CONTINUATION SHEET

SECTION 00102 LIST OF DRAWINGS

1.2 CONTRACT DRAWINGS

Sketches SKA-001, SKM-1, SKM-2, SKM-3, SKM-4, SKM-5, SKM-6, SKM-7, SKM-8, SKM-9, SKE-1 and SKE-2 are added to the list of drawings. These sketches accompany this amendment.

SECTION 01 14 00 WORK RESTRICTIONS

1.3 Occupied and Existing Buildings:

ADD the following paragraph:

"c. Room 219 has existing telecom equipment that serves Northwest Buildings 351 & 366. Room 220 has existing telephone equipment that provides service to Northwest Buildings 144, 342, & 66. Rooms 219 and 220 shall remain in operation during the course of the project."

SECTION 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.7.1.2 Contractor Quality Control (QC) Manager:

DELETE this Paragraph in its entirety and REPLACE with the following:

"1.7.1.2 Contractor Quality Control (QC) Manager:

The Quality Control Manager cannot be the Site Safety and Health Officer."

SECTION 01 45 00.00 20 QUALITY CONTROL

1.5.1.2 Qualifications

At the end of this paragraph ADD the following: "The Quality Control Manager cannot be the Site Safety and Health Officer."

SECTION 08 51 13 ALUMINUM WINDOWS

1.11.5 Thermal Performance:

DELETE this Paragraph in its entirety and REPLACE with the following:

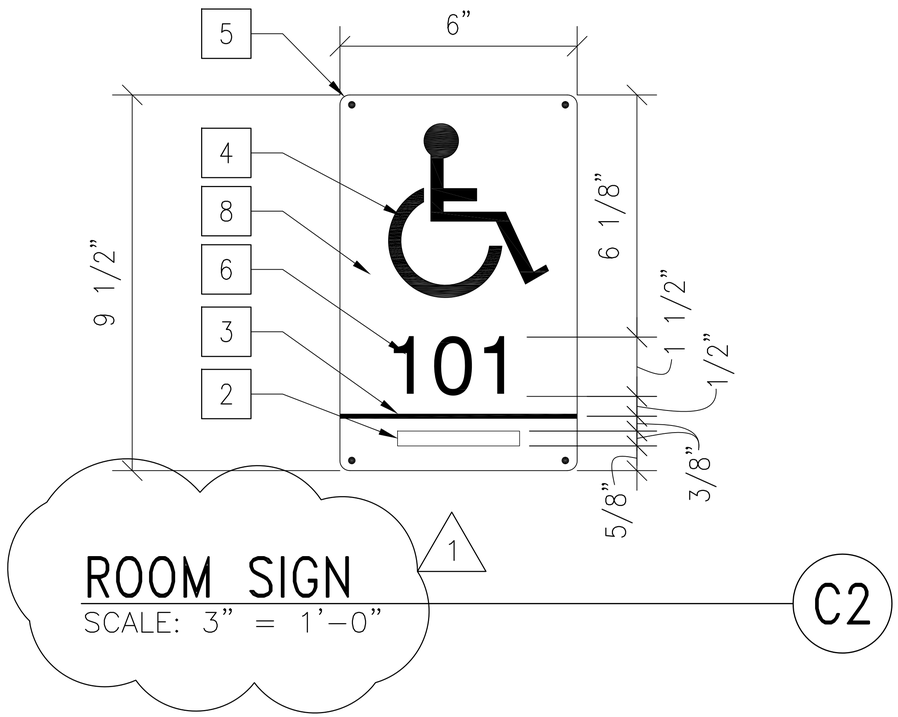
"1.11.5 Thermal Performance:

Non-residential aluminum windows (including frames and glass) must be certified by the National Fenestration Rating Council with a whole-window Solar Heat Gain Coefficient (SHGC) maximum of .173 determined according to NFRC 200 procedures and a U-factor maximum of .381 Btu/hr-ft2-F per NFRC-100 & .37 at user size."

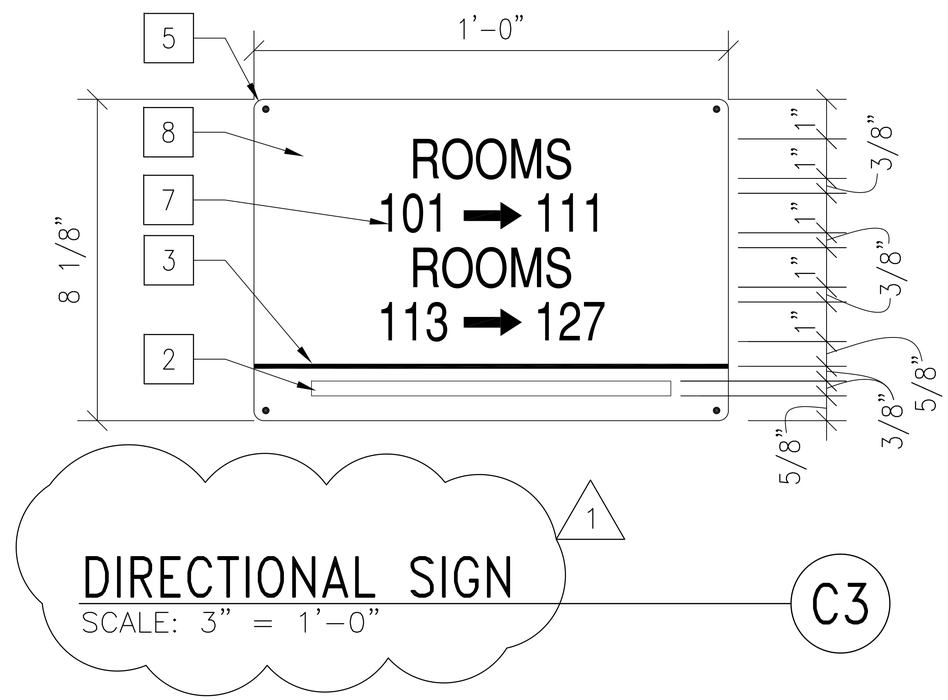
SECTION 08 51 13 ALUMINUM WINDOWS (CONTINUED)

2.1 Windows

In the last sentence of the paragraph after the text (minimum Condensation Resistance Factor (CRF) of), delete “35” and replace with “55”.



