

REFRIGERANT PIPING INSTALLERS SHALL FOLLOW MANUFACTURERS INSTRUCTIONS AND ATTACH REFRIGERANT PIPE TO SUPPORT LEGS WITH SOLATORS, CUSHIONED LEGS, OR CLAMPS AND UNISTRUT

Figure 20 Piping R-410A VFD control single circuit condensers

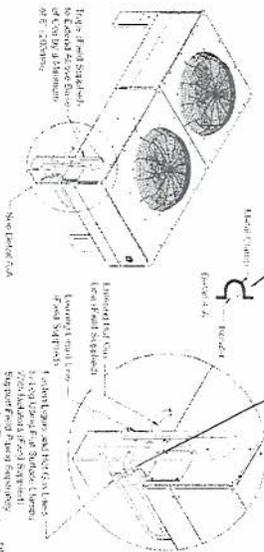


Figure 19 Cabinet and anchor dimensional data R-410A VFD control condensers

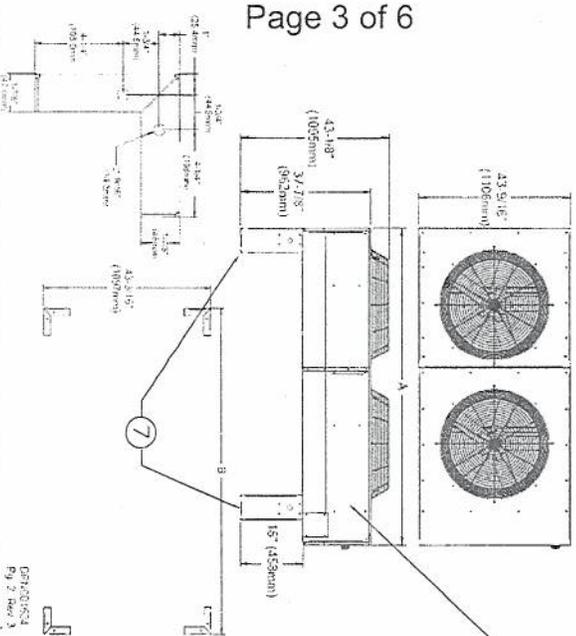
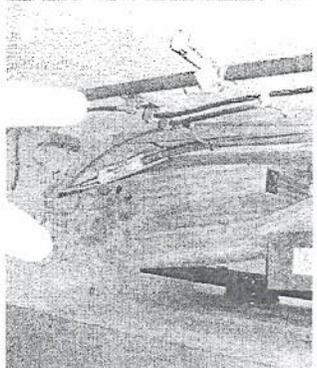
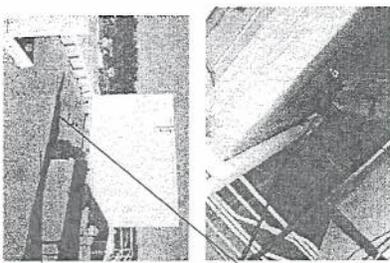


Table 23 Cabinet and anchor dimensions, R-410A, VFD control single circuit condensers, 50Hz

Label	Model No.	No. of Fans	A		B		Net Weight (lb)
			in (mm)	in (mm)	in (mm)	in (mm)	
TCS929K	1	1	31.52 (803)	31.11 (790)	32.71 (833)	47.0 (107)	120 (54)
TCS929N	2	2	31.52 (803)	31.11 (790)	32.71 (833)	47.0 (107)	120 (54)
TCS929M	3	3	31.52 (803)	31.11 (790)	32.71 (833)	47.0 (107)	120 (54)

Source: Design for Rev. 3, Fig. 2



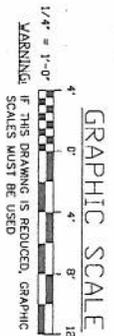
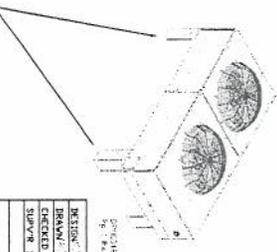
FLOOR OF 2ND FLOOR RM 216 COMM. CLOSET

LOOKING UP TO 3RD FLOOR FROM CEILING OF RM 216 REFRIGERANT LINES AND ELECTRICAL CONDUIT TO ROOF

FLOOR OF RM 406 CONDUIT REFRIGERANT AND ELECTRICAL LINES TO CEILING AND THROUGH WALL TO ROOF

ROUTE REFRIGERANT LINES FROM CONDENSING UNIT TO ROOF MOUNTED CONDENSING UNIT
NOTE:
THIS SYSTEM WILL HAVE TWO (2) SETS OF REFRIGERANT LINES FOR A TOTAL OF (4) COPPER LINES
BY ROUTING THE REFRIGERANT LINES THROUGH THE CEILING OF THE CEILING OF RM 406 AND DRILLING THROUGH THE WALL IN THIS LOCATION WILL ALLOW THE INSTALLER TO EXIT THE APPROXIMATE LOCATION.

