

FAN SCHEDULE						
DESIGNATION		SF-1	SF-2	SF-3	SF-4	SF-5
TYPE		SWSI UTILITY SET	SWSI UTILITY SET	SWSI UTILITY SET	SWSI UTILITY SET	INLINE
ORIENTATION		CLOCKWISE TOP HORIZONTAL	CLOCKWISE TOP HORIZONTAL	CLOCKWISE BOTTOM HORIZONTAL	CLOCKWISE BOTTOM HORIZONTAL	N/A
SERVICE		STAIR #1 PRESSURIZATION	STAIR #2 PRESSURIZATION	ELEVATOR #1 & #2 PRESSURIZATION	ELEVATOR #3 PRESSURIZATION	ELEVATOR MACHINE ROOM
AIR QUANTITY	CFM	45000	42000	20000	12000	200
STATIC PRESSURE	IN. H2O	1.1	1.5	1.2	1.3	0.3
FAN SPEED	RPM	658	648	970	1478	1161
BRAKE HORSEPOWER	HP	21.6	21.4	10.0	7.2	85 W
FAN MOTOR	HP	25	25	15	10	1/8
FAN DRIVE		BELT	BELT	BELT	BELT	DIRECT
MOTOR SPEED	RPM	1725	1725	1725	1725	1075
DISCONNECT SWITCH-PREWIRED		NO	NO	NO	NO	YES
ELECTRICAL CHARACTERISTICS	V/PH	208/3	208/3	208/3	208/3	115/1
BIRDSCREEN		NO	NO	NO	NO	YES
BACKDRAFT DAMPER		PROVIDE	PROVIDE	PROVIDE	PROVIDE	PROVIDE
SOLID STATE SPEED CONTROLLER		NO	NO	NO	NO	YES
VARIABLE FREQUENCY DRIVE		YES	YES	YES	YES	NO
NOISE LEVEL	LWA	96	94	96	97	59
WEIGHT	LBS	1640	1640	950	650	107
MANUFACTURER		COOK	COOK	COOK	COOK	COOK
MODEL NUMBER		490CPA-A	490CPA-A	330CPA-A	245CPA-A	90SON100
NOTES		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14

- NOTES:**
- PROVIDE ALUMINUM ACCESS DOOR - BOLTED
  - PROVIDE 1.5 TIMES # OF BELTS REQUIRED FOR OPERATION (MINIMUM OF 2 BELTS).
  - PROVIDE EXTENDED LUBE LINES.
  - PROVIDE ALUMINUM OSHA BELT GUARD / WEATHER COVER.
  - PROVIDE ALUMINUM DRAIN.
  - PROVIDE L10 200K BEARINGS.
  - PROVIDE ALUMINUM FLANGED INLET.
  - PROVIDE ALUMINUM OUTLET COMPANION FLANGE.
  - PROVIDE INSULATED ROOF CURB WITH PLYWOOD DECK AND COVER.
  - PROVIDE EXTENDED INLET SAFETY SCREEN.
  - PROVIDE BELT TENSION ROTARY.
  - PROVIDE SPRING ISOLATORS (SC-70 OR APPROVED EQUAL).
  - PROVIDE SIDE DISCHARGE ARRANGEMENT.
  - PROVIDE INSULATED HOUSING.

VALVE SCHEDULE		
UNIT	AHU-9	AHU-9
SERVICE	CHW	HHW
TYPE	2-WAY	2-WAY PICV
CONTROL VALVE SIZE	3	2
CONTROL VALVE FLOW	249	37
FLOW CHARACTERISTIC	MODIFIED EQUAL PERCENTAGE	EQUAL PERCENTAGE
Cv 90°	302	N/A
Cv 60°	116	N/A
MANUFACTURER	BELMO	BELMO
MODEL NUMBER	F880HDU	PICCV-50-037
ACTUATOR MODEL NUMBER	GRX24-MFT-T N4	ARX24-MFT
NOTES	1, 2	3

**NOTES:**

- ANGLE OF ROTATION LIMITS: 60° MAX; 0° MIN.
- PROVIDE NEMA-4 ACTUATOR.
- PROVIDE NEMA-4 WEATHERSHIELD.

MEASUREMENTS AND CONTROLS	
	THERMOMETER
	PRESSURE GAUGE AND ISOLATION BALL VALVE
	VENTURI FLOW METER
	PRESSURE & TEMPERATURE TEST STATION
	VARIABLE FREQUENCY DRIVE
	DIRECT DIGITAL CONTROLLER
	DIFFERENTIAL PRESSURE SENSOR

GRAVITY VENTILATOR SCHEDULE			
DESIGNATION		GV-1, 2, 3, 4	
SERVICE		RELIEF	
AIRFLOW	CFM	450	
THROAT SIZE DIAMETER	INCHES	12	
HOOD DIAMETER	INCHES	28	
WEIGHT	LBS	30	
MANUFACTURER		COOK	
MODEL NUMBER		12PR	
NOTES			

**NOTES:**

- PROVIDE PREFABRICATED ROOF CURB WITH WELDED CURB CAP CORNERS AND DAMPER TRAY.
- PROVIDE BACKDRAFT DAMPER.
- PROVIDE ALUMINUM BIRDSCREEN.

AIR DISTRIBUTION	
	RECTANGULAR SHEET METAL DUCT
	ROUND SHEET METAL DUCT
	SUPPLY AIR DUCTWORK SECTION
	RETURN OR OUTSIDE AIR DUCTWORK SECTION
	EXHAUST AIR DUCTWORK SECTION
	AIR BALANCING DAMPER (MANUAL)
	AIR BALANCING DAMPER (MOTORIZED)
	FIRE DAMPER IN DUCT - SEE DETAIL - A/M501
	FIRE/SMOKE DAMPER IN DUCT - SEE DETAIL - A/M501
	DUCTWORK FLEXIBLE CONNECTION
	DUCT ELBOW WITH SINGLE THICKNESS TURNING VANES
	SIDEWALL REGISTER AND AIR FLOW (CFM) (SEE SCHEDULE FOR SIZES UNLESS NOTED OTHERWISE)
	LOUVER

VALVES	
N.O.	N.C. BALL VALVE
N.O.	N.C. BUTTERFLY VALVE
VALVE ACTUATORS:	
	QUARTER TURN LEVER
	HANDWHEEL
	ELECTRIC MOTOR

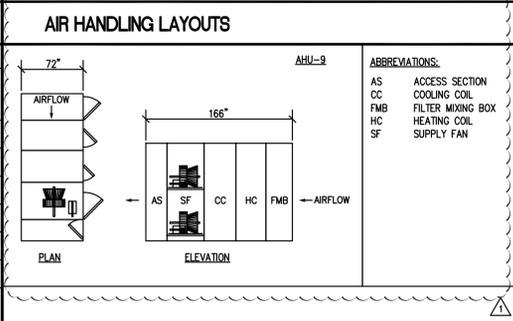
SIDEWALL REGISTERS AND GRILLES					
CFM	SUPPLY AIR		RETURN AIR OR EXHAUST AIR		
	REGISTER SIZE	RUNOUT DUCT	REGISTER SIZE	RUNOUT DUCT	
0-95	8x6	8x6	8x6	8x6	
100-195	10x6	10x6	10x6	10x6	
200-295	12x6	12x6	18x6	18x6	
300-395	16x6	16x6	24x6	24x6	
400-495	18x8	18x8	30x8	30x8	
500-595	18x10	18x10	30x10	30x10	

AIR HANDLING UNIT SCHEDULE		
AIR HANDLING UNIT NUMBER		AHU-9
AIR HANDLING UNIT DATA		
TOTAL SUPPLY AIR	CFM	20,000
OUTSIDE AIR	CFM	20,000
WEIGHT	LBS	7,350
FILTER SECTION		
DAMPERS		NONE
FILTER ORIENTATION		FLAT
TYPE OF FILTER		4" MERV 8
HEATING COIL DATA		
COIL TYPE		PREHEAT
HEATING CAPACITY	MBTUH	573.2
AIR ENTERING HEATING COIL	F	25.0
AIR LEAVING HEATING COIL	F	51.2
WATER FLOW	GPM	37
HEATING HOT WATER ENTERING TEMP.	F	180
HEATING HOT WATER LEAVING TEMP.	F	150
RUNOUT PIPE SIZE / QUANTITY	IN. - #	1.5 - 3
CONTROL VALVE (TYPE)		2-WAY
CONTROL VALVE	MIN Cv	PICV
COOLING COIL DATA		
TOTAL COOLING CAPACITY	MBTUH	1,740.6
SENSIBLE COOLING CAPACITY	MBTUH	718.8
AIR ENTERING COOLING COIL	Tdb	88.0
AIR ENTERING COOLING COIL	Twb	79.0
AIR LEAVING COOLING COIL	Tdb	55.1
AIR LEAVING COOLING COIL	Twb	54.9
WATER FLOW	GPM	249
CHILLED WATER ENTERING TEMP.	F	45
CHILLED WATER LEAVING TEMP.	F	59
MINIMUM FACE AREA	SF	40
PERCENT ETHYLENE GLYCOL	%	0
RUNOUT PIPE SIZE / QUANTITY	IN. - #	3 - 2
CONTROL VALVE (TYPE)		2-WAY
CONTROL VALVE	MIN Cv	111
CONDENSATE DRAIN SIZE	IN.	1-1/4
FAN SECTION		
FAN TYPE		AIRFOIL
EXTERNAL STATIC PRESSURE (INCLUDING FILTER)	IN. WG	1.5
MAXIMUM TOTAL STATIC PRESSURE	IN. WG	3.4
BRAKE HORSEPOWER	HP - #	8.5 - 2
FAN MOTOR	HP - #	10 - 2
ELECTRICAL CHARACTERISTICS	V/PH	208/3
VARIABLE SPEED DRIVE		YES
MANUFACTURER		
MCQUAY		