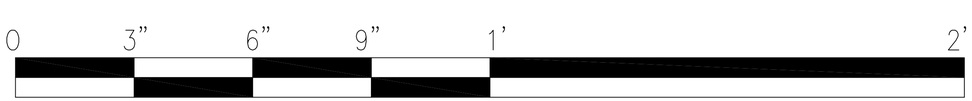
ROOM SIGN
SCALE: 3” = 1’–0”



DIRECTIONAL SIGN
SCALE: 3” = 1’–0”

GRAPHIC SCALE

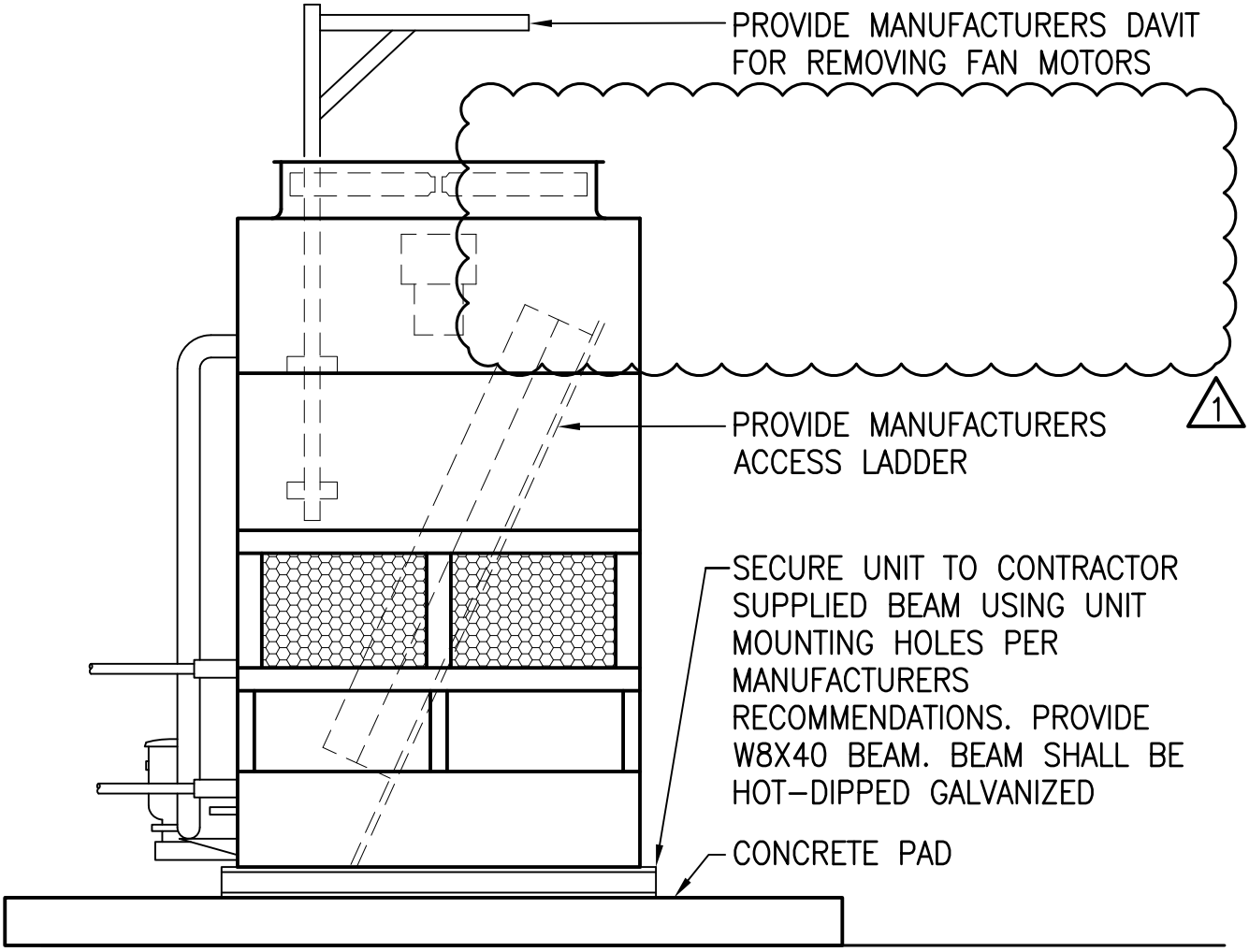
3”=1’–0”



DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVFAC MIDLANT HAMPTON ROADS IPT NAVAL STATION NORFOLK, VIRGINIA	SIGNAGE RENAMED
E PROJECTS NO.: 1293116	NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA REPAIR AND RENOVATE BARRACKS 351
MAXIMO NO.:	
JOB NO.: DATE: 05/17/16	THIS DRAWING REVISES IN PART DRAWING NO.: 12715854
CHECKED: RH DESIGNED:	SUPPLEMENTAL DRAWING NO.: SKA-001
DRAWN: ER QC: ER	

NAVFAC

REVISION: 12 AUGUST 2004



NOTE:

1. SEE CONDENSER LOOP DIAGRAM FOR PIPING.
2. EXTERNAL PLATFORM NOT SHOWN FOR CLARITY.

1

C4 CLOSED CIRCUIT COOLER DETAIL

NOT TO SCALE

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

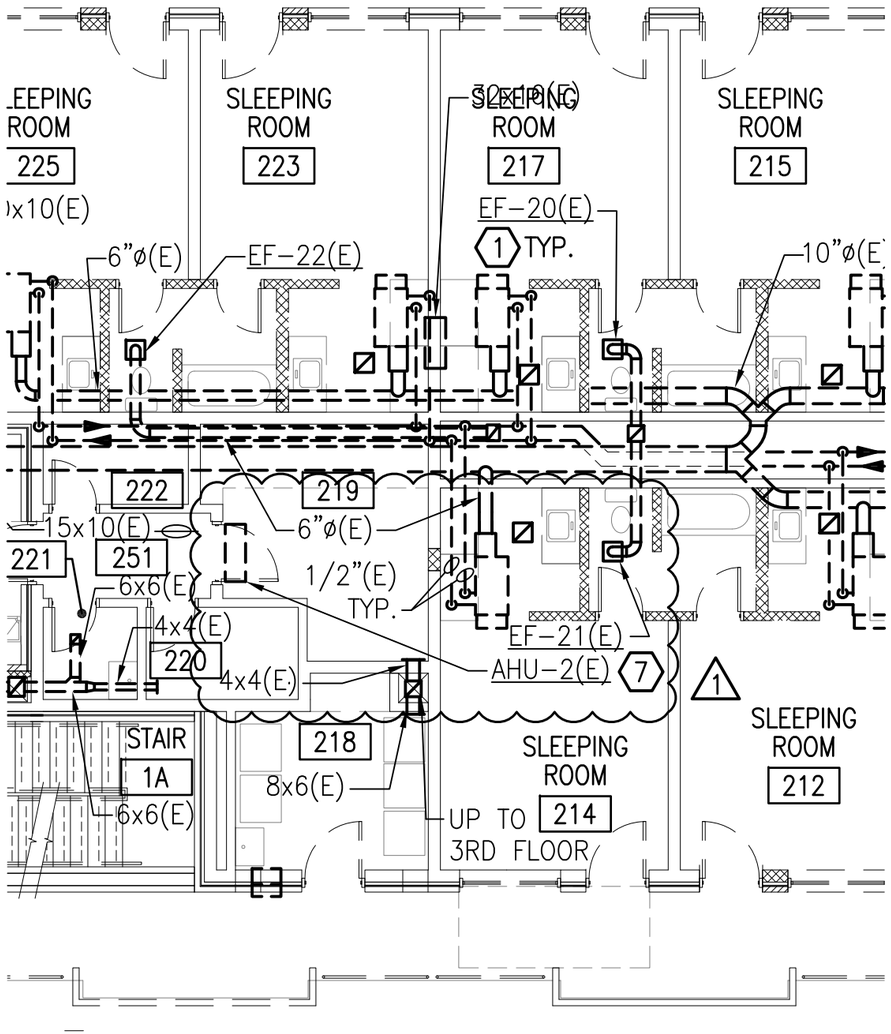
REVISED CLOSED CIRCUIT COOLER DETAIL

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA.
REPAIR AND RENOVATION
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715898	SKM-1

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-MS101.dwg LAYOUT NAME: 12715898 SKM-1 PLOTTED: Tuesday, May 17, 2016 - 1:51pm



PARTIAL DEMOLITION SECOND FLOOR PLAN - AREA B

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

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXHAUST FAN.
2. REMOVE EXHAUST DUCT AND RISER UP THROUGH ROOF.
3. DISCONNECT AND REMOVE SERIES FAN POWERED BOX, DUCTWORK AND SUPPLY GRILLES.
4. REMOVE RETURN AIR PLENUM GRILLE.
5. DISCONNECT AND REMOVE HEATING HOT WATER PIPING AND VALVES.
6. REMOVE EXISTING BOILER FLUE.
7. DISCONNECT AND REMOVE EXISTING SPLIT SYSTEM INDOOR UNIT COMPLETE, INCLUDING REFRIGERANT LINES AND CONTROLS. TELE/COM ROOM IS REQUIRED TO REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR SHALL REMOVE UNIT ONCE NEW UNIT IS OPERATIONAL. (1)

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

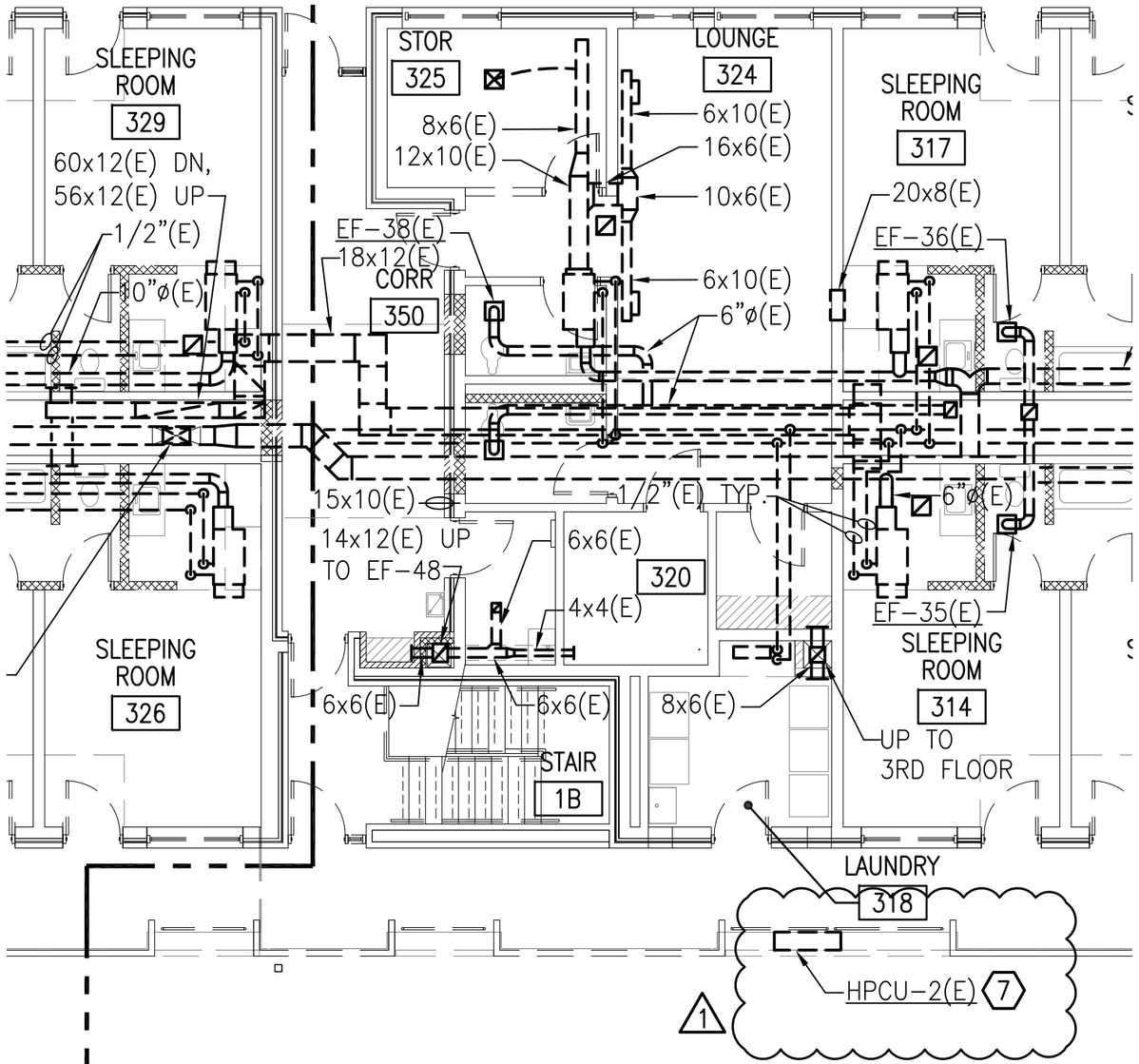
REVISED NOTES AND
PARTIAL DEMOLITION SECOND FLOOR PLAN – AREA B

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715894	SKM--2

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-MD102.dwg LAYOUT NAME: 12715894 SKM-2 PLOTTED: Tuesday, May 17, 2016 - 1:04pm



PARTIAL DEMOLITION THIRD FLOOR PLAN - AREA B

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

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXHAUST FAN.
2. REMOVE EXHAUST DUCT AND RISER UP THROUGH ROOF.
3. DISCONNECT AND REMOVE SERIES FAN POWERED BOX, DUCTWORK AND SUPPLY GRILLES.
4. REMOVE RETURN AIR PLENUM GRILLE.
5. DISCONNECT AND REMOVE HEATING HOT WATER PIPING AND VALVES
6. REMOVE EXISTING BOILER FLUE.
7. DISCONNECT AND REMOVE EXISTING DX SPLIT SYSTEM OUTDOOR UNIT COMPLETE, INCLUDING REFRIGERANT LINES AND CONTROLS. TELE/COM ROOM IS REQUIRED TO REMAIN OPERATIONAL DURING CONSTRUCTION. COONTRACTOR SHALL REMOVE UNIT ONCE NEW UNIT IS OPERATIONAL.

