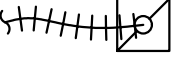
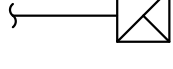
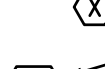
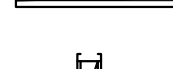
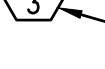
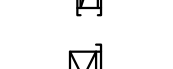
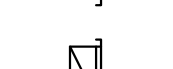
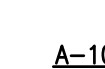
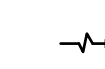
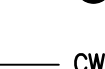
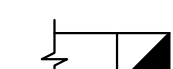
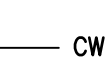
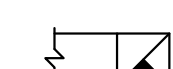
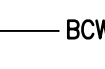
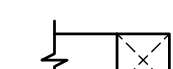
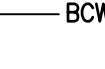
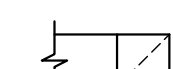
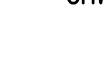
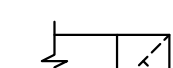
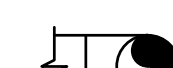
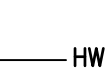
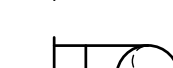
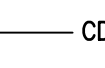
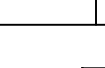
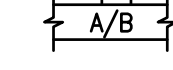
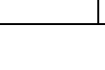
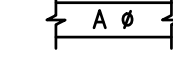
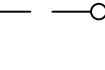
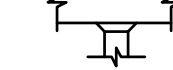
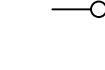
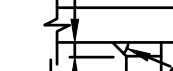
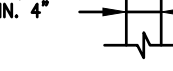
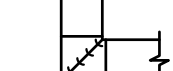
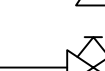
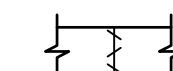
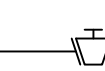
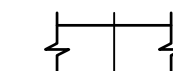
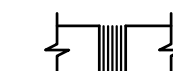
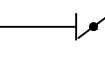
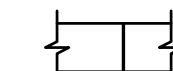
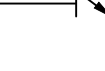
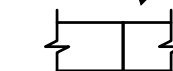
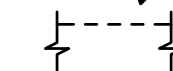
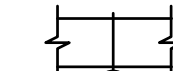
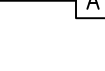
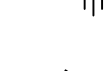
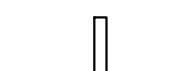
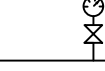
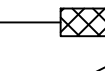
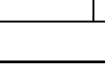
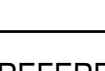