PIPING AND FITTINGS		
C	CONDENSATE DRAIN PIPING FROM COOLING COIL	
CHWS	CHILLED WATER SUPPLY PIPING	
CHWR	CHILLED WATER RETURN PIPING	
CWS	CONDENSER WATER SUPPLY PIPING	
CWR	CONDENSER WATER RETURN PIPING	
HHWS	HEATING HOT WATER SUPPLY PIPING	
HHWR	HEATING HOT WATER RETURN PIPING	
	STRAINER	
	UNION	
	FLEXIBLE PIPE CONNECTION	
	AUTOMATIC AIR VENT AND ISOLATION BALL VALVE	
2D	2 DIAMETERS OF STRAIGHT PIPE	
5D	5 DIAMETERS OF STRAIGHT PIPE	
	FLOW DIRECTION IN PIPE	
	ECCENTRIC REDUCER	
	CONCENTRIC REDUCER	
	PIPE ANCHOR	
	NEW PIPE	
	EXISTING PIPE TO REMAIN	
	EXISTING PIPE TO BE REMOVED	
	ELBOW TURNED UP	
	ELBOW TURNED DOWN	
	ROOF DRAIN	

ALTERNATES		
BASE SCOPE: AHU-9 TO OPERATE AS OUTSIDE AIR FAN ONLY. PIPING MODIFICATIONS TO CHILLED WATER AND HEATING HOT WATER SYSTEMS, ASSOCIATED CONDENSATE PIPING, INSULATION FOR RAIN LEADER, AND ASSOCIATED CONTROLS NOT INCLUDED.		
INCLUDES ALL MECHANICAL SHEETS EXCEPT M100A.		
ADD ALTERNATE #1: AHU-9 TO OPERATE AS PRE-TREATED OUTSIDE AIR UNIT. PROVIDE PIPING MODIFICATIONS TO CHILLED WATER AND HEATING HOT WATER SYSTEMS AS INDICATED ON PLANS AND SPECIFICATIONS. PROVIDE CONDENSATE PIPING AND INSULATION ON ASSOCIATED RAIN LEADER.		
INCLUDES ALL MECHANICAL SHEETS.		

MISCELLANEOUS	
	POINT OF CONNECTION, NEW TO EXISTING
	POINT INDICATES LIMIT OF DEMOLITION



- HVAC NOTES**
- INSTALL DUCTWORK, PIPING, ETC. AS HIGH AS POSSIBLE ABOVE CEILING.
  - INSTALLATION OF EQUIPMENT, DUCTWORK AND PIPING SHALL PROVIDE CONVENIENT ACCESS FOR REMOVAL OF FILTERS AND FOR MAINTENANCE.
  - DUCT SIZES GIVEN ARE SHEET METAL SIZES.
  - COORDINATE EXACT LOCATIONS OF AIR DISTRIBUTION EQUIPMENT WITH THE CEILING AND THE LIGHTING LAYOUT.
  - PROVIDE NEW AIR FILTERS IN EACH UNIT REQUIRING FILTERS WHEN THE PROJECT IS READY FOR TEST AND BALANCE. DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION. REPLACE FILTERS DURING CONSTRUCTION ACCORDING TO FILTER MANUFACTURER'S RECOMMENDATIONS. SEAL ALL OPEN ENDS OF DUCT WORK DURING CONSTRUCTION.
  - WHEREVER THE DEPTH OF THE TRUNK DUCT IS LESS THAN THE ROUND RUNOUT DUCT DIAMETER, PROVIDE TRANSITION FITTING OF EQUIVALENT AREA TO THE RUNOUT DUCT.
  - PROVIDE FLEXIBLE DUCT CONNECTIONS AT EACH EQUIPMENT CONNECTION.
  - PROVIDE FIRE DAMPER AT EVERY DUCT PENETRATION OF 1 HOUR OR MORE FIRE RATED CONSTRUCTION, WHETHER SHOWN ON THE DRAWINGS OR NOT.
  - INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIV. 26) IN SUPPLY AIR TRUNK DUCT BEFORE ANY TAKE-OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY GREATER THAN 2000 CFM AND WHERE INDICATED ON PLANS.
  - WHERE FIRE DAMPERS ARE REQUIRED, PROVIDE ACCESS PANELS TO ALLOW RE-LINKING OF DAMPER FUSIBLE LINKS. PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL.
  - WHERE DUCT MOUNTED SMOKE DETECTORS ARE REQUIRED, PROVIDE ACCESS PANELS TO ALLOW VIEWING AND SERVICING. PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL.
  - THE DUCTWORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS IS DIAGRAMMATIC AND DOES NOT NECESSARILY INCLUDE ALL MODIFICATIONS REQUIRED TO AVOID THESE INTERFERENCES. BEFORE FABRICATING ANY DUCTWORK, CHECK THE PHYSICAL CONDITIONS AT THE JOB SITE AND MAKE CHANGES IN CROSS SECTIONS, ROUTING, OFFSETS AND SIMILAR ITEMS WHETHER SPECIFICALLY INDICATED OR NOT. VERIFY THAT SUFFICIENT CLEARANCES ARE AVAILABLE FOR INSTALLING DUCTWORK, PIPING, LIGHT FIXTURES, CEILING SYSTEMS AND TO PROVIDE EQUIPMENT SERVICE. COSTS REQUIRED TO CHANGE DUCTWORK TO FIT THE SPACE AVAILABLE AND AVOID INTERFERENCES CAUSED BY SPACE COMPETING SYSTEMS SHALL BE BORNE BY THE CONTRACTOR. NO ADDITIONAL REMUNERATION WILL BE PAID BY THE OWNER.
  - APPLY EXTERNAL INSULATION TO SINGLE WALL SUPPLY DUCTS, RETURN DUCTS AND OUTSIDE AIR DUCTS. DUCTS INDICATED ON PLANS TO HAVE INTERNAL DUCT LINER SHALL NOT RECEIVE EXTERNAL INSULATION.
  - PROVIDE ACCESS PANEL AT EACH LOCATION WHERE A VALVE, DAMPER OR OTHER DEVICE REQUIRING SERVICE IS LOCATED ABOVE AN INACCESSIBLE CEILING OR INSIDE A WALL. ACCESS PANEL SHALL BE FIRE RATED IF INSTALLED IN A FIRE RATED CEILING OR WALL.

