

SEISMIC DESIGN CATEGORY D

GENERAL NOTES

- A. PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.
- B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTERS 26 TO 29 OF ASCE 7-16.
- C. WHERE AN INCREASED ADDITION TO WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.
- D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.
- E. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
- F. USE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.
- G. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL.
- H. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.
- I. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAY AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

COMPONENT IDENTIFICATION		COMPONENT IMPORTANCE FACTOR (ip)	
		1.0	
		SEISMIC RESTRAINT REQUIREMENT	ASCE 7 REFERENCE
ROOF MOUNTED		RESTRAIN ALL (SEE NOTE 1.2)	13.1.4.6
FLOOR MOUNTED		RESTRAIN ALL (SEE NOTES 1.2)	13.1.4.6
WALL MOUNTED		RESTRAIN ALL (SEE NOTE 1.2)	13.1.4.6
COMPONENT SUPPORTS		RESTRAIN ALL (SEE NOTE 1)	13.6.4
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN. (SEE NOTE 3)	13.6.6
	NOT INLINE W/ DUCT	RESTRAIN ALL (SEE NOTE 1)	13.1.4.6
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		RESTRAIN IF > 3" (SEE NOTE 4)	13.6.7.3
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL (SEE NOTE 4)	13.6.7.3
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE ≥ 10 LBS/FT (SEE NOTE 4)	13.6.7.3
DUCTWORK		RESTRAIN IF ≥ 6 SQ.FT. OR > 20 LBS/FT (SEE NOTE 4.5)	13.6.6
COMPONENT CERTIFICATION		NOT REQUIRED	13.2.2

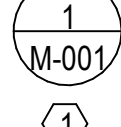
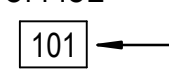
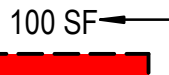
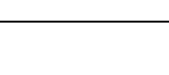
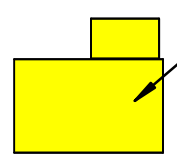
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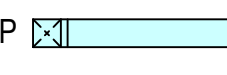
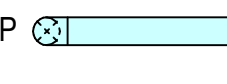
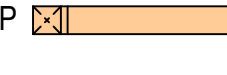
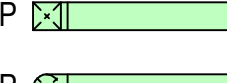
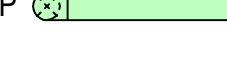
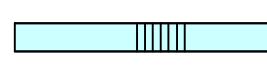
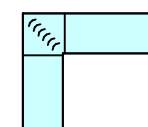
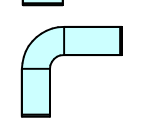
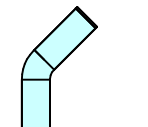
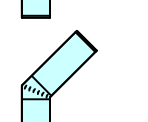
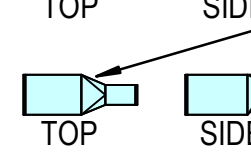
1. EQUIPMENT 20 LBS. OR LESS IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS AT 4 FT. OR LESS ABOVE A FLOOR, IS
3. POSITIVELY ATTACHED TO THE STRUCTURE, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
4. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE AND CONDUIT CONNECTIONS ONLY.
5. SEE TABLE 1 FOR ROD HANGER LENGTH EXEMPTION RULES
6. ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
7. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD AND
8. BUILDING OFFICIAL.