ABBREVIATIONS				GENERAL NOTES		SYMBOL LEGEND			
ABV	ABOVE	HW	HOT WATER	1. INSTALL EQUIPMENT AND MATERIALS IN COMPLIANCE WITH MANUFACTURER'S MINIMUM CLEARANCE REQUIREMENTS AND RECOMMENDATIONS.	2. COMPLY WITH THE LATEST EDITIONS OF NFPA AND THE 8TH EDITION OF THE 2023 FLORIDA BUILDING CODE (MECHANICAL, PLUMBING, GAS AND ENERGY CONSERVATION).		SUPPLY DIFFUSER		WALL MOUNTED HUMIDITY SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR
ADJ	ADJUSTABLE	HWR	HOT WATER RETURN				RETURN OR OUTDOOR AIR GRILLE		WALL MOUNTED CO2 SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR
AF	AIRFOIL	HWS	HOT WATER SUPPLY				EXHAUST GRILLE		REFERENCE NOTES
AFF	ABOVE FINISHED FLOOR	HVAC	HEATING VENTILATION AND AIR CONDITIONING	3. ALL MATERIALS SHALL FIT THE SPACE AVAILABLE. VERIFY DIMENSIONS AND CLEARANCES ON BUILDING PLANS PRIOR TO COMMENCING WORK.	4. AN INDEPENDENT TEST AND BALANCE CONTRACTOR (TABC) SHALL BE HIRED BY THE GENERAL CONTRACTOR.		LINEAR SLOT DIFFUSER		EQUIPMENT TAG
AHU	AIR HANDLING UNIT	HV	HEATING AND VENTILATING	5. TABC IS RESPONSIBLE FOR TESTING AND BALANCING OF AIR SYSTEMS IN ACCORDANCE WITH AABC GUIDELINES. A TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.	6. PROVIDE 45 DEGREE BRANCH TAKE-OFF PER SMACNA FIG. 2-8 ON ALL RECTANGULAR DUCT TAKE-OFFS.		SIDEWALL TRANSFER GRILLE		PHOTO DETAIL OR SECTION IDENTIFICATION TARGET A = DETAIL NUMBER B = SHEET NUMBER ON WHICH DETAIL IS LOCATED
AP	ACCESS PANEL	IN WG	INCHES WATER GAUGE	7. ALL DUCTWORK TAKE-OFFS AND/OR BRANCH DUCTWORK SHALL BE PROVIDED WITH BALANCING DAMPERS (REMOTE IF IN HARD CEILING AREAS).	8. CONTRACT SHALL MAINTAIN ALL RATED FIRE, SMOKE AND MEMBRANE ASSEMBLIES (EVEN IF NOT NOTED ON PLANS). PROVIDE AND INSTALL FIRE/SMOKE/RADIATION DAMPERS AT ALL RATED PENETRATIONS AND PROVIDE DUCT MOUNTED HINGED ACCESS DOORS. THIS APPLIES FOR ALL FIRE/SMOKE/RADIATION DAMPERS.		SIDEWALL SUPPLY REGISTER		AIR DEVICE TAG MARK-CEM
BAS	BUILDING AUTOMATION SYSTEM	KW	KILOWATTS	9. CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING AND SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO OR INSTALLING EQUIPMENT AND MATERIALS.	10. COORDINATE ALL HVAC SYSTEM DRAWINGS WITH EXISTING/NEW TRUSS TO AVOID INTERFERENCE BETWEEN MECHANICAL SYSTEMS AND ROOF STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRUSS INTERFERENCE THAT OCCURS IN THE FIELD DURING CONSTRUCTION. COORDINATE IN ADVANCE. DUCT SIZES MAY BE REVISED TO FIT TRUSS SYSTEM SO LONG AS THE EQUIVALENT INSIDE CROSS SECTIONAL AREA IS NOT DECREASED.		SIDEWALL RETURN GRILLE OR OUTSIDE AIR LOUVER		1" DOOR UNDER CUT. ARROW INDICATES DIRECTION OF FLOW
BLDG	BUILDING	LWT	LEAVING WATER TEMPERATURE	11. GAUGES AND CONSTRUCTION FOR DUCTWORK SHALL CONFORM TO THE LATEST EDITION OF SMACNA'S HVAC DUCT CONSTRUCTION STANDARDS.	12. TRANSITION RECTANGULAR DUCTWORK ON BOTTOM AND SIDES. MAINTAIN TOP OF DUCTWORK LEVEL AND HIGH AS POSSIBLE. FLEXIBLE DUCT RUN-OUTS TO CEILING DIFFUSERS SHALL BE AS STRAIGHT AS POSSIBLE AND FREE OF SAGS AND KINKS. FLEX DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK IT SERVES.		SIDEWALL EXHAUST GRILLE		FLOW DIRECTION
BHP	BRAKE HORSEPOWER	MA	MAKE-UP AIR	13. ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH SQUARE TO ROUND TRANSITIONS. SPIN-IN FITTINGS AT THE END OF CAPPED DUCTS ARE NOT ACCEPTABLE. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.	14. THE CONTRACTOR SHALL FULFILL ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL COMPLETE THE WORK SHOWN ON THESE DRAWINGS. ALL SYSTEMS SHALL BE FINISHED, TESTED AND BALANCED, ADJUSTED, AND PROVEN TO BE FULLY OPERATIONAL AND USEABLE.		RADIATION DAMPER INSTALLED IN AIR DEVICE		INDICATES POINT OF CONNECTION BETWEEN NEW AND EXISTING
BTUH	BRITISH THERMAL UNIT PER HOUR	MAX	MAXIMUM	15. ADJUST ALL DIFFUSERS IN CORRIDORS OR WITHIN THREE (3) FEET OF A WALL TO PROVIDE 2-WAY OR 3-WAY BLOW AWAY FROM OR PARALLEL TO WALLS. ALL DIFFUSERS SHALL HAVE 4-WAY BLOW UNLESS NOTED OTHERWISE.	16. PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.		RADIATION DAMPER INSTALLED IN DUCT		POINT OF DISCONNECT
BDD	BACKDRAFT DAMPER	MBH	1,000 X BTUH	17. ALL DAMPERS IN AND ABOVE CEILING SHALL BE ACCESSIBLE. CONTRACTOR SHALL COORDINATE ALL ACCESS PANELS IN CEILINGS OR WALLS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND INTERIOR DRAWINGS FOR PROPER LOCATION. REMOTE DAMPERS CAN BE INSTALLED ON AIR DEVICES LOCATED WITHIN HARD CEILINGS.	18. MOUNT THERMOSTATS WHERE INDICATED ON PLANS 4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. IN HANDICAPPED ACCESSIBLE AREAS, MOUNT CONTROLS AT 4'-0" (MAXIMUM) ABOVE FINISHED FLOOR.		SUPPLY DUCT UP SECTION (RECTANGULAR)		CONDENSER WATER SUPPLY PIPING
CD	CONDENSATE DRAIN	MIN	MINIMUM	19. COORDINATE DUCTWORK AND PIPING WITH PLUMBING, FIRE PROTECTION AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ANY ADDITIONAL EXPENSE TO THE CONTRACT.	20. SEAL ALL TRANSVERSE JOINTS AND FITTINGS WITH DUCT SEALER.		RETURN DUCT UP SECTION (RECTANGULAR)		CONDENSER WATER RETURN PIPING
CFM	CUBIC FEET PER MINUTE	MD	MANUAL VOLUME DAMPER	21. TRAP AND ROUTE CONDENSATE DRAINS LINES, FULL SIZE OF UNIT CONNECTION, AS INDICATED. SLOPE 1/8" PER FOOT.	22. ALTERNATE MANUFACTURERS AND MODELS WILL BE REVIEWED. THERE MAY BE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL CHANGES RESULTING FROM THE ALTERNATES. THE COST OF IMPLEMENTING AND ENGINEERING THESE CHANGES SHALL BE BORNE BY THE MECHANICAL SUBCONTRACTOR.		EXHAUST DUCT UP SECTION (RECTANGULAR)		BUILDING CONDENSER WATER SUPPLY PIPING
CLG	CEILING	M	MOTORIZED DAMPER	23. PIPE AND DUCT ROUTING SHOWN IS SCHEMATIC. PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS, INCLUDING DIVIDED DUCTS, REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE FIELD.	24. COORDINATE CEILING MOUNTED AIR DEVICE LOCATION WITH REFLECTED CEILING PLAN AND OTHER TRADES.		SUPPLY DUCT DOWN SECTION (RECTANGULAR)		BUILDING CONDENSER WATER RETURN PIPING
CHW	CHILLED WATER	MZ	MULTI-ZONE	25. ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH NEC DIVISION 16 SPECIFICATIONS.	26. PROVIDE MATERIALS WHICH HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS WHEN TESTED IN ACCORD WITH ASTM E84.		RETURN DUCT DOWN SECTION (RECTANGULAR)		CHILLED WATER SUPPLY PIPING
CHWR	CHILLED WATER RETURN	NTS	NOT TO SCALE	27. SLEEVE AND FIRE STOP PENETRATIONS THROUGH FIRE RATED SYSTEMS TO MAINTAIN RATING OF SYSTEM. USE MINIMUM GALVANIZED STEEL GAUGE DUCT AS REQUIRED TO MAINTAIN RATING OF SYSTEM.	28. WHERE DRYER EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION, IF THE EQUIVALENT LENGTH OF THE DUCT IS MORE THAN 35'-0" IT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG. THE LABEL OR TAG SHALL BE LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.		EXHAUST DUCT DOWN SECTION (RECTANGULAR)		CHILLED WATER RETURN PIPING
CHWS	CHILLED WATER SUPPLY	OA	OUTSIDE AIR	29. CONTRACTOR TO ORDER ALL FIRE/SMOKE DAMPERS WITH INTEGRAL SMOKE DETECTORS AND END STOP INDICATOR OPTIONS. VERIFY VOLTAGE WITH ELECTRICAL DRAWINGS. IF BUILDING IS EQUIPPED WITH FIRE ALARM SYSTEM ALL FIRE/SMOKE DAMPERS WILL BE CONNECTED TO BUILDING FIRE ALARM SYSTEM.	30. ALL MECHANICAL EQUIPMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, OIL, CONCRETE, ETC. ANY DENTS, SCRATCHES OR OTHER VISIBLE BLEMISHES SHALL BE CORRECTED AND THE APPEARANCE OF THE EQUIPMENT MADE "LIKE NEW" AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER. UPON COMPLETION, AND BEFORE FINAL ACCEPTANCE OF THE WORK, ALL DEBRIS, RUBBISH, LEFTOVER MATERIALS, TOOLS AND EQUIPMENT SHALL BE REMOVED FROM THE SITE. PROTECTION OF WORK UNTIL FINAL ACCEPTANCE. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE, ENTRANCE OF DIRT AND CONSTRUCTION DEBRIS FROM THE TIME OF INSTALLATION UNTIL FINAL ACCEPTANCE. ANY MATERIALS AND EQUIPMENT WHICH ARE DAMAGED SHALL BE REPAIRED TO "AS NEW" CONDITION OR REPLACED AT THE DIRECTION OF THE ARCHITECT/ENGINEER. WHERE FACTORY FINISHES OCCUR AND DAMAGE IS MINOR, FINISHES MAY BE TOUCHED UP. IF, IN THE OPINION OF THE ARCHITECT/ENGINEER THE DAMAGE IS EXCESSIVE, FACTORY FINISH SHALL BE REPLACED TO "NEW" CONDITION.		SUPPLY DUCT UP SECTION (ROUND)		HOT WATER SUPPLY PIPING
CWR	CONDENSER WATER RETURN	OBMVD	OPPOSED BLADE MANUAL VOLUME DAMPER	31. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND EXTENT OF WORK. EXACT LOCATIONS AND ARRANGEMENT OF MATERIALS AND EQUIPMENT SHALL BE DETERMINED, WITH THE ACCEPTANCE OF THE ARCHITECT/ENGINEER, AS WORK PROGRESSES TO CONFORM IN THE BEST POSSIBLE MANNER WITH THE SURROUNDINGS AND WITH THE ADJOINING WORK OF OTHER TRADES. WHERE LOCATIONS OF EQUIPMENT, DEVICES OR FIXTURES ARE CONTROLLED BY ARCHITECTURAL FEATURES, ESTABLISH SUCH LOCATIONS BY REFERRING TO DIMENSIONS ON ARCHITECTURAL DRAWINGS AND NOT BY SCALING DRAWINGS.	32. IN CASE OF DIFFERENCES BETWEEN DRAWINGS AND SPECIFICATIONS, OR WHERE DRAWINGS AND SPECIFICATIONS ARE NOT CLEAR OR DEFINITE, THE SUBJECT SHALL BE REFERRED TO ARCHITECT/ENGINEER FOR CLARIFICATION AND INSTRUCTIONS.		SUPPLY DUCT DOWN SECTION (ROUND)		HOT WATER RETURN PIPING
CWS	CONDENSER WATER SUPPLY	PROP	PROPELLER	33. ANY INTERRUPTION OF EXISTING MECHANICAL AND ELECTRICAL SERVICES SHALL BE COORDINATED IN ADVANCE WITH THE OWNER'S REPRESENTATIVE. THIS INCLUDES, BUT IS NOT LIMITED TO, SERVICES PROVIDING CHILLED WATER, ELECTRICITY, OR OTHER CRITICAL SYSTEMS AS MAY BE PERTINENT TO THIS PARTICULAR PROJECT. SERVICE INTERRUPTION TIMES AND DURATION OF INTERRUPTION OF SERVICES SHALL BE DECIDED BY THE OWNER. PROVIDE APPROPRIATE PROVISIONS (SUCH AS ISOLATION SHUT-OFF VALVES, DAMPERS, END CAPS, AND SIMILAR ITEMS) AS NECESSARY TO ACCOMMODATE THE REQUIRED SERVICE INTERRUPTIONS. IF SHUTDOWNS CANNOT BE ACCOMMODATED, PROVIDE MEANS FOR "WET" TAPPING OR "HOT" TAPPING OF PIPING SYSTEMS.	34. ALL MAIN DUCTWORK SHOWN PER PLAN IS TO BE SHEET METAL. FIBERGLASS DUCT BOARD IS NOT TO BE INSTALLED UNLESS SPECIFICALLY AUTHORIZED BY THE BUILDING LANDLORD, PROJECT OWNER/AGENT AND MECHANICAL ENGINEER OF RECORD.		EXHAUST DUCT UP SECTION (ROUND)		CONDENSATE DRAIN PIPING
CONC	CONCRETE	PCR	PRE-CONDITIONED AIR SYSTEM RETURN WATER	35. FIRE AND FIRE/SMOKE DAMPERS ARE REQUIRED TO BE UL LISTED AND APPROVED FOR THE ASSEMBLIES LISTED ON THE ARCHITECTURAL DRAWINGS. THESE DAMPERS MUST ALSO BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING.	36. TOTAL DEVELOPED LINESET LENGTH, INCLUDING HORIZONTAL AND VERTICAL DISTANCE, TO BE VERIFIED WITH CONDENSING UNIT MANUFACTURER PRIOR TO PURCHASE. IF CONDENSING UNIT LOCATIONS EXCEED THE MANUFACTURER'S RECOMMENDED TOTAL LINESET LENGTH VERIFY THE MANUFACTURER HAS AN OPTION TO ALLOW FOR LONG LINESETS AND PROVIDE ACCESSORIES AS REQUIRED.		EXISTING DUCTWORK TO REMAIN (LIGHT LINETYPE)		REFRIGERANT PIPING
CONT	CONTINUOUS	PD	PRESSURE DROP	37. WHERE REFRIGERANT LINES ARE INSTALLED IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBER SPACES AND LOCATED LESS THAN 1 1/2" FROM THE NEAREST EDGE OF THE MEMBER THEY MUST BE CONTINUOUSLY PROTECTED BY SHIELD PLATES PER FMC 1101.3.			RECTANGULAR DUCTWORK WITH TAKE-OFF, BALANCING DAMPER AND INSULATED FLEXIBLE ROUND DUCT. SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE. FIRST DIMENSION IS THAT OF SIDE SHOWN		FLOW SENSOR
CO	CARBON MONOXIDE	PLBG	PLUMBING				ROUND DUCTWORK		STATIC PRESSURE TRANSMITTER ASSEMBLY
CO2	CARBON DIOXIDE	PSIA	POUNDS PER SQUARE INCH ABSOLUTE				CONICAL FITTING WITH DAMPER ON BRANCH CONNECTION TO RECTANGULAR MAIN (PROVIDE DAMPER IN LOW PRESSURE DUCTWORK ONLY)		TEE (PLAN, UP, DOWN)
CU	CONDENSING UNIT	PSIG	POUNDS PER SQUARE INCH GAUGE				RECTANGULAR BRANCH DUCT CONNECTION. (PROVIDE BALANCING DAMPER AT ALL BRANCH CONNECTIONS)		ELBOW (PLAN, UP, DOWN)
DB	DRYBULB	R	REFRIGERANT PIPING				ELBOW WITH TURNING VANES		VALVE
DWGS	DRAWINGS	RA	RETURN AIR				OPPOSED BLADE VOLUME DAMPER (OBD)		TWO WAY MOTORIZED CONTROL VALVE
DX	DIRECT EXPANSION	RD	RADIATION DAMPER				MANUAL DAMPER		THREE WAY MOTORIZED CONTROL VALVE
EF	EXHAUST FAN	REG	REGISTER				FLEXIBLE DUCT CONNECTION		PRESSURE REDUCING VALVE
EXH	EXHAUST	REQ'D	REQUIRED				FIRE/RADIATION DAMPER WITH ACCESS PANEL		FLOW CONTROL VALVE
EA	EACH	RH	RELATIVE HUMIDITY				COMBINATION FIRE/SMOKE DAMPER WITH ACCESS PANEL (PROVIDED BY MECHANICAL, CONNECTED BY ELECTRICAL PROVIDE 120V CIRCUIT AND FIRE ALARM CONNECTION IF APPLICABLE)		SHUT-OFF VALVE
EAT	ENTERING AIR TEMPERATURE	RPM	REVOLUTIONS PER MINUTE				EXISTING DUCTWORK TO BE REMOVED (DASHED LINETYPE)		BUTTERFLY VALVE
EER	ENERGY EFFICIENCY RATIO	RTU	ROOFTOP UNIT				DUCT MOUNTED SMOKE DETECTOR PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR AND INSTALLED IN DUCT BY MECHANICAL CONTRACTOR. REFER TO SPECIFICATIONS FOR CONTROL REQUIREMENTS.		CHECK VALVE
ELECT	ELECTRICAL	SA	SUPPLY AIR				FLEX DUCT		STRAINER
ENT	ENTERING	SEER2	SEASONAL ENERGY EFFICIENCY RATIO 2				OPENING IN WALL ABOVE CEILING		BALANCE VALVE WITH INTEGRAL TAPS FOR CONNECTION OF DIFFERENTIAL PRESSURE METER. VALVE SHALL HAVE NAMEPLATE INDICATING WATER FLOW RATE VERSUS VALVE PRESSURE DROP
EO	EQUAL	SF	SQUARE FOOT				WALL MOUNTED TEMPERATURE SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR		UNION
EWT	ENTERING WATER TEMPERATURE	SD	SMOKE DETECTOR				WALL MOUNTED THERMOSTAT MOUNT 4'-0" ABOVE FINISHED FLOOR		VENTURI FLOW METER
FC	FORWARD CURVED	SDMP	SMOKE DAMPER				WALL MOUNTED CO SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR		PRESSURE AND/OR TEMPERATURE PORT
FCU	FAN COIL UNIT	SR	SUPPLY REGISTER						THERMOMETER
FD	FIRE DAMPER	STR	STARTER						PRESSURE GAUGE WITH GAUGE COCK
FL	FLOOR	SZ	SINGLE ZONE						FLEXIBLE CONNECTION
FLEX	FLEXIBLE CONNECTOR OR DUCT	T	THERMOSTAT						PRESSURE RELIEF VALVE
FPM	FEET PER MINUTE	TEFC	TOTALLY ENCLOSED FAN COOLED						
F/S	COMBINATION FIRE AND SMOKE DAMPER	TEMP	TEMPERATURE						
FT H2O	FEET WATER GAUGE	T/O	TRANSFER OPENING ABOVE CEILING						
F	DEGREES FAHRENHEIT	TS	TEMPERATURE SENSOR						
GA	GAUGE	TYP	TYPICAL						
GAL	GALLON	VFD	VARIABLE FREQUENCY DRIVE						
GALV	GALVANIZED	VAV	VARIABLE AIR VOLUME						
GPM	GALLONS PER MINUTE	VS	VARIABLE SPEED						
H	HUMIDISTAT	W	WATTS						
HP	HORSEPOWER	W/	WITH						
HTWR	HIGH TEMPERATURE HOT WATER RETURN	W/O	WITHOUT						
HTWS	HIGH TEMPERATURE HOT WATER SUPPLY	WB	WETBULB						
		ZD	ZONE DAMPER						