4.4 - Typical dimensioned R-410A VFD Control Condensers



REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION
PENSACOLA, FLORIDA 32508-5000

PROJECT: HVAC FOR COMPUTER RACKS
BLDG 60 ROOM 214 & BOM
CONDENSING UNIT DETAIL & BOM
REVISION: IN ROW COOLING SYSTEM

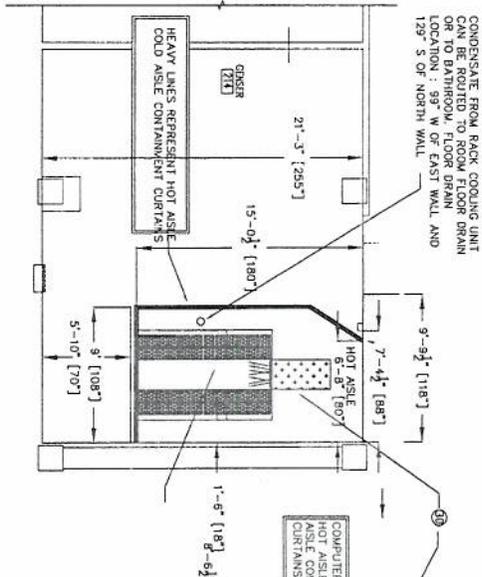
DATE: 08/09/11
DRAWN BY: 80091
CHECKED BY: 00000-000

SCALE: AS SHOWN
SHEET: 03 OF 06
JOB NO: 5358
PROJECT: 142710

BILL OF MATERIALS

ITEM	DESCRIPTION	SIZE & CONNECTIONS	QUANTITY	VENDOR	PAGE	UNIT
1	Material = (5510):					
2	UNITED STATES - 1/2 SLOTT - SILVER	10 FT LENGTHS	5763	GRANGER	571	4
3	THREADED ROD - 3/8" DIA	3/8-16-10FT, RH, UNC	4709	GRANGER	2926	6
4	WASHER - FLAT	3/8" X 1 1/8" DIA	4709	GRANGER	2922	2
5	ROOF SUPPORT MOUNTING RODS - 3/4" H	10-7/8 IN L, 27/16 IN	22106	GRANGER	3917	10
6	ROOF SUPPORT MOUNTING RODS - 3/4" H	10-7/8 IN L, 27/16 IN	22106	GRANGER	3917	10
7	ROOF SUPPORT MOUNTING RODS - 3/4" H	10-7/8 IN L, 27/16 IN	22106	GRANGER	3917	10
8	ROOF SUPPORT MOUNTING RODS - 3/4" H	10-7/8 IN L, 27/16 IN	22106	GRANGER	3917	10
9	PIPE - COPPER = TYPE ACR = 20 FT CUT TO 18 FT	3/4" OD	57142	GRANGER	3917	3
10	PIPE - COPPER = TYPE ACR = 20 FT CUT TO 18 FT	3/4" OD	57142	GRANGER	3917	3
11	PIPE - COPPER = TYPE ACR = 20 FT CUT TO 18 FT	3/4" OD	57142	GRANGER	3917	3
12	PIPE - COPPER = TYPE ACR = 20 FT CUT TO 18 FT	3/4" OD	57142	GRANGER	3917	3
13	ELBOW - WROUGHT COPPER = 45 DEG LGS RADII	3/4" OD	57083	GRANGER	3917	25
14	ELBOW - WROUGHT COPPER = 45 DEG LGS RADII	3/4" OD	57083	GRANGER	3917	25
15	ELBOW - WROUGHT COPPER = 45 DEG LGS RADII	3/4" OD	57083	GRANGER	3917	25
16	PAINT = PRIMER	WHITE 5 GAL	ZENGI	GRANGER	NA	1
17	CEILING TILE	ARMSTRONG CEILING TILE	SUTMA	GRANGER	382	4
18	APPLICATION - CLEAN ROOMS	24" X 24" 587RICK	52E 21	GRANGER	3917	6
19	CONDENSATE LINE	Sch 40 Pipe 1/2" ID, 1.315" OD	52E 21	GRANGER	3917	6
20	WATER LINE FOR HUMIDIFIER	Pipe 1/2" ID, 1.315" OD	52E 21	GRANGER	3917	6
21	INSULATION = 160 H	5/8" X 6 FT X 3/4" WALL	ZCKL9	GRANGER	3944	28
22	INSULATION = 160 H	3/4" X 6 FT X 3/4" WALL	ZCKK1	GRANGER	3944	28
23	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
24	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
25	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
26	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
27	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
28	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
29	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
30	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
31	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
32	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28
33	INSULATION = 160 H	5/8" X 3/4" WALL	ZCKK1	GRANGER	3944	28

PLAN VIEW



GRAPHIC SCALE
1/4" = 1'-0"
IF THIS DRAWING IS REDUCED, GRAPHIC SCALES MUST BE USED.