- GENERAL NOTES**
- DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WORK TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
  - FIELD VERIFY DIMENSIONS AND CONDITIONS. IF THE CONTRACTOR IS UNABLE TO INTERPRET THE CONTRACT DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLARIFICATION IN WRITING TO THE ARCHITECT. IF HE PROCEEDS WITH ANY WORK BEFORE OBTAINING CLARIFICATION, HE SHALL BE HELD RESPONSIBLE FOR DEFICIENCIES ASSOCIATED THEREWITH.
  - BEFORE SUBMITTING FOR THE WORK, EACH BIDDER WILL BE RESPONSIBLE TO EXAMINE THE PREMISES AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE AND COMPLETE THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR OMISSION ON HIS PART.
  - THE CONTRACTOR SHALL PAY FOR INSPECTION PERMITS, CERTIFICATES, CONNECTION FEES, SYSTEM DEMAND CHARGES AND LICENSE FEES IN CONNECTION WITH HIS WORK.
  - GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK OF SUBCONTRACTORS TO AVOID INTERFERENCES.
  - WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AND E.P.A. REGULATIONS AND GUIDELINES.
  - ERECT AND MAINTAIN REASONABLE PRECAUTIONS FOR SAFETY AND HEALTH INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS INCLUDING PROMULGATING SAFETY REGULATIONS. PROVIDE SAFETY PRECAUTIONS AND BARRICADES FOR PEDESTRIANS AT CONSTRUCTION VEHICLE ACCESS AND EGRESS LOCATIONS.
  - COORDINATE AND SEQUENCE DEMOLITION, CLEANING AND CONSTRUCTION WORK. SUBMIT A COMPLETELY DETAILED CONSTRUCTION SCHEDULE PRIOR TO PRE-CONSTRUCTION CONFERENCE.
  - THE CONTRACTOR SHALL STRICTLY BE HELD TO THE PROJECT SCHEDULE. HE SHALL PROVIDE SUFFICIENT MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PROCEED WITH AND COMPLETE THE WORK.
  - THE CONTRACTOR SHALL BE RESTRICTED TO AREAS SPECIFIED BY THE OWNER FOR ON-SITE STORAGE OF CONSTRUCTION MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF EQUIPMENT AND MATERIALS.
  - THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK ENVIRONMENT AT ALL TIMES AND SHALL CLEAN CONSTRUCTION SITE OF DEBRIS AT COMPLETION OF THE JOB AND BEFORE FINAL PAYMENT IS MADE.
  - THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS TO THE ARCHITECT AT COMPLETION OF CONSTRUCTION.
  - CONTRACTOR'S USE OF AN APPROVAL STAMP ON DOCUMENTS SUBMITTED AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS RELATED TO "SHOP DRAWINGS, PRODUCT DATA AND SAMPLES".
  - THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF.
  - PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL OTHER WALL MOUNTED FURNISHINGS.
  - NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING THE EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED FOR ENTRY INTO THE BUILDING AND EQUIPMENT ROOMS.
  - PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.
  - SUPPORTS AND HANGERS SHALL PRESENT A NEAT, ORDERLY APPEARANCE.
  - ROOF MOUNTED EQUIPMENT SHALL BE SECURED TO STRUCTURE TO RESIST A 120 MPH WIND LOAD.
  - CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF FIRE AND SMOKE WALL ASSEMBLIES AND ACOUSTICAL WALLS.
  - BEAM AND FLOOR PENETRATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. BEAM SLEEVES AND BEAM REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
  - CONTRACTOR SHALL FURNISH U.L. APPROVED DRAWINGS FOR EACH TYPE OF FIRE RATED ASSEMBLY PENETRATION BY DUCTS, PIPES OR CONDUITS. THESE DRAWINGS SHALL BE DISPLAYED ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION. SEE SPECIFICATIONS.
  - CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY MATERIAL SUPPLIERS AND MANUFACTURERS.
  - THE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE OWNER WILL MAKE REASONABLE EFFORTS TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. COORDINATE WORK WITH THE OWNER'S DESIGNATED REPRESENTATIVE.
  - EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MUST BE TEMPORARILY BLOCKED, PROVIDE THE REQUIRED BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORARY EXITING AND SAFETY.

- DELEGATED DESIGN CALCULATION REQUIREMENTS**
- THESE MECHANICAL SYSTEM ENGINEERING DOCUMENTS REPRESENT THE DESIGN INTENT FOR ATTACHING AND SECURING THE STAIRWELL SHAFT AND ELEVATOR HOISTWAY PRESSURIZATION FANS TO ISOLATE VIBRATION AND RESIST WIND FORCES. THE DELEGATED ENGINEER IS RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN, APPROVED BY THE AUTHORITY HAVING JURISDICTION, TO ATTACH AND SECURE THE STAIRWELL SHAFT, ELEVATOR HOISTWAY PRESSURIZATION FANS, AND ASSOCIATED ROOF CURBS.
  - DESIGN CRITERIA  
 WIND SPEED: 120 MPH  
 IMPORTANCE FACTOR: 1.0
  - DELEGATED ENGINEER SHALL PROVIDE SIGNED AND SEALED DATA TO THE ENGINEER OF RECORD AND AUTHORITY HAVING JURISDICTION INCLUDING THE FOLLOWING AS APPLICABLE, BUT NOT LIMITED TO: 1) DESIGN CALCULATIONS FOR STATIC AND DYNAMIC LOADING DUE TO EQUIPMENT WEIGHT AND OPERATION AND WIND FORCES REQUIRED TO SELECT VIBRATION ISOLATORS AND WIND RESTRAINT, AND 2) CURB DETAILS WITH ANCHORAGES AND ATTACHMENTS TO STRUCTURE AND TO SUPPORTED EQUIPMENT INCLUDING AUXILIARY MOTOR SLIDES AND RAILS, BASE WEIGHTS, EQUIPMENT STATIC LOADS, POWER TRANSMISSION, COMPONENT MISALIGNMENT, AND CANTILEVER LOADS.

ABBREVIATIONS			
AC	AIR COMPRESSOR	N/A	NOT APPLICABLE
AFF	SMOKE CONTROL ABOVE FINISHED FLOOR	OA	OUTSIDE AIR
ARL	RAIN LEADER	RL	RAIN LEADER
AHU	AIR HANDLING UNIT	RP	REVOLUTIONS PER MINUTE
BD	BALANCING DAMPER	SMA	SUPPLY AIR
BHP	BRAKE HORSEPOWER	SAG	SUPPLY AIR GRILLE
BTU/H	BRITISH THERMAL UNITS PER HOUR	SAN	SANITARY PIPING
CFM	CUBIC FEET PER MINUTE	SF	SUPPLY FAN
DDC	DIRECT DIGITAL CONTROL PANEL	SMS	SHEET METAL SIZE
DN	DOWN	SP	STATIC PRESSURE/STAND PIPE
EOR	ENGINEER OF RECORD	SWI	SANITARY PIPING
FD	FIRE DAMPER	TYP	TYPICAL
FSD	FIRE/SMOKE DAMPER	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
		WH	WATER HEATER

DRAWING INDEX	
M001	GENERAL NOTES, SCHEDULES AND LEGEND - MECHANICAL
M002	SMOKE CONTROL SYSTEMS DESIGN - MECHANICAL
M100A	FLOOR PLANS (ADD ALTERNATE #1) - MECHANICAL
M101	FLOOR PLANS - LEVELS 1-4 - MECHANICAL
M102	FLOOR PLANS - LEVELS 5-8 - MECHANICAL
M109	ROOF AND PENTHOUSE DEMOLITION PLAN - MECHANICAL
M109	ROOF AND PENTHOUSE PLAN - MECHANICAL
M201	RISERS - MECHANICAL
M202	SOUTH ELEVATION - MECHANICAL
M301	SECTIONS & ENLARGEMENTS - MECHANICAL
M501	DETAILS - MECHANICAL
M502	DETAILS - MECHANICAL
M701	CONTROLS - MECHANICAL
M702	CONTROLS - MECHANICAL

**ENGINEERING**

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HSE PROJECT NO: 1109

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**BARNETT FRONCZAK BARLOWE ARCHITECTS**

Leon County  
 Courthouse Annex  
 (Bank of America) Stair & Elevator  
 Pressurization  
 12062