NOTE

ABBREVIATIONS, GENERAL NOTES AND SYMBOLS ON THIS MECHANICAL SHEET ARE FOR GENERAL REFERENCE PURPOSES ONLY. ALL OF THESE ABBREVIATIONS, GENERAL NOTES AND SYMBOLS MAY NOT BE USED FOR THIS PROJECT.

Donnelly

Architecture

ARCHITECTS INCORPORATED

1384 NORTH CITRUS AVENUE
CRYSTAL RIVER, FLORIDA 34428

825 NW 13TH STREET
GAINESVILLE, FLORIDA 32601

352.249.1166

WWW.DONNELLYARCHITECTURE.COM

O'LENO STATE PARK
DINING HALL AIR CONDITIONING
High Springs, Florida

PROJECT LOCATION:
O'LENO STATE PARK
410 SE O'LENO PARK ROAD
HIGH SPRINGS, FLORIDA 32643

JLC24.0022.00

ADAM J. BARNEY

PROFESSIONAL ENGINEER

FLORIDA

10.09.24

Adam J Barney

OCTOBER 21, 2024

100% CONSTRUCTION DOCUMENTS

ABBREV., LEGEND, & GENERAL NOTES MECHANICAL

M0.01

JL & Co

Joseph. Lawrence & Co

Consulting Engineers

1180 HARWOOD AVE., SUITE 3000
ALTAMONTE SPRINGS, FLORIDA 32714

TEL. 321.972.4466

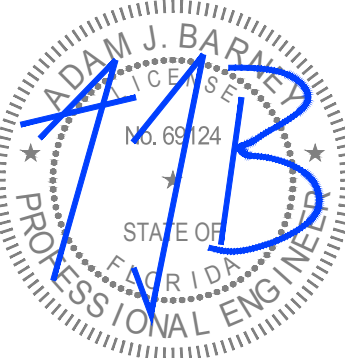
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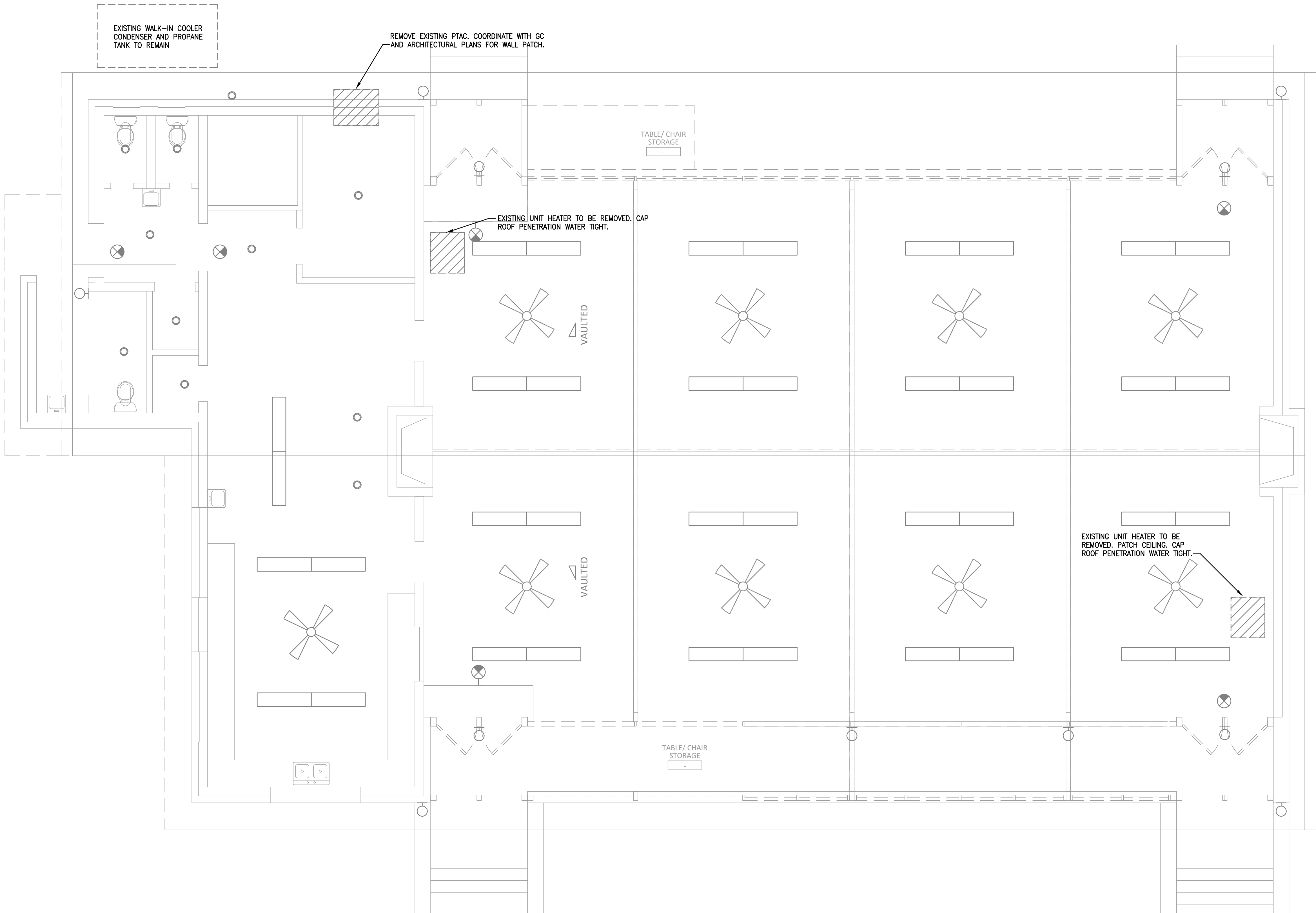
Adam J Barney