1

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

NAVFAC

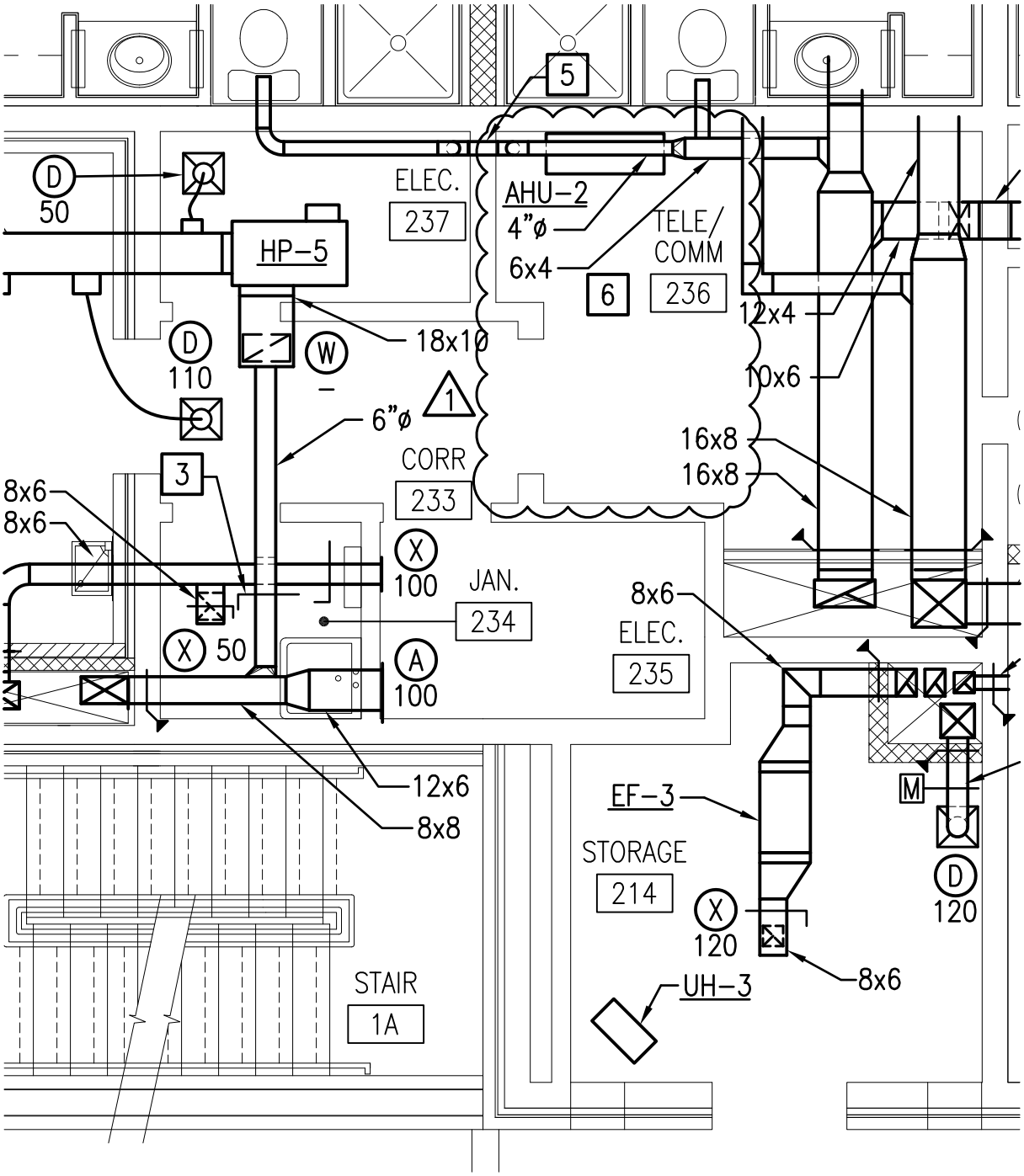
REVISED NOTES AND
PARTIAL DEMOLITION THIRD FLOOR PLAN – AREA B

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715895	SKM-3

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-MD103.dwg LAYOUT NAME: 12715895 SKM-3 PLOTTED: Tuesday, May 17, 2016 - 1:03pm



ENLARGED COMMON AREA PLAN - SECOND FLOOR

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

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVFAC MIDLANT HAMPTON ROADS IPT NAVAL STATION NORFOLK, VIRGINIA		REVISED ENLARGED COMMON AREA PLAN – SECOND FLOOR
E PROJECTS NO.: 1293116		NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA. REPAIR AND RENOVATION BARRACKS 351
MAXIMO NO.:		
JOB NO.:	DATE: 5/17/2016	THIS DRAWING REVISES IN PART DRAWING NO. 12715918 / SUPPLEMENTAL DRAWING NO. SKM-4
CHECKED: PCS	DESIGNED: FCF	
DRAWN: EJB	QC: PCS	

NAVFAC

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-M-406.dwg LAYOUT NAME: 12715918 SKM-4 PLOTTED: Tuesday, May 17, 2016 - 1:25pm

