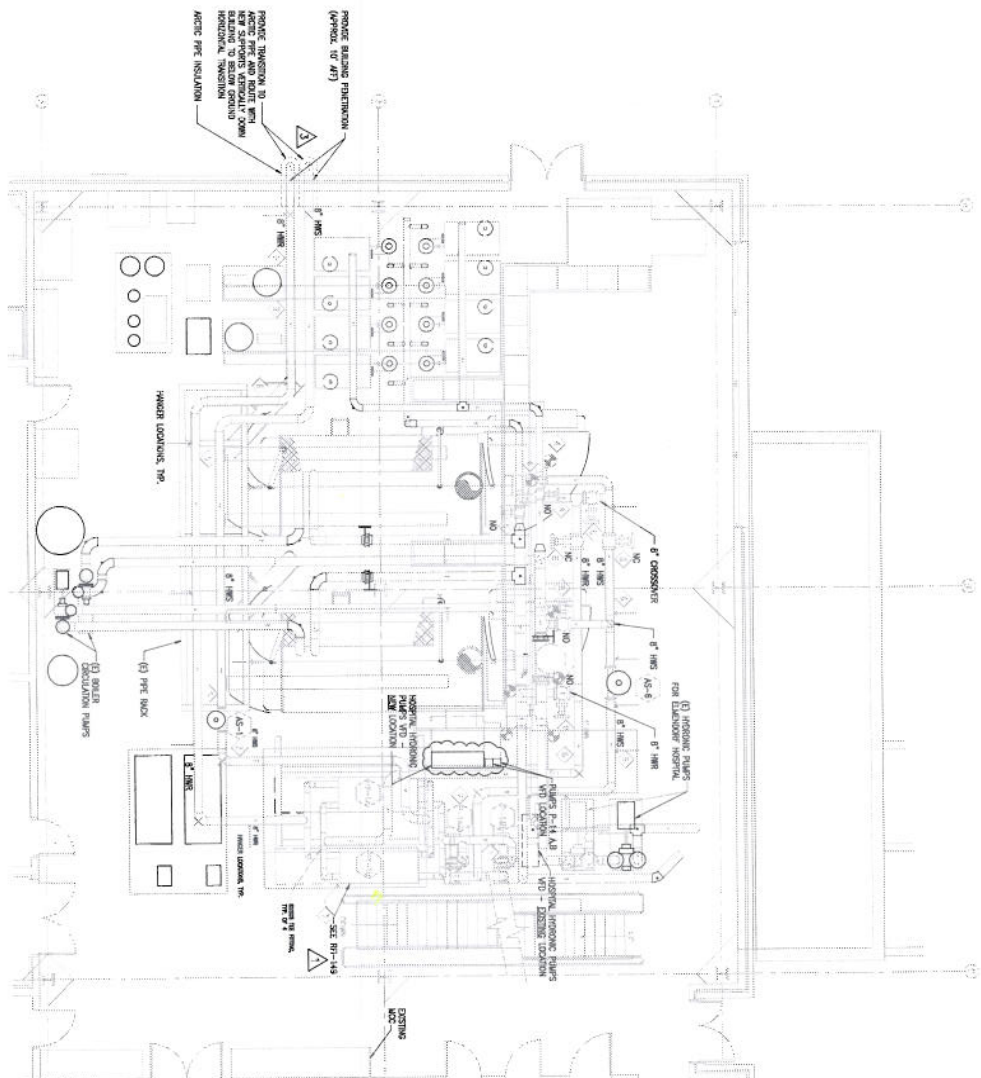


*Mech. Ans. Vol. 3 M H & C 2*



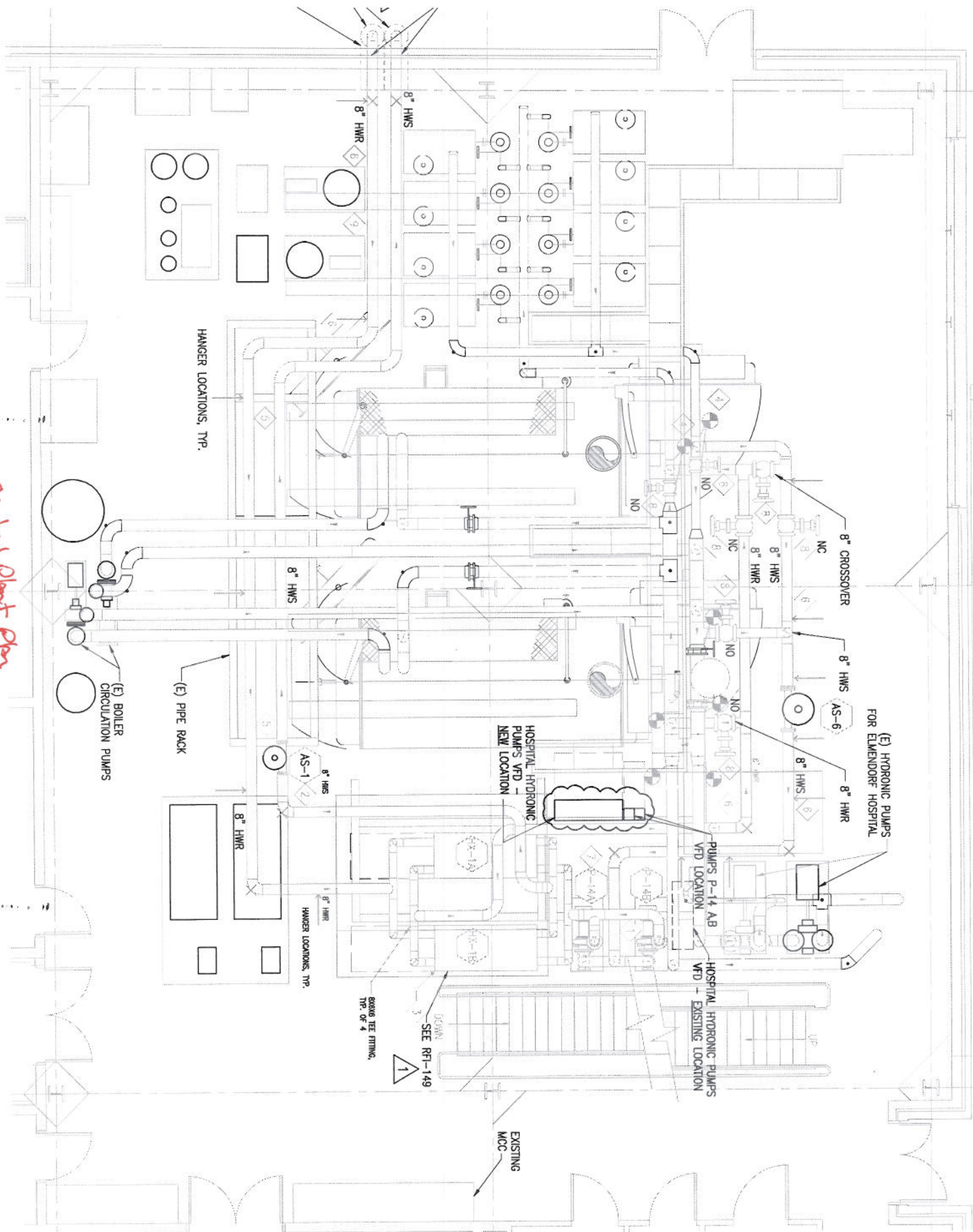
1 CENTRAL PLANT NEW PLAN  
Scale 1/4" = 1'-0"