Drawn By: RCT  
 Project Code: Checked By: SRD

27 April 2012  
 Date

Construction Documents

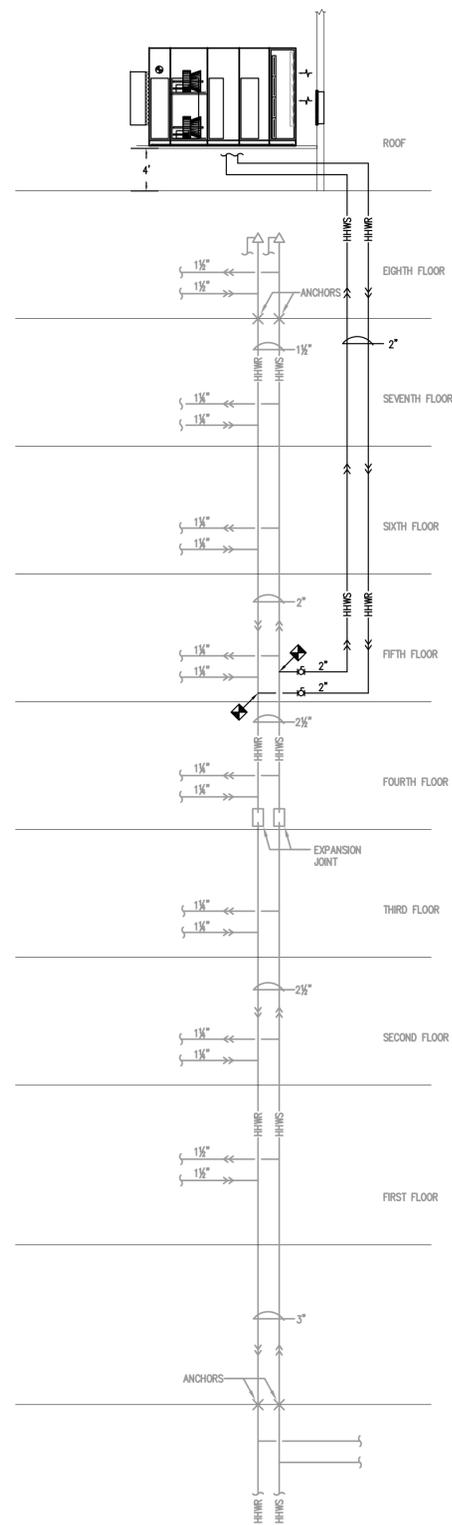
Revisions

5 JUNE 2012 - ADDENDUM #1

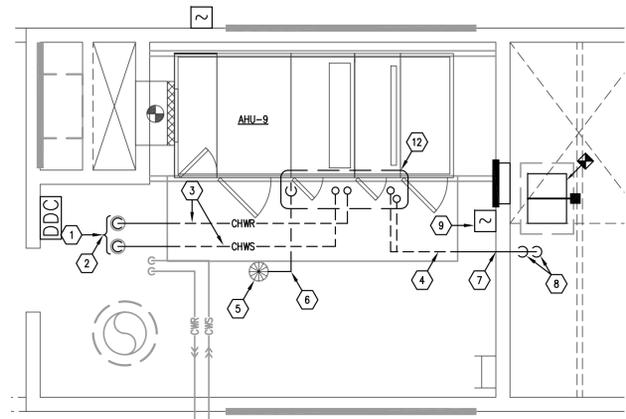
**GENERAL NOTES & LEGEND - MECHANICAL**

Tallahassee Florida

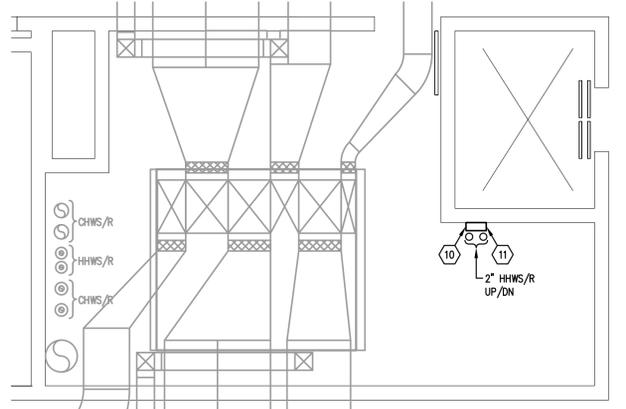
**M001**



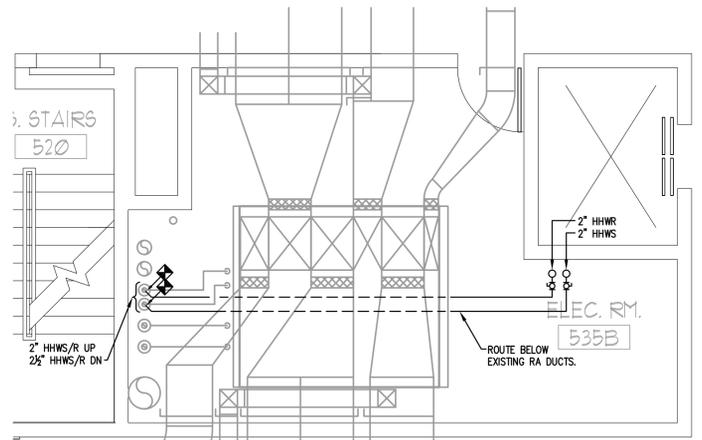
**5**  
**M100A** SCALE: NTS  
**HEATING HOT WATER RISER**  
**(ADD ALTERNATE #1) - MECHANICAL**



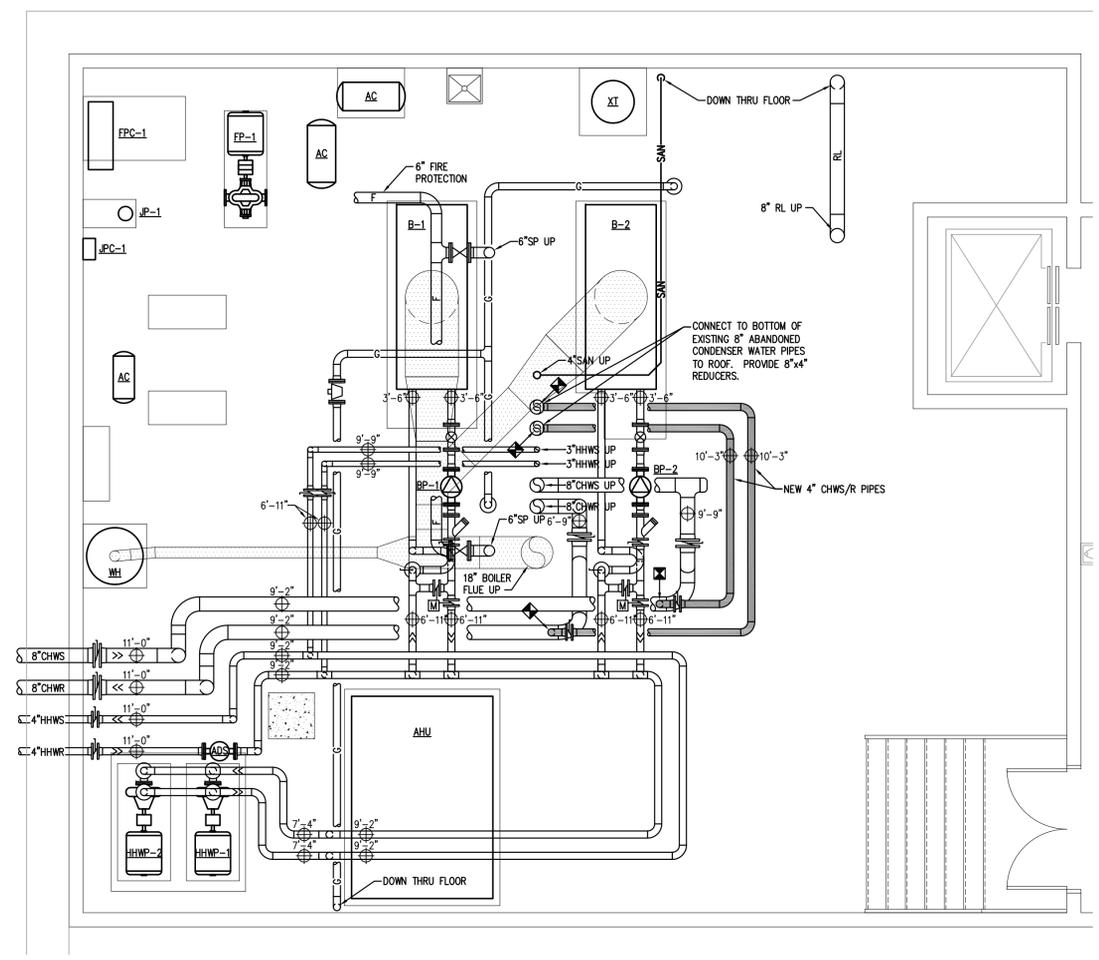
**2**  
**M100A** SCALE 1/4"=10'  
**PARTIAL ROOF PIPING PLAN**  
**(ADD ALTERNATE #1) - MECHANICAL**



**3**  
**M100A** SCALE 1/4"=10'  
**TYPICAL PARTIAL FLOOR PLAN**  
**(ADD ALTERNATE #1) - MECHANICAL**



**4**  
**M100A** SCALE 1/4"=10'  
**5TH FLOOR MECHANICAL PLAN**  
**(ADD ALTERNATE #1) - MECHANICAL**



**1**  
**M100A** SCALE 1/4"=10'  
**BOILER ROOM FLOOR PLAN**  
**(ADD ALTERNATE #1) - MECHANICAL**

- RENOVATION KEY NOTES:**
- 1 CONNECT TO TOP OF EXISTING 8" ABANDONED CONDENSER WATER PIPES TO ROOF. PROVIDE 8"x4" REDUCERS.
  - 2 PROVIDE CHEMICAL TREATMENT AND FLUSHING ON EXISTING PIPE RISERS AND NEW PIPING - SEE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE ALL NECESSARY PROVISIONS FOR CHEMICALLY TREATING AND FLUSHING EXISTING 8" PIPE RISERS AND NEW PIPING, INCLUDING TEMPORARY PUMPS, BYPASS PIPING, VALVES, AND ELECTRICAL.
  - 3 SECURE CHWS/R PIPING TO PLATFORM ABOVE.
  - 4 2" HHWS UNDER 2" HHWR. SECURE HHWS/R TO PLATFORM ABOVE.
  - 5 INSULATE ROOF DRAIN AND HORIZONTAL RAIN LEADER - SEE SPECIFICATIONS.
  - 6 EXTEND CONDENSATE PIPING TO ROOF DRAIN.
  - 7 PROVIDE SLEEVE AT WALL PENETRATION - SEE SPECIFICATIONS.
  - 8 2" HHWS/R DOWN BELOW ELEVATOR ROOM FLOOR.
  - 9 VARIABLE FREQUENCY DRIVE FOR AHU-9.
  - 10 110 BLOCKS TO BE RELOCATED - FLOOR 6. SEE ELECTRICAL DRAWINGS.
  - 11 ATP PANEL TO BE RELOCATED - FLOOR 8. SEE ELECTRICAL DRAWINGS.
  - 12 COORDINATE PIPE PENETRATIONS OF PLATFORM WITH STRUCTURAL DRAWINGS.