SYSTEM	EXEMPTION SCENARIO 1	EXEMPTION SCENARIO 2	EXEMPTION SCENARIO 3
PIPING ^(1,3) l _b = 1.0	TRAPEZE ⁽⁴⁾ WITH 3/8" RODS ≤ 12 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	TRAPEZE ⁽⁴⁾ WITH 1/2" RODS ≤ 12 IN. FROM STRUCTURE ≤ 200 LBS. TOTAL SUPPORTED WEIGHT OR ≤ 24 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	INDIVIDUALLY ⁽⁵⁾ SUPPORTED WITH 3/8" OR 1/2" RODS ≤ 12 IN. FROM STRUCTURE TOTAL WEIGHT SUPPORTED BY ANY SINGLE ROD ≤ 50 LBS.
EQUIPMENT l _b = 1.0 OR 1.5	NO EXEMPTION ALLOWED		
CONDUIT, CABLE TRAY, RACEWAYS ^(2,3) l _b = 1.0	TRAPEZE ⁽⁴⁾ WITH 3/8" RODS ≤ 12 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	TRAPEZE ⁽⁴⁾ WITH 1/2" RODS ≤ 12 IN. FROM STRUCTURE ≤ 200 LBS. TOTAL SUPPORTED WEIGHT OR ≤ 24 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	INDIVIDUALLY SUPPORTED WITH 3/8" OR 1/2" RODS ≤ 12 IN. FROM STRUCTURE TOTAL WEIGHT SUPPORTED BY ANY SINGLE ROD ≤ 50 LBS.
CONDUIT, ETC. l _b = 1.5	NO EXEMPTION ALLOWED		
DUCT ^(2,3) l _b = 1.0	TRAPEZE ⁽⁴⁾ WITH 3/8" RODS ≤ 12 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	TRAPEZE ⁽⁴⁾ WITH 1/2" RODS ≤ 12 IN. FROM STRUCTURE ≤ 200 LBS. TOTAL SUPPORTED WEIGHT OR ≤ 24 IN. FROM STRUCTURE ≤ 100 LBS. TOTAL SUPPORTED WEIGHT	INDIVIDUALLY SUPPORTED WITH 3/8" OR 1/2" RODS ≤ 12 IN. FROM STRUCTURE TOTAL WEIGHT SUPPORTED BY ANY SINGLE ROD ≤ 50 LBS.

NOTES

1. FLEXIBLE CONNECTIONS, EXPANSION LOOPS, OR OTHER ASSEMBLIES MUST BE PROVIDED TO ACCOMMODATE THE RELATIVE DISPLACEMENT BETWEEN COMPONENT AND PIPING.
2. DISPLACEMENT BETWEEN COMPONENT AND PIPING, SYSTEM AND ASSOCIATED COMPONENTS TO ACCOMMODATE THE RELATIVE DISPLACEMENT.
3. NO EXEMPTION ALLOWED WHEN TRAPEZE INSTALLATION REQUIRES 3/8" ROD OR LARGER.
4. NO EXEMPTION ALLOWED WHEN TRAPEZE ASSEMBLY INCLUDES ANY SINGLE PIPE/CONDUIT/DUCT REQUIRING SEISMIC RESTRAINT BASED ON SIZE/WEIGHT.
5. NO EXEMPTION ALLOWED FOR NON DUCTILE PIPING.

