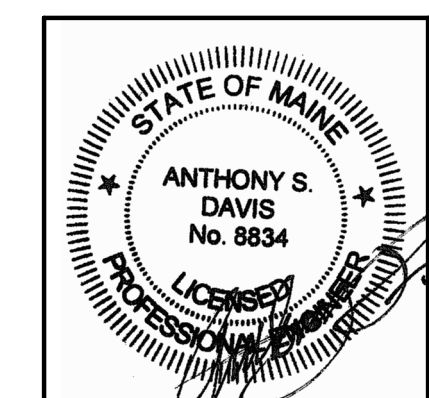

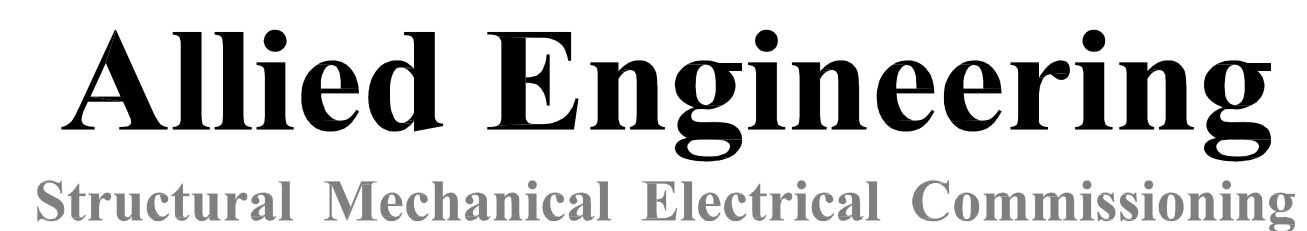
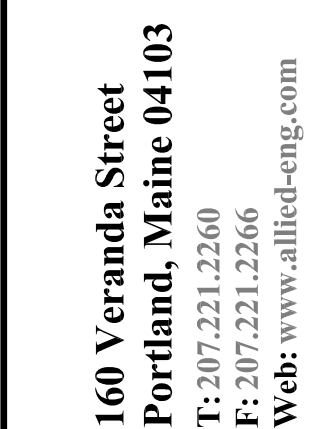


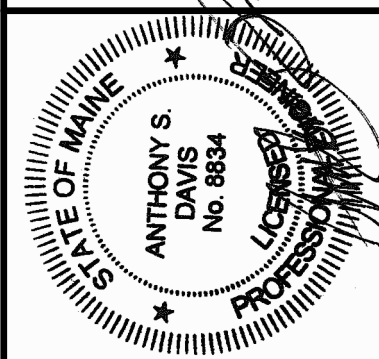
**ALLIED PROJECT No. 21076**[illegible]

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**Allied Engineering**  
Structural Mechanical Electrical Commissioning



R E V I S I O N S			
DATE:			
Drawn By: REW			
Checked By: ASD			
Project Mgr: ASD			
Project No: 21076			
Cad File: 21076M.DWG			
Graphic Scale: 0 1"			
	NUMBER	DATE	BY
	DESCRIPTION		

MECHANICAL PIPING PART PLANS  
~ MECHANICAL ROOM

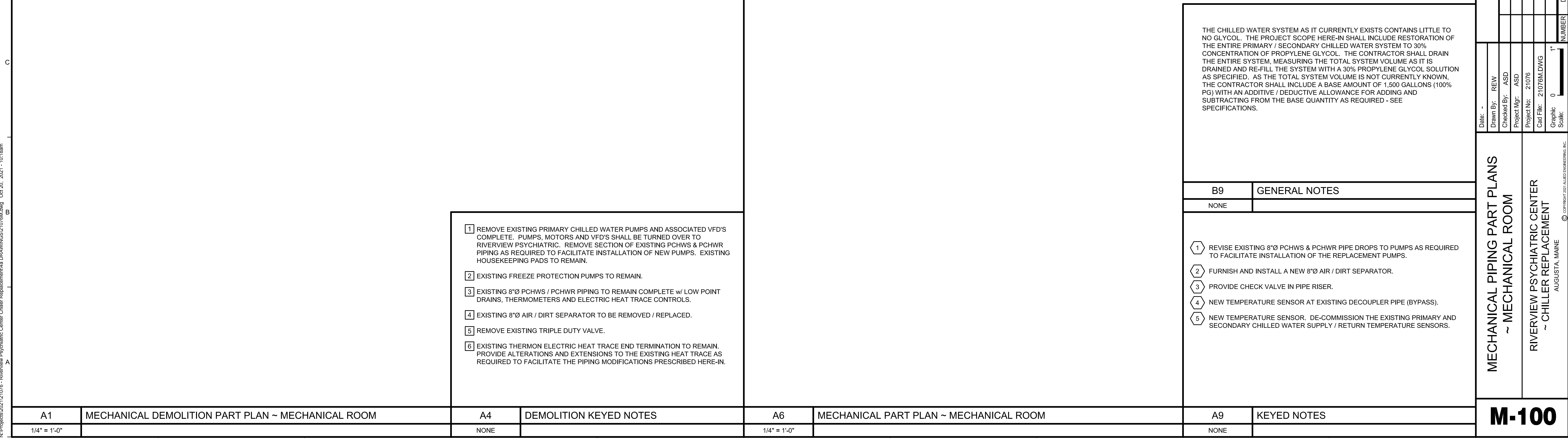
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N:\Projects\2021\21076 - Riverview Psychiatric Center Chiller Replacement\dwg DRAWING\GS21076A.dwg Oct 19, 2021 - 10:28am