OCTOBER 21, 2024

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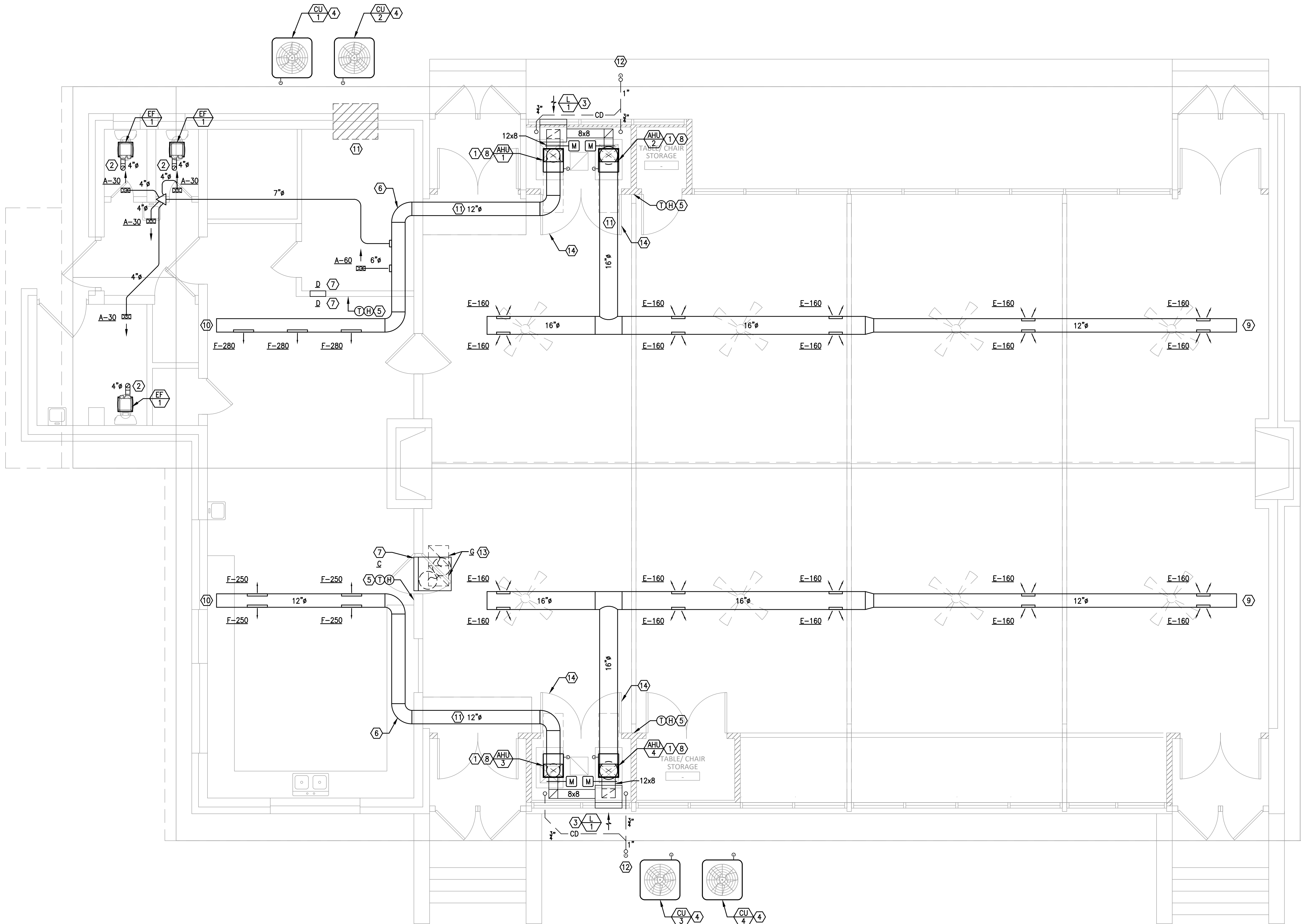
DEMO FLOOR PLAN
MECHANICAL

M1.01



1 RENO FLOOR PLAN - MECHANICAL

Scale: 1/4" = 1'-0"



GENERAL NOTES:

1. ALL EXHAUST OUTLETS SHALL BE FARTHER THAN 3 FEET AWAY FROM ANY OPERABLE WINDOWS.

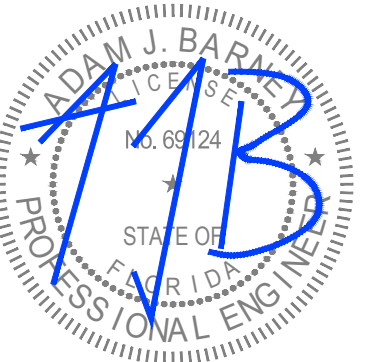
REFERENCE NOTES: (X)

- (1) MOUNT AHU PER DETAIL AND ROUTE REFRIGERANT LINES THRU CEILING SPACE AS REQUIRED AND OUT EXTERIOR WALL TO GROUND MOUNTED CONDENSING UNIT. SEE PLUMBING PLANS FOR CONDENSATE DISPOSAL.
- (2) ROUTE TOILET EXHAUST DUCT FROM CEILING MOUNTED EXHAUST FAN THROUGH CEILING SPACE TO ROOF. TERMINATE DUCT AT ROOF CAP WITH BIRD SCREEN. PRIME COAT AND PAINT WALL CAP TO MATCH BUILDING COLOR.
- (3) PROVIDE FULL SIZE PLENUM BOX FROM INTAKE LOUVER. ROUTE OUTSIDE AIR DUCT FROM AHU UP TO OUTDOOR AIR PLENUM BOX. PROVIDE MOTORIZED DAMPER IN DUCT. COORDINATE FINISH COLOR OF LOUVER WITH ARCHITECT. OUTSIDE AIR DUCT SHALL BE LOCATED A MINIMUM OF 10'-0" AWAY FROM ANY DISCHARGE AIR. PROVIDE WITH INTEGRAL BIRD SCREEN.
- (4) INSTALL CONDENSING UNIT AND HOUSEKEEPING PAD PER DETAIL. CONDENSING UNITS TO BE INSTALLED WITH REQUIRED MANUFACTURER CLEARANCE.
- (5) PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR SPECIFICATION. MOUNT THERMOSTAT 4'-0" ABOVE FINISHED FLOOR.
- (6) TURN UP SUPPLY DUCT TO FOLLOW ROOF PITCH. COORDINATE FINAL HEIGHT OF SUPPLY DUCT WITH STRUCTURE. COORDINATE DUCT ROUTING WITH CEILING FANS.
- (7) RETURN AIR GRILLE, MOUNT AS HIGH AS POSSIBLE.
- (8) PROVIDE FULL SIZE RETURN AIR PLENUM UNDER AIR HANDLER. PROVIDE RETURN AND OUTSIDE AIR BALANCING DAMPERS.
- (9) ATTACH DUCT-MOUNTED SUPPLY DIFFUSERS AT 45 DOWNWARD ANGLE.
- (10) ATTACH DUCT-MOUNTED SUPPLY DIFFUSERS HORIZONTALLY.
- (11) SUPPLY DUCT IN SOFFIT.
- (12) 1" CONDENSATE LINE; GOOSENECK WITHIN GREEN SPACE.
- (13) PROVIDE FULL SIZE PLENUM BOX AND FLEX DUCTS TO SOFFIT MOUNTED TRANSFER GRILLES.
- (14) PROVIDE DOOR LOUVERS, MIN. 2.2 SQFT FREE AREA PER DOOR. COORDINATE WITH GC AND ARCHITECTURAL PLANS.