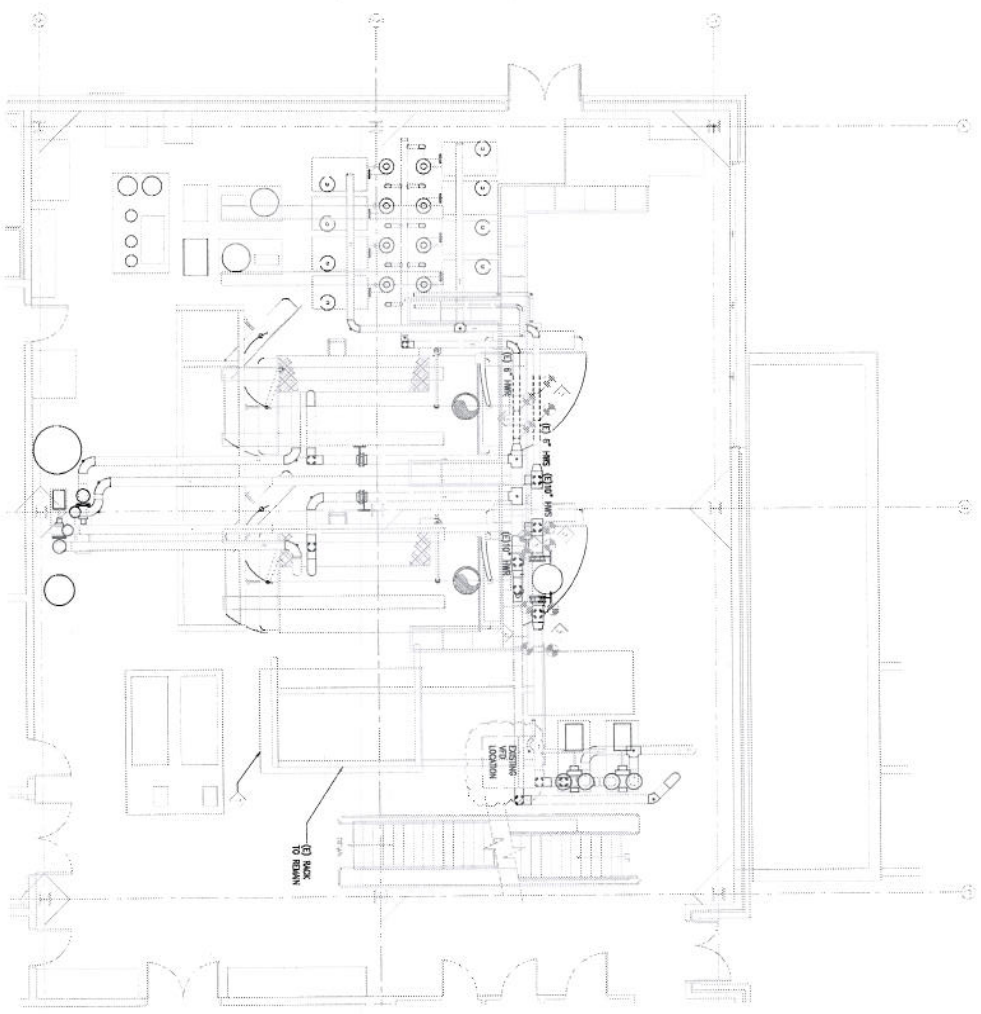
- SHEET NOTES**
- ▶ CLEANUP AND PPE HAZARDOUS AREA, THE SUPPORT AS-1, ROOF STRUCTURE AND BRICK ADJACENT TO PPE NOCK.
  - ▶ MOUNT THE SIZE OF THE EXISTING 4\"/>