1 WATER SOURCE HEAT PUMP SCHEDULE

TAG	TYPE	FAN DATA		WATER FLOW GPM	COOLING DATA										HEATING DATA					ELECTRICAL SERVICE				WPD FT.WG	NOTES
		AIR FLOW CFM	ESP IN.WG		TOTAL MBH	SENSIBLE MBH	EDB °F	EWB °F	LDB °F	LWB °F	LWT °F	COOLING INPUT kW	HEAT OF REJECTION MBH	MIN. EER	HEATING TOTAL MBH	HEATING INPUT kW	HEAT OF ABSORPTION MBH	LWT °F	MIN. COP	FLA	MCA	VOLTS	PH		
HP1-1	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-2	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-3	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-4	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-5	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-6	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-7	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-8	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-9	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-10	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-11	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-12	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-13	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-14	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-15	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-16	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-17	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-18	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-19	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-20	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-21	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-22	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-23	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP1-24	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-1	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-2	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-3	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-4	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-5	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-6	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-7	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-8	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-9	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-10	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-11	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-12	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-13	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-14	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-15	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-16	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-17	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-18	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-19	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-20	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-21	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-22	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-23	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-24	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-25	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-26	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-27	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-28	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3
HP2-29	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	56.2	96.5	0.48	8	12.1	7.0	0.48	6.6	51.1	4.4	3.7	4.1	208	1	1.4	1, 2, 3

NOTES:

1. PROVIDE 20% PROPYLENE GLYCOL FLUID CONCENTRATION.
2. PROVIDE CONDENSATE OVERFLOW SWITCH.
3. EFFICIENCIES LISTED ARE FOR THE DESIGN CONDITIONS AT 20% PROPYLENE GLYCOL FLUID CONCENTRATION. 1

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

REVISED WATER SOURCE HEAT PUMP SCHEDULE

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715922	SKM-5

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-M-601.dwg LAYOUT NAME: 12715922 SKM-5 PLOTTED: Tuesday, May 17, 2016 - 1:01pm

WATER SOURCE HEAT PUMP SCHEDULE

TAG	TYPE	FAN DATA		WATER FLOW GPM	COOLING DATA										HEATING DATA				ELECTRICAL SERVICE				WPD FT.WG	NOTES
		AIR FLOW CFM	ESP IN.WG		TOTAL MBH	SENSIBLE MBH	EDB °F	EWB °F	LDB °F	LWB °F	LWT °F	COOLING INPUT kW	HEAT OF REJECTION MBH	MIN. EER	HEATING TOTAL MBH	HEATING INPUT kW	HEAT OF ABSORPTION MBH	LWT °F	MIN. COP	FLA	MCA	VOLTS	PH		
HP3-1	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-2	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-3	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-4	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-5	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-6	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-7	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-8	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-9	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-10	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-11	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-12	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-13	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-14	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-15	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-16	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-17	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-18	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-19	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-20	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-21	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-22	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-23	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-24	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-25	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-26	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP3-27	HORIZONTAL CONCEALED	205	0.34	1.3	5.8	4.1	79.4	65.5	60.5	55.2	96.0	0.47	8	12.1	7	0.48	6	51.1	4.4	3.7	4.5	208	1	1.4	1, 2, 4
HP-2	HORIZONTAL CONCEALED	165	0.29	1.3	5.6	3.8	78.6	65.3	57.2	51.8	96.2	0.47	7	12	7	0.47	6	51.0	4.5	3.7	4.5	208	1	1.4	1, 2, 4
HP-3	HORIZONTAL CONCEALED	165	0.29	1.3	5.6	3.8	78.6	65.3	57.2	51.8	96.2	0.47	7	12	7	0.47	6	51.0	4.5	3.7	4.5	208	1	1.4	1, 2, 4
HP-4	HORIZONTAL CONCEALED	460	0.20	2.5	12.0	8.0	79.2	65.0	61.1	55.7	96.5	.93	15	12.6	11.7	0.93	11	51.2	4.1	5.3	6.4	208	1	6.7	1, 2, 4
HP-5	HORIZONTAL CONCEALED	380	0.20	1.9	7.3	7.3	79.6	65.6	61.9	56.7	96.5	0.71	11	11.8	10	0.69	9	51.1	4.4	5.3	6.4	208	1	3.5	1, 2, 4
HP-6	HORIZONTAL CONCEALED	650	0.20	3.8	17.5	14.1	79.2	65.0	59.0	53.3	96.8	1.33	18	13.1	19	1.19	16	51.6	4.8	8.2	10.0	208	1	6.9	1, 2, 3, 4
HP-7	HORIZONTAL CONCEALED	380	0.20	1.9	8.4	7.3	79.6	65.6	61.9	51.8	96.5	0.71	11	11.8	10	0.69	9	51.1	4.4	5.3	6.4	208	1	3.5	1, 2, 4
HP-8	NOT USED																								
HP-9	HORIZONTAL CONCEALED	250	0.45	1.9	7.9	5.9	78.0	65.1	58.6	53.5	96.1	0.67	11	12.1	10	0.74	8	51.5	4.1	5.3	6.4	208	1	3.5	1, 2, 4
HP-10	HORIZONTAL CONCEALED	250	0.45	1.9	7.9	5.9	78.0	65.1	58.6	53.5	96.1	0.67	11	12.1	10	0.74	8	51.5	4.1	5.3	6.4	208	1	3.5	1, 2, 4
HP-11	HORIZONTAL CONCEALED	250	0.45	1.9	7.9	5.9	78.0	65.1	58.6	53.5	96.1	0.67	11	12.1	10	0.74	8	51.5	4.1	5.3	6.4	208	1	3.5	1, 2, 4

NOTES:

1. PROVIDE 20% PROPYLENE GLYCOL FLUID CONCENTRATION.
2. PROVIDE CONDENSATE OVERFLOW SWITCH.
3. ~~PROVIDE WITH CONDENSATE PUMP.~~
4. EFFICIENCIES LISTED ARE FOR THE DESIGN CONDITIONS AT 20% PROPYLENE GLYCOL FLUID CONCENTRATION.

1

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

NAVFAC

REVISED WATER SOURCE HEAT PUMP SCHEDULE

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA

REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715923	SKM-6

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\VA\BLDG0351-1293116-M-602.dwg LAYOUT NAME: 12715923 SKM-6 PLOTTED: Tuesday, May 17, 2016 - 2:24pm

CLOSED-CIRCUIT COOLER SCHEDULE

MARK	TYPE	WATER FLOW GPM	EWT DEG. F.	LWT DEG. F.	WB °F	PRESSURE DROP PSI	FAN					SPRAY PUMP			SUMP HEATER		ELECTRICAL SERVICE (NOTE 4)				NOTES
							TYPE	NO.	EAT DEG. F. DB	EAT DEG. F. WB	MOTOR HP	NO.	FLOW GPM	MOTOR HP	TYPE	KW	VOLTS	PHASE	MCA	MOCP	
CC-1	INDUCED-DRAFT	100	96.7	85.0	78.7	0.54	CENTRIFUGAL	1	93	–	5	1	290	2	ELEC	1 @ 4KW	208	3	58.3	100	1, 2, 3, 4
CC-2	INDUCED-DRAFT	100	96.7	85.0	78.7	0.54	CENTRIFUGAL	1	93	–	5	1	290	2	ELEC	1 @ 4KW	208	3	58.3	100	1, 2, 3, 4

NOTES:

1. PROVIDE ELECTRIC PAN HEATER(S), AND ELECTRIC WATER LEVEL CONTROL.
2. PROVIDE WITH BLOW DOWN VALVE, INTERNAL ACCESS LADDER, AND MOTOR DAVIT AND BASE.
3. PROVIDE WITH VARIABLE SPEED FAN MOTOR. VARIABLE SPEED DRIVE SHALL HAVE NEMA 3R ENCLOSURE MOUNTED ON THE UNIT.
4. PROVIDE 20% PROPYLENE GLYCOL FLUID CONCENTRATION.