ABBREVIATIONS				HVAC DUCTWORK LEGEND	
AFF	ABOVE FINISHED FLOOR	MBH	THOUSAND BTUS PER HOUR		SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
AHU	AIR HANDLING UNIT	MCA	MINIMUM CIRCUIT AMPS		OVAl DUCT SIZE TAG (WIDTH / HEIGHT)
BHP	BRAKE HORSE POWER	MOCp	MAXIMUM OVER CURRENT PROTECTION		ROUND DUCT SIZE TAG (DIAMETER)
BTU	BRITISH THERMAL UNIT	NC	NORMALLY CLOSED		EXISTING DUCT TAG
CFM	CUBIC FEET PER MINUTE	NO	NORMALLY OPENED		DUCT BEING DEMOLISHED
CV	CONSTANT VOLUME	NTS	NOT TO SCALE		SUPPLY AIR
CU	CONDENSING UNIT	OA	OUTSIDE AIR		OUTSIDE AIR
DB	DRY BULB TEMPERATURE (°F)	PSI	POUNDS PER SQUARE INCH		RETURN AIR
DCV	DEMAND CONTROL VENTILATION	PSIG	PSI GAUGE		EXHAUST AIR
DDC	DIRECT DIGITAL CONTROLS	PVC	POLYVINYL CHLORIDE PIPE		GREASE EXHAUST AIR
DOAS	DEDICATED OUTSIDE AIR SYSTEM	PVCL	POLYVINYL CHLORIDE LIQUID LINES		LAB & SPECIALTY EXHAUST AIR
DN	DOWN	RA	RETURN AIR		
EAT	ENTERING AIR TEMPERATURE	RH	RELATIVE HUMIDITY		
EF	EXHAUST FAN	RHC	REHEAT COIL		
ESP	EXTERNAL STATIC PRESSURE	RLA	RUNNING LOAD AMPS		
EWI	ENTERING WATER TEMPERATURE	RPM	REVOLUTIONS PER MINUTE		
FCU	FAN COIL UNIT	RS/RL	REFRIGERANT SUCTION & LIQUID LINES		
FD	FIRE DAMPER	RTU	ROOFTOP AIR HANDLING UNIT		
FLA	FULL LOAD AMPS	SA	SUPPLY AIR		
FPI	FINS PER INCH	SF	SUPPLY FAN		
FPM	FEET PER MINUTE	SP	STATIC PRESSURE		
GPM	GALLONS PER MINUTE	TSP	TOTAL STATIC PRESSURE		
IV	INTAKE VENTILATOR	VAV	VARIABLE AIR VOLUME		
KW	KILOWATT	VRF	VARIABLE REFRIGERANT FLOW		
LAT	LEAVING AIR TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE		
LRA	LOCKED ROTOR AMPS	WB	WET BULB TEMPERATURE (°F)		
LWT	LEAVING WATER TEMPERATURE				
GENERAL MECHANICAL SYMBOLS					
 REVISION NUMBER SHOWN ON PLANS					
 POINT WHERE NEW CONNECTS TO EXISTING					
 DEMOLISH TO POINT INDICATED					
 NUMBER OF DETAIL ON SHEET NUMBER OF SHEET WHERE DETAIL APPEARS					
 KEYNOTE					
<u>CONTINUATION SYMBOLS:</u>					
 PIPE					
 ROUND DUCT					
 RECTANGULAR DUCT					
<u>SPACE TAG:</u>					
 OFFICE → SPACE NAME					
 101 → SPACE NUMBER					
 100 SF → SPACE AREA					
 ITEM TO BE DEMOLISHED					
 AREA NOT IN CONTRACT					
HVAC ENERGY DESIGN CONDITIONS					
LOCATION: LITTLE ROCK, AR					
OUTDOOR SUMMER (0.4% OCCURANCE): 100°F DB / 78°F WB					
OUTDOOR DEHUMIDIFICATION (0.4% OCCURANCE): 85°F DB / 79°F WB					
OUTDOOR WINTER (99.6% OCCURANCE): 15°F DB					
INSIDE SETPOINT SUMMER: 75°F DB / 50% MAX RH.					
INSIDE SETPOINT WINTER: 70°F DB					
SEISMIC DESIGN CONDITIONS					
1. SEISMIC DESIGN DATA: A. SEISMIC DESIGN CATEGORY: D B. MECHANICAL COMPONENTS IMPORTANCE FACTOR: 1.0					
2. SEISMIC RESTRAINTS ARE NOT REQUIRED FOR THE MECHANICAL COMPONENTS AND SYSTEMS PER THE REQUIREMENTS FOR THE INTERNATIONAL BUILDING CODE (IBC) AS DEFINED PER ASCE 7 - SECTION 13.6.					
3. REFER TO THE SPECIFICATIONS.					
MECHANICAL SHEET SET NOTE					
* NOTE *					
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.					
MECHANICAL EQUIPMENT TAGS					
 RTU-XX → EQUIPMENT MARK ID					
 EVAV-XX → EQUIPMENT MARK ID					
200 CFM → EQUIPMENT AIRFLOW					
 EVAV-XX → EQUIPMENT MARK ID					
MECHANICAL PHASING					
 NEW CONSTRUCTION MECHANICAL EQUIPMENT (TYPICAL TAG FOR ALL NEW CONSTRUCTION)					
 EXISTING MECHANICAL EQUIPMENT (TYPICAL FOR ALL EXISTING TAGS)					
 MECHANICAL EQUIPMENT FOR DEMOLITION (TYPICAL FOR ALL DEMOLITION TAGS)					