CD - FULLY SPRINKLERED

<b>PROJECT:</b> RECORD DRAWINGS TITLE:		<b>CONSULTANTS:</b> PDC INC. ENGINEERS		<b>ARCHITECT/ENGINEERS:</b> In association with <b>SMITHGROUP</b>		<b>CLIENT:</b> CENTRAL PLANT PLAN & SECTION		<b>DATE:</b> New VA Outpatient Clinic and Regional Office Building Anchorage, Alaska 02/26/07		<b>NO.:</b> 483-500 PROJECT NO. 100 DRAWING NO. MH492		<b>OFFICE OF:</b> Facilities Management 	
----------------------------------------------	--	-------------------------------------------	--	-------------------------------------------------------------------------	--	---------------------------------------------------	--	--------------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------------	--	---------------------------------------------------	--

*Central Plant Plan  
& Section*





1 CENTRAL PLANT DEMOLITION PLAN  
 SCALE: 1/8" = 1'-0"

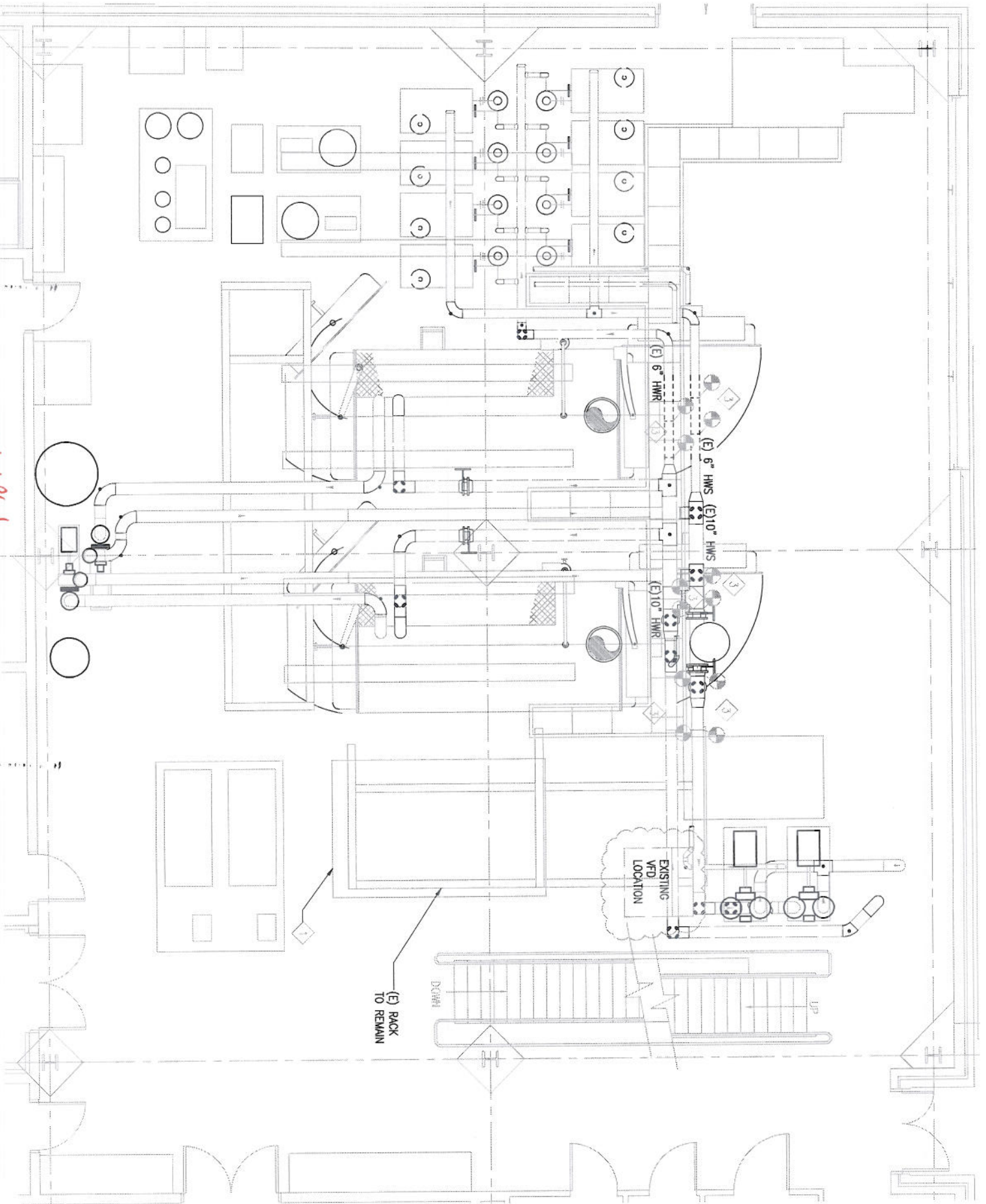
- SHEET NOTES**
- ◊ (1) REVISIONS INDICATED BY TAG TO REMAIN.
  - ◊ USE (1) FOR FLOOR PLAN OR CONNECTION TO FLOOR/ROOF.
  - ◊ DIMENSIONS (1) OR (2) ARE GIVEN FROM A CORNER OR SURFACE.