A1	MECHANICAL SCHEDULES
NONE	

AIR COOLED CHILLER SCHEDULE																												
TAG	MFR.	MODEL	REFRIG.	REFRIG. CHARGE	DIMENSIONS			UNIT WEIGHT, LBS	NOMINAL TONS	REFRIGERATION CAPACITY (TONS)	AMBIENT TEMP	PERFORMANCE					EVAPORATOR				COMP QTY	ELECTRICAL - SINGLE-PT. POWER CONNECTION					NOTES	
					LENGTH	WIDTH	HEIGHT					KW/TON	IPLV	EER	A-WEIGHTED SOUND PRESSURE	A-WEIGHTED SOUND POWER	GPM	WATER P.D. (FT HD)	EVAPORATOR CONFIGURATION	FLUID		VOLTS-PH	UNIT POWER, KW	UNIT RLA	UNIT MCA	MOP		
CH-1	TRANE	ACSA23002EUA	R-410A	208LBS.	334"	88"	98"	10,701	230	207.9	95F	54F - 44F	1.13	16.5	9.6	70 dBA	94 dBA	517	19.9	2-PASS, 1.25" INSULATION	30% PG	6	460-3	260.93	69XB	468A	500A	1, 2
CH-2	TRANE	ACSA23002EUA	R-410A	208LBS.	334"	88"	98"	10,701	230	207.9	95F	54F - 44F	1.13	16.5	9.6	70 dBA	94 dBA	517	19.9	2-PASS, 1.25" INSULATION	30% PG	6	460-3	260.93	69XB	468A	500A	1, 2
NOTES: 1. PROVIDE UNIT MOUNTED STARTER AND DISCONNECT SWITCH; SINGLE POINT POWER CONNECTION. 2. PROVIDE PREMIUM SOUND ENHANCEMENT PACKAGE AND AUTOMATIC SOUND REDUCTION REQUEST CONTROLS.																												

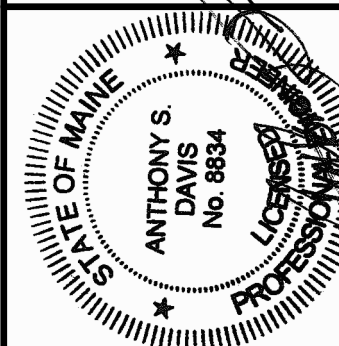
HYDRONIC PUMP SCHEDULE																			
TAG	SYSTEM	MFR.	MODEL	SUCT X DISCH	TYPE	PUMPED FLUID	PERFORMANCE				ELECTRICAL				ELECTRICAL COORDINATION				NOTES
							GPM	HEAD	RPM	NPSH	BHP	NOL HP	MOTOR HP	VOLTS/PH (60 Hz.)	STARTER TYPE	STARTER FURN. BY	BOTH PUMPS RUN?	DISC. SWITCH FURN BY	
P-5R	CHW	TACO	SF16011	8 X 6	INTEGRAL VARIABLE SPEED-REMOTE MT	WATER	1034	90	1,760	15	39.1	50	50	460/3	INTEGRAL	----	NO, LEAD-LAG	DIV 26	1
P-6R	CHW	TACO	SF16011	8 X 6	INTEGRAL VARIABLE SPEED-REMOTE MT	WATER	1034	90	1,760	15	39.1	50	50	460/3	INTEGRAL	----	NO, LEAD-LAG	DIV 26	1
NOTES: 1., Pump shall include remote mounted VFD, controlled via signal from BAS.																			

M-600

MECHANICAL SCHEDULES  
  
RIVERVIEW PSYCHIATRIC CENTER  
~ CHILLER REPLACEMENT  
AUGUSTA, MAINE

Date: -  
Drawn By: REW  
Checked By: ASD  
Project Mgr: ASD  
Project No: 21076  
Cad File: 21076A.DWG  
Graphic Scale: 0 1"