GRILLE, REGISTER & DIFFUSER SCHEDULE

TAG	SERVICE	FACE TYPE	CFM RANGE	NECK SIZE	FACE SIZE	MAX. PD	MAX. NC	THROW	NOTES
A	SUPPLY GRILLE	SURFACE MOUNT 45D ADJUSTABLE DOUBLE DEFLECTION	0–300	12X6	14"x8"	0.10"	<25	15'	1, 2, 3, 4
B	SUPPLY DIFFUSER	SQUARE LOUVERED	121–275	8"ø	24"x24"	0.10"	<25	4–WAY	2, 3, 7
C	SUPPLY DIFFUSER	SQUARE LOUVERED	0–120	6"ø	24"x24"	0.10"	<25	4–WAY	2, 3, 7
D	SUPPLY DIFFUSER	SQUARE LOUVERED	0–120	6"ø	12"x12"	0.10"	<25	4–WAY	2, 3, 7
E	SUPPLY GRILLE	SURFACE MOUNT 45D ADJUSTABLE DOUBLE DEFLECTION	0–150	6"x6"	8"x8"	0.10"	<25	15'	1, 2, 3, 4
V	RETURN/EXHAUST GRILLE	LOUVERED FILTER GRILLE	0–1880	20"x22"	24"x24"	0.05"	<25	–	4, 5, 2
W	RETURN/EXHAUST GRILLE	LOUVERED FILTER GRILLE	0–290	12"x6"	14"x8"	0.05"	<25	–	4, 5, 2
X	RETURN/EXHAUST GRILLE	LOUVERED RETURN/EXHAUST GRILLE	0–150	6"x6"	8"x8"	0.05"	<25	–	6, 8
Y	RETURN/EXHAUST GRILLE	LOUVERED RETURN/EXHAUST GRILLE	0–1850	22"x22"	24"x24"	0.05"	<25	–	4, 5, 2
Z	RETURN/EXHAUST GRILLE	LOUVERED RETURN/EXHAUST GRILLE	0–200	8"x6"	10"x8"	0.05"	<25	–	6, 2

NOTES:

1. GRILLE SHALL HAVE 3/4" BLADE SPACING. GRILLE SHALL BE CONSTRUCTED OF ALUMINUM.
2. PROVIDE OPPOSED BLADE DAMPER WITH SCREWDRIVER ADJUSTMENT THROUGH FACE OF GRILLE.
3. PROVIDE WITH OFF WHITE FACTORY BAKED ENAMEL FINISH INCLUDING HEADS OF SCREWS.
4. PROVIDE WITH PLASTER TRIM FRAME FOR MOUNTING IN HARD CEILINGS/ WALLS.
5. GRILLE SHALL HAVE MERV 8 FILTER, 35' DEFLECTION, 3/4" BLADE SPACING. GRILLE SHALL BE CONSTRUCTION OF ALUMINUM.
6. DIFFUSER SHALL BE CONSTRUCTED OF ALUMINUM.
7. DIFFUSER SHALL BE CONSTRUCTED OF ALUMINUM.
8. PROVIDE OPPOSED BLADE DAMPER MOUNTED IN THE DUCT WITH GANG OPERATED OPPOSED BLADES SUITABLE FOR BALANCING PURPOSES.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116
MAXIMO NO.:
JOB NO.: DATE: 5/17/2016
CHECKED: PCS DESIGNED: FCF
DRAWN: EJB QC: PCS

REVISED SCHEDULES

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO. 12715924
SUPPLEMENTAL DRAWING NO. SKM-7

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-M-603.dwg LAYOUT NAME: 12715924 SKM-7 PLOTTED: Tuesday, May 17, 2016 - 12:49pm

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	SUPPLY FAN DATA			EXHAUST FAN DATA			DX COOLING COIL DATA						HEAT RECOVERY WHEEL								HEATING PERFORMANCE		HOT GAS REHEAT COIL				WATER FLOW GPM	WPD FT. WG	ELECTRICAL SERVICE				NOTES
													OUTDOOR AIR				EXHAUST AIR																
	TOTAL CFM	ESP IN. WG	MOTOR HP	TOTAL CFM	ESP IN. WG	MOTOR HP	TOTAL MBH	SENSIBLE MBH	EDB °F	EWB °F	LDB °F	LWB °F	SUMMER ENTERING (°F) DB	SUMMER ENTERING (°F) WB	WINTER ENTERING (°F) DB	WINTER ENTERING (°F) WB	SUMMER ENTERING (°F) DB	SUMMER ENTERING (°F) WB	WINTER ENTERING (°F) DB	WINTER ENTERING (°F) WB	ENTERING (°F)	LEAVING (°F)	CFM	EAT °F	LAT °F	CAPACITY MBH			MCA	MOCP	VOLTS	PH	
ERV-1	4885	1.7	5	3420	1.7	3	248	249	84.3	70.4	55.8	54.6	94	76.8	20.4	15.6	78	65	72	55.9	50.4	72	4885	53	75	115.8	60	27	108	125	208	3	1, 2, 3, 4, 5, 6

NOTES:

1. MINIMUM CONDENSING EER = 14.2
2. R-410A REFRIGERANT REQUIRED.
3. PROVIDE WITH LOW LEAKAGE DAMPERS. LEAKAGE RATE SHALL NOT EXCEED 3 CFM / SQFT, WITH A PRESSURE DIFFERENTIAL OF 1" W.G.
4. PROVIDE WITH INTEGRAL DISCONNECT.
5. PROVIDE WITH MERV8 FILTERS.
6. PROVIDE 20% PROPYLENE GLYCOL FLUID CONCENTRATION.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116
MAXIMO NO.:
JOB NO.: DATE: 5/17/2016
CHECKED: PCS DESIGNED: FCF
DRAWN: EJB QC: PCS

NAVFAC

REVISED ENERGY RECOVERY VENTILATOR SCHEDULE

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO. 12715925
SUPPLEMENTAL DRAWING NO. SKM-8

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\W\BLDG0351-1293116-M-604.dwg LAYOUT NAME: 12715925 SKM-8 PLOTTED: Tuesday, May 17, 2016 - 12:47pm

HEAT PUMP SEQUENCE OF OPERATION (HP-2 THROUGH 11) 1

RUN CONDITIONS – SCHEDULED

THE SYSTEM SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:

OCCUPIED MODE: THE UNIT SHALL MAINTAIN

- A 78°F (ADJ.) COOLING SETPOINT
- A 68°F (ADJ.) HEATING SETPOINT

UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN

- A 85°F (ADJ.) COOLING SETPOINT
- A 55°F (ADJ.) HEATING SETPOINT.