REVISIONS

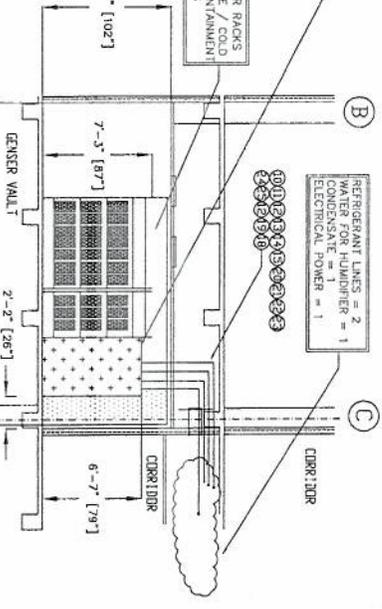
NO.	DATE	DESCRIPTION
1		

HAAC FOR COMPUTER RACKS
BLDG 60 ROOM 214
CONDENSING UNIT DETAIL & BOM
R1 DESIGN = IN ROW COOLING SYSTEM

DESIGNED BY: [Name]
CHECKED BY: [Name]
DATE: [Date]

SCALE: 1/4" = 1'-0"
SHEET 04 OF 05
DATE: 14270

SIDE VIEW

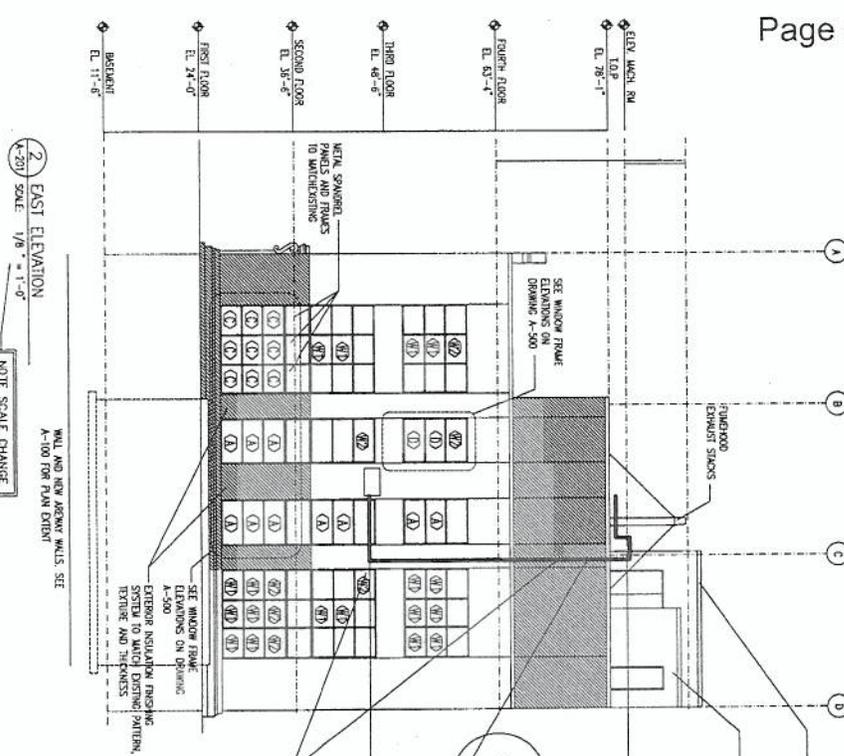


NOTE:

1. FIRE RESISTANCE VINYL DROP DOWN CURTAINS WITH FUSIBLE LINK
2. BASIS OF DESIGN: SUBZERO ENGINEERING
3. BASIS OF DESIGN: INPPA
4. CONNECTING SPLICER
5. FAN/L LISTED LINKS
6. MOUNTING KITS INCLUDE ALUMINUM TRACK

