6 SPIN TAP TO ROUND NECK DIFFUSER
M2.1 NO SCALE

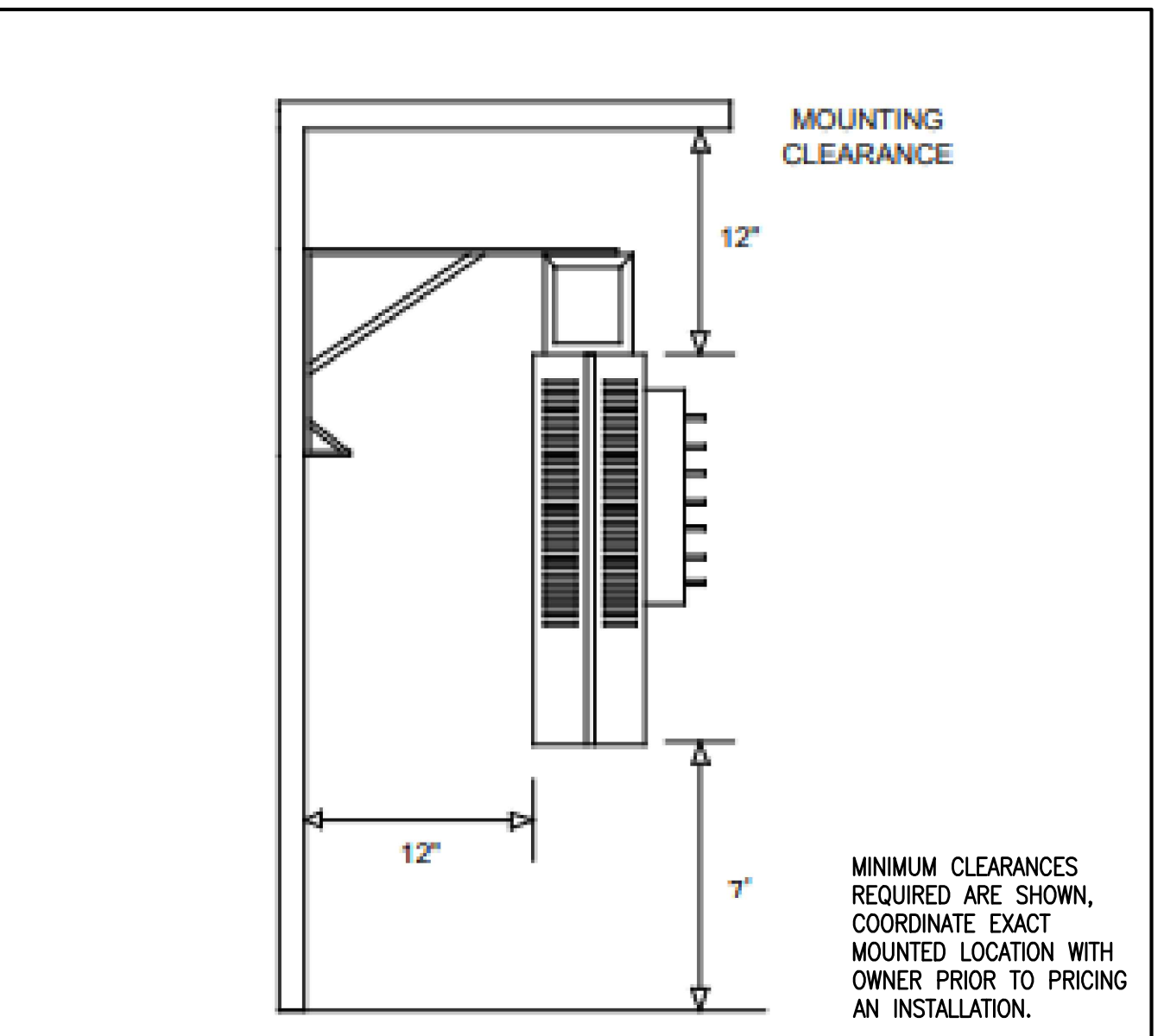
WHERE VAPOR RETARDER IS REQUIRED CLOSE JOINTS WITH PRESSURE SENSITIVE TAPE OR GLASS FABRIC AND MASTIC.

NOTES:

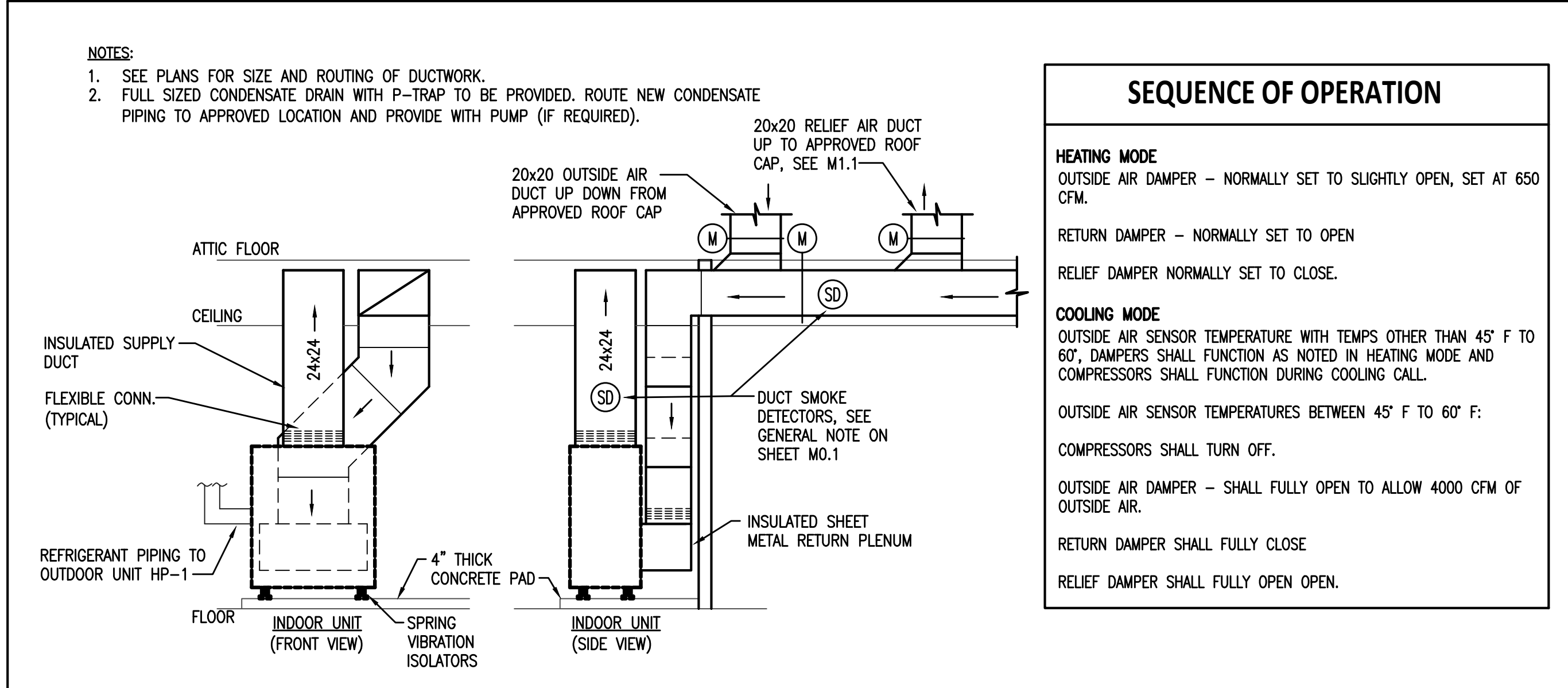
- INSULATION SHALL BE FIRMLY BUTTED AT ALL JOINTS WITH A MAXIMUM ALLOWABLE COMPRESSION OF 25%.
- ALL SEAMS SHALL OVERLAP A MINIMUM OF 2" AND BE STAPLED APPROXIMATELY 6" ON CENTER WITH OUTWARD CLINCHING STAPLES. THESE SEAMS SHOULD BE FINISHED WITH COMPAC #120 PRESSURE SENSITIVE FOIL TAPE OR GLASS FABRIC AND VAPOR RETARDANT MASTIC.
- PRESSURE SENSITIVE TAPES AND GLASS CLOTH SHALL BE A MINIMUM 3" WIDE.
- DO NOT USE A BONDING ADHESIVE TO ATTACH THE DUCT WRAP TO THE DUCT.
- FOR RECTANGULAR DUCTS OVER 24" WIDE, DUCT WRAP SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF THE DUCTWORK WITH MECHANICAL FASTENERS ON 18" CENTERS TO REDUCE SAGGING. WASHERS SHALL BE APPLIED WITHOUT COMPRESSING THE INSULATION.
- ON DUCTS CONVEYING COOL AIR, ALL SEAMS, JOINTS, PENETRATIONS, AND DAMAGE TO THE FACING SHALL BE SEALED WITH VAPOR RETARDANT MASTIC OR PRESSURE SENSITIVE TAPES THAT HAVE MATERIAL SIMILAR TO THE FACING.
- DO NOT PIN THE SIDES OR TOP OF THE DUCTWORK REGARDLESS OF THE SIZE OF THE DUCT. DO NOT USE WIRE TO SECURE THE WRAP TO THE DUCTWORK.

STRETCH OUTS				
LABELED THICKNESS	INSTALLED COMPRESSED THICKNESS	ROUND	SQUARE	RECTANGULAR
1 1/2"	1 1/8"	P+9 1/2"	P+8"	P+7"
2"	1 1/2"	P+12"	P+10"	P+8"
2 3/16"	1 5/8"	P+13"	P+11"	P+8 1/2"
2 1/2"	1 7/8"	P+14 1/2"	P+12 1/2"	P+9 1/2"
3"	2 1/4"	P+17"	P+14 1/2"	P+11 1/2"

7 DUCT WRAP
M2.1 NO SCALE



8 ELECTRIC UNIT HEATER WITH WALL BRACKET
M2.1 NO SCALE



8 VERTICALLY MOUNTED AIR HANDLER UNIT DETAIL
M2.1 NO SCALE

SEQUENCE OF OPERATION

HEATING MODE
OUTSIDE AIR DAMPER - NORMALLY SET TO SLIGHTLY OPEN, SET AT 650 CFM.
RETURN DAMPER - NORMALLY SET TO OPEN
RELIEF DAMPER NORMALLY SET TO CLOSE.

COOLING MODE
OUTSIDE AIR SENSOR TEMPERATURE WITH TEMPS OTHER THAN 45° F TO 60°, DAMPERS SHALL FUNCTION AS NOTED IN HEATING MODE AND COMPRESSORS SHALL FUNCTION DURING COOLING CALL.
OUTSIDE AIR SENSOR TEMPERATURES BETWEEN 45° F TO 60° F:
COMPRESSORS SHALL TURN OFF.
OUTSIDE AIR DAMPER - SHALL FULLY OPEN TO ALLOW 4000 CFM OF OUTSIDE AIR.
RETURN DAMPER SHALL FULLY CLOSE
RELIEF DAMPER SHALL FULLY OPEN OPEN.

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SHEET NO.
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