SUPPLY FAN START/STOP:

THE SUPPLY FAN WILL BE STARTED ACCORDING TO THE SCHEDULE. AFTER THE SUPPLY FAN HAS BEEN STARTED, THE CONTROL SEQUENCE WILL BE ENABLED.

ZONE CONTROL:

ON A RISE IN ZONE TEMPERATURE ABOVE COOLING SETPOINT OR BELOW HEATING SETPOINT, THE CONDENSER WATER VALVE SHALL OPEN TO THE COIL. THE COMPRESSOR WILL CYCLE IN SEQUENCE TO MAINTAIN THE ZONE TEMPERATURE AT SETPOINT. ONCE THE ZONE TEMPERATURE IS SATISFIED, THE CONDENSER VALVE SHALL CLOSE TO THE COIL AND THE BYPASS VALVE SHALL BE OPEN.

ZONE SETPOINT ADJUST:

THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS ±2°F FROM THE BAS SETPOINT AT THE ZONE SENSOR. IF THE HEAT PUMP FAILS TO MAINTAIN ZONE TEMPERATURE SETPOINT FOR 15 MINUTES (ADJ.), AN ALARM CONDITION SHALL BE GENERATED.

HEAT PUMP CONTROL:

WHEN THE ZONE TEMPERATURE FALLS BELOW THE ZONE TEMPERATURE SETPOINT THE REVERSING VALVE(S) WILL BE INDEXED TO PROVIDE HEATING WHEN THE COMPRESSOR IS RUNNING. WHEN THE ZONE TEMPERATURE RISES ABOVE THE ZONE TEMPERATURE SETPOINT THE REVERSING VALVE(S) WILL BE INDEXED TO PROVIDE COOLING WHEN THE COMPRESSOR IS RUNNING.

NIGHT SETBACK/NIGHT SETUP:

WHEN IN "UNOCCUPIED" MODE, THE UNIT WILL CYCLE AS NECESSARY TO MAINTAIN THE NIGHT SETBACK ZONE TEMPERATURE AT SETPOINT. A DIFFERENTIAL PREVENTS THE UNIT FROM CYCLING EXCESSIVELY.

ZONE UNOCCUPIED OVERRIDE:

A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR A PERIOD OF 30 MINUTE INTERVALS FOR A MAXIMUM OF 6 HOURS. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

OVERFLOW SWITCH:

IF CONDENSATE IS SENSED IN THE DRAIN PAN BY THE FLOAT SWITCH, THE HEAT PUMP SHALL TURN OFF AND ALARM CONDITION SHALL BE GENERATED AT THE BAS. WHEN CONDENSATE IS NO LONGER SENSED, THE HEAT PUMP SHALL START IN NORMAL OPERATION.

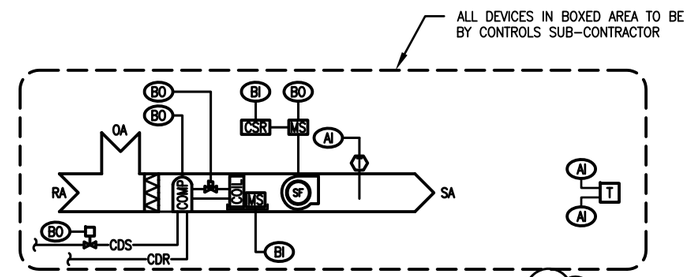
SUPPLY AIR DISCHARGE TEMPERATURE

THE BAS SYSTEM SHALL MONITOR THE SUPPLY AIR DISCHARGE AIR TEMPERATURE.

SHUTDOWN:

WHEN THE UNIT IS SHUTDOWN BY EITHER A STOP COMMAND OR SYSTEM SAFETY THE UNIT WILL BE SET AS FOLLOWS:

- SUPPLY FAN WILL BE OFF
- COMPRESSORS(S) WILL BE OFF.



HEAT PUMP CONTROL DIAGRAM (HP-2 THROUGH 11) 1

NO SCALE

1

HEAT PUMP (HP-2 THROUGH 11)

TYPE	POINT NAME	ALARM	SOFTWARE	TREND
AI	ZONE TEMPERATURE	X		X
BO	SUPPLY FAN START/STOP			
BI	SUPPLY FAN STATUS			
BO	COMPRESSOR OUTPUT			
BO	REVERSING VALVE			
BI	OVERFLOW SWITCH	X		
AI	ZONE SETPOINT ADJUST			
AI	SUPPLY AIR DISCHARGE AIR TEMPERATURE			
BO	CONDENSER WATER VALVE			

NOTE: PROVIDE 2-WAY OR 3-WAY VALVES AS SHOWN ON HEAT PUMP PIPING DIAGRAM

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: PCS	DESIGNED: FCF
DRAWN: EJB	QC: PCS

