

BASE BID: ACU-3 / CU-3
BID ALT: ACU-3 (ALT) / CU-3 (ALT) IN
LIEU OF ACU-3 / CU-3

E

D

C

B

A

COMPUTER ROOM AC UNIT

#	MFR	MODEL	CONFIG	MIN. OSA	SUPPLY FAN				DX COOLING						COMPRESS TYPE	REF	FILTERS	ELECTRICAL			WEIGHT (LBS)	NOTES
					DRIVE	CFM	ESP IN.WC	HP	NOM TONS	SENS MBH	EAT DB	EAT WB	LAT DB	COP _C				V/PH	MCA	MOCP		
ACU-3	LIEBERT	DS-053	DOWNFLOW	0	DIRECT ECM	8,000	0.2	4.2	15	170	75	61	54	1.99	DIGITAL SCROLL	R407C	4" MERV 8	460/3	45	60	1920	①
ACU-3 (ALT)	LIEBERT	PX-029	DOWNFLOW	0	DIRECT ECM	4,300	0.2	4.2	8.0	91	75	61	54	1.99	DIGITAL SCROLL	R410A	4" MERV 8	460/3	34	50	800	①

NOTES:

- ① UNIT SHALL INCLUDE THE FOLLOWING FEATURES, OPTIONS AND ACCESSORIES:
- 10" SEISMIC RATED FLOOR STAND
 - FACTORY MICROPROCESSOR CONTROLS WITH DISPLAY PANEL AND BACNET COMMUNICATION TO INTERFACE WITH BAS
 - SINGLE POINT POWER WITH FACTORY DISCONNECT
 - 65KA SCR
 - 14 GAUGE, WELDED FRAME, WITH AUTOPHORETIC COATING
 - FRONT SERVICE ACCESS
 - DUAL REFRIGERATION CIRCUITS WITH LIQUID LINE FILTER DRIERS, REFRIGERANT SIGHT GLASSES, EXPANSION VALVES, AND LIQUID LINE SOLENOID VALVES
 - FACTORY INSTALLED DUAL FLOAT CONDENSATE PUMP WITH UNIT ALARM INDICATION AND UNIT SHUTDOWN UPON
 - STAINLESS STEEL DRAIN PAN

COMPUTER ROOM AC OUTDOOR CONDENSING UNIT

#	MFR	MODEL	FANS		REF	REFRIG. CIRCUITS	AMB DEG.F	ELECTRICAL			WEIGHT (LBS)	NOTES
			QTY	DRIVE				V/PH	MCA	MOCP		
CU-3	LIEBERT	MCL-110	2	EC VSD	R407C	2	95	460/3	6.3	15	700	①
CU-3 (ALT)	LIEBERT	MCL-055	1	EC VSD	R410A	2	95	460/3	3.5	15	600	①

NOTES:

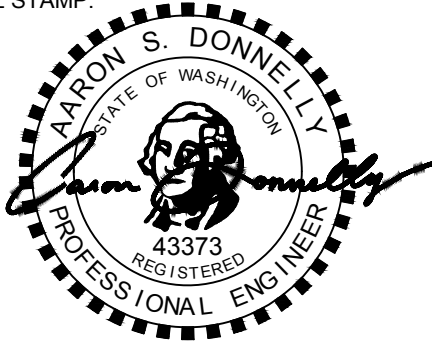
- ① UNIT SHALL INCLUDE THE FOLLOWING FEATURES, OPTIONS AND ACCESSORIES:
- FACTORY MICROPROCESSOR CONTROLS TO COMMUNICATE WITH INDOOR UNIT VIA FIELD INSTALLED COMM CABLE.
 - SINGLE POINT POWER WITH FACTORY DISCONNECT
 - 65KA SCR
 - DUAL REFRIGERATION CIRCUITS

DESIGN FIRM:



CONSULTANTS:

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Facilities Services
2425 E. Grimes Way
Pullman, Wa. 99164-1150

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ELECTRICAL-MECHANICAL
ENGINEERING
BUILDING (EEME)