DROP			RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE		
DROP			ROUND SUPPLY/OUTSIDE AIR DUCT RISE		
DROP			RECTANGULAR RETURN AIR DUCT RISE		
DROP			ROUND RETURN AIR DUCT RISE		
DROP			RECTANGULAR EXHAUST AIR DUCT RISE		
DROP			ROUND EXHAUST AIR DUCT RISE		
			FLEXIBLE CONNECTION		
			90° ELBOW w/ TURNING VANE		
			90° BEND, ROUND DUCT		
			45° BEND, ROUND DUCT		
			45° RECTANGULAR DUCT		
			30° OR LESS FOR ALL SIMILAR FITTINGS		
			RECTANGULAR TRANSITION		

HVAC GRILLES/DIFFUSERS		
	SUPPLY DIFFUSER (SEE PLANS OR SCHEDULE FOR SIZES)	
	RETURN GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)	
	EXHAUST GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)	
MECHANICAL DATA DEVICES		
LOCKING COVER (OPTIONAL)		C2 → CARBON DIOXIDE (CO2)
DATA DEVICE		DP → DIFFERENTIAL PRESSURE
SENSOR INTERLOCK		T → THERMOSTAT
		TS → TEMPERATURE SENSOR
		H → HUMIDISTAT
		HS → HUMIDITY SENSOR
	TH → TEMP. & HUMIDITY SENSOR	
	MS → MANUAL SWITCH	
DUCT ACCESSORIES		
FIRE DAMPER		MANUAL BALANCING DAMPER
SMOKE DAMPER		MOTORIZED DAMPER
COMBINATION FIRE/SMOKE DAMPER		