NAVFAC

REVISED CONTROL DIAGRAM

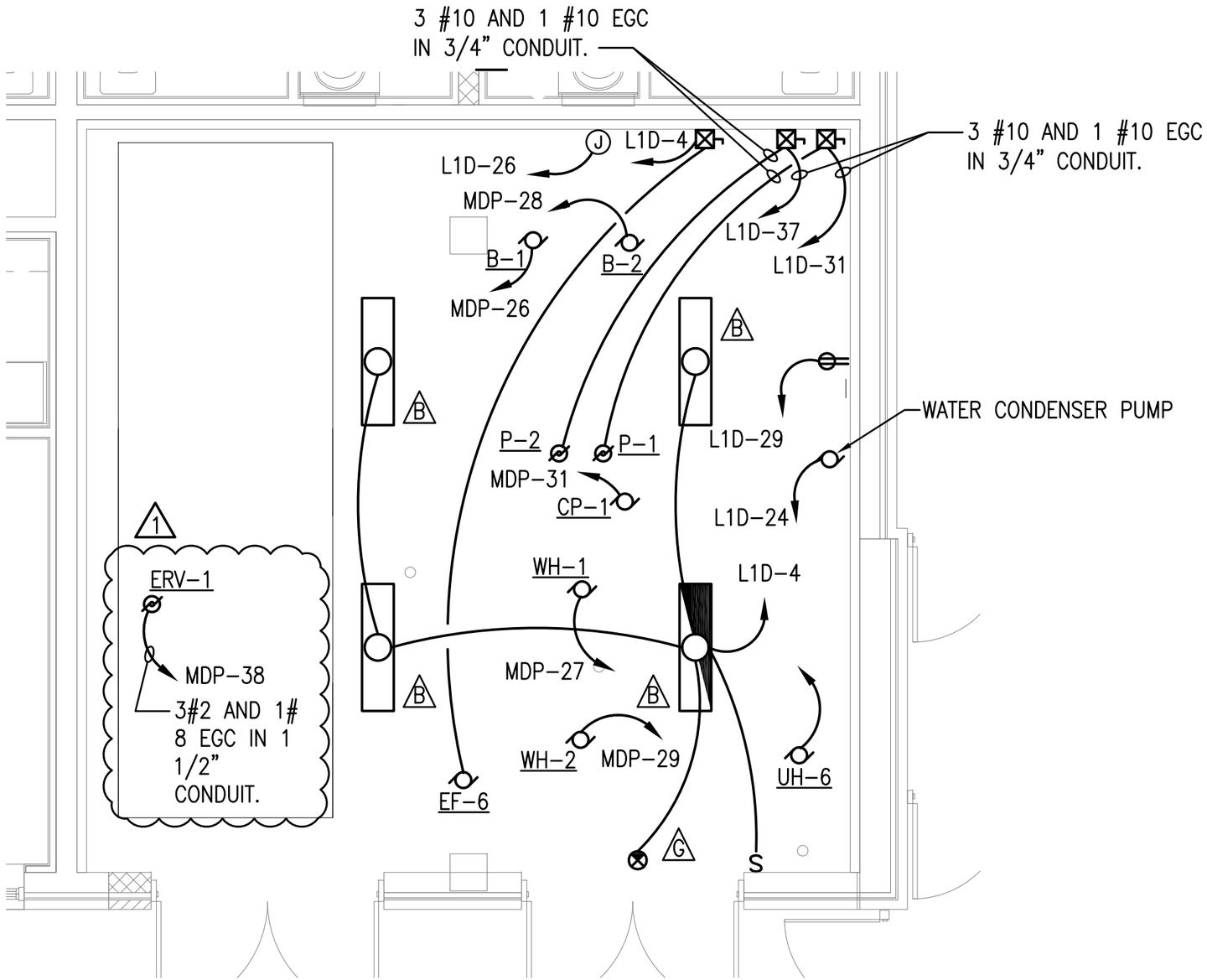
NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA

REPAIR AND RENOVATE BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715927	SKM-9

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\M\BLDG0351-1293116-M-702.dwg LAYOUT NAME: 12715927 SKM-9 PLOTTED: Tuesday, May 17, 2016 - 12:46pm



A2 ENLARGED MECHANICAL ROOM PLAN

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

E-101, E-104

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: TBS	DESIGNED: SLP
DRAWN: SLP	QC: TBS

NAVFAC

REVISED WATER SOURCE HEAT PUMP WIRING

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA

REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715948	SKE-1

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\E\BLDG0351-1293116-E-401.dwg LAYOUT NAME: 12715948 SKE-1 PLOTTED: Tuesday, May 17, 2016 - 2:25pm

PANELBOARD MDP SCHEDULE

1200 A 100% RATED MCB, 208Y/120 V, 3 PHASE, 4 WIRE, 14 KAIC MINIMUM, SURFACE MOUNT

LOAD SERVED	LOAD (AMPS) A	LOAD (AMPS) B	LOAD (AMPS) C	BKR. TRIP	WIRE SIZE	CKT. NO.	PHASE A B C	CKT. NO.	WIRE SIZE	BKR. TRIP	LOAD (AMPS) A	LOAD (AMPS) B	LOAD (AMPS) C	LOAD SERVED
PANELBOARD L1A	404			400	500	1		2	500	400	416			PANELBOARD L2A
		414										410		
			367										384	
PANELBOARD L3A	431			400	500	7		8	2	125	93			ERV–1
		417										93		
			416										93	
SPACE	–			–	–	13		14	2/0	200	140			PANELBOARD L1D
SPACE		–		–	–	15						142		
SPACE			–	–	–	17							147	
SPACE	–			–	–	19		20	–	20	–			SPARE
SPACE		–		–	–	21		22	–	20		–		SPARE
SPACE			–	–	–	23		24	–	20			–	SPARE
FACP	5			*20	12	25		26	12	15	12			B–1
WH–1 PUMP		14		20	12	27		28	12	15		12		B–2
WH–2 PUMP			14	20	12	29		30	12	20			2	SUMP PUMP
CP–1	6			15	12	31		32	12	20	5			ELEVATOR CAB. LTG AND REC.
ELEVATOR CONTROLS		5		20	12	33		34	–	20		–		SPARE
SHUNT TRIP			–	–	–	35		36	12	20			2	TTB
ELEVATOR	92			125	2	37		38	12	20	11			EF–7
30HP		92		*								11		
			92										11	
TOTAL	938	942	889								677	668	639	TOTAL

TOTAL NEW CONNECTED AMPS A: 1615 B: 1610 C: 1528

1

* PROVIDE LOCK ON BREAKER.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC MIDLANT
HAMPTON ROADS IPT
NAVAL STATION NORFOLK, VIRGINIA

E PROJECTS NO.: 1293116	
MAXIMO NO.:	
JOB NO.:	DATE: 5/17/2016
CHECKED: TBS	DESIGNED: SLP
DRAWN: SLP	QC: TBS

NAVFAC

REVISED PANELBOARD SHCEDULE

NAVSUPPORT NORTHWEST ANNEX CHESAPEAKE, VA
REPAIR AND RENOVATE
BARRACKS 351

THIS DRAWING REVISES IN PART DRAWING NO.	SUPPLEMENTAL DRAWING NO.
12715952	SKE-2

REVISION: 12 AUGUST 2004

FILE NAME: P:\15047 Bldg 351 NW\CAD\E\BLDG0351-1293116-E-601.dwg LAYOUT NAME: 12715952 SKE-2 PLOTTED: Tuesday, May 17, 2016 - 2:27pm