**H2 ENGINEERING**  
 114 EAST 5th AVENUE TALLAHASSEE, FL 32301 PHONE: 850.224.7302 www.H2Engineering.com  
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**BARNETT FRONCZAK BARLOWE ARCHITECTS**

Leon County Courthouse Annex (Bank of America) Stair & Elevator Pressurization 12062  
 Project Code: 12062 Drawn By: RCT  
 Checked By: SRD  
 Date: 27 April 2012  
 Construction Documents

- Revisions
- ▲ 5 JUNE 2012 - ADDENDUM #1
  - ▲
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**FLOOR PLANS (ADD ALTERNATE #1) - MECHANICAL**

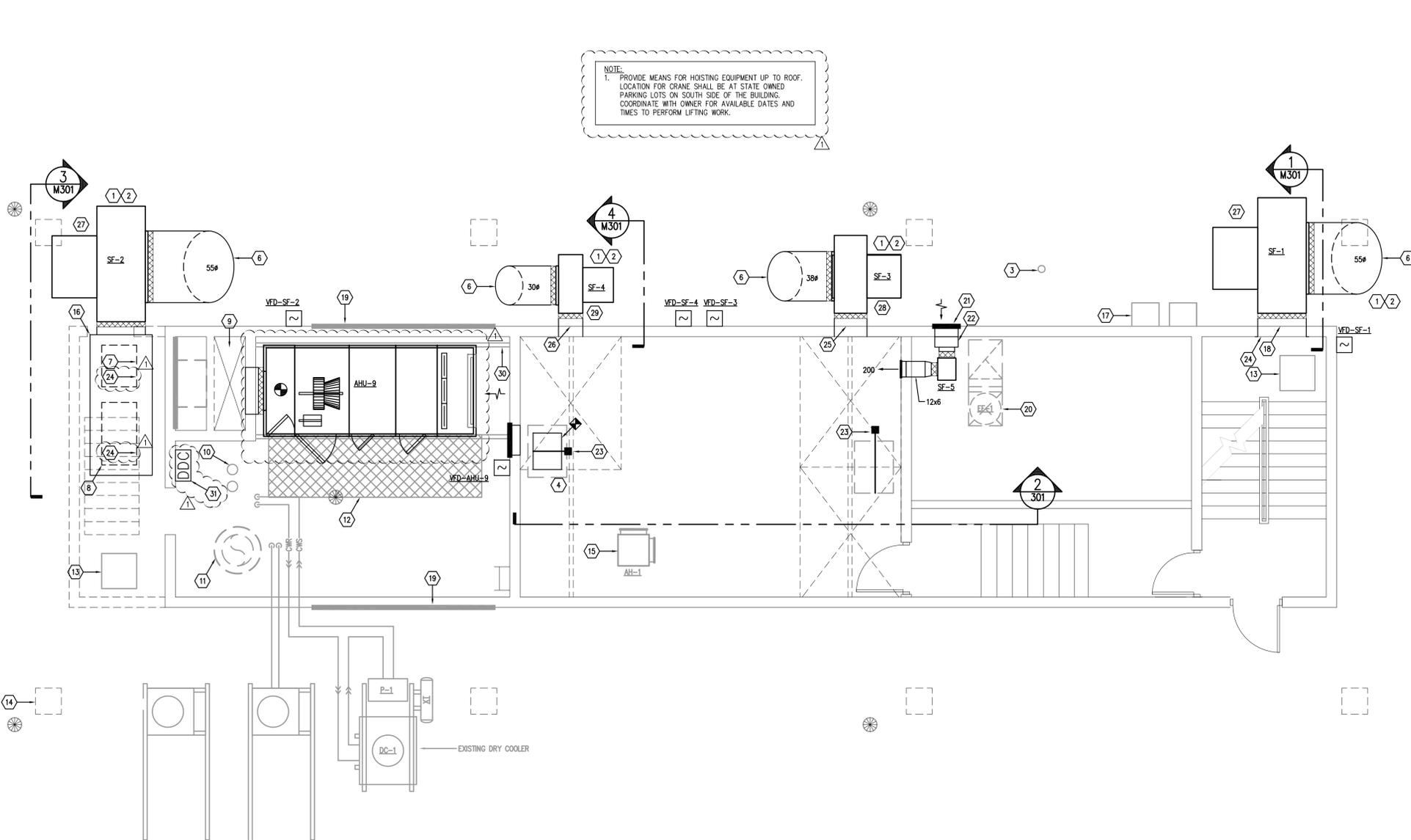
ENTIRE SHEET ADDED TO SET

Tallahassee Florida  
**M100A**  
 225 South Adams St. Tallahassee, FL 32301  
 Phone 850 224-8301 Fax 850 561-6978

**RENOVATION KEY NOTES:**

- |   |  |   |                                     |
|---|--|---|-------------------------------------|
| 1 ROOF CURB SHALL EXTEND 8" AFR. FIELD VERIFY EXISTING ROOF THICKNESS. (SEE DETAIL B/M502).                               | 11 EXISTING TRANSITE BOILER FLUE.                            | 21 18x12 LOUVER - SEE ARCHITECTURAL PLANS.  | 31 NEMA-3R CONTROL PANEL ENCLOSURE. |
| 2 SECUREMENT AND ATTACHMENT OF CURB AND FAN BY DELEGATED DESIGN.  | 12 SUPPORT RAILS AND ACCESS PLATFORM - SEE STRUCTURAL PLANS. | 22 8" DEEP PLENUM. SLOPE TO DRAIN WITH MINIMUM 1% SLOPE.                              |                                     |
| 3 EXISTING PLUMBING VENT.   | 13 CAPPED VENT.  | 23 REPLACE DAMPER ACTUATOR PER SPECIFICATIONS. DAMPER TO REMAIN.                      |                                     |
| 4 EXTEND 22x28 DUCT THRU ROOF. SEAL PENETRATION WATERTIGHT (SEE ARCHITECTURAL DRAWINGS)                                   | 14 COLUMN BELOW (TYPICAL).                                   | 24 PROVIDE 1/2" MESH WELDED STAINLESS STEEL WITH MINIMUM 80% FREE AREA.               |                                     |
| 5 COORDINATE LOCATION BETWEEN EXISTING STRUCTURE (TYPICAL OF 4 LOCATIONS). PROVIDE MINIMUM 20 FEET FROM SMOKE FAN INLETS. | 15 EXISTING AIR CONDITIONING UNIT.                           | 25 26"x37" OPENING INTO SHAFT - SEE STRUCTURAL PLANS.                                 |                                     |
| 6 MITER DUCT AT 45 DEGREES FOR RAIN PROTECTION. SLOPE TO DRAIN. PROVIDE DUCT SUPPORT.                                     | 16 NEW 48"x108"x114" PLENUM MOUNTED ON CURB.                 | 26 19"x27" OPENING INTO SHAFT - SEE STRUCTURAL PLANS.                                 |                                     |
| 7 NEW 27"x32" PENETRATION ON ROOF - SEE STRUCTURAL PLANS.   | 17 EXISTING HVAC UNIT (TYPICAL OF 2).                        | 27 TOTAL COMBINED WEIGHT OF FAN, CURB, AND WIND RESTRAINTS SHALL NOT EXCEED 2000 LBS. |                                     |
| 8 NEW 27"x48" PENETRATION ON ROOF - SEE STRUCTURAL PLANS.   | 18 38"x54" OPENING - SEE STRUCTURAL PLANS.                   | 28 TOTAL COMBINED WEIGHT OF FAN, CURB, AND WIND RESTRAINTS SHALL NOT EXCEED 1100 LBS. |                                     |
| 9 CLEAN OUTSIDE AIR SHAFT - SEE SPECIFICATIONS.   | 19 NEW LOUVER - SEE ARCHITECTURAL PLANS.                     | 29 TOTAL COMBINED WEIGHT OF FAN, CURB, AND WIND RESTRAINTS SHALL NOT EXCEED 800 LBS.  |                                     |
| 10 EXISTING CWS&R PIPE CAPPED AT ROOF.  | 20 EXISTING EXHAUST FAN ON PENTHOUSE ROOF ABOVE.             | 30 ATTACH AND SECURE OAF-9 TO EQUIPMENT RAILS (SEE DETAIL A/M502)                     |                                     |

NOTE:  
1. PROVIDE MEANS FOR HOISTING EQUIPMENT UP TO ROOF. LOCATION FOR CRANE SHALL BE AT STATE OWNED PARKING LOTS ON SOUTH SIDE OF THE BUILDING. COORDINATE WITH OWNER FOR AVAILABLE DATES AND TIMES TO PERFORM LIFTING WORK.