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2021 EDITION OF THE "INTERNATIONAL MECHANICAL CODE", THE 2014 EDITION OF THE "ARKANSAS ENERGY CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.
2. CONTRACT DOCUMENTS INCLUDE BOTH PLANS AND THE PROJECT MANUAL/SPECIFICATIONS. REFER TO THE PROJECT MANUAL/SPECIFICATIONS FOR ALL REQUIREMENTS NOT INDICATED ON THE PLANS AND VICE-VERSA, WHERE CONFLICTS EXIST, THE MOST STRINGENT SHALL TAKE PRECEDENCE. THE CONTRACTOR SHALL STUDY THE PLANS
3. REFER TO ARCHITECTURAL PLANS FOR:
- a. REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES.
 - b. EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS.
 - c. FIRE-RATED WALLS AND PARTITIONS. PROVIDE FIRE DAMPERS IN DUCT PENETRATIONS OF ALL FIRE RATED WALLS AND PARTITIONS AS NECESSARY TO MEET CITY AND STATE REQUIREMENTS.
 - d. ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.
4. DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION
5. 1. LISTED FLEXIBLE DUCT RUN-OUTS MAY BE USED BUT SHALL NOT EXCEED 5'-0" IN LENGTH. ALL FLEXIBLE DUCT TO BE PROPERLY SUPPORTED WITH NO KINKS OR HARD BENDS.
6. DUCT FITTINGS:
- a. SUPPLY TAKE-OFFS TO CEILING SUPPLY DIFFUSERS TO BE CONICAL TAP OR 45° SIDE TAP.
 - b. ALL DUCT RUN-OUTS SHALL HAVE LOCKING QUADRANT VOLUME DAMPERS. PROVIDE STAND-OFF BRACKET TO ACCOMMODATE INSULATION THICKNESS. ALL 90° ROUND ELBOWS TO HAVE RUD-15 (UNLESS OTHERWISE NOTED).
 - c. ALL RECTANGULAR AIR MIXTURED ELBOWS 45° OR GREATER SHALL HAVE TURNING VANES (UNLESS OTHERWISE NOTED).
 - d. PROVIDE HARD ELBOW WHEN TRANSITIONING FROM RIGID TO FLEXIBLE DUCT WHEN CONNECTING TO AIR DEVICES. REFER TO DETAIL.
7. DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE SLOPED WITH 2-30° ELBOWS UNLESS OTHERWISE NOTED.
8. PROVIDE ACCESS PANELS IN CEILINGS OTHER THAN LAY-IN TYPE WHERE NECESSARY:
- a. CLOSELY COORDINATE LOCATIONS AND SIZE OF ACCESS PANELS WITH INSTALLED EQUIPMENT TO ACHIEVE GREATEST ACCESSIBILITY FOR MAINTENANCE PURPOSES.
 - b. PROVIDE ACCESS PANEL AT BALANCING DAMPERS, FIRE DAMPERS, CONTROLS, VALVES, TRAPS, CLEAN OUTS, ETC.
 - c. PROVIDE ACCESS PANELS FOR GREASE DUCTS, AS REQUIRED BY NFPA 96, FOR CLEANING PURPOSES, AT CHANGES IN DIRECTION, ETC.
9. COMPLETELY INSULATE THE TOPS OF ALL CEILING DIFFUSERS.
10. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
11. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.
12. ALL ROOF MOUNTED HVAC EQUIPMENT, INCLUDING BUT NOT LIMITED TO EXHAUST FANS, CONDENSING UNITS, CONDENSING UNITS, AND ROOF-TOP UNITS, SHALL BE A MINIMUM OF 10'-0" FROM THE ROOF'S EDGE, OR PARAPET, UNLESS OTHERWISE NOTED ON PLANS. IN SUCH CASE, THE CONTRACTOR SHALL COORDINATE WITH ARCHITECT TO PROVIDE SAFETY HANDRAILS AROUND ROOF MOUNTED HVAC EQUIPMENT THAT IS LOCATED LESS THAN 10' FROM ROOF'S EDGE, OR PARAPET.
13. PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.
14. PROVIDE 4" CONCRETE PADS UNDER ALL GROUND MOUNTED CONDENSING UNITS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.
15. ROOF MOUNTED CONDENSING UNITS SHALL BE PLACED ON PATE OR APPROVE EQUAL EQUIPMENT SUPPORTS, MODEL ES-2 W/ INSULATION, FIBER CANT, AND METAL CAP, MINIMUM 1" HIGH ABOVE ROOF DECK, MAKE WEATHER TIGHT.
16. PROVIDE CONCRETE PADS UNDER ALL GROUND MOUNTED AIR HANDLING UNITS AND CHILLERS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.
17. ATTIC MOUNTED AND ABOVE CEILING MOUNTED EQUIPMENT SUBJECT TO WATER/CONDENSATE OVERFLOW SHALL BE SET IN DRAIN PANS WITH DRAINS TO THE OUTSIDE OR SANITARY SEWER SYSTEM WITH VISIBLE DISCHARGE
18. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
19. PROVIDE APPROVED, NON-FLAMMABLE PIPE INSULATION ON ALL INSULATED PIPES AND PIPES OF PVC MATERIAL PASSING THRU AREAS OF BUILDING WITH RETURN AIR PLenums.
20. ALL EXTERIOR EXPOSED PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATE PIPING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
21. COORDINATE WORK CLOSELY WITH CONTROL CONTRACTOR. PROVIDE ALL NECESSARY DUCT, PIPE TAPS, TEES, WELLS, CONTROL DAMPERS, AIR MEASURING STATIONS, AND OTHER ACCESSORIES REQUIRED BY CONTROL SYSTEM.
22. SLEEVE AND SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED AND NON-RATED SLABS AND PARTITIONS.
23. CONTRACTOR SHALL COORDINATE AS REQUIRED TO ENSURE THE HEIGHT OF ALL ROOF CURBS ON MEMBRANE TYPE ROOF SYSTEMS EXTENDS MINIMUM 12" ABOVE FINISHED FLOOR TO THE TOP OF THE CONTROL DEVICE.
24. ALL WALL-MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, E.G., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR TO THE TOP OF THE CONTROL DEVICE, ALIGNED WITH ELECTRICAL SWITCHES. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.