REVISIONS			
NUMBER	DATE	BY	DESCRIPTION



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ELECTRICAL SCHEDULE OF MECHANICAL EQUIPMENT																		
TAG	DESCRIPTION	LOC.	VOLTS	PH	LOAD	FLA	MCA	MOPD	DISCONNECT SWITCH					STARTER (NEMA)		CBD	LOAD SOURCE	NOTES
									FRAME	POLES	FUSE	NEMA ENCL	FBD	SIZE/ VFD	FBD			
P-5R	HYDRONIC PUMP - CHW	MECH	480	3	50 HP	65		100	100	3		1	26	VFD	23	23	(E) EEH-01A	1
P-6R	HYDRONIC PUMP - CHW	MECH	480	3	50 HP	65		100	100	3		1	26	VFD	23	23	(E) EEH-01A	1
CH-1	AIR COOLED CHILLER	OUTSIDE	480	3	230 TONS		468	500	600	3	NF	3R	26	VFD	23	23	(E) ATS-CH1A	11,12,8
CH-2	AIR COOLED CHILLER	OUTSIDE	480	3	230 TONS		468	500	600	3	NF	3R	23	VFD	23	23	(E) ATS-CH1B	11,12,8
	NOTES:													ABBREVIATIONS:				
1	LEAD/LAG													FWE	FURNISHED WITH EQUIPMENT			
2	DUCT SMOKE DETECTORS (PROVIDED IN BOTH SUPPLY AND RETURN) FURNISHED BY DIV. 26, INSTALLED BY DIV. 23, WIRED TO FIRE ALARM (INCLUDING REMOTE TEST STATION) BY DIV. 26.													NF	NOT FUSED			
3	POWER TO CU BY DIVISION 26, POWER AND CONTROL WIRING BETWEEN AC AND CU PROVIDED BY DIVISION 26.													SWBD	SWITCHBOARD			
4	PROVIDE A DATA BACKBOX AND CONDUIT AT THIS LOCATION													FBD	FURNISHED BY DIVISION			
5	UNIT CONSISTS OF TWO REDUNDANT MOTORS FACTORY WIRED TO DEDICATED REDUNDANT VFDS; PROVIDE SEPARATE POWER FEEDER CONNECTION TO EACH INDIVIDUAL VFD.													CBD	CONTROL WIRING BY DIVISION			
6	CORD AND PLUG FURNISHED WITH EQUIPMENT, PROVIDE NEMA 5-20 RECEPTACLE. COORDINATE EXACT LOCATION FOR RECEPTACLE IN FIELD.													INT	INTEGRAL WITH UNIT			
7	SEE ELEVATOR SUMP PUMP CONTROL DETAIL.													HWC	HARD WIRED DIRECT CONNECTION			
8	PROVIDE 120V, 20A DEDICATED CIRCUIT FOR CONVENIENCE RECEPTACLE AT EACH CHILLER CONTROL PANEL PROVIDED BY MANUFACTURER.													MRT	MOTOR RATED TOGGLE SWITCH (VOLTAGE, CURRENT RATING AND POLE QUANTITY AS REQUIRED)			
9	PROVIDE A DEDICATED 15AMP, 120 VOLT CIRCUIT TO JUNCTION BOX AT UNIT IDENTIFIED FOR AUXILIARY LOADS (EG. LTG., RECEPTACLES, CONTROLS, ETC.)																	
10	POWER TO UNIT BY DIVISION 26, LINE VOLTAGE CONTROL WIRING, LOW VOLTAGE CONTROL WIRING AND TRANSFORMER PROVIDED BY DIVISION 23.																	
11	PROVIDE POWER TO NEW HEAT TRACE CABLE FOR EXTERIOR CHILLED WATER PIPING AS SHOWN ON MECHANICAL PLANS (LENGTHS AND LOCATIONS)																	
12	PROVIDE 120V, 20A DEDICATED CIRCUIT FOR EACH CHILLER CONTROL PANEL - REUSE EXISTING CIRCUIT SERVES EXISTING REMOVAL CONTROL PANEL.																	

1. BRANCH CIRCUIT WIRING NOT SHOWN, WIRE AND CONNECT ELECTRICAL ITEMS TO CIRCUITS INDICATED.
2. DISCONNECT, REMOVE, RELOCATE, AND RECONNECT ELECTRICAL CONDUIT, WIRING, DEVICES, BOXES, FIXTURES, EQUIPMENT, ETC. AS INDICATED AND AS REQUIRED TO FACILITATE THE WORK OF DIVISION 26 AND OTHER DIVISIONS. THESE DRAWINGS ARE NOT INTENDED TO INDICATE ALL ITEMS TO BE REMOVED.
3. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS FOR EXACT DIMENSIONS.
4. THE LOCATION OF EQUIPMENT, OUTLETS, ETC. AS GIVEN ON THE DRAWINGS IS APPROXIMATE. IT SHALL BE UNDERSTOOD THAT THESE LOCATIONS ARE SUBJECT TO MODIFICATION AS MAY BE FOUND NECESSARY OR DESIRABLE AT THE TIME OF INSTALLATION IN ORDER TO MEET PROJECT REQUIREMENTS. SUCH CHANGES SHALL BE MADE WITHOUT EXTRA CHARGE.
5. COORDINATE ALL WORK WITH OTHER DIVISIONS AND THE OWNER.
6. VERIFY EXACT POWER REQUIREMENTS OF EQUIPMENT PRIOR TO ROUGH IN
7. POWER WIRING FOR EQUIPMENT & CONTROL SHALL BE PERFORMED BY DIVISION 26. ALL CONTROL WIRING OPERATING AT LESS THAN 120 VOLTS FOR MECHANICAL EQUIPMENT SHALL BE BY DIVISION 23.
8. NO WIRING THAT BECOMES UNUSED AS PART OF THIS PROJECT SHALL BE ABANDONED IN PLACE.























F9	GENERAL NOTES