CD - FULLY SPRINKLERED

<b>REVISIONS</b> REVISION NUMBER      DATE      BY      DESCRIPTION			
<b>CONSULTANTS:</b>  <b>PDC INC. ENGINEERS</b>		<b>ARCHITECT/ENGINEERS:</b>  <b>LINKSTONE ARCHITECTS</b> In association with  <b>SMITHGROUP</b>	
<b>PROJECT TITLE:</b> CENTRAL PLANT DEMOLITION PLAN		<b>PROJECT LOCATION:</b> New VA Outpatient Clinic and Regional Office Building Anchorage, Alaska	
<b>DATE:</b> 02/28/07		<b>PROJECT NUMBER:</b> 463-500 100 MH491	
<b>CLIENT:</b> Office of Facilities Management			

11/2004 08-2011 OCT 19/08

Central Print  
Demonstration Plan



(E) RACK  
TO REMAIN

EXISTING  
VFD  
LOCATION

DOWN

UP

# MUELLER

## ACCU-THERM FLOW DIAGRAM

PROPERTY GYCOL  
Hx-1A & 1B  
40/60

**CUSTOMER:** Elmendorf VA Clinic - Heating Sys Units  
**LOCATION:**  
**TYPE:** ACCU-THERM 80M H /HV / LB-20

**DATE:** 06/11/2008  
**INQUIRY NUMBER:** 116403-01.04  
**SERIAL NO.:** 389348-01-02

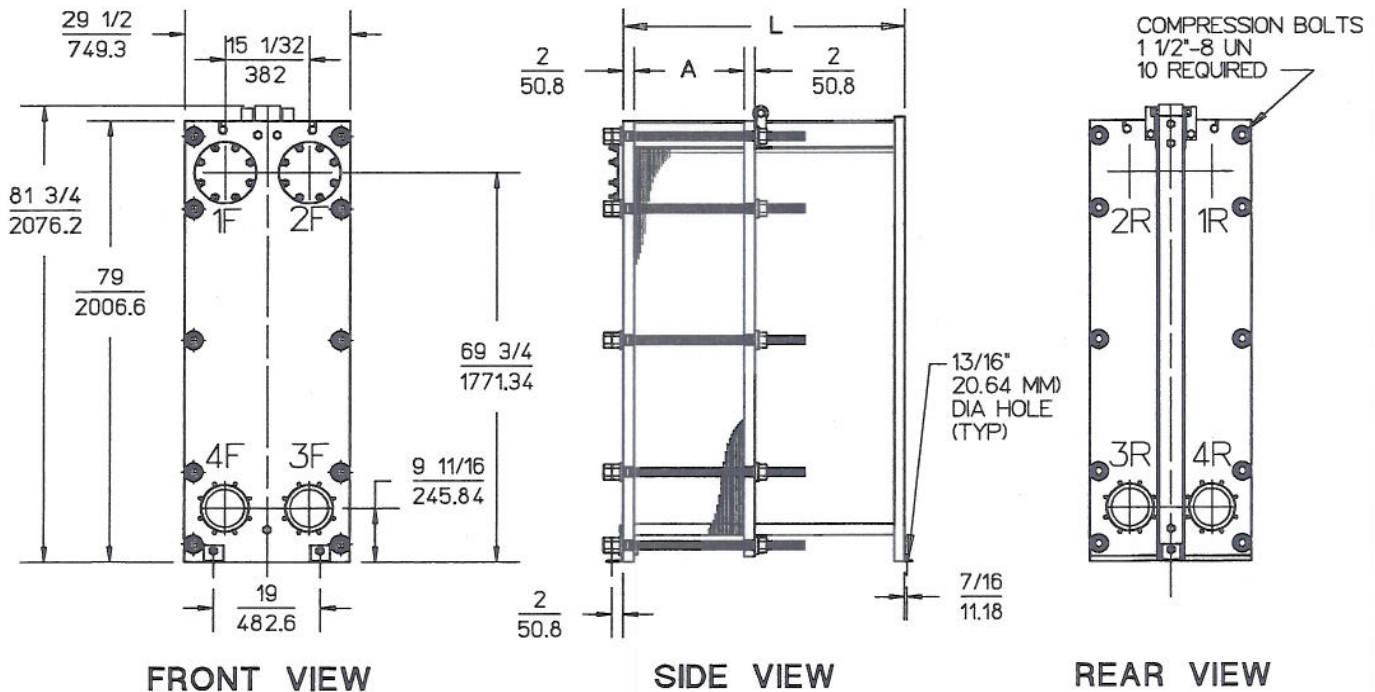
	HOT	COLD	
<b>MEDIUM:</b>	Boiler Water	40% PG	
<b>FLOW:</b>	728.0	779.0	GPM
<b>TEMPERATURE IN:</b>	190.0	158.0	°F
<b>TEMPERATURE OUT:</b>	161.4	186.0	°F
<b>PRESSURE DROP:</b>	4.9	6.55	PSI
<b>FLOW PATH:</b>	1 X 96 + 1 X 97	1 X 96 + 1 X 97	
<b>GUIDE LENGTH / CAPACITY:</b>	102.0 Inch / 431 plates		
<b>BOLT LENGTH / CAPACITY:</b>	84.0 Inch / 427 plates		

<b>DESIGN PRESS:</b>	75 PSI G
<b>TEST PRESS:</b>	98 PSI G
<b>DESIGN TEMP:</b>	200°F
<b>MDMT:</b>	32°F
<b>VOLUME:</b>	282.49 Gallons
<b>PLATE MATERIAL:</b>	0.5 MM 304 S/S
<b>GASKET MATERIAL:</b>	NBR

CONNECTIONS	TYPE	MATERIAL	SIZE	POSITION
HOT IN	STUDDED	316L S/S	6.00	4F
HOT OUT	STUDDED	316L S/S	6.00	4R
COLD IN	STUDDED	316L S/S	6.00	3R
COLD OUT	STUDDED	316L S/S	6.00	3F
VENT	STUDDED	316L S/S	6.00	1F W/ BLIND FLANGE
VENT	STUDDED	316L S/S	6.00	2F W/ BLIND FLANGE