**1 PARTIAL ROOF & PENTHOUSE PLAN - HVAC**  
M109 SCALE 1/4"=1'-0"

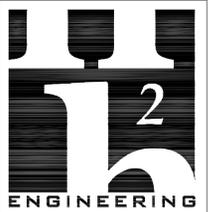
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**BARNETT FRONCZAK BARLOWE ARCHITECTS**

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**PARTIAL ROOF & PENTHOUSE PLAN - MECHANICAL**



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Leon County Courthouse Annex (Bank of America) Stair & Elevator Pressurization

Project Code 12062 Drawn By: RCT Checked By: SRD

27 April 2012 Date

Construction Documents

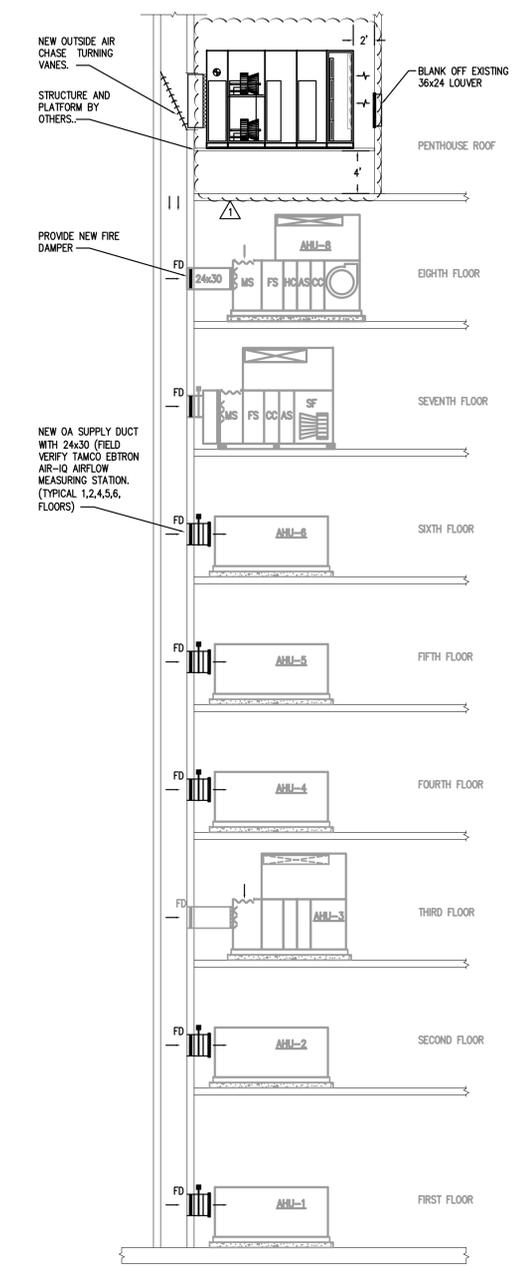
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RISERS - MECHANICAL

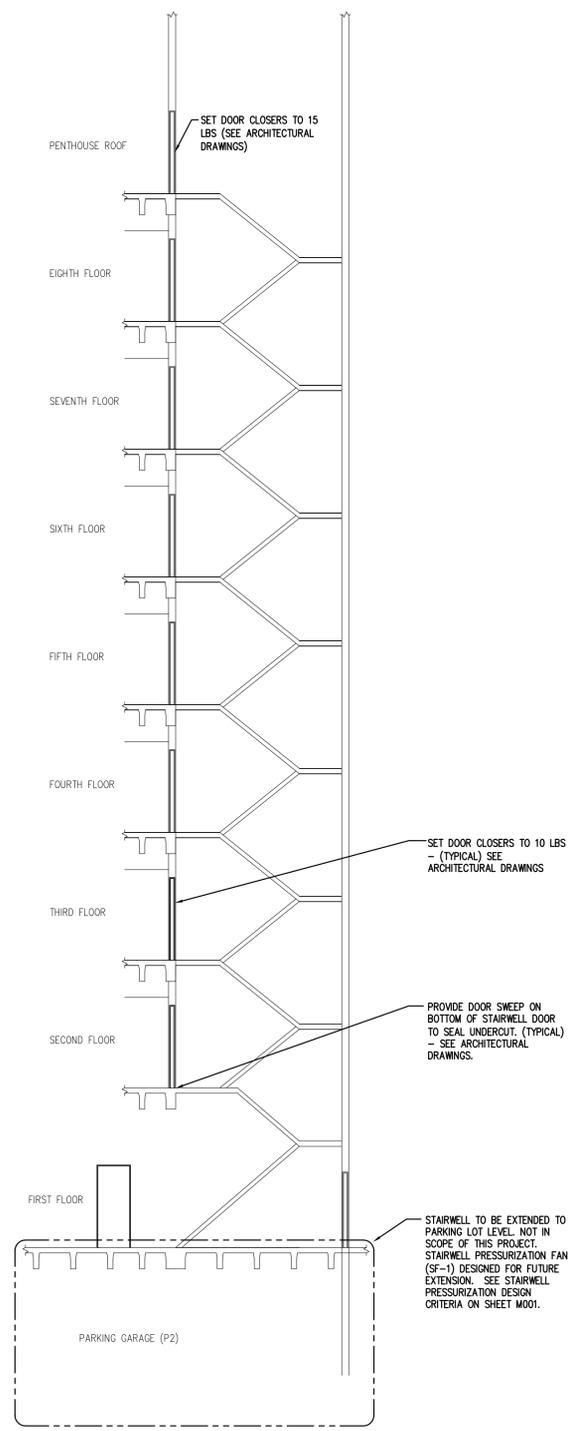
Tallahassee Florida

M201

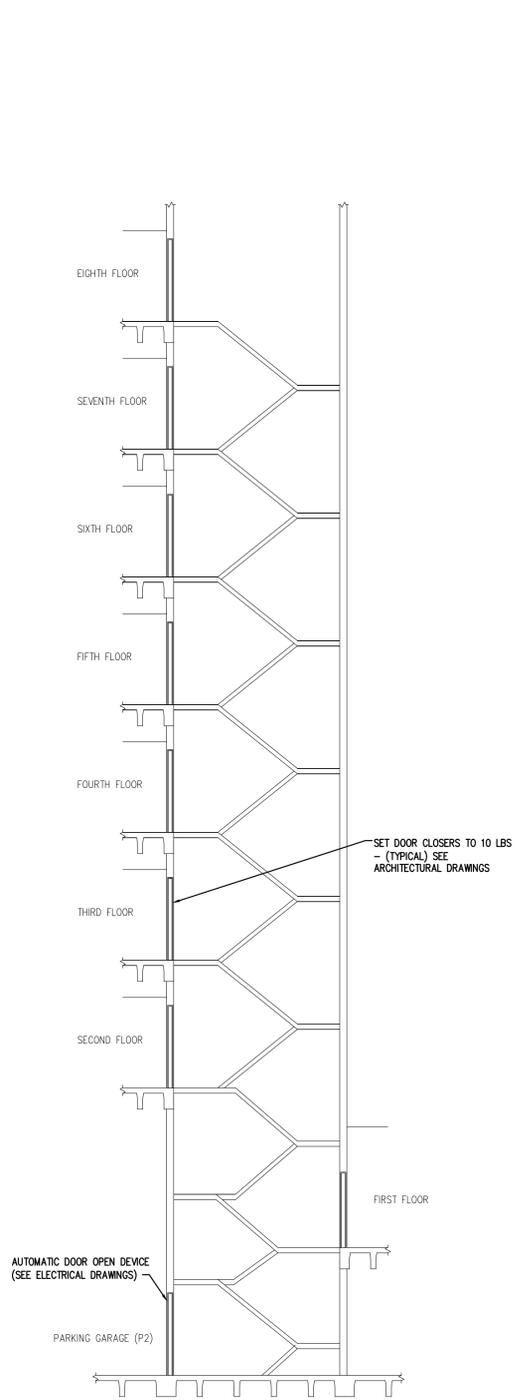
225 South Adams St, Tallahassee, FL 32301 Phone 850 224-8301 Fax 850 561-6978



