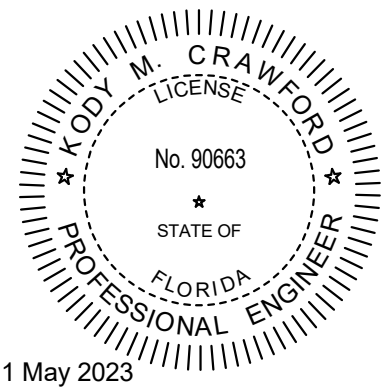


HVAC SYMBOL LEGEND				HVAC ABBREVIATIONS				HVAC GENERAL NOTES			
SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION	
		-CEILING DIFFUSER, ROUND NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		AFD		-ADJUSTABLE FREQUENCY DRIVE	
		-ROUND DIFFUSER				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		AFF		-ABOVE FINISHED FLOOR	
		-CEILING RETURN				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		AFR		-ABOVE FINISHED ROOF	
		-CEILING EXHAUST				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		AHU		-AIR HANDLING UNIT	
		-CEILING DIFFUSER, RECTANGULAR OR SQUARE NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		AP		-ACCESS PANEL	
		-SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		BOP		-BOTTOM OF PIPE	
		-RETURN/EXHAUST REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		BHP		-BRAKE HORSEPOWER	
		-REVISION REFERENCE				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		BTU		-BRITISH THERMAL UNIT	
		-DETAIL REFERENCE: TOP-DETAIL#, BOTTOM-DRAWINGS# SHOWN ON				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CL		-CENTER LINE	
		-THERMOSTAT/TEMPERATURE SENSOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CFM		-CFM (CUBIC FEET PER MINUTE)	
		-HUMIDISTAT/HUMIDITY SENSOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CD		-CEILING DIFFUSER	
		-DUCT SMOKE DETECTOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CT		-COOLING TOWER	
		-CONNECT TO EXISTING				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CV		-CONSTANT AIR VOLUME	
		-DEMOLISH TO POINT INDICATED				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		ΔP		-CHANGE IN PRESSURE	
		-MOTORIZED CONTROL DAMPER				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		ΔT		-CHANGE IN TEMPERATURE	
		-TEMPERATURE SENSOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CFM		-CUBIC FEET PER MINUTE	
		-PRESSURE SENSOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		CU		-CONDENSING UNIT	
		-BACKDRAFT DAMPER				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		DDC		-DIRECT DIGITAL CONTROLS	
		-NEUTRAL RELATIVE PRESSURE				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		DN		-DOWN	
		-POSITIVE RELATIVE PRESSURE				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		EAT		-ENTERING AIR TEMPERATURE	
		-NEGATIVE RELATIVE PRESSURE				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		ESP		-EXTERNAL STATIC PRESSURE	
		-SHEET NOTE CALLOUT				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		EWT		-ENTERING WATER TEMPERATURE	
		-SHEET NOTE CALLOUT				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		FCU		-FAN COIL UNIT	
		-CEILING MOUNTED ACCESS DOOR				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		FD		-FIRE DAMPER	
		-SQUARE THROAT ELBOW WITH TURNING VANES				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		FF		-FINAL FILTERS	
		-RADIUS ELBOW				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		FLA		-FULL LOAD AMPS	
		-RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		FPM		-FEET PER MINUTE	
		-EXHAUST DUCT UP THROUGH SLAB W/ FAN ON ROOF ABOVE				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		GPM		-GALLONS PER MINUTE	
		-EXHAUST FAN ON ROOF W/ DUCT DOWN THROUGH ROOF				-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		KW		-KILOWATT	
						-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		LAT		-LEAVING AIR TEMPERATURE	
						-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT		LWT		-LEAVING WATER TEMPERATURE	

REVISIONS		
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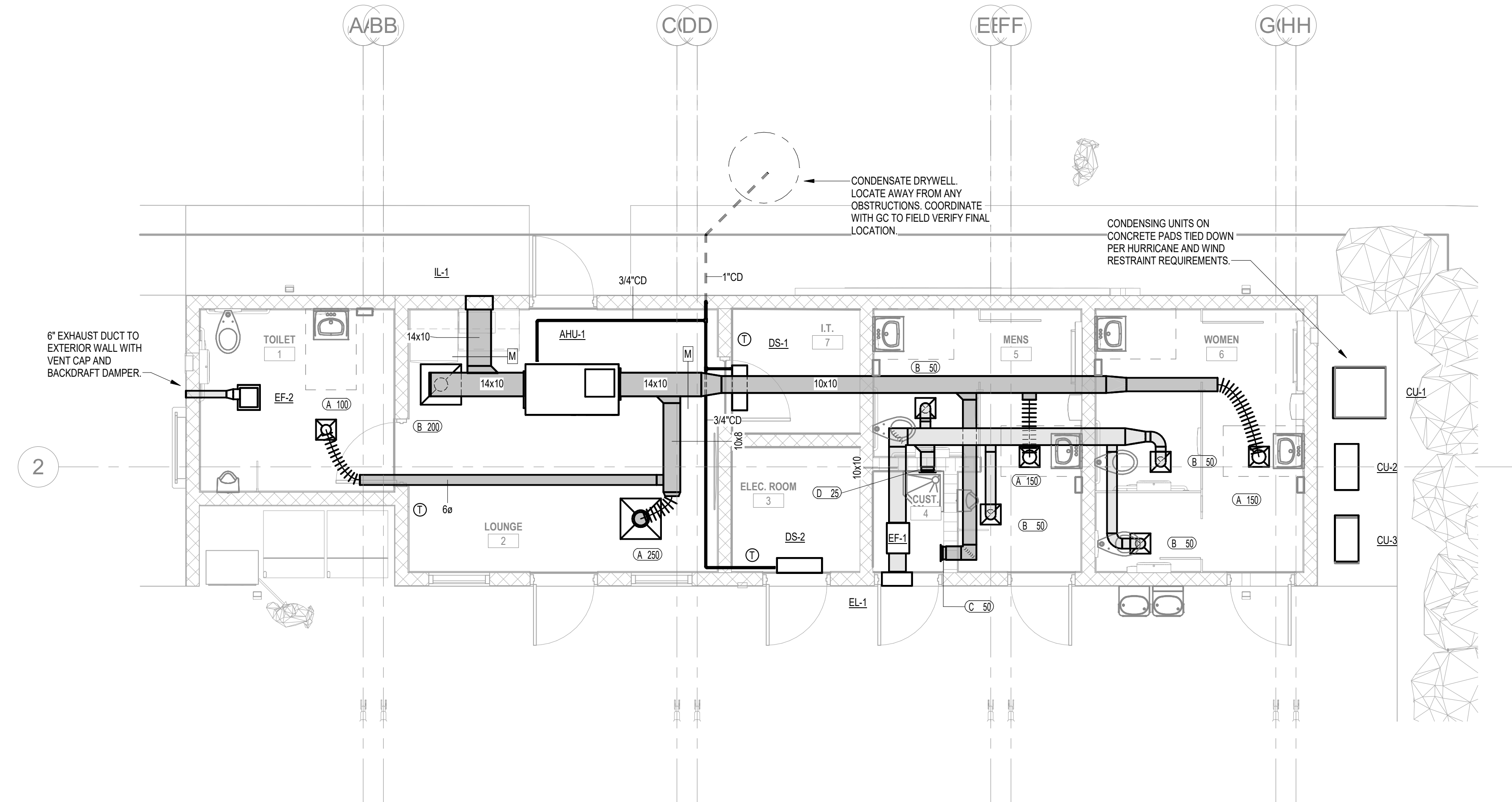
11 May 2023