<b>PACK LENGTH MAX (A):</b>	58.59 Inch
<b>PACK LENGTH MIN:</b>	54.84 Inch
<b>OVERALL LENGTH (L):</b>	105.89 Inch
<b>EMPTY WEIGHT:</b>	7,356 LB
<b>OPERATING WEIGHT:</b>	9,687 LB
<b>SHROUD MATERIAL:</b>	ALUMINUM

FRAME IS DESIGNED PER ASME SECTION VIII, DIV. 1



### MATERIAL SPECIFICATIONS

END FRAMES	SA-516 GR 70
PLATE HANGER	304 S/S
COMPRESSION BOLTS	(ZINC PLATED) SA-193-B7
COMPRESSION NUTS	(ZINC PLATED) SA-194-2H
PAINT	POLYURETHANE
CLAD SLEEVE .1875 316L SA240	
FLANGE FACING 16 GA 316L SA240	
FLANGE CLAD .25 316L SA240	

3F

4F

2F

1F

FIXED END FRAME STYLE / OPENINGS

1-					80M H-RF / 1 2 3 4
2-					-80M H-L / 1 2 3 4
3					80M H-R / 1 2 3 4
4					-80M H-L / 1 2 3 4
5					80M H-R / 1 2 3 4
6-					-80M H-L / 1 2 3 4
7-					80M H-R / 1 2 3 4
8-					-80M H-L / 1 2 3 4
9-					80M H-R / 1 2 3 4
10-					-80M H-L / 1 2 3 4
11-					80M H-R / 1 2 3 4
12-					-80M H-L / 1 2 3 4
13-					80M H-R / 1 2 3 4
14-					-80M H-L / 1 2 3 4
15-					80M H-R / 1 2 3 4
16-					-80M H-L / 1 2 3 4
17-					80M H-R / 1 2 3 4
18-					-80M H-L / 1 2 3 4
19-					80M H-R / 1 2 3 4
20-					-80M H-L / 1 2 3 4
21-					80M H-R / 1 2 3 4
22-					-80M H-L / 1 2 3 4
23-					80M H-R / 1 2 3 4
24-					-80M H-L / 1 2 3 4
25-					80M H-R / 1 2 3 4
26-					-80M H-L / 1 2 3 4
27-					80M H-R / 1 2 3 4
28-					-80M H-L / 1 2 3 4
29-					80M H-R / 1 2 3 4
30-					-80M H-L / 1 2 3 4
31-					80M H-R / 1 2 3 4
32-					-80M H-L / 1 2 3 4
33-					80M H-R / 1 2 3 4
34-					-80M H-L / 1 2 3 4
35-					80M H-R / 1 2 3 4
36-					-80M H-L / 1 2 3 4
37-					80M H-R / 1 2 3 4
38-					-80M H-L / 1 2 3 4
39-					80M H-R / 1 2 3 4
40-					-80M H-L / 1 2 3 4
41-					80M H-R / 1 2 3 4
42-					-80M H-L / 1 2 3 4
43-					80M H-R / 1 2 3 4
44-					-80M H-L / 1 2 3 4
45-					80M H-R / 1 2 3 4
46-					-80M H-L / 1 2 3 4
47-					80M H-R / 1 2 3 4
48					-80M H-L / 1 2 3 4
4					80M H-R / 1 2 3 4
5					-80M H-L / 1 2 3 4
5.					80M H-R / 1 2 3 4
52-					-80M H-L / 1 2 3 4
53-					80M H-R / 1 2 3 4
54-					-80M H-L / 1 2 3 4
55-					80M H-R / 1 2 3 4
56-					-80M H-L / 1 2 3 4
57-					80M H-R / 1 2 3 4
58-					-80M H-L / 1 2 3 4
59-					80M H-R / 1 2 3 4
60-					-80M H-L / 1 2 3 4
61-					80M H-R / 1 2 3 4
62-					-80M H-L / 1 2 3 4
63-					80M H-R / 1 2 3 4
64-					-80M H-L / 1 2 3 4
65-					80M H-R / 1 2 3 4
66-					-80M H-L / 1 2 3 4
67-					80M H-R / 1 2 3 4
68-					-80M H-L / 1 2 3 4
69-					80M H-R / 1 2 3 4
70-					-80M H-L / 1 2 3 4
71-					80M H-R / 1 2 3 4
72-					-80M H-L / 1 2 3 4
73-					80M H-R / 1 2 3 4
74-					-80M H-L / 1 2 3 4
75-					80M H-R / 1 2 3 4
76-					-80M H-L / 1 2 3 4
77-					80M H-R / 1 2 3 4
78-					-80M H-L / 1 2 3 4
79-					80M H-R / 1 2 3 4
80-					-80M H-L / 1 2 3 4
81-					80M H-R / 1 2 3 4
82-					-80M H-L / 1 2 3 4
83-					80M H-R / 1 2 3 4
84-					-80M H-L / 1 2 3 4
85-					80M H-R / 1 2 3 4
86-					-80M H-L / 1 2 3 4
87-					80M H-R / 1 2 3 4
88-					-80M H-L / 1 2 3 4
89-					80M H-R / 1 2 3 4
90-					-80M H-L / 1 2 3 4
91-					80M H-R / 1 2 3 4
92-					-80M H-L / 1 2 3 4
93-					80M H-R / 1 2 3 4
9/					-80M H-L / 1 2 3 4
ε					80M H-R / 1 2 3 4
ε					-80M H-L / 1 2 3 4
97					80M H-R / 1 2 3 4
98-					-80M H-L / 1 2 3 4
99-					80M H-R / 1 2 3 4
100-					-80M H-L / 1 2 3 4