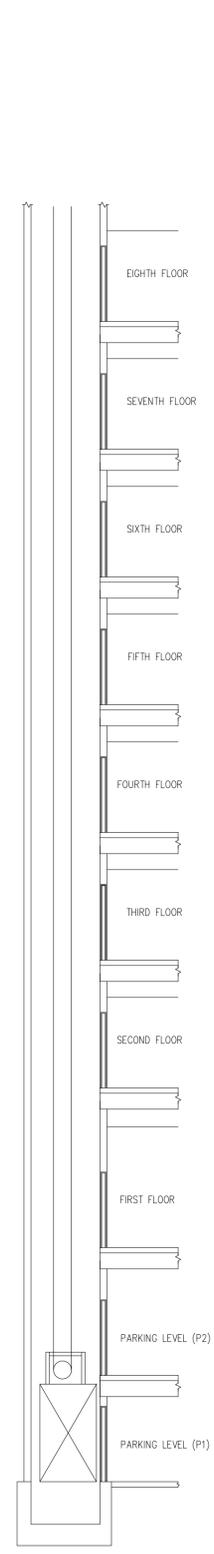
1 OUTSIDE AIR CHASE RISER - MECHANICAL  
M201 SCALE - NTS BOA TOWER



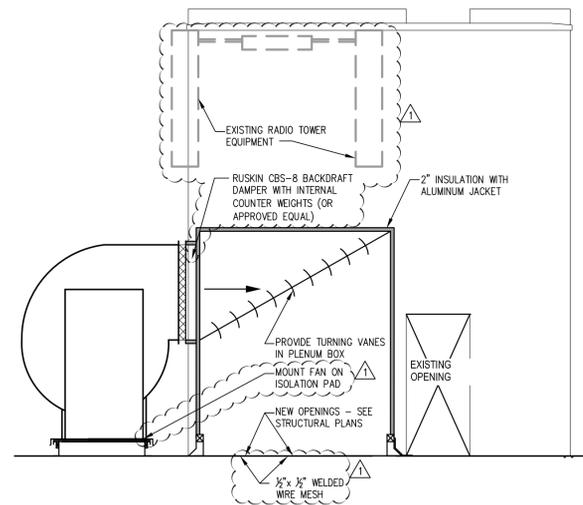
2 STAIR#1 RISER - MECHANICAL  
M201 SCALE - NTS BOA TOWER



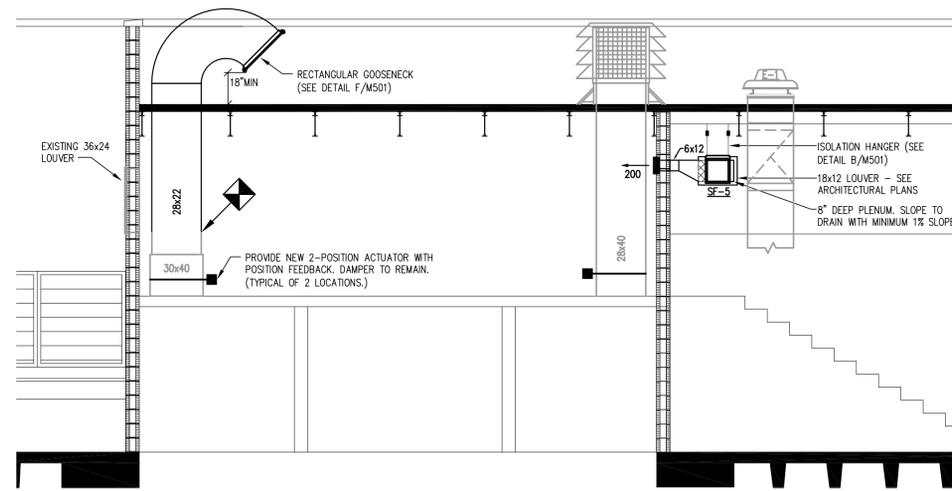
3 STAIR#2 RISER - MECHANICAL  
M201 SCALE - NTS BOA TOWER



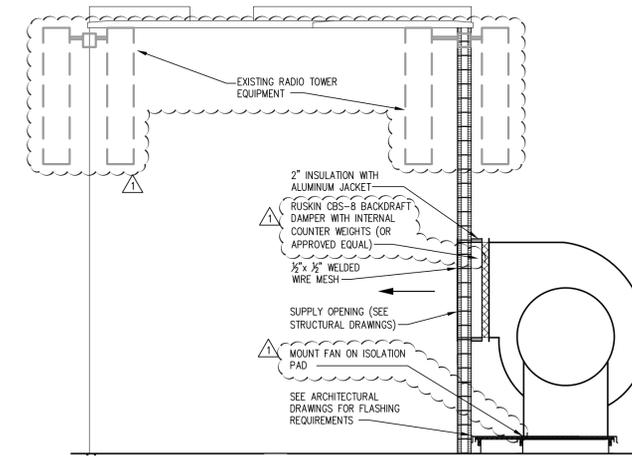
4 ELEVATOR RISER - MECHANICAL  
M201 SCALE - NTS BOA TOWER



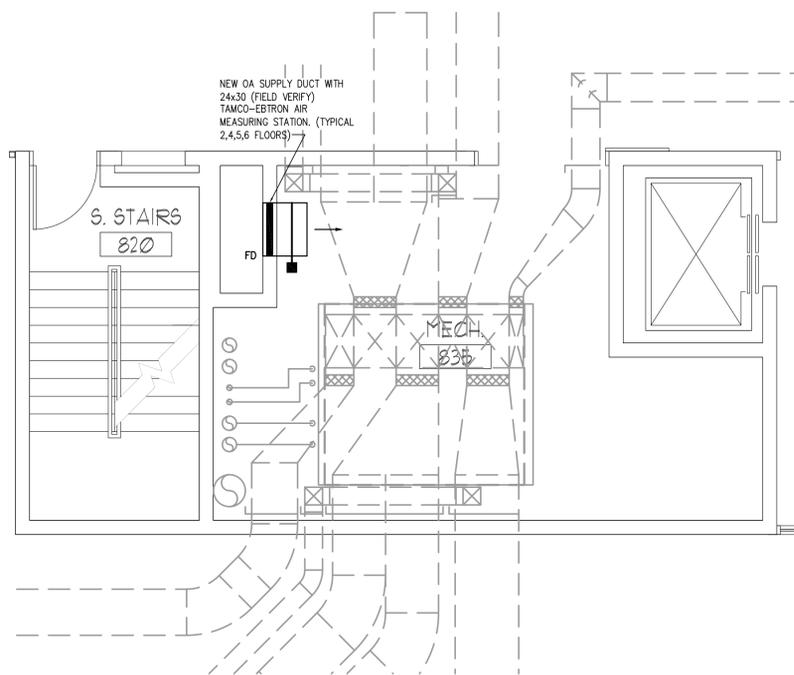
**3 SECTION (SF-2)**  
M301 SCALE 1/4"=1'-0" BOA TOWER



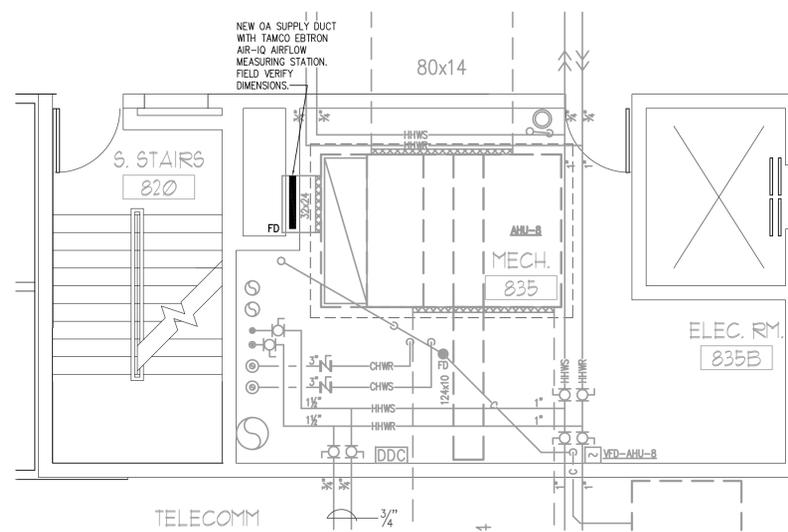
**2 PENTHOUSE SECTION**  
M301 SCALE 1/4"=1'-0" BOA TOWER



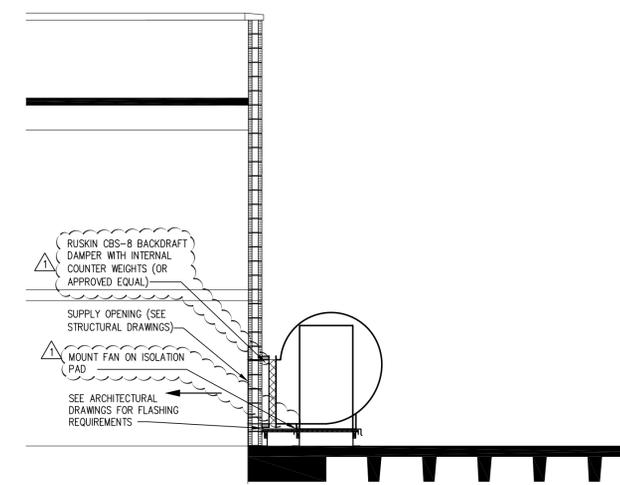
**1 SECTION (SF-1)**  
M301 SCALE 1/4"=1'-0" BOA TOWER