COLD AISLE AND HOT AISLE CONTAINMENT - SEPARATION

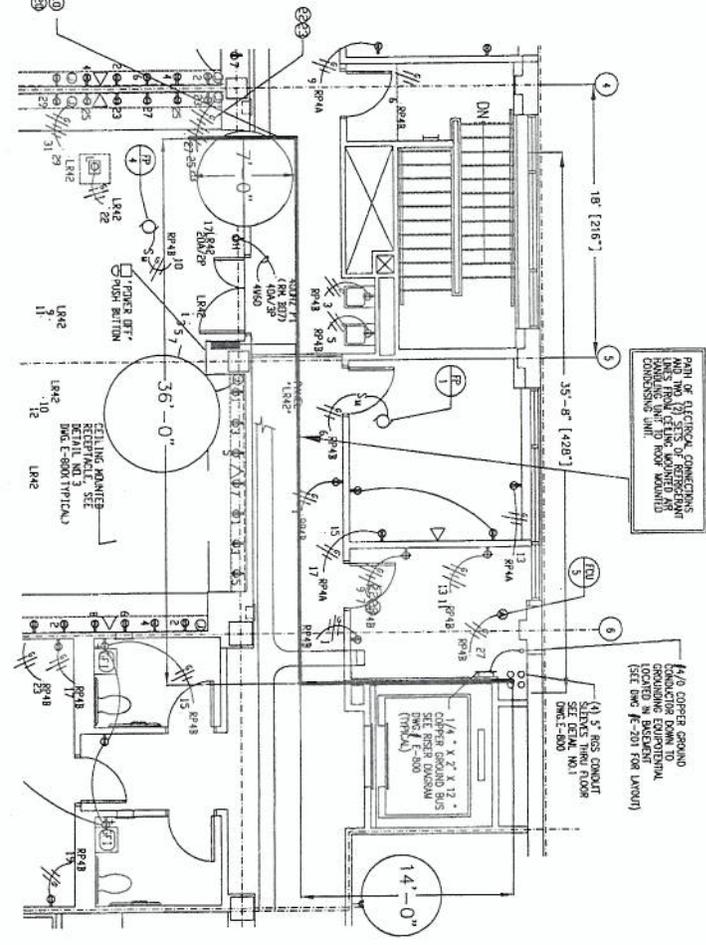
FOR BLDG 60 ROOM 214 CURTAIN TYPE OF SEPARATION SHALL BE ADDED ABOVE THE RACKS FROM CEILING MOUNTING BRACKETS. THE CURTAIN SHALL BE MOUNTED ABOVE THE RACKS AND EXTEND DOWN TO THE TOP OF THE COMPUTERS IN THE RACKS AND ALL THE WAY TO THE FLOOR ON WEST END OF THE RACKS AND ALL THE WAY TO THE FLOOR ON EAST END OF THE RACKS. ALL ACCESS BRACKETS SHALL BE MOUNTED TO THE RACKS AND TO THE EAST WALL CLOSING OFF BOTH THE HOT AISLE AND COLD AISLE. THIS ARRANGEMENT WILL KEEP THE COLD AIR AT THE FRONT OF THE RACKS AND AVOID COLD AIR BYPASS. THE COMPUTERS ON THE RACKS WITH THEIR REAR FANS SHALL BE MOUNTED TO THE RACKS AND EXTEND DOWN TO THE FLOOR INTO THE HOT AISLE. THE ROW COOLING UNIT SHALL HAVE TWO (2) RACK MOUNTED SENSORS WITH AN UPPER AND LOWER SENSOR FOR EACH OF THE TWO (2) RACK LOCATIONS. THESE SENSORS SHALL VARY THE SPEED OF THE SUPPLY FANS AND THE VARIABLE SPEED SCHOOL COMPRESSOR TO CLOSELY MONITOR THE COOLING LOAD REQUIREMENTS OF THIS RACK ARRANGEMENT.



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"
NOTE SCALE CHANGE

WALL AND ROOF ABOVE WALLS SEE A-100 FOR PLAN DETAIL

PIPE FITTERS - INSTALLERS SHALL PLACE REFRIGERATION LINE "TRAPS" AT THE BOTTOM OF THE VERTICAL RISERS IN ROOM 216 AND IN ROOM 406 AT A HEIGHT OF 5'-0" FROM THE FLOOR.



DESIGN	BY	DATE	REVISION
CHECKED	BY	DATE	REVISION
SAFETY OFF	BY	DATE	REVISION
DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND 4040 RESEARCH LABORATORY WASHINGTON, DC 20380			
HVAC FOR COMPUTER RACKS BLDG 60 ROOM 214 ROUTING OF ELECTRICAL CONDUIT AND (4) REFRIGERANT LINES			
SCALE	DATE	BY	REVISION
1/4" = 1'-0"	05/06	5368	14270

SYMBOL	DESCRIPTION	DATE	APPROVAL