# MUELLER

## ACCU-THERM PLATE USAGE SUMMARY

CUSTOMER: Elmendorf VA Clinic - Heating Sys Units

DATE: 06/11/2008

LOCATION:

INQUIRY NUMBER: 116403-01.04

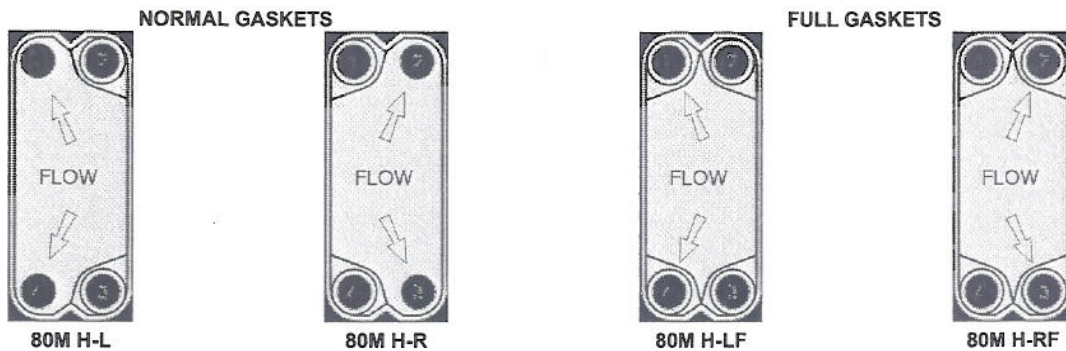
TYPE: ACCU-THERM 80M H /HV / LB-20

SERIAL NO.: 389348-01:02

NUMBER HX-PLATES	PLATE MATERIAL	GASKET MATERIAL	STYLE / OPENINGS	PLATE NUMBER
1	304 S/S	FULL NBR	80M H-RF / 1 2 3 4	1
193	304 S/S	NBR	80M H-L / 1 2 3 4	
114	304 S/S	NBR	80M H-R / 1 2 3 4	
1	304 S/S	NBR	80M H-R / 1 2	
77	304 S/S	NBR	80M V-R / 1 2 3 4	
1	304 S/S	NBR	80M V-R / 3 4	387

**NOTE:** ALL PLATES NUMBERED FROM 1 TO 232 ARE "H" TYPE PLATES.  
ALL PLATES NUMBERED FROM 233 TO 387 ARE "HV" TYPE PLATES.  
(2) DRAINS NEEDED ON THIS UNIT.

### PICTORIAL VIEW AND TERMINOLOGY FOR PLATES AND GASKETS



LEFT HAND R = RIGHT HAND  
PLATES AS VIEWED FROM FIXED END  
GASKETED SIDE OF PLATE FACES FIXED END

### BILL OF MATERIAL

PART NUMBER	DESCRIPTION	QUANTITY
9816400	AT80 C/S MUELLER ACCU-THERM	2
100Y389348	PLATE PACK AT80M H /HV 304/NBR	2
9818486	PLATE ASSY .5MM 80M H 304/NBR	308.
9818487	PLATE ASSY .5MM 80M V 304/NBR	77.
9830777	PLATE .5MM 80M H 316 UNP	1.
9830778	PLATE .5MM 80M V 316 UNP	1.
9818369	GASKET HX NBR 80M/P END *	1.
9818367	GASKET HX NBR 80M *	1.
9831360	FRAME COMPONENTS AT80 LB-20	2
9831406	80FBB16.0BB26.0BB36.0BB46.0BB	2
9831454	80MBB50-60-76.0BB86.0BB	2
9831455	CLAD LINER 6" 316L AT80L(QTY6)	2
9824457	BLIND FLANGE 6" 150# (QTY2)	2
9824456	STUD PACK 5"-8" 150# QTY2	2
9807236	GUIDE PKG B FRAME 102"	2
9831370	CPRSN BOLT 1.5"X 84"L C/S 80L	2
9814161	SHROUD AT80,AT184 40" TO 90"	2
9824331	LABEL PACKAGE PHE	2
9814256	DATA PLATE A.S.M.E. PHE	2