**6 ENLARGED EX. MECHANICAL ROOMS FLOORS 2,4,5,6 - HVAC**  
M301 SCALE 1/4"=1'-0" BOA TOWER



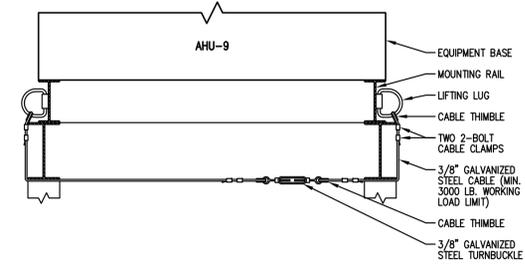
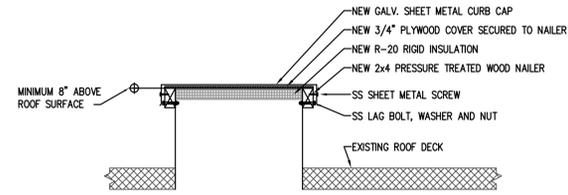
**5 ENLARGED EX. MECHANICAL ROOM FLOORS 8 - HVAC**  
M301 SCALE 1/4"=1'-0" BOA TOWER



**4 SECTION (SF-4)**  
M301 SCALE 1/4"=1'-0" BOA TOWER

Revisions

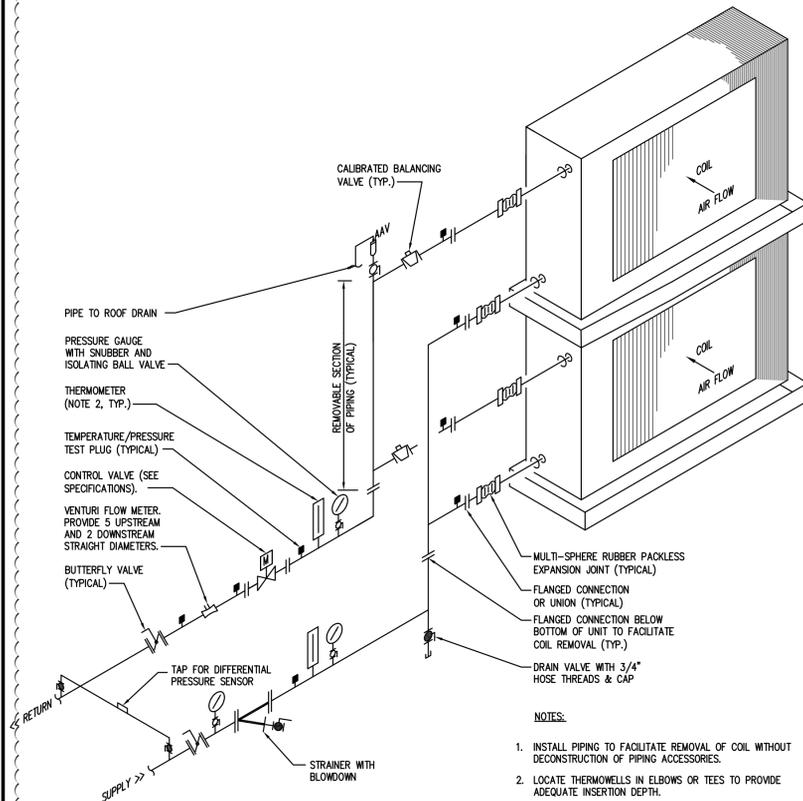
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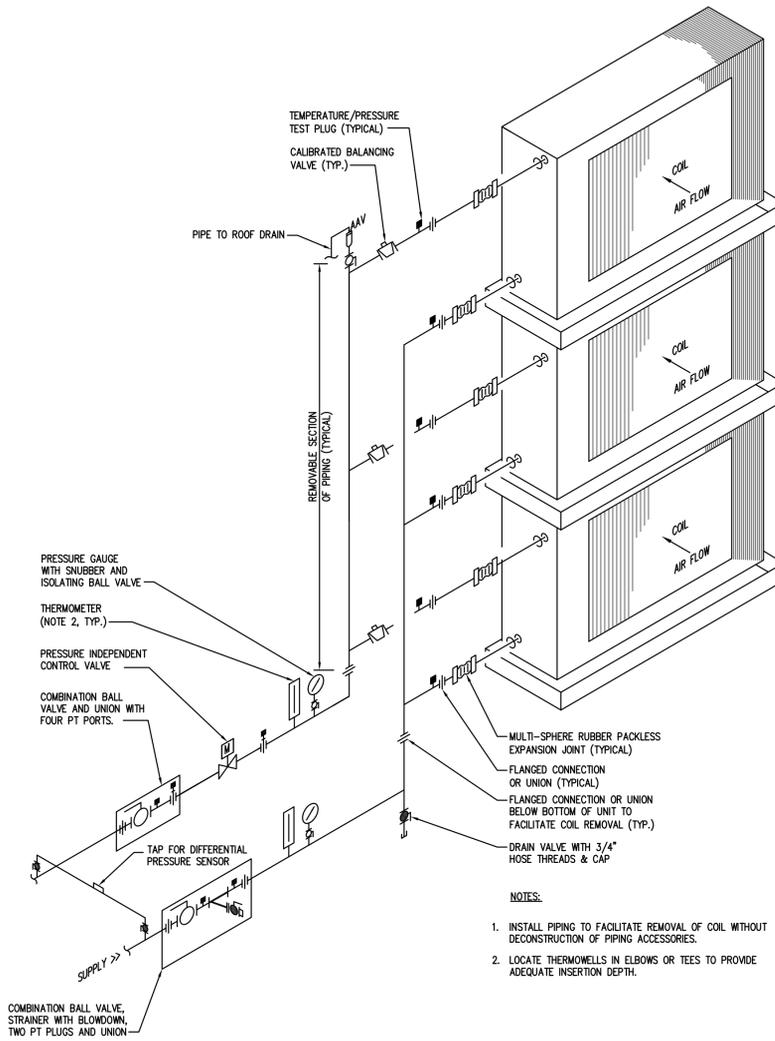
NOTES:  
1. PROVIDE AT EACH LIFTING LUG. PROVIDE MINIMUM OF FOUR (4) CABLES.

C ROOF VENT CAP

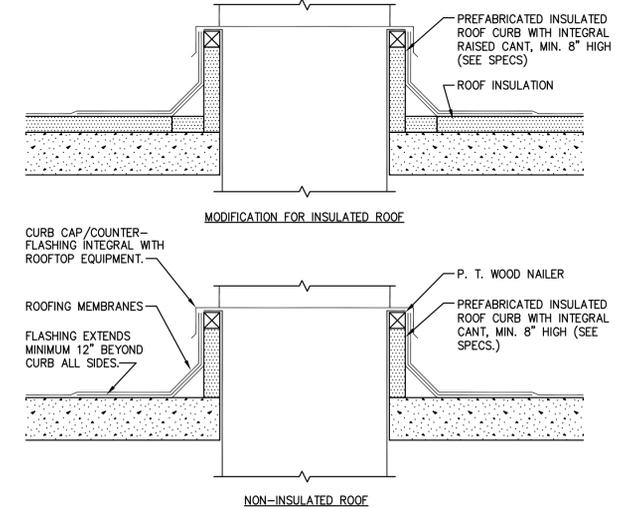
A EQUIPMENT TIE-DOWN (AHU-9)



NOTES:  
1. INSTALL PIPING TO FACILITATE REMOVAL OF COIL WITHOUT DECONSTRUCTION OF PIPING ACCESSORIES.  
2. LOCATE THERMOWELLS IN ELBOWS OR TEES TO PROVIDE ADEQUATE INSERTION DEPTH.



NOTES:  
1. INSTALL PIPING TO FACILITATE REMOVAL OF COIL WITHOUT DECONSTRUCTION OF PIPING ACCESSORIES.  
2. LOCATE THERMOWELLS IN ELBOWS OR TEES TO PROVIDE ADEQUATE INSERTION DEPTH.



NOTES:  
1. SECURE CURB TO ROOF WITH LAG BOLTS OR OTHER METHOD CONSISTENT WITH ROOF CONSTRUCTION.  
2. SECURE CURB CAP TO WOOD NAILING STRIP WITH 3/8\"/>

F TYPICAL 2-WAY AHU SPLIT COIL PIPING (2-1/2\"/>

D TYPICAL 2-WAY AHU SPLIT COIL PIPING (2\"/>

B ROOF CURB DETAIL