COMPUTER ROOM
COOLING

007BA

	04/19/24	ISSUED FOR BID
MARK	DATE	DESCRIPTION

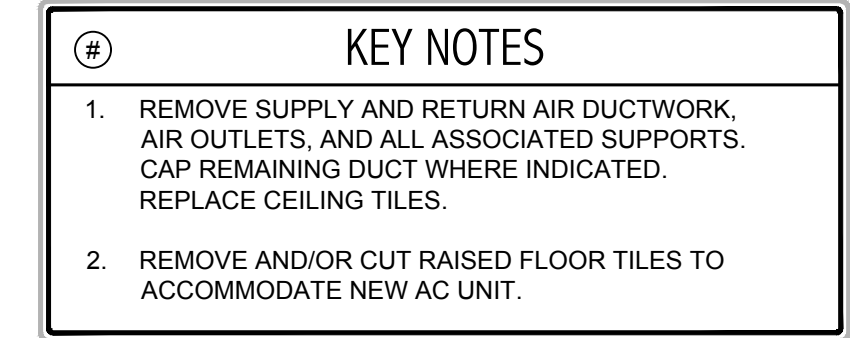
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SHEET TITLE

EQUIPMENT
SCHEDULES

M0.02

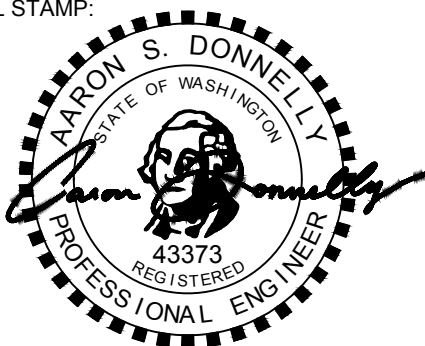
SHEET 2 # OF 7 SHEETS



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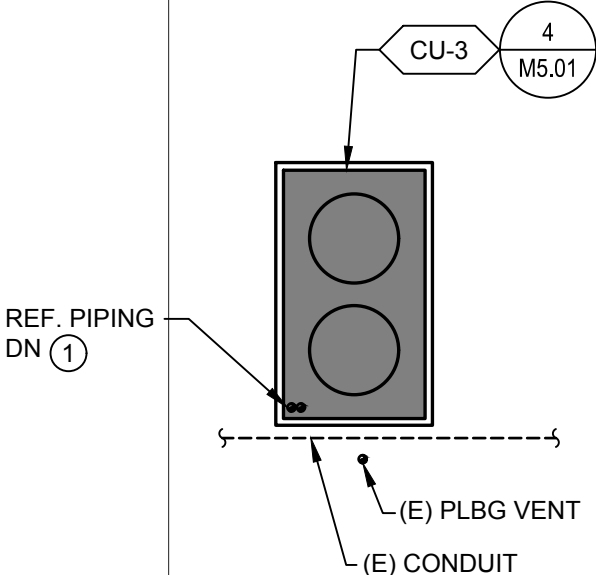
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SHEET TITLE

FIRST FLOOR - HVAC DEMO

M1.02

SHEET 3 # OF 7 SHEETS



Scale: 1/8" = 1' - 0"

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KEY NOTES

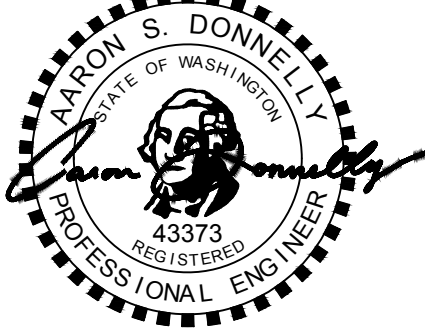
1. REFRIGERANT PIPING CONSISTS OF TWO GAS PIPES AND TWO LIQUID RETURN PIPES. ROUTE DOWN THROUGH ROOF (SEE DETAIL 5/M5.01). TRAP GAS PIPING AT MIDPOINT AND BOTTOM OF RISER (SEE DETAIL 3/M5.01). SIZES PER MANUFACTURER.