# Pump 14B Heat Exchanger

Current Outside Air Temperature: 23.6 °F

Wednesday, 2/25/2015 8:44:20AM



Facility Alarm



Override Alarm

Login/Logout

Manuals



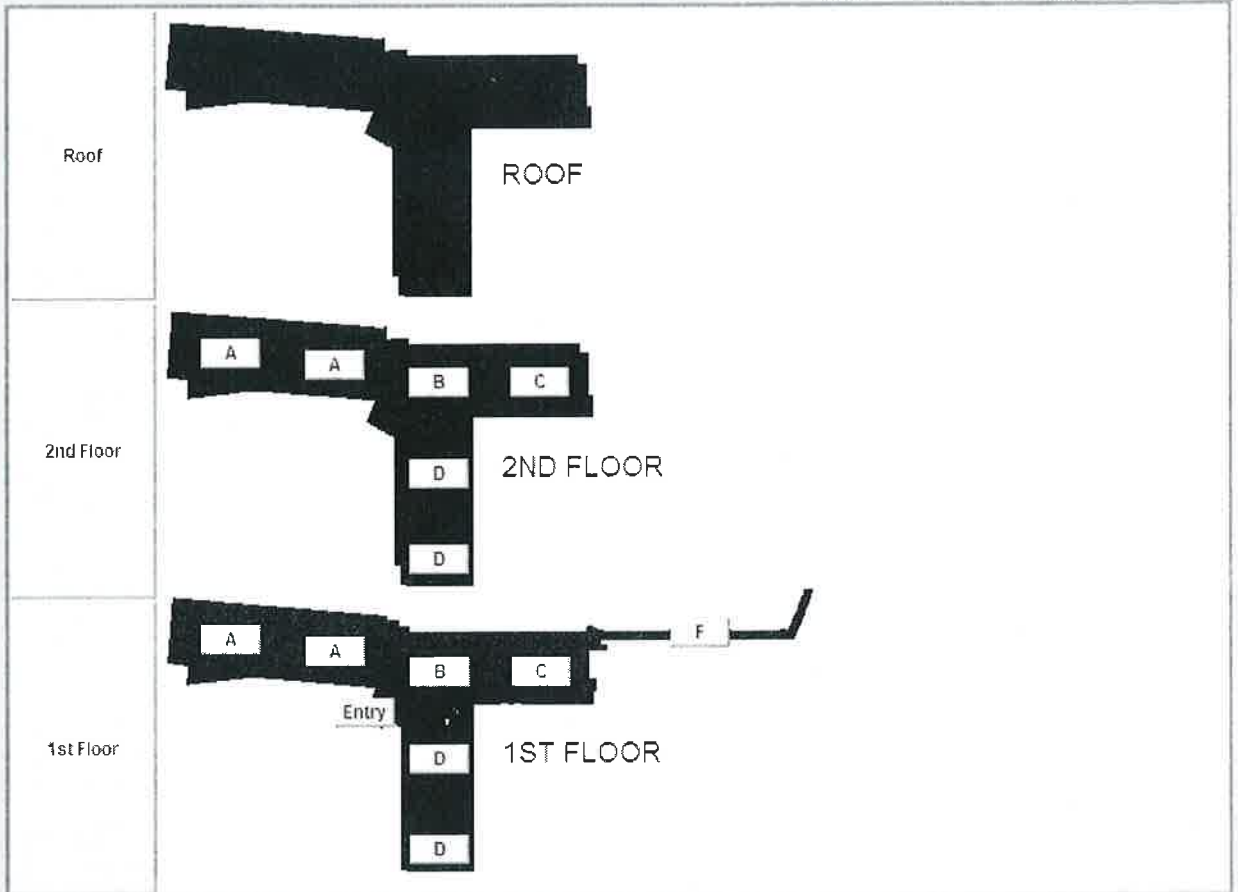
Central Plant

VA Heating

Ventilation

Generator

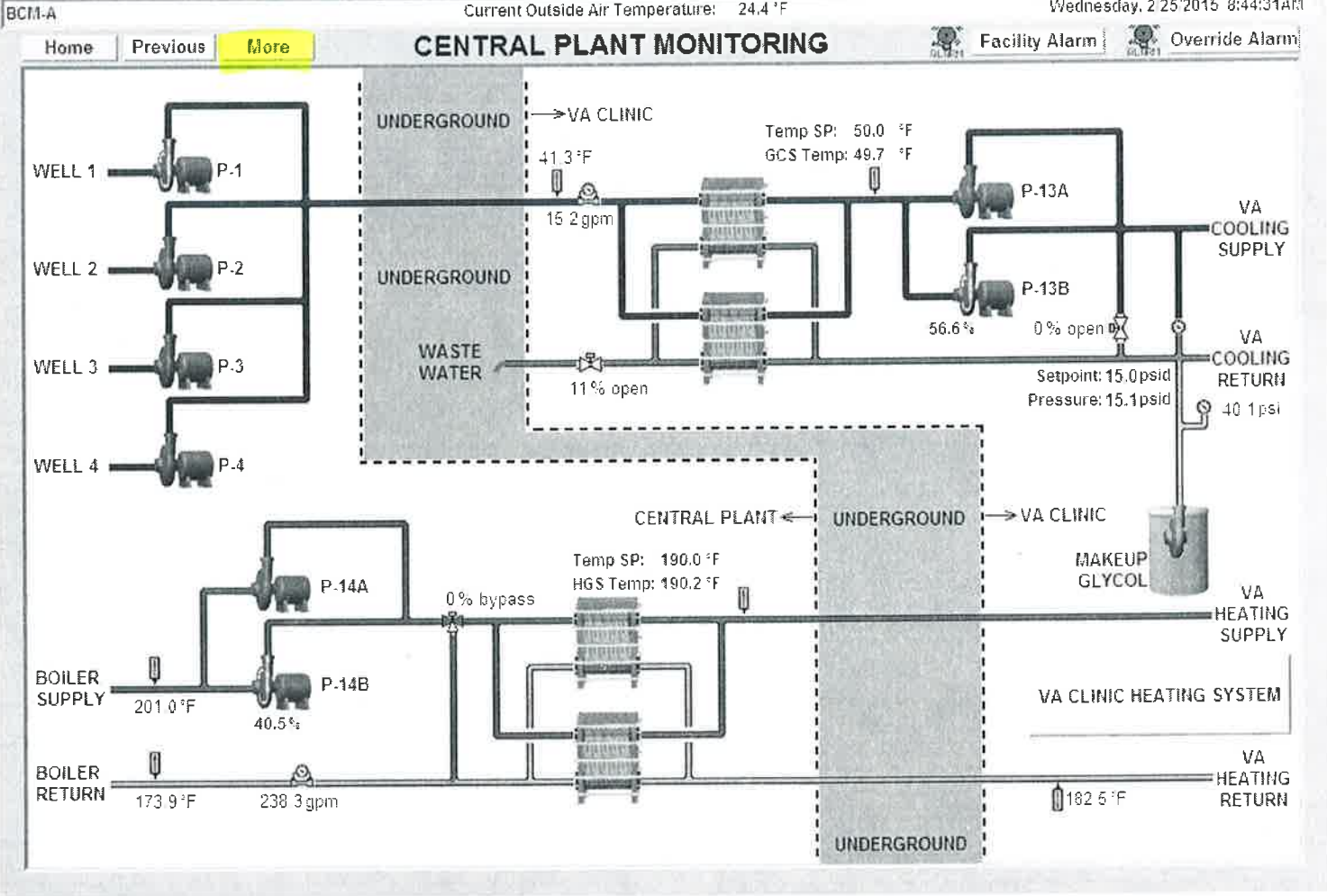
Misc Systems



\* Pump 14A/B :