TLC ENGINEERING SOLUTIONS

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P 239.275.4240

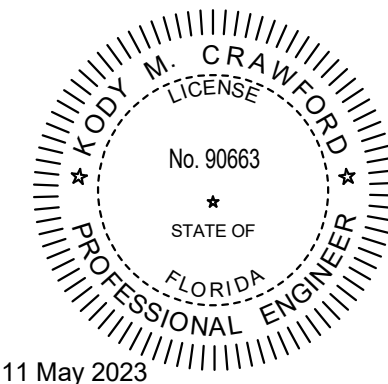
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1 FLOOR PLAN - MECHANICAL
1/4" = 1'-0"

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1121 VILLAGE LAKES BLVD., LEHIGH ACRES, FLORIDA

04/14/2023

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PARKER / MUDGETT / SMITH ARCHITECTS, INC.
2136 MCGREGOR BLVD. FORT MYERS, FLORIDA 33901
(239) 332-1171

REVISIONS		
No.	Description	Date

AHU SCHEDULE																																						
PLAN MARK	MANUFACTURER	MODEL NO.	CU MODEL NO.	UNIT CONFIGURATION	UNIT SECTIONS	AIRFLOW			EXT. SP	FAN DATA						HEAT PUMP - COOLING				HEAT PUMP - HEATING			HOT GAS REHEAT			EER	ELECTRICAL DATA								UNIT WEIGHT, LBS (AHU)			
						TOTAL CFM	OA CFM	FILTER		FAN TYPE	FAN QTY.	FAN RPM EA	TOTAL BHP	MOTOR HP	VFD OR ECM	EAT		LAT		CAPACITY	FACE VEL. FPM	CAPACITY (MBH)	EAT	LAT	CAPACITY (MBH)		MAX LAT		AIR HANDLER				CONDENSING UNIT					
																DB	WB	DB	WB								SEN. MBH	TOTAL MBH	DB	WB	VOLT/PHASE	FLA	MCA	MOCp		VOLT/PHASE	FLA	MCA
AHU-1	AAON	H3-BRB-8	CFA 005	HORIZONTAL	FILTER/DX COIL/HGRH COIL/ACCESS/FAN	700	450	MERV-8	1.00	DD PLENUM	1	1715	0.29	1	VFD	87.0	74.0	50.0	49.0	28	53	197	50	40	100	16	70	57	11.2	208/3	2	3	15	208/3	20	24	40	575
<div>NOTES:</div> <div>1. BASIS OF DESIGN AAON, PROVIDE PRIOR APPROVAL FROM ENGINEER PRIOR TO BID FOR OTHER MANUFACTURERS.</div> <div>2. PROVIDE FACTORY MOUNTED CONTROLS WITH BACNET INTEGRATORS INCLUDING DEHUMIDIFICATION SEQUENCE VIA HOT GAS REHEAT COIL. CONTRACTOR TO WIRE AND PROVIDE WALL MOUNTED THERMOSTAT/HUMIDISTATS, WITH 5 DEGREE DEADBAND, BATTERY BACK-UP AND 7 DAY PROGRAMMABLE.</div> <div>3. UNIT TO BE PROVIDED WITH SEA COAST PROTECTION ON COILS AND ANTI-SHORT CYCLE RELAY.</div> <div>4. SECURE CONDENSING UNITS TO RESIST HURRICANE WINDS.</div> <div>5. PROVIDE HOT GAS REHEAT COIL WITH MODULATING CONTROL VALVE, AND CONTROLS CAPABLE OF 100% OA, WITH CONTINUOUSLY MODULATING INVERTER-DRIVEN (OR DIGITAL SCROLL) COMPRESSOR WITH CAPACITY DOWN TO 10%.</div> <div>6. PROVIDE WITH LINESETS SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE LONG LINESET EQUIPMENT WHERE CU AND FCU ARE GREATER THAN 25 FT. OR MFR. REQUIREMENT.</div> <div>7. FOR SPLIT UNITS (INDOOR VS OUTDOOR) AT DIFFERENT LEVELS, PROVIDE MANUFACTURER TRAPS AND REFRIGERANT PIPE ACCOMMODATIONS TO ENSURE PROPER REFRIGERANT AND OIL CIRCULATION THROUGH SYSTEM.</div> <div>8. PROVIDE AIR HANDLERS WITH AUXILIARY DRAIN PAN WITH OVERFLOW SWITCH TO SHUT UNIT DOWN ON OVERFLOW.</div> <div>9. MOTORIZED DAMPER IN OA DUCT, DAMPER TO OPEN IN OCCUPIED MODE AND BE CLOSED IN UNOCCUPIED MODE.</div>																																						

DX SPLIT SYSTEM SCHEDULE													
MARK	PLAN MARK CU	UNIT TYPE	AH MODEL	CU MODEL	TOTAL COOLING CAPACITY (BTU/H)	CFM	INDOOR ELECTRICAL			OUTDOOR ELECTRICAL			
							VOLTAGE/PHASE	MCA	MOCp	CU VOLT/PHASE	CU MCA	CU MOCp	CU FLA
DS-1	CU-2	WALL MOUNTED	MSY-GL09	MUY-GL09	9000	250	208/1	1	15	208/1	7	15	0.5
DS-2	CU-3	WALL MOUNTED	MSY-GL09	MUY-GL09	9000	250	208/1	1	15	208/1	7	15	0.5
NOTES: 1. BASIS OF DESIGN IS MITSUBISHI 2. PROVIDE LONG LINESET LENGTHS FOR UNITS EXCEEDING THE RECOMMENDED SEPARATION DISTANCE BETWEEN INDOOR AND OUTDOOR UNITS. 3. PROVIDE WITH CONDENSATE PUMP POWERED BY ASSOCIATED UNIT, WHERE GRAVITY DRAIN IS POSSIBLE, RETURN UNINSTALLED PUMP TO OWNER/MAINTENANCE. 4. PROVIDE INLINE CONDENSATE OVERFLOW DETECTION TO SHUT UNIT OFF ON OVERFLOW. 5. PROVIDE WITH 24/7 365 DAY PROGRAMMABLE WALL THERMOSTAT. 6. INDOOR UNIT POWERED BY OUTDOOR UNIT. 7. DISCONNECT BY ELECTRICAL.													