DEMOLITION NOTES

1. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO:
 - a. PIPE SIZES AND ROUTING.
 - b. EQUIPMENT CONNECTIONS AND LOCATIONS.
 - c. CONTROLS.
2. PROVIDE NECESSARY MODIFICATIONS TO NEW AND EXISTING SYSTEMS TO FACILITATE THE INSTALLATION AND INTERFACE OF NEW AND EXISTING SYSTEMS.
3. EXISTING SYSTEMS AND INFORMATION SHOWN ON THESE PLANS WERE DEVELOPED USING EXISTING BUILDING DRAWINGS AND NON-DESTRUCTIVE SITE OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY AT SITE ALL EXISTING SYSTEMS AND CONDITIONS PRIOR TO BID. THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS NEEDED TO SUIT ACTUAL EXISTING SITE CONDITIONS AS REQUIRED TO ENSURE A COMPLETE, OPERABLE, AND WARRANTABLE INSTALLATION OF THE SCOPE OF WORK OF THIS PROJECT.
4. REMOVE ALL PORTION OF PIPING SYSTEMS BEING REMOVED OR ABANDONED. TERMINATE EXISTING SYSTEMS ABOVE CEILINGS AND BELOW FLOOR SLABS IN A MANNER THAT WILL NOT CONFLICT WITH NEW WORK. CLOSELY COORDINATE NEW WORK WITH EXISTING SYSTEMS. PROVIDE OFFSETS IN EXISTING AND NEW SYSTEMS AS REQUIRED TO AVOID CONFLICTS.
5. COORDINATE AND SCHEDULE ALL CONNECTIONS TO EXISTING SYSTEMS AND SYSTEM SHUT-DOWNS WITH MAINTENANCE PERSONNEL.
6. MAINTAIN EXISTING BUILDING SYSTEMS WITH PHASED DEMOLITION AND INSTALLATION OF NEW WORK, PROVIDING TEMPORARY SERVICES AS REQUIRED.
7. USE EXISTING PIPING SYSTEM VALVES WHERE POSSIBLE TO ISOLATE SYSTEMS AND TO CAP EXISTING PIPING. REPLACE EXISTING VALVES WHERE NECESSARY WHEN EXISTING VALVES WILL NOT HOLD.
8. EXISTING EQUIPMENT BEING REMOVED AND DESIGNATED TO REMAIN THE PROPERTY OF THE OWNER SHALL BE DELIVERED UPON REMOVAL TO LOCATION DESIGNATED BY OWNER. ALL OTHER SYSTEM COMPONENTS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
9. REMOVE AND RELOCATE SMALL CONDUIT, CABLE, PIPE AND DUCT, PIPE AND CEILING HANGERS ETC. AS NECESSARY TO ACHIEVE A COMPLETE INSTALLED MECHANICAL SYSTEM AS SHOWN ON DRAWINGS.
10. PATCH ALL WALLS, FLOORS, ROOFS AND CEILINGS TO MATCH EXISTING OR NEW (IF APPLIED) FOR ALL OPENINGS CREATED BY DEMOLITION WORK OF EQUIPMENT AND HVAC SYSTEM PENETRATIONS.
11. REPLACE AND/OR PATCH TO MATCH EXISTING; ANY EXISTING PIPE AND/OR DUCT INSULATION THAT IS TO REMAIN EXISTING AND IS DAMAGED OR REMOVED DURING CONSTRUCTION.
12. REFER TO ELECTRICAL PLANS FOR EXTENT OF DEMOLITION WORK RELATING TO WIRING FOR SUPPORT OF HVAC EQUIPMENT TO BE REMOVED.

GENERAL NOTE:

ADD ALTERNATIVE #2: REPLACE EXISTING
PACKAGED AIR HANDLER SERVING
AUDITORIUM SPACE. REFER TO SCHEDUL
M-601 AND SPECS.



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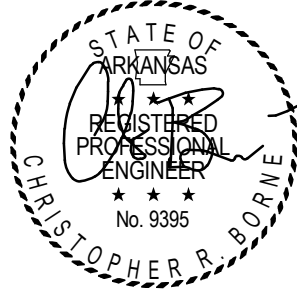
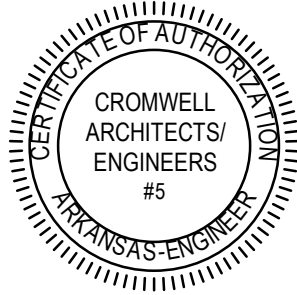
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