- Fault Reset

- Head Position Change



BCM-A Current Outside Air Temperature: 24.4 °F Wednesday, 2/25/2015 8:44:43AM

**CENTRAL PLANT PARAMETERS**

P-13A  Run: <input type="checkbox"/>	P-13B  Run: <input type="checkbox"/>	P-14A  Run: <input type="checkbox"/>	P-14B  Run: <input type="checkbox"/>
--------------------------------------------	--------------------------------------------	--------------------------------------------	--------------------------------------------

GCS CONTROL	HGS CONTROL
Diff. Pressure: 15.3 psid	
Pressure SP: 15.0 psid	
GCS Temp: 49.8 °F	HGS Temp: 190.1 °F
Temp SP: 50.0 °F	Temp SP: 190.0 °F

### Cooling Groundwater

Water Valve Cmd 10.7 %

Valve Manual

Minimum Flowrate  gpm

GCS Temp SP  °F

Valve Minimum 0.0 %

### Cooling Glycol

Lead Position P-13B

Manual Command

P-13A Runtime  hrs

P-13B Runtime  hrs

Pressure Setpoint  psid

VFD Min. Speed  %

VFD Speed Cmd 56.1 %

VFD Speed Manual

Bypass Valve Cmd 0.0 %

Bypass Manual

VFD Min. Current  A

### Heating Glycol

Master Allow

Fault Reset

Lead Position P-14B

P-14A Runtime  hrs

P-14B Runtime  hrs

HGS Temp SP 190.0 °F

OSA Temp ----> HGS Temp

°F  °F

°F  °F

VFD Min. Speed  %

VFD Speed Cmd 40.6 %

VFD Speed Manual

Bypass Valve Cmd 0.0 %

Bypass Manual

Bypass Delay  min

### Alarms

**Fault Reset** : Right-click to Reset Pump Fault

**Lead Position** : Right-click to change LEAD PUMP status



**WORK ORDER # MHV150225-001**

- |                                                                     |                                |
|---------------------------------------------------------------------|--------------------------------|
| 1) PRIMARY EMPL:                                                    | 2) REQ DATE: FEB 25,2015@08:13 |
| 3) REQ MODE: COMPUTER                                               | 4) LOCATION: 1Z999-100         |
| 5) BED #:                                                           | 6) STATUS: IN PROGRESS         |
| 7) TASK DESC: PUMP 14B Heat Exchanger: Leaking (JBER Central Plant) |                                |
| 8) CONTACT: Kief, M.                                                | 9) PHONE: 907-257-4900         |
| 10) ENTERED BY: KIEF,MIKE                                           | 11) SHOP: MLDN HVAC            |
| 12) DATE ASSIGNED: 02/25/15                                         | 13) PRIORITY: HIGH             |
| 14) EQUIP ID#:                                                      | 15) LOCAL ID:                  |
| 16) EQUIP CAT:                                                      | 17) CONDITION:                 |
| 18) MFGR:                                                           |                                |
| 19) MODEL:                                                          | 20) SERIAL #:                  |
| 21) OWNER/DEPT: FACILITIES MANAGEMENT                               | 22) PM #:                      |
| 23) PARTS ORDER:                                                    | 24) WORK ACTION:               |
| 25) WORK CTR:                                                       |                                |
| 26) TOTAL HOURS:                                                    | 27) TOTAL MATERIAL COST:       |
| 28) TOTAL LABOR COST:                                               | 29) VENDOR SERVICE COST:       |
| 30) *ASSIGNED TECH*                                                 | 31) DATE COMPLETE:             |
| 32) WORK PERFORMED:                                                 |                                |

Press <RETURN> to continue, '^' to escape...

33) COMMENTS:

**02/25/2015: Discovered a boiler water leak coming from PUMP14B Heat Exchanger. Assessing the severity of leak.\***

ENTER/EDIT (1-33), D(DISPLAY), AC(ACCOUNT), P(PRINT)): EXIT//

**VA CLINIC  
HEAT EXCHANGERS**

**PAUL MUELLER COMPANY (NOT IN-SERVICE in need of Rebuild)**

**MUELLER NB45397**

**DIV. 1 = W**

**Max W.P. = 75 PSI @ 200PSI**

**MDMT = 32 F @ 75 PSI**

**Serial Number = 389348 - 1**

**Year Built = 2008**

**Model Number = AT80 LB-20**

**Part Number = 9816400**

**Pack Length Max = 58.59**

**Pack Length Min = 54.84**

**PAUL MUELLER COMPANY (In-Service, but Leaking)**

**MUELLER NB45397**

**DIV. 1 = W**

**Max W.P. = 75 PSI @ 200PSI**

**MDMT = 32 F @ 75 PSI**

**Serial Number = 389348 - 2**

**Year Built = 2008**

**Model Number = AT80 LB-20**

**Part Number = 9816400**

**Pack Length Max = 58.59**

**Pack Length Min = 54.84**