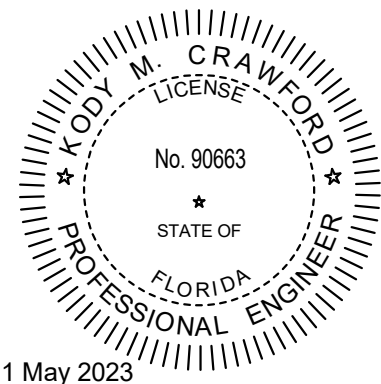
FAN SCHEDULE											
PLAN MARK	MODEL	AREA SERVED	TYPE	TOTAL CFM	EXT. SP (IN WG.)	MAX FAN BHP	MOTOR HP	MOTOR RPM	ELECTRICAL DATA		WEIGHT (lb)
									INPUT WATTS	VOLTS/PHASE	
EF-1	SQ-80-VG	PUBLIC RR	INLINE	225	0.5	0.06	1/10	1725	-	115/1	40
EF-2	SP-A90	INDIVIDUAL RR	CEILING MOUNTED	100	0.1	-	-	-	17	115/1	15
NOTES: 1. BASIS OF DESIGN: GREENHECK 2. PROVIDE EC MOTOR WITH INTEGRAL SPEED CONTROLLER. 3. MOTOR/FAN TO BE UL 705 LISTED, PROVIDE EXTRUDED ALUMINUM BACKDRAFT DAMPER. 4. EXHAUST FANS INTERLOCKED WITH AHU TO RUN DURING OCCUPIED HOURS. OTHERWISE REMAIN OFF.											

LOUVER SCHEDULE							
PLAN MARK	MODEL	TYPE	TOTAL CFM	SIZE W x H (INCHES)	FREE AREA (FT²)	FACE VELOCITY (FPM)	BPWP (FPM)
EL-1	GREENHECK	EVH-501D	225	12 x 12	0.27	840	-
IL-1	GREENHECK	EVH-501D	450	16 x 12	0.45	1079	1250
NOTES: 1. BASIS OF DESIGN: GREENHECK EVH-501D, MIAMI-DADE APPROVED, AMCA 550 RATED, EQUALS BY RUSKIN OR PRIOR APPROVED. 2. PROVIDE WITH FACTORY APPLIED KYNAR FINISH. FINAL COLOR SELECTION BY OWNER/ARCHITECT. 3. PROVIDE WITH ALUMINUM BIRDSCREEN. 4. PROVIDE FULL SIZE PLENUM UNLESS OTHERWISE NOTED, OFFSET/TRANSITION DUCT TO AVOID STRUCTURAL COMPONENTS. 5. FASTEN TO BUILDING TO MAINTAIN HIGH WINDS NOAA/MIAMI DADE RATING							

CONTROLS - SEQUENCES OF OPERATION
AHU-1 / CU-1 -FANDAMPER CONTROL: SUPPLY FAN SHALL RUN CONTINUOUSLY IN OCCUPIED MODE BASED ON T-STAT TIME CLOCK, OR WHEN SYSTEM IS OVERRIDDEN FOR OCCUPIED PERIOD. OA DAMPER SHALL BE INTERLOCKED AND OPEN DURING OCCUPIED PERIOD AND OTHERWISE BE CLOSED. -COOLING / HEATING: UNIT SHALL BE CONTROLLED BY 365 DAY PROGRAMMABLE THERMOSTAT LOCATED IN SPACE. IF SPACE TEMPERATURE RISES ABOVE SETPOINT ENERGIZE COMPRESSOR/CONDENSING UNIT AND MODULATE COOLING CAPACITY (THROUGH DIGITAL SCROLL COMPRESSOR) TO SATISFY COOLING SETPOINT. IF SPACE TEMPERATURE FALLS BELOW SETPOINT ENERGIZE HEATING COIL AND MODULATE TO MAINTAIN SETPOINT. -DEHUMIDIFICATION MODE: UNIT SHALL HAVE HUMIDISTAT INPUT (55% RH SETPOINT ADJUSTABLE). IF SPACE HUMIDITY RISES ABOVE SETPOINT AND COOLING IS NOT CALLED FOR, ENERGIZE COOLING (COMPRESSOR/CONDENSING UNIT) TO PROVIDE DEHUMIDIFICATION AND MODULATE HOT GAS REHEAT COIL VALVE TO MAINTAIN SPACE TEMPERATURE. IF SIMULTANEOUS COOLING AND DEHUMIDIFICATION ARE CALLED FOR, ENGAGE 100% COOLING MODE WITH NO REHEAT. -UNOCCUPIED HOURS: DURING UNOCCUPIED HOURS, MOTORIZED DAMPERS IN OUTSIDE AIR AND SUPPLY AIR DUCTS TO CLOSE. AHU-1 TO REDUCE AIRFLOW AND PROVIDE COOLING TO MAINTAIN UNOCCUPIED SETPOINT IN LOUNGE. EF-1&2 INTERLOCK EXHAUST FANS WITH AHU-1 T-STAT TO RUN WHEN FCU/CU IS IN OCCUPIED MODE, OTHERWISE SHUT DOWN.

AIR DISTRIBUTION SCHEDULE					
MARK	CFM	NECK SIZE	FACE SIZE LENGTH	DESCRIPTION	
A	000-110	6ø	24x24	SUPPLY DIFFUSER BASIS OF DESIGN: TITUS TDC-AA COLOR: WHITE MATERIAL: ALUMINUM OPPOSED BLADE DAMPERS: NO BACK PAN SIZE: 18x18	
	111-240	8ø	24x24		
	241-420	10ø	24x24		
	421-620	12ø	24x24		
	621-750	14ø	24x24		
	751-980	16ø	24x24		
B	000-110	6x6	24x24	RETURN / EXHAUST GRILLE BASIS OF DESIGN: TITUS 50F STAGGERED CENTERS COLOR: WHITE MATERIAL: ALUMINUM OPPOSED BLADE DAMPERS: NO 1/2"x1/2"x1/2" GRID	
	111-220	8x8	24x24		
	221-350	10x10	24x24		
	351-530	12x12	24x24		
	531-730	14x14	24x24		
	731-970	16x16	24x24		
	971-1240	18x18	24x24		
	1241-1540	20x20	24x24		
C	000-160	6x6	SEE PLANS	SUPPLY SIDEWALL DIFFUSER BASIS OF DESIGN: TITUS 271FS COLOR: WHITE MATERIAL: EXTRUDED ALUMINUM OPPOSED BLADE DAMPERS: NO DOUBLE DEFLECTION 3/4" SPACING	
	161-210	8x6			
	211-300	12x6			
	301-440	18x6			
	441-740	18x10			
	741-1100	24x12			
D	000-160	6x6	SEE PLANS	RETURN/EXHAUST SIDEWALL GRILLE BASIS OF DESIGN: TITUS 56FL COLOR: WHITE MATERIAL: EXTRUDED ALUMINUM OPPOSED BLADE DAMPERS: NO 0" FIXED DEFLECTION 3/4" SPACING	
	161-210	8x6			
	211-330	12x6			
	331-500	18x6			
	501-780	18x10			
	781-1275	24x12			
	1275-1500	24x14			
	2000-	36x18			
NOTES:					
1. AIR DISTRIBUTION DEVICES LOCATED WITHIN ACOUSTICAL TILE CEILINGS SHALL BE PROVIDED WITH BORDER TYPE 3 FOR LAY-IN MOUNTING. AIR DISTRIBUTION DEVICES LOCATED WITHIN GYPSUM BOARD CEILINGS OR WALLS SHALL BE PROVIDED WITH BORDER TYPE 1 FOR SURFACE MOUNTING. REFER TO ARCHITECTURAL DOCUMENTS FOR CEILING TYPES. RETURN/EXHAUST GRILLES MOUNTED IN GYP CEILINGS, SHALL HAVE SAME FACE SIZE AS NECK.					
2. AIR DISTRIBUTION DEVICES LOCATED IN SMALL ROOMS WHERE FULL 24"x24" GRID ARE NOT AVAILABLE SHALL BE PROVIDED WITH SURFACE MOUNTING BORDERS IN LIEU OF LAY-IN. SECURE EACH DEVICE TO CEILING GRID WITH FIELD-FABRICATED SUPPORTS.					
3. ALL AIR DISTRIBUTION SHALL BE COORDINATED WITH ARCHITECT PRIOR PURCHASE. ALL MATERIAL AND FINISHES SHALL BE APPROVED BY ARCHITECT PRIOR TO PURCHASING.					

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Suite 500
Fort Myers, FL 33907
P 239.275.4240
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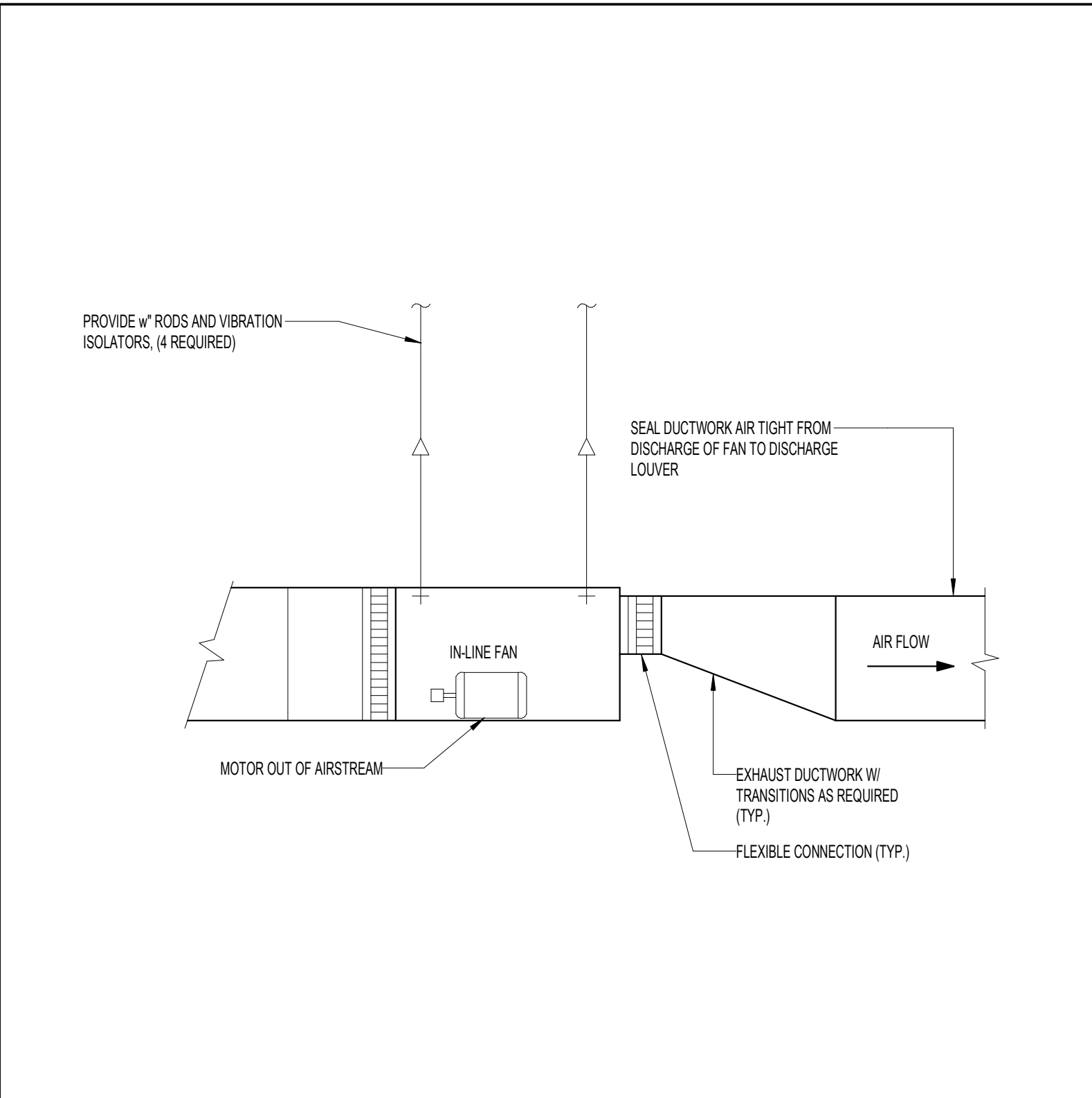
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M300

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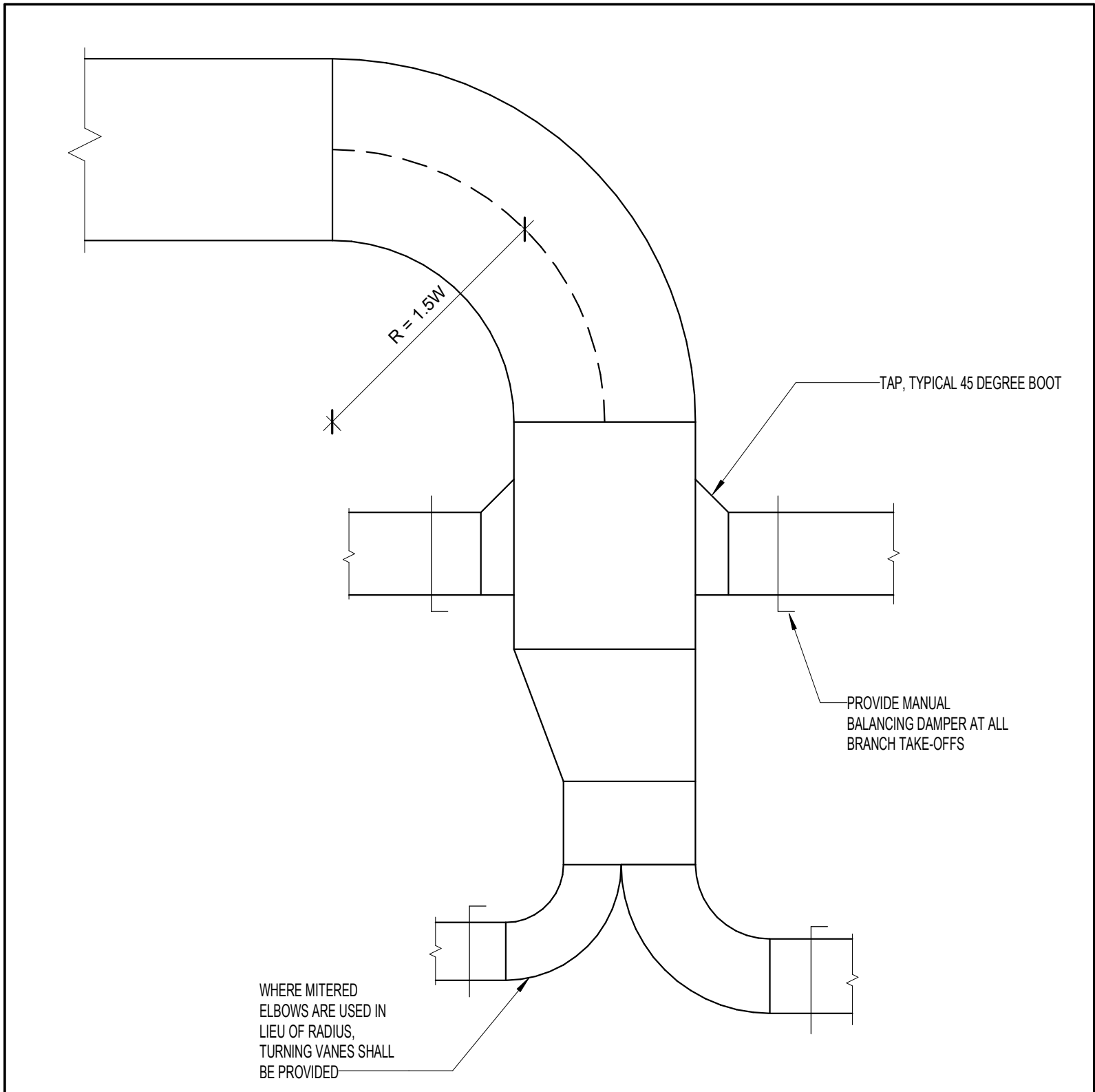
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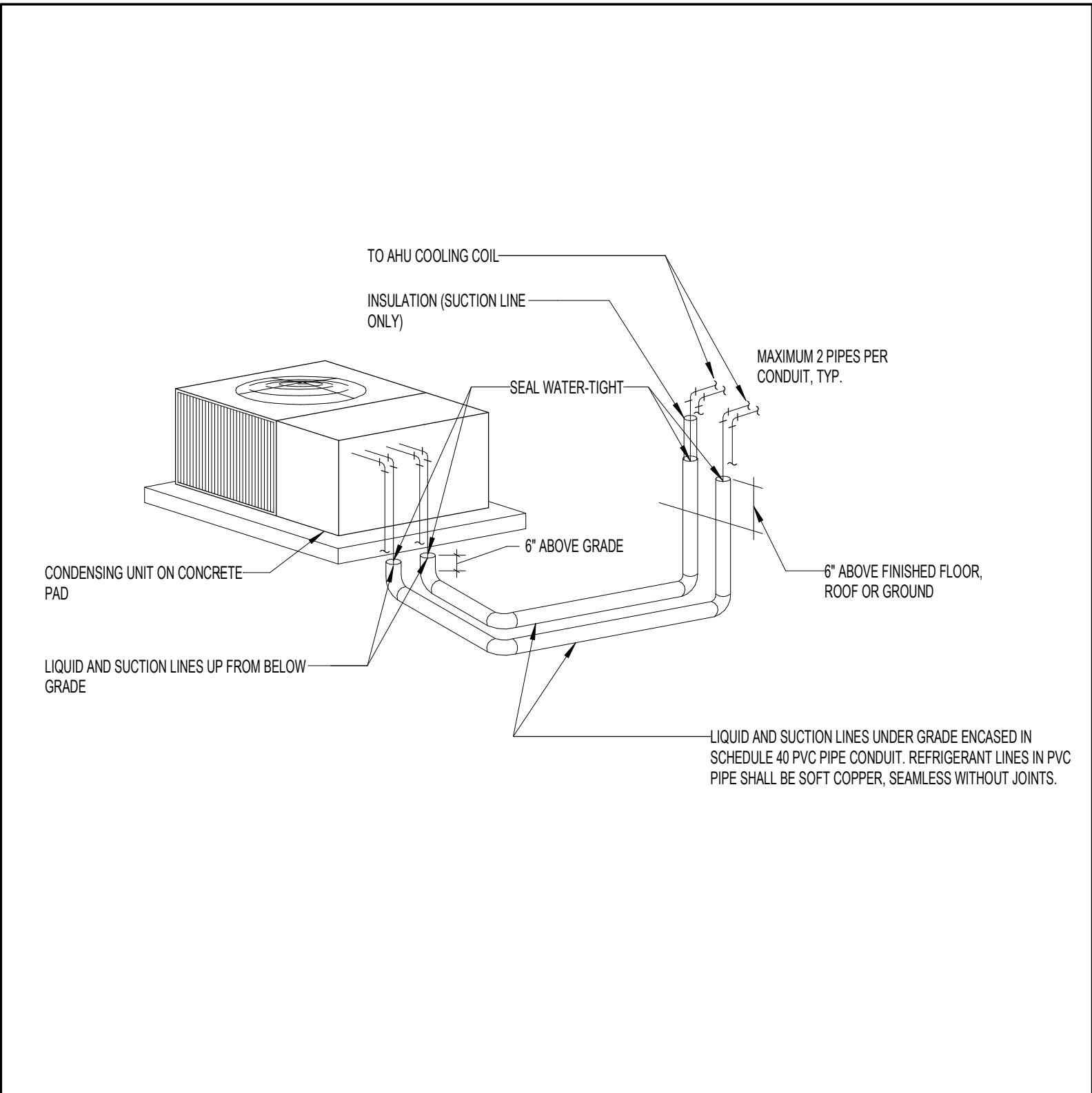
INLINE FAN - SMALL
No Scale

7



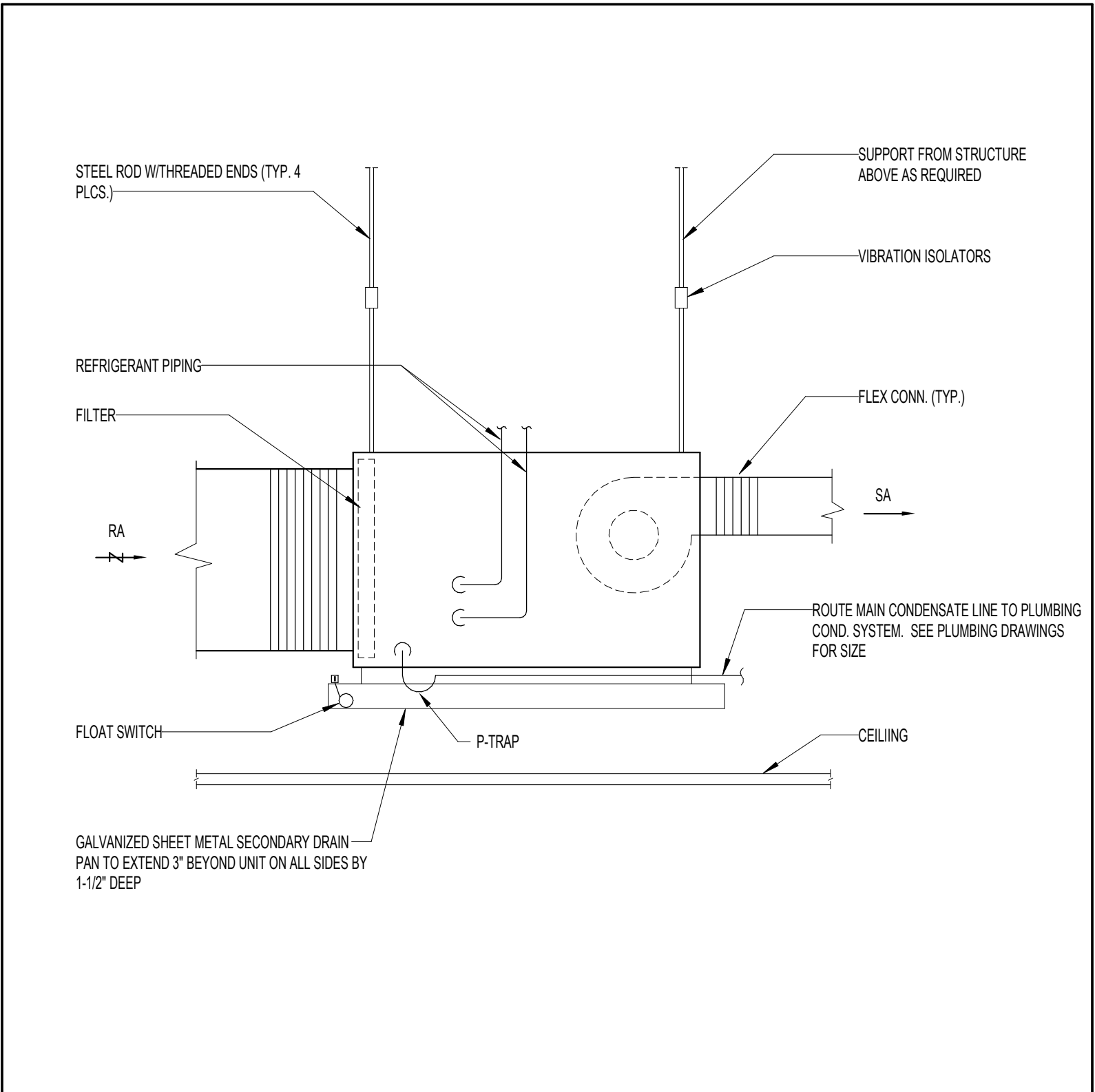
TYPICAL LOW PRESSURE DUCTWORK
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5



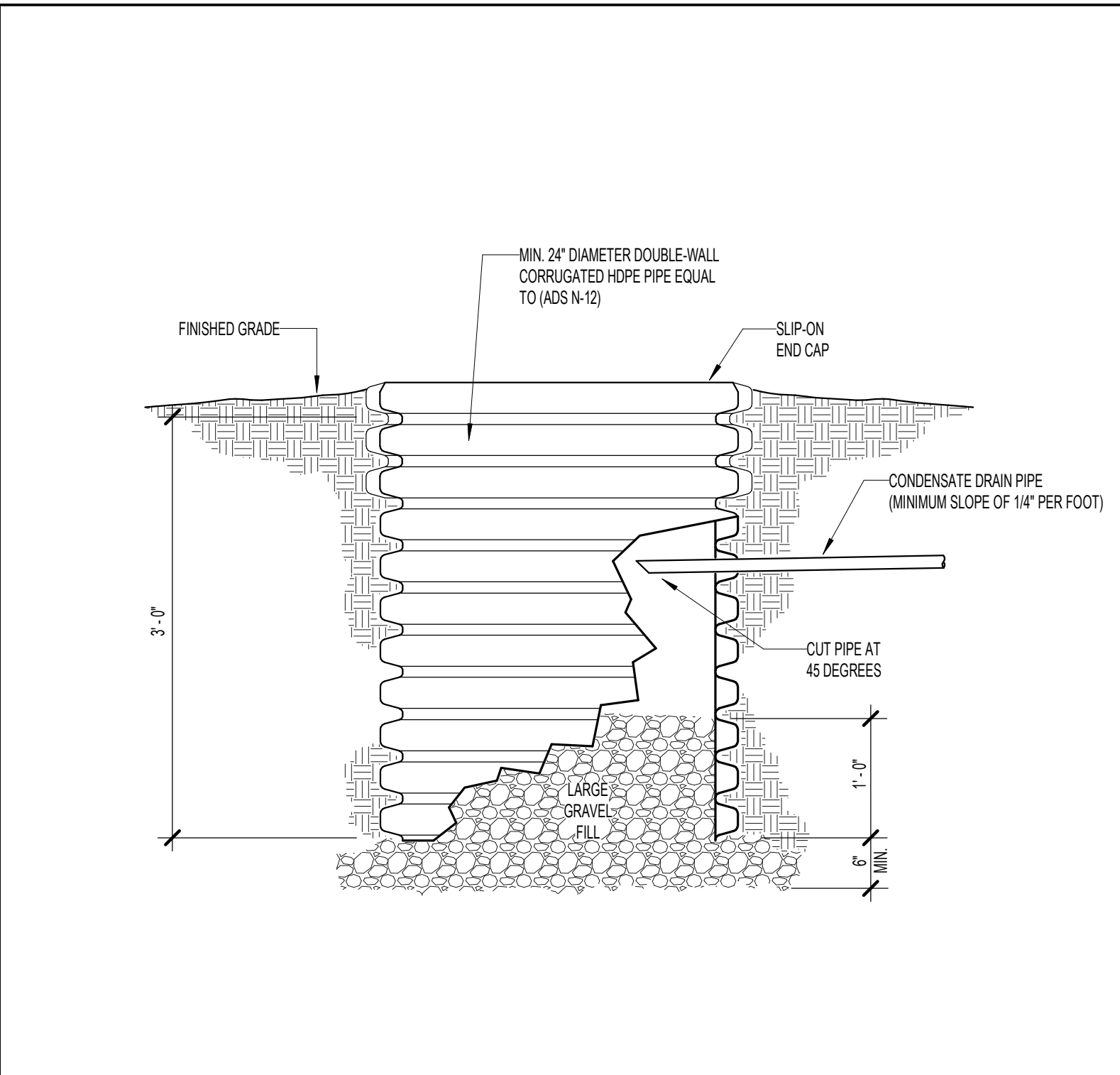
REFRIGERANT PIPING DIAGRAM
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3



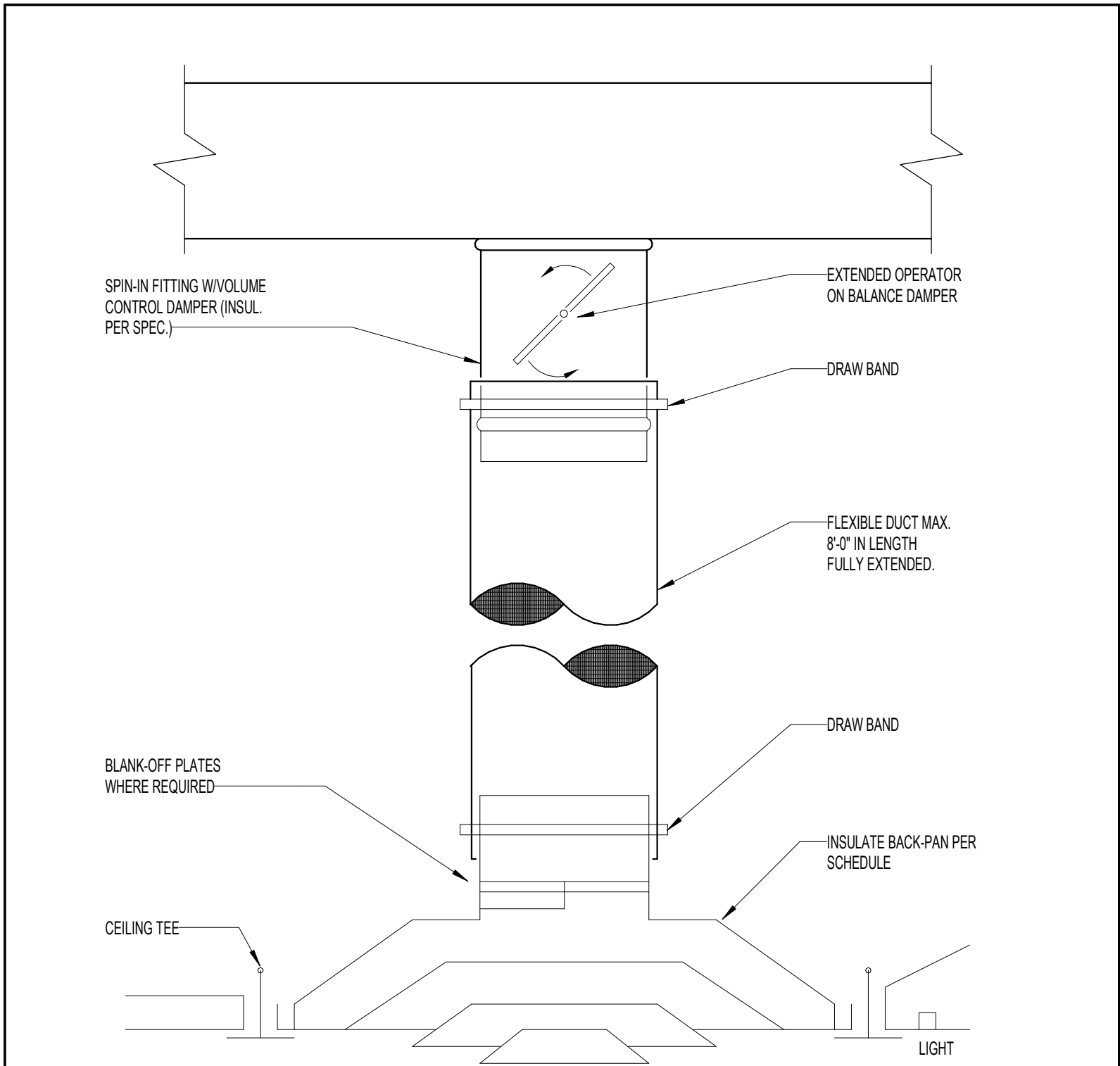
SUSPENDED BLOWER COIL INSTALLATION
No Scale

1



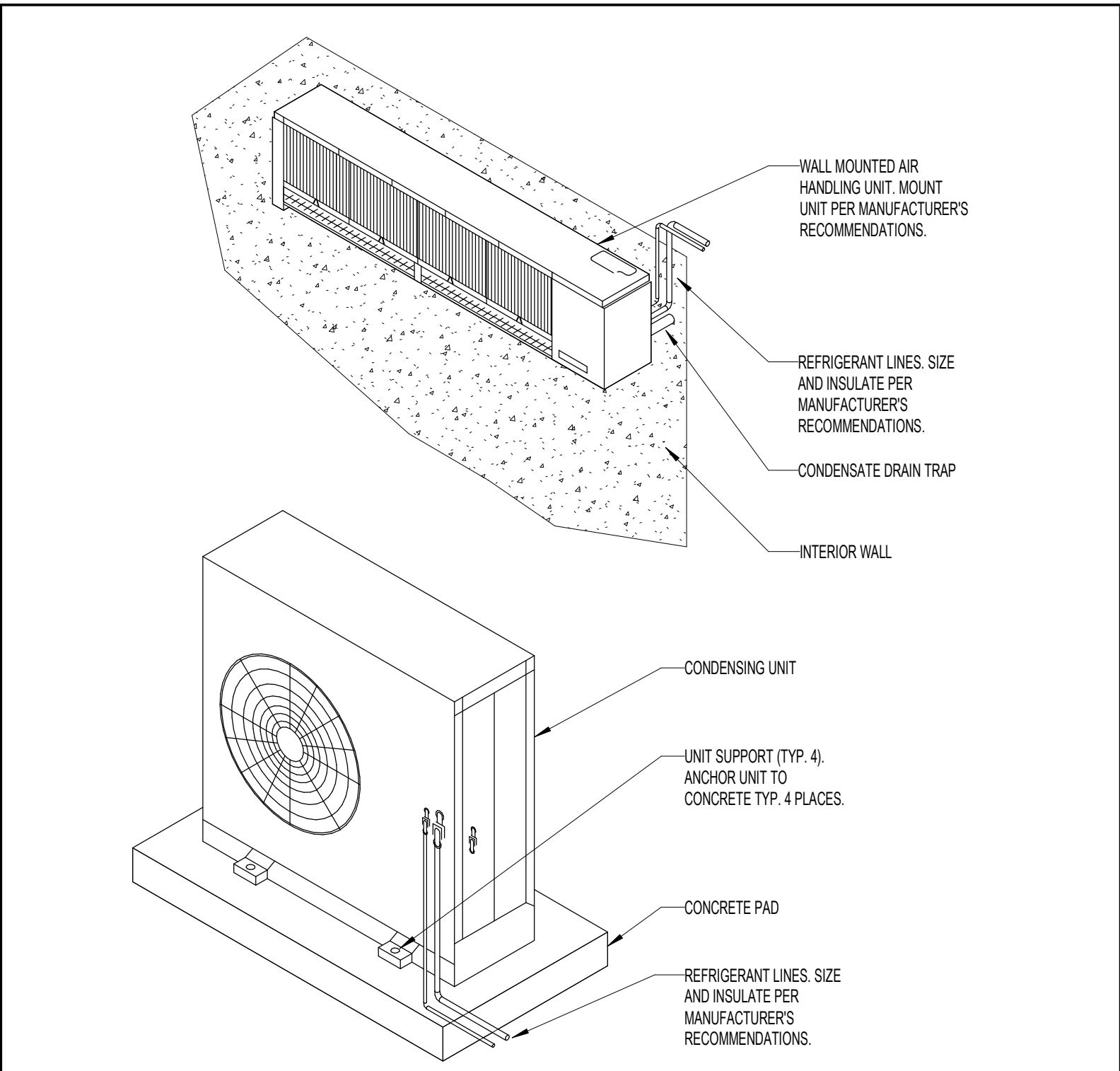
DRYWELL DETAIL (5 Tons & Larger)
No Scale

8



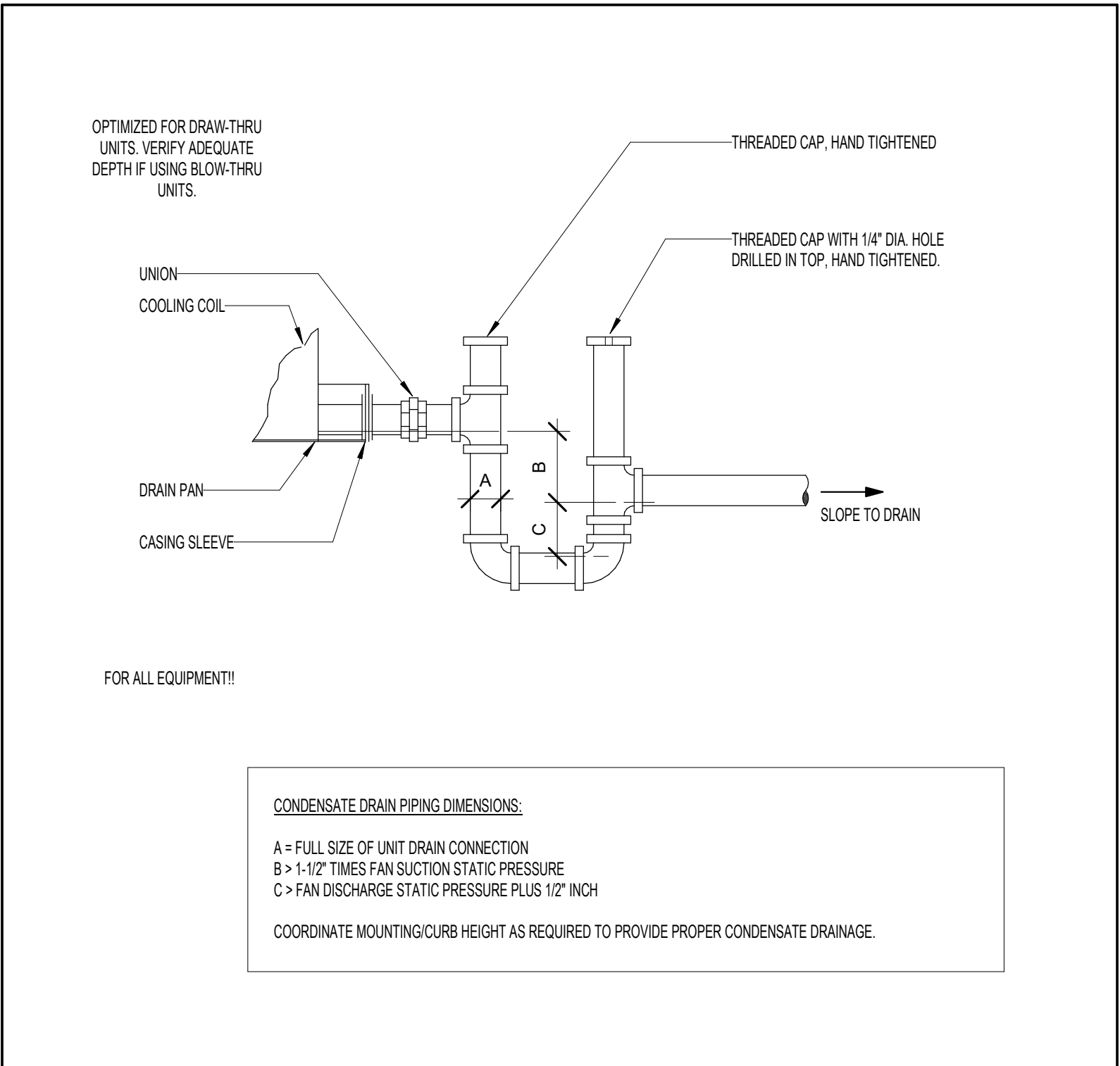
DIFFUSER MOUNTING
No Scale

6



DUCTLESS DX SPLIT SYSTEMS
No Scale

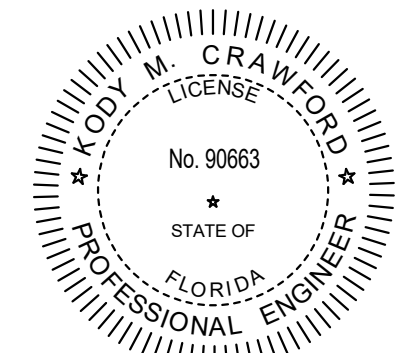
4



AHU CONDENSATE DRAIN TRAP
No Scale

2

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