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Adam J Barney

OCTOBER 21, 2024

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RENO FLOOR PLAN
MECHANICAL

M2.01

High Springs, Florida

PROJECT LOCATION:
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SCHEDULES - MECHANICAL

M3.01

1180 HARWOOD AVE., SUITE 3000
 LTAMONTE SPRINGS, FLORIDA 32717
 TEL: 321.972.4466
 WWW.JLCENG.COM
 CA NO. 28730

By troy crews at 2:35 pm, May 01, 2025

FAN SCHEDULE										
MARK	AREA SERVED	TYPE	CFM	T.S.P.	HP/WATTS	RPM	VOLTS/PH	SONES	MANUFACTURER & MODEL NO.	NOTES
EF-1	BATHROOM	CEILING	53	0.25	7.5 WATTS	1,025	120/1Ø	0.5	PANASONIC FV-0510VS1 OR EQUAL	1., & 2.
NOTES: 1. EXHAUST FAN EQUIPPED WITH 4" OVAL CONNECTION. PROVIDE DUCTWORK TRANSITION AS REQUIRED. 2. EXHAUST FAN TO BE CONTROLLED BY WALL SWITCH, REFER TO ELECTRICAL DRAWINGS.										

AIR DEVICE SCHEDULE						
MARK	DESCRIPTION	FACE SIZE	NECK	MATERIAL	MANUFACTURER & MODEL NO.	NOTES
A	LOUVERED FACE SUPPLY DIFFUSER	8"x4"	SEE PLAN	STEEL	TRUAIRE 401	1., & 2.
B	LOUVERED FACE SUPPLY DIFFUSER	14"x10"	SEE PLAN	STEEL	TRUAIRE 401	1., & 2.
C	LOUVERED FACE RETURN GRILLE	30"x20"	SEE PLAN	STEEL	TRUAIRE 270	1., & 2.
D	LOUVERED FACE RETURN GRILLE	14"x8"	SEE PLAN	STEEL	TRUAIRE 270	1., & 2.
E	LOUVERED FACE SUPPLY DIFFUSER - SPIRAL	12"x6"	SEE PLAN	STEEL	TRUAIRE SF2	1., & 2.
F	LOUVERED FACE SUPPLY DIFFUSER - SPIRAL	18"x6"	SEE PLAN	STEEL	TRUAIRE SF1	1., & 2.
G	LOUVERED FACE RETURN GRILLE	18"x18"	SEE PLAN	STEEL	TRUAIRE 1210	1., & 2.
NOTES:						
1. COORDINATE SURFACE FINISHES WITH ARCHITECTURAL DRAWINGS.						
2. PROVIDE FACTORY OBD.						

LOUVER SCHEDULE								
MARK	SERVICE	AIR FLOW (CFM)	FREE AREA (SF)	W x H (IN)	MAX. VELOCITY IN FPM	MAX. PRESSURE DROP (IN H2O)	MANUFACTURER & MODEL NO.	NOTES
L-1	OUTSIDE AIR	520	1.1	24"x18"	500	0.04	RUSKIN ESD-635DE	1. & 2.
NOTES: 1. PROVIDE BIRD SCREEN.								

OUTSIDE AIR CALCULATIONS								
	CLASSIFICATION	OCC. FACTOR (OCCUPANCY/1000 SQFT. (PERSONS))	FBC-M SECTION 403.3 VALUES TABLE 403.3.1.1		SPACE AREA (SQFT)	SPACE LOAD (PERSONS)	OUTSIDE AIR REQUIRED (CFM)	OUTSIDE AIR SUPPLIED (CFM)
			Rp	Ra				
AHU-1	PREP ROOM	20	7.5	0.12	303	7	88.86	200
	DRY STORAGE	0	0	0.12	100	0	12	
	RR1	0	0	0	16	0	0	
	RR2	0	0	0	16	0	0	
	CORRIDOR	0	0	0.06	49	0	2.94	
AHU-2	DINING HALL	-	7.5	0.18	1338	10	315.84	320
AHU-3	PREP ROOM	20	7.5	0.12	303	7	88.86	200
AHU-2	DINING HALL	-	7.5	0.18	1338	10	315.84	320

NOTES:
REQUIRED OUTDOOR VENTILATION AIR VALUES TAKEN FROM FBC-M SECTION 403, TABLE 403.3.1.1.
VENTILATION BREATHING ZONE FORMULA: $Vbz = Rp * Pz + Ra * Az$
 $Pz = \text{OCCUPANCY FACTOR} * \text{SPACE AREA}$

*AREA DOES NOT INCLUDE RESTROOMS.

DX SPLIT AIR HANDLING UNIT SCHEDULE																									
MARK	LOCATION SERVED	FAN					COOLING COIL			FILTERS			ELECTRIC HEATING COIL				SINGLE POINT UNIT ELEC. REQUIREMENTS			UNIT INFORMATION					
		TOTAL AIR FLOW (CFM)	OUTSIDE AIR FLOW (CFM)	EXTERNAL STATIC PRESS. (IN. WG.)	DRIVE TYPE	HP	ENTERING AIR TEMP. (°F DB/WB)	LEAVING AIR TEMP. (°F DB/WB)	TOTAL CAPACITY (BTUH)	TYPE	MERV	THICKNESS (IN)	NO. OF STAGES	VOLTAGE / PHASE	TOTAL KW	HEATER STEPS	VOLTAGE / PHASE	SINGLE CICIUIT MCA	SINGLE CIRCUIT MOCP	UNIT SIZE (H'xW'xD')	OPERATING WEIGHT (LBS.)	MANUFACTURER	MODEL NUMBER	MOUNTING APPLICATION	NOTES
AHU-1	-	1020	102	0.8	DIRECT	0.5	77 / 65	54.7 / 54.7	29.7	THROWAWAY	8	1	1	240V / 1Ø	7.5	1	208V / 1Ø	39	40	47.75 x 18.5 x 22	143	LENNOX	CBA25UHV-030	-	-
AHU-2	-	1600	160	0.8	DIRECT	1	77 / 65	55.4 / 55.1	46.3	THROWAWAY	8	1	1	240V / 1Ø	10	1	208V / 1Ø	52	60	55.75 x 21.5 x 22	179	LENNOX	CBA25UHV-048	-	-
AHU-3	-	1020	102	0.8	DIRECT	0.5	77 / 65	54.7 / 54.7	29.7	THROWAWAY	8	1	1	240V / 1Ø	7.5	1	208V / 1Ø	39	40	47.75 x 18.5 x 22	143	LENNOX	CBA25UHV-030	-	-
AHU-4	-	1600	160	0.8	DIRECT	1	77 / 65	55.4 / 55.1	46.3	THROWAWAY	8	1	1	240V / 1Ø	10	1	208V / 1Ø	52	60	55.75 x 21.5 x 22	179	LENNOX	CBA25UHV-048	-	-
NOTES: 1. PROVIDE COMPLETE WITH SINGLE POINT WIRING, ELECTRICAL DISCONNECT (PROVIDED BY DIVISION 16), 1" THICK CABINET FOIL FACED INSULATION, HONEYWELL TH8321WF1001 PROGRAMMABLE THERMOSTAT WITH HUMIDISTAT AND NIGHT SET BACK, FACTORY INSTALLED TXV KIT, AND CONDENSATE OVERFLOW SWITCH. 2. PROVIDE UV PROTECTIVE COATING/COVERING ON ALL ELASTOMERIC PIPE INSULATION WHERE EXPOSED TO SUNLIGHT.																									
PLEASE CALL YOUR LOCAL LENNOX REP RYAN MCDANIEL FOR YOUR QUOTE AT (407) 625-8436.																									

DX SPLIT CONDENSING UNIT SCHEDULE (STRAIGHT COOL)																		
MARK	LOCATION	COMPRESSOR			CONDENSER FANS		ELECTRICAL						UNIT INFORMATION		MANUFACTURER	MODEL NUMBER	NOTES	
		OUTDOOR DESIGN TEMP (°F)	QTY.	CAPACITY STAGES	QTY.	NOMINAL HP	VOLTAGE / PHASE	COMPRESSOR RLA (EACH)	CONDENSER FANS		MCA	MOCP	SEER2	UNIT SIZE (H"xW"xD")				OPERATING WEIGHT (LBS.)
									QTY.	FLA (EACH)								
CU-1	-	95	1	100% / 1	1	1/8	240V / 1Ø	14.1	1	0.74	18.4	25	16	31.25 x 28.25 x 28.25	180	LENNOX	ML17XC1-030-230	-
CU-2	-	95	1	100% / 1	1	1/3	240V / 1Ø	19.9	1	2.6	27.5	35	15.4	35.25 x 32.25 x 32.25	225	LENNOX	ML17XC1-047-230	-
CU-3	-	95	1	100% / 1	1	1/8	240V / 1Ø	14.1	1	0.74	18.4	25	16	31.25 x 28.25 x 28.25	180	LENNOX	ML17XC1-030-230	-
CU-4	-	95	1	100% / 1	1	1/3	240V / 1Ø	19.9	1	2.6	27.5	35	15.4	35.25 x 32.25 x 32.25	225	LENNOX	ML17XC1-047-230	-
NOTES:																		
1. PROVIDE COMPLETE WITH DISCONNECT SWITCH (PROVIDED BY DIVISION 16), TIME DELAY RELAY AND ANTI-SHORT CYCLE TIMER.																		
PLEASE CALL YOUR LOCAL LENNOX REP RYAN MCDANIEL FOR YOUR QUOTE AT (407) 625-8436.																		

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Adam J Barney

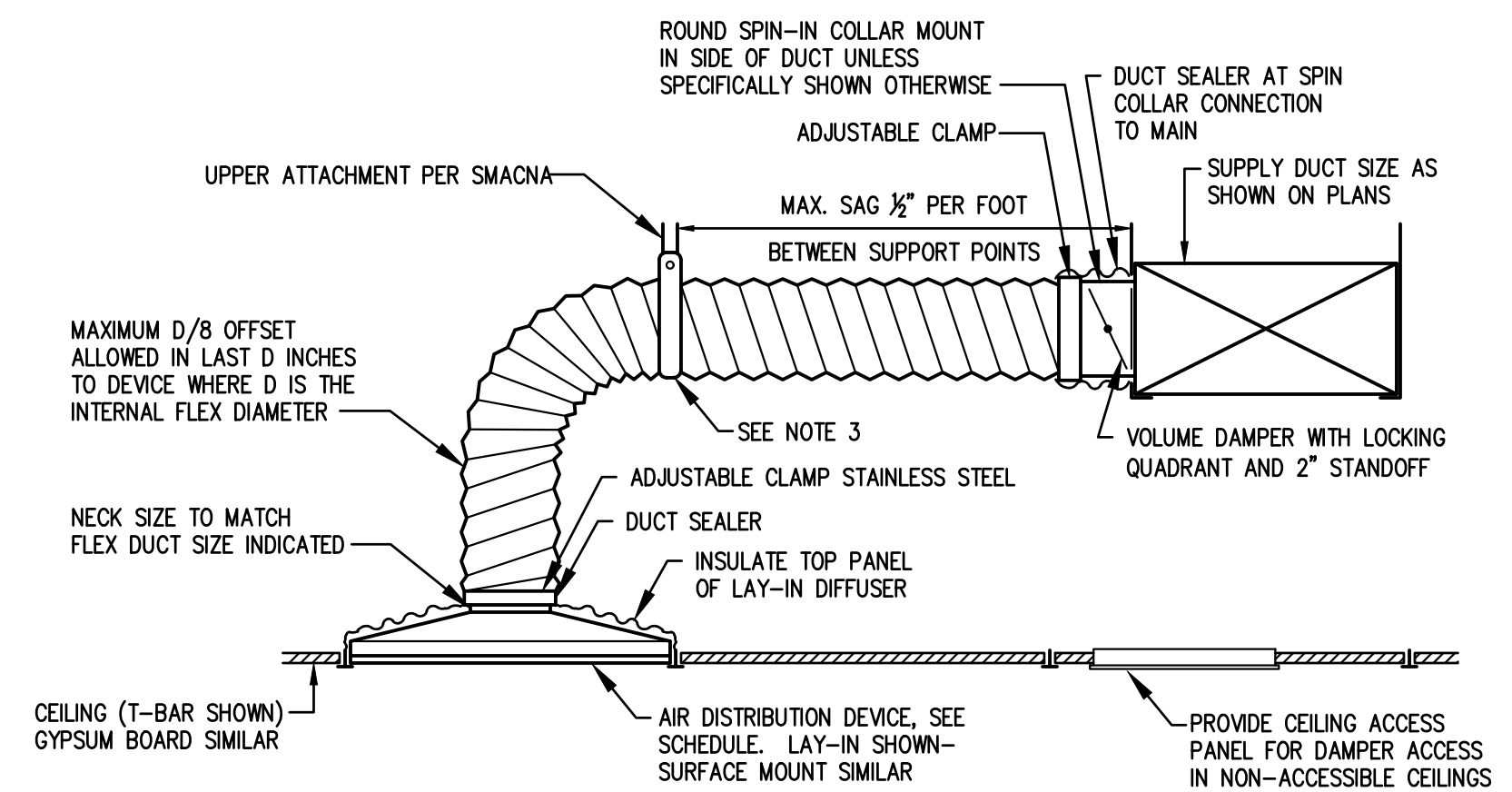
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DETAILS -
MECHANICAL

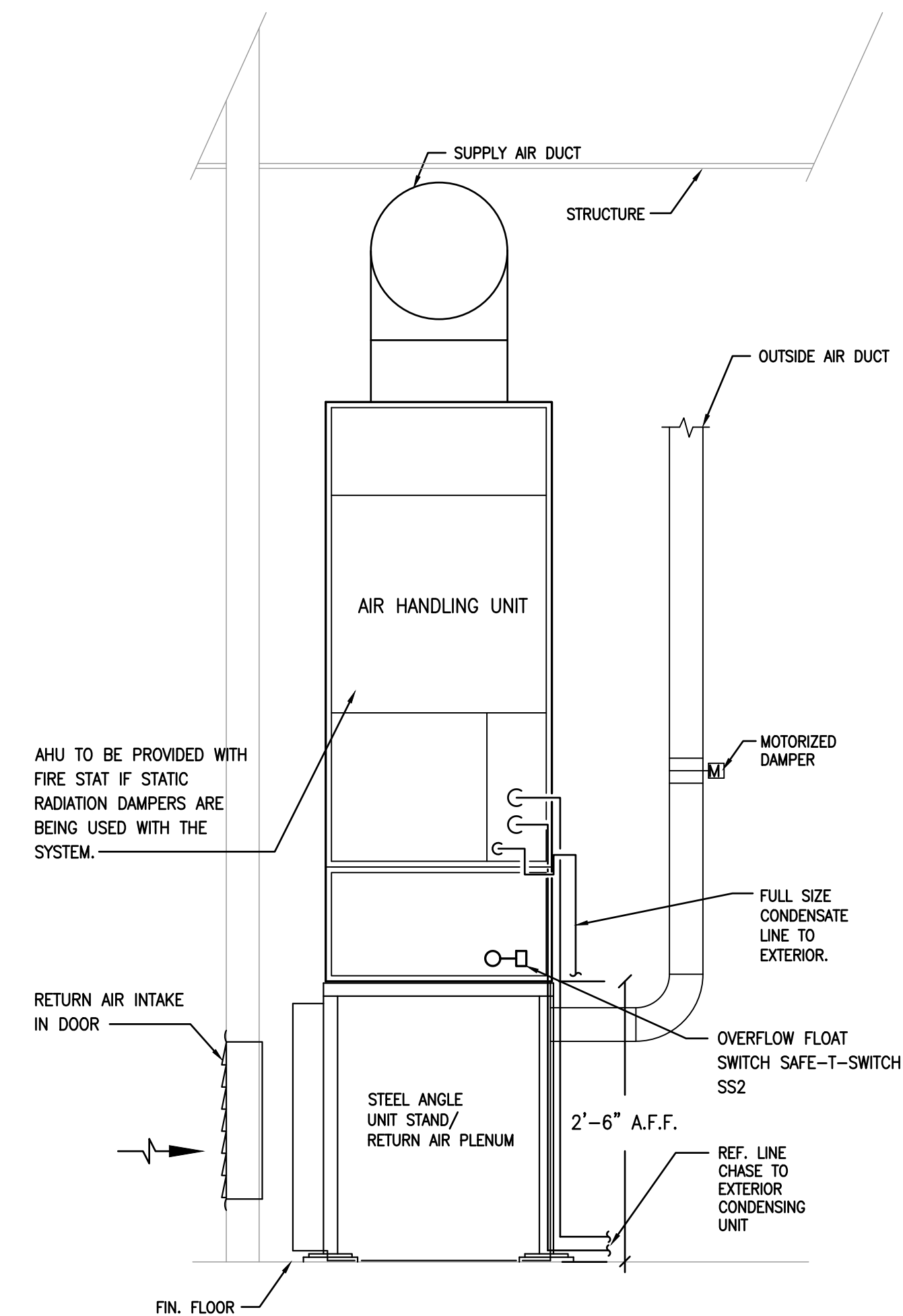
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Joseph, Lawrence & Co
Consulting Engineers
1180 HARWOOD AVE., SUITE 3000
ALTAMONTE SPRINGS, FLORIDA 32714
TEL. 321.972.4466
WWW.JLCENG.COM
CA NO. 28730

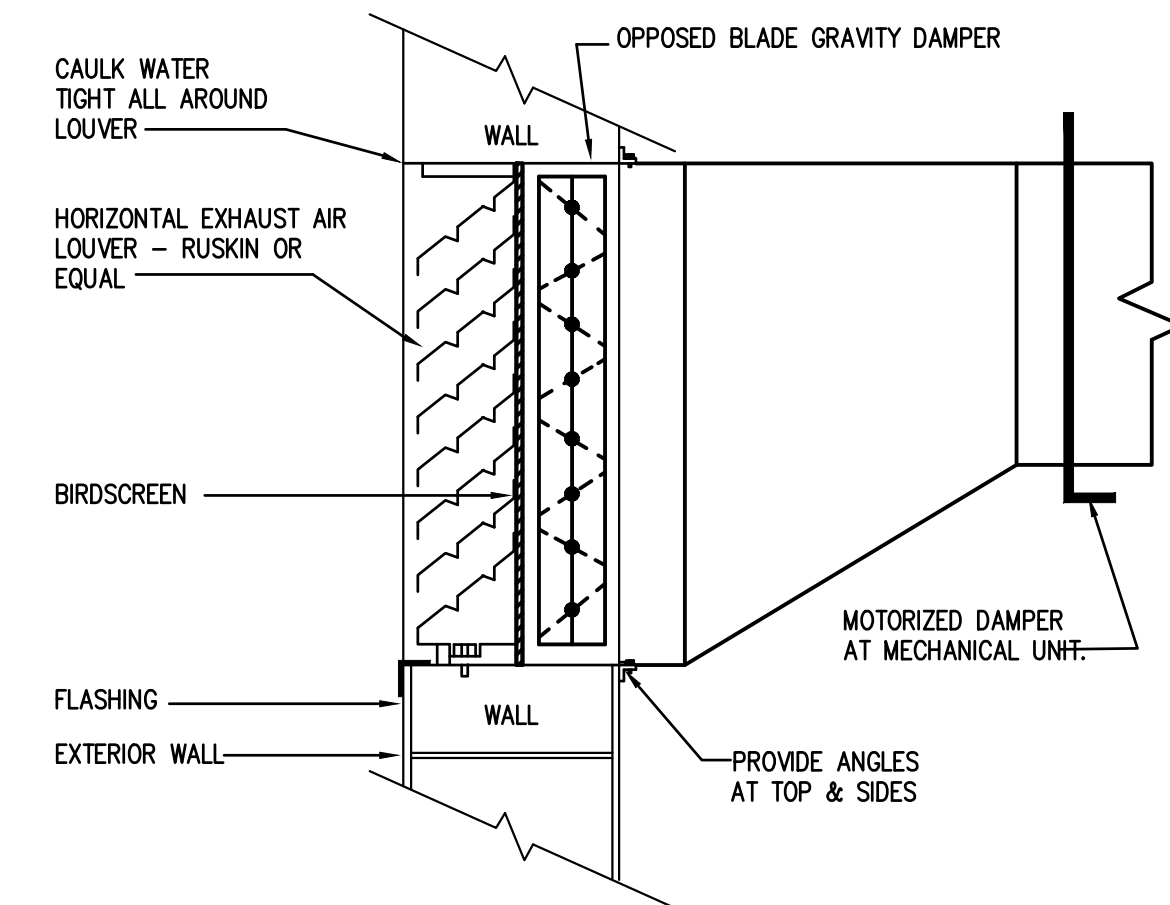


- NOTES:
1. EXTEND FLEXIBLE DUCT INSULATION TO DUCT/DIFFUSER PANEL INSULATION AND SEAL WITH MASTIC.
 2. MINIMUM 1-1/2" WIDE 22 GAUGE GALVANIZED STRAP HANGER WITH HEMMED EDGES PER SMACNA FIGURE 3-10.
 3. FLEXIBLE AIR DUCT SHALL BE FULLY EXTENDED AND NOT COMPRESSED WITH ELBOW RADIUS NO LESS THAN R/D=1.0.

6 FLEXIBLE DUCT DETAIL
NTS

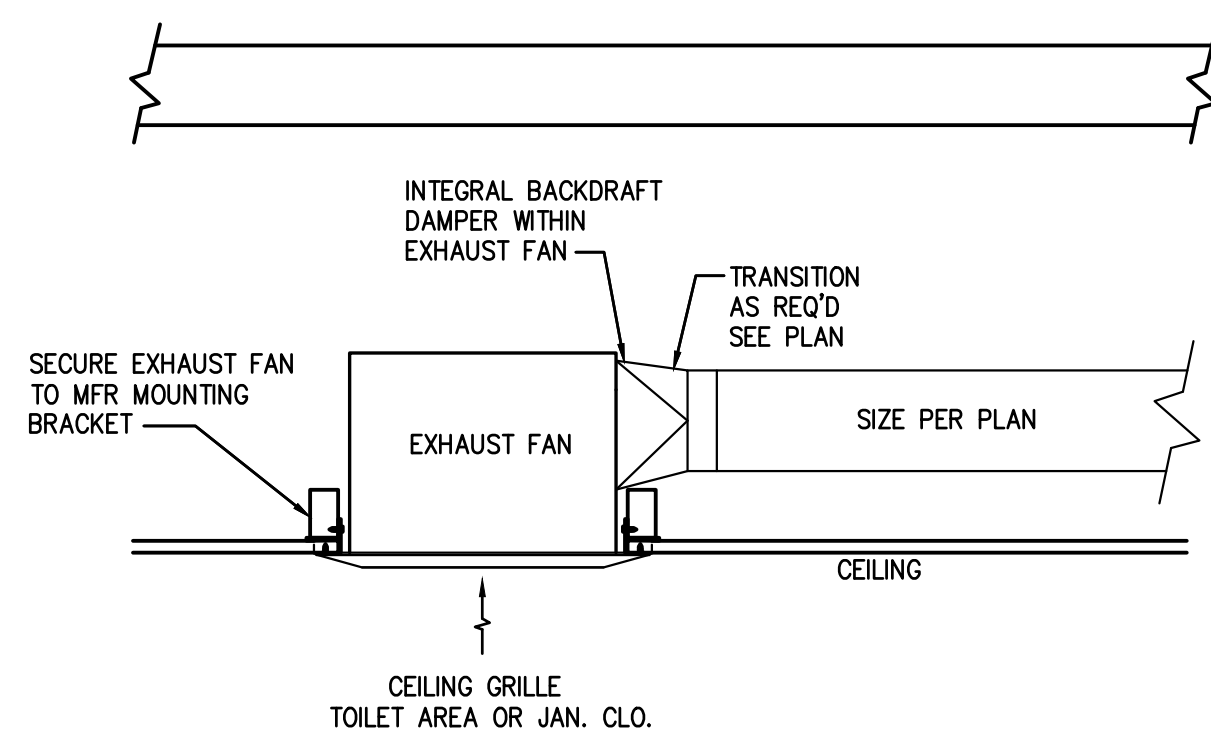


1 VERTICAL AHU DETAIL
NTS (CORRIDOR)

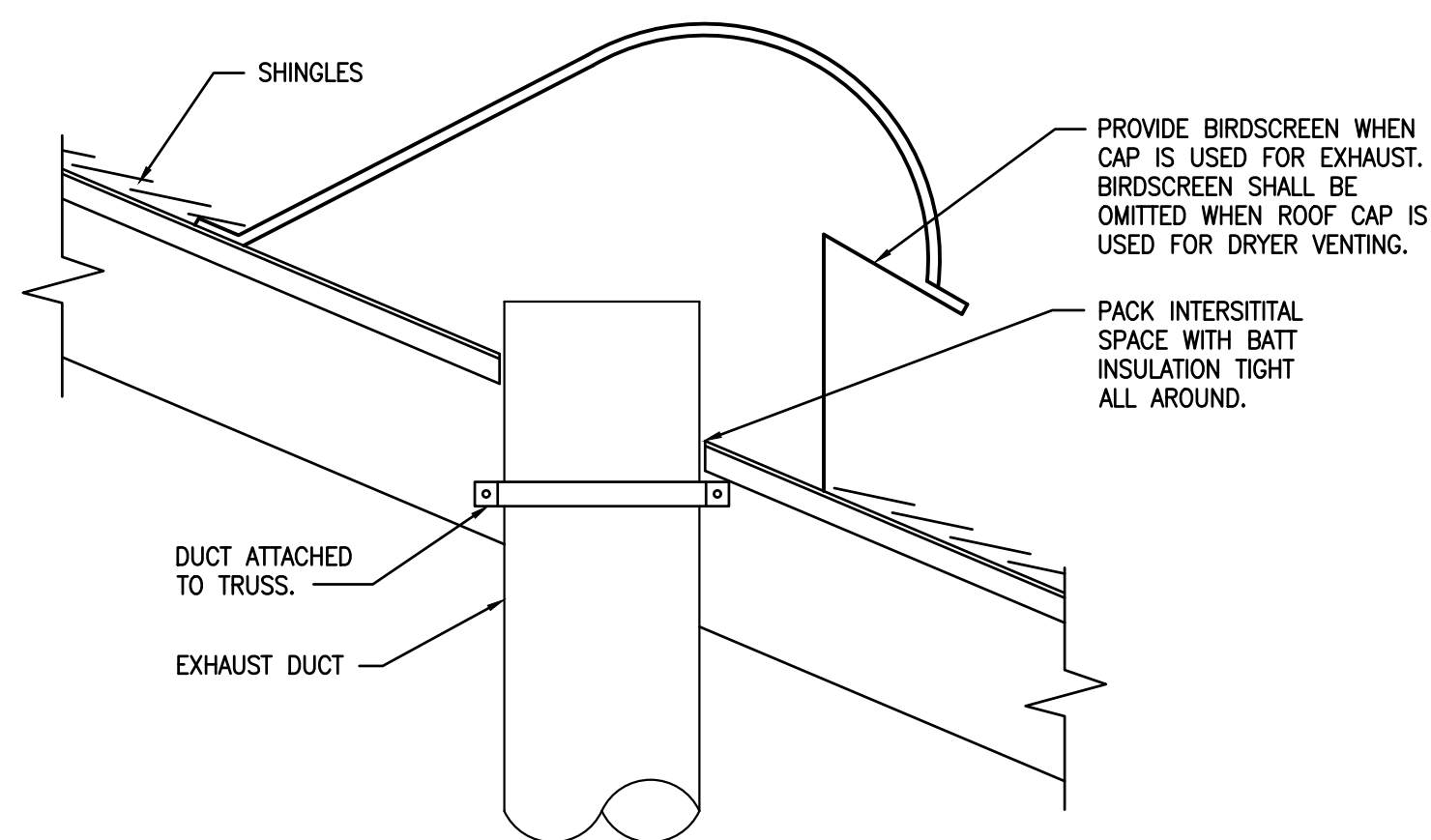


- NOTES:
1. PROTECT OPENING PER FLORIDA BUILDING CODE - MECHANICAL SECTION 401.5 AND 401.6

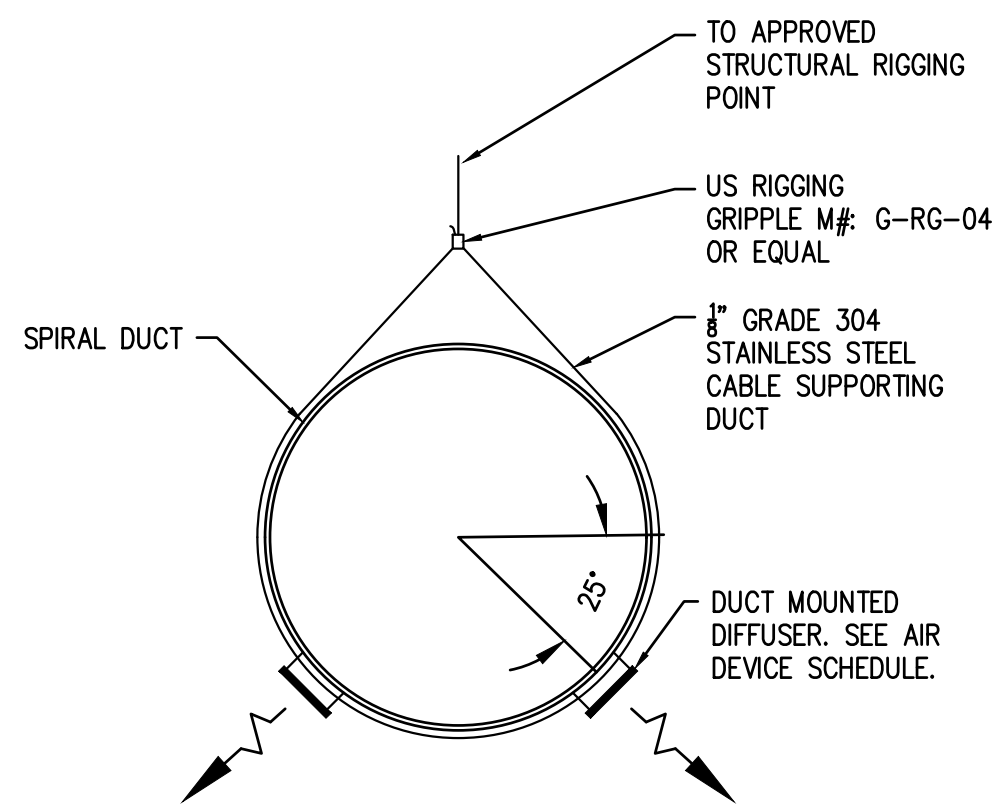
7 SIDEWALL LOUVER DETAIL
NTS



4 CEILING FAN SUPPORT DETAIL
NTS

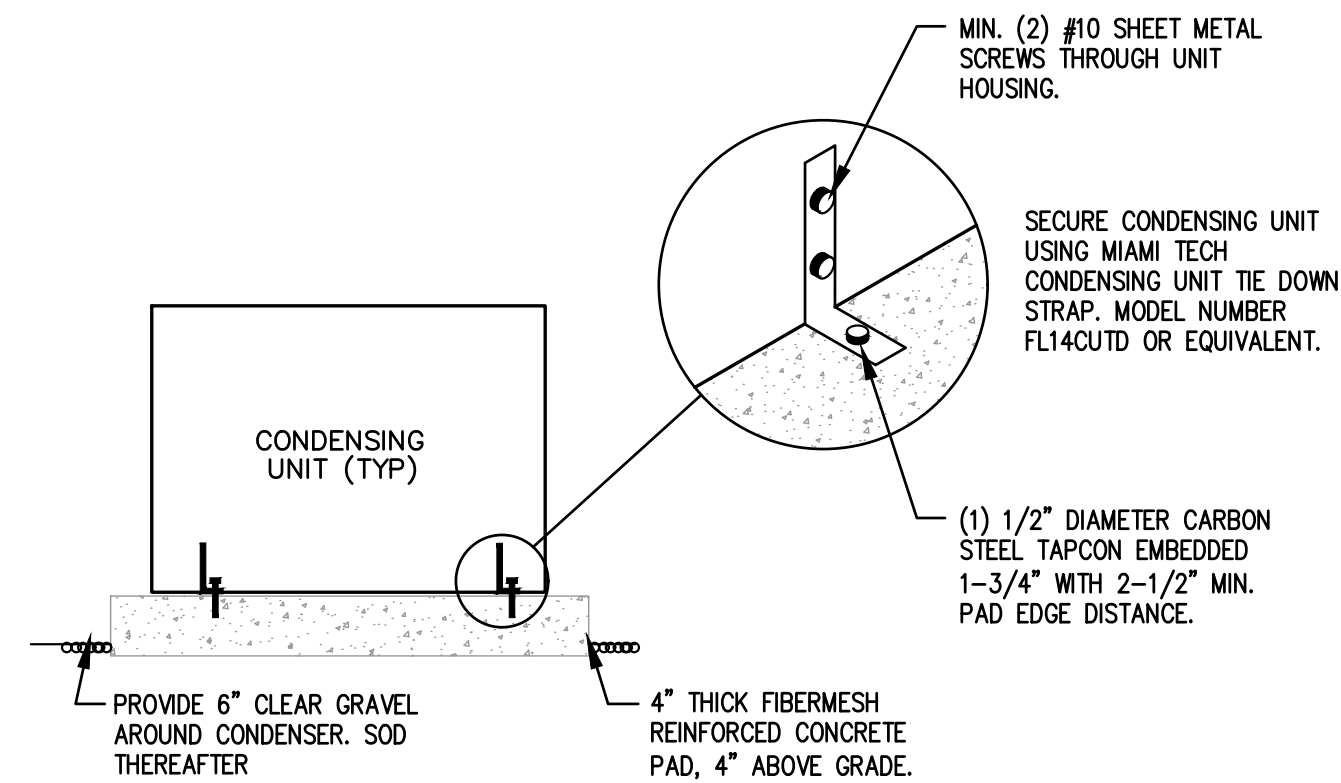


2 ROOF CAP DETAIL
NTS

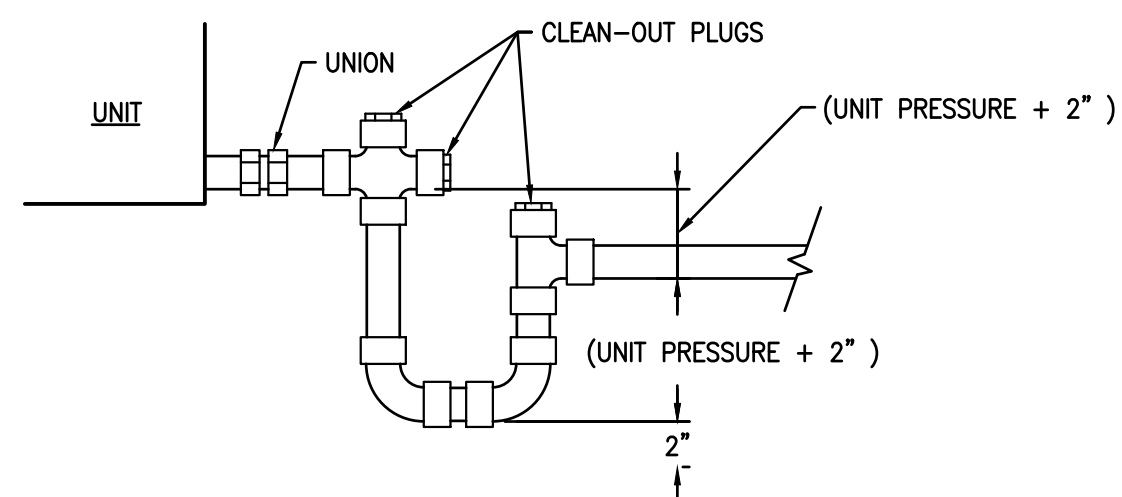


- NOTES:
1. MAXIMUM SPACING BETWEEN HANGER LOCATIONS SHALL BE 8'-0" PER PAIR.
 2. REFER TO SMACNA FOR ADDITIONAL REQUIREMENTS.
 3. ALL SPIRAL DUCT TO BE 1" DOUBLE WALL INSULATED SPIRAL DUCTWORK

8 SPIRAL DUCTWORK SUPPORT DETAIL
NTS



5 TYP. CONC. PAD
MOUNTED CU DETAIL
NTS



- NOTES:
1. CONDENSATE DRAIN SHALL BE PIPED FULL SIZE OF UNIT CONNECTION.
 2. CONDENSATE PANS SHALL BE INSTALLED WITH ADEQUATE PITCH TO ENSURE POSITIVE DRAINAGE OF ACCUMULATED CONDENSATE.
 3. TRAP CONDENSATE AND DISCHARGE PER PLAN.

3 CONDENSATE DRAIN DETAIL
NTS