DESIGN FIRM

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THIRD FLOOR - HVAC

M2.04

SHEET 6 # OF 7 SHEET:



This diagram illustrates a raised floor cooling system for server racks. It shows two server racks with air being drawn from the floor and exhausted through the ceiling. The system includes a raised floor with supply grilles, a ceiling with return grilles, and an indoor computer room AC (CRAC) unit. The air flow is indicated by arrows, showing a cycle from the floor, through the racks, and back to the ceiling and AC unit.

Labels in the diagram include:

- CEILING RETURN GRILLES
- HEAT REJECTION FROM SERVERS
- SERVER RACK
- RETURN THROUGH CEILING PLENUM
- INDOOR COMPUTER ROOM AC (CRAC) UNIT
- SUPPLY THROUGH RAISED FLOOR PLENUM
- FLOOR SUPPLY GRILLES
- RAISED FLOOR
- BUILDING FLOOR

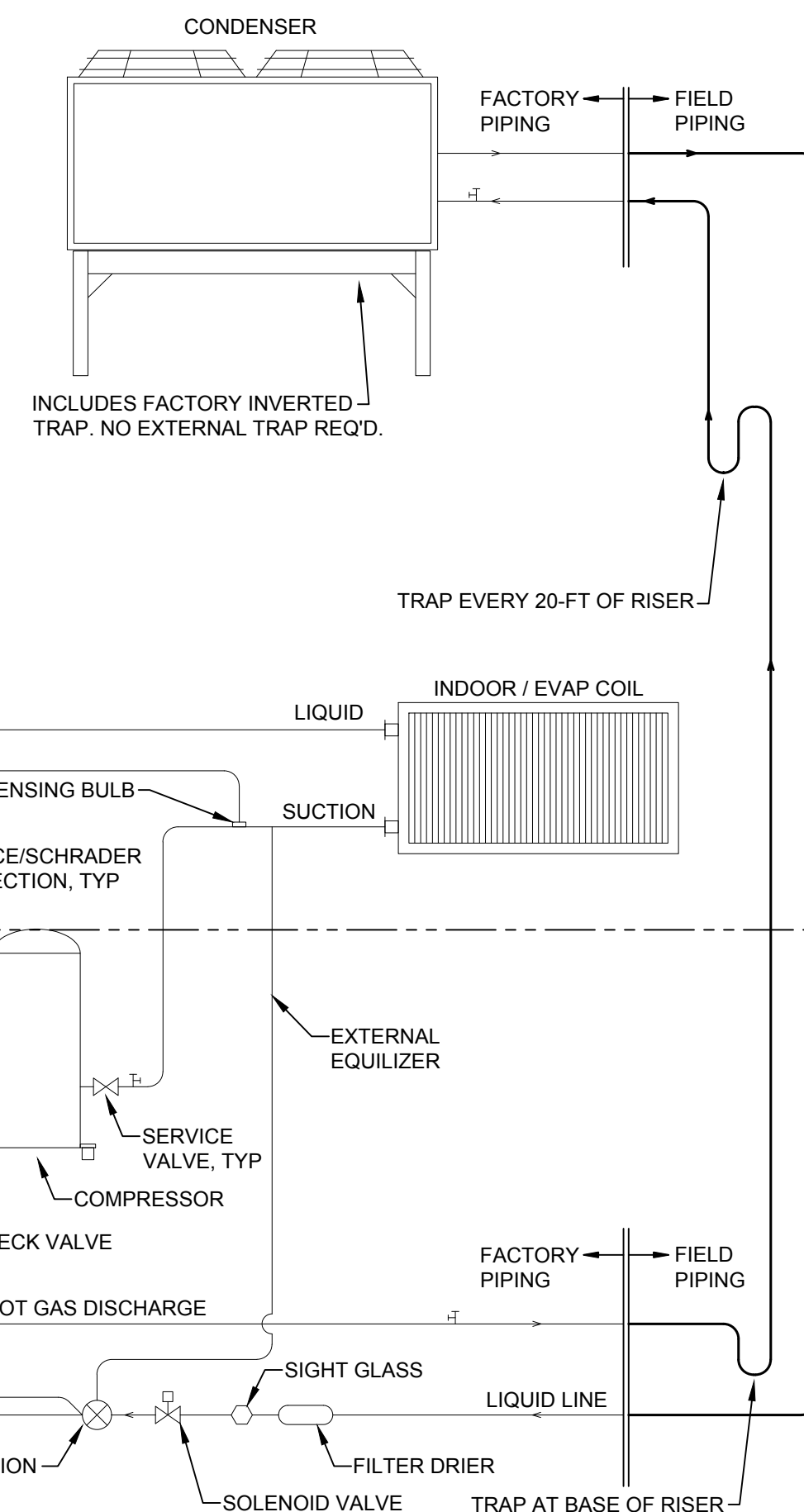
INTENT OF OPERATIONS:

THE EXISTING TERMINAL UNIT SERVED FROM THE BUILDING HVAC SYSTEM SHALL PROVIDE THE MINIMUM VENTILATION TO THE SPACE. THE HEATING CONTROLS SHALL BE DISABLED AND WATER VALVE CLOSED PERMANENTLY.

THE EXISTING CHILLED WATER AC UNITS WILL RUN AT 100% FAN SPEED AND CHILLED WATER VALVE WIDE OPEN AT ALL TIMES TO PROVIDE A BASELINE COOLING CAPACITY. TESTING AND BALANCING SHALL VERIFY FAN SPEED AND VALVE POSITION. (NOTE: THE ON-BOARD CONTROLS ARE ASSUMED TO BE NO LONGER FUNCTIONAL, AND THE NEWER DDC CONTROL VALVE IS CURRENTLY NOT CONTROLLED)

THE FACTORY CONTROLS ON ACU-3 SHALL PERFORM ALL CONTROL FUNCTIONS FOR IT AND THE CONDENSING UNIT TO CYCLE ON/OFF AND MODULATE COMPRESSOR CAPACITY TO MAINTAIN THE ROOM SETPOINT AS MEASURED BY THE FACTORY THERMOSTAT.

THE ENGINEER'S INTENT IS FOR ACU-1 AND ACU-2 TO HANDLE AVERAGE COOLING LOADS WHILE ACU-3 WILL PROVIDE PEAK COOLING LOAD. ACU-3 WILL ALSO PROVIDE BACKUP COOLING IF ACU-1/2 LOOSE CHILLED WATER.



- NOTES:
1. THIS DIAGRAM IS BASED ON THE MANUFACTURE'S LITERATURE. VERIFY ALL FACTORY AND FIELD REQUIREMENTS PRIOR TO BID.
 2. THIS DIAGRAM REPRESENTS A SINGLE CIRCUIT. THE BASIS OF DESIGN IS DUAL CIRCUIT.

Diagram illustrating the internal layout and clearance requirements for a walk-in freezer unit. The unit is shown with a height of 35" and a 36" clearance for component access at the base. Key components and features labeled include:

- REFRIGERANT PIPING ENTRANCE
- FILTERS
- AIR INLET OPENING ON TOP
- ELECTRICAL AND LOW VOLTAGE ENTRANCE AREA
- 36" CLEARANCE FOR COMPONENT ACCESS

Technical drawing of the ACU-3 unit, showing front and side views with dimensions and labels.

Labels:

- DIGITAL SCROLL COMPRESSORS
- RETURN DUCT
- 8" TALL FABRICATED HINGED FILTER ACCESS DOOR
- ELECTRICAL SECTION
- ACU-3
- COOLING COIL
- EC FAN SECTION
- 10" TALL SEISMIC RATED FLOOR STAND PROVIDED WITH UNIT FOR RAISED FLOOR APPLICATION, FIELD VERIFY HEIGHT PRIOR TO ORDERING

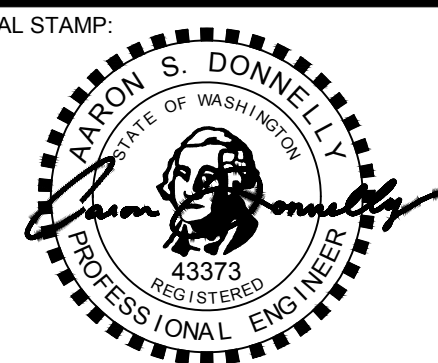
Dimensions:

- Height: 76"
- Width: 98"

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DETAILS

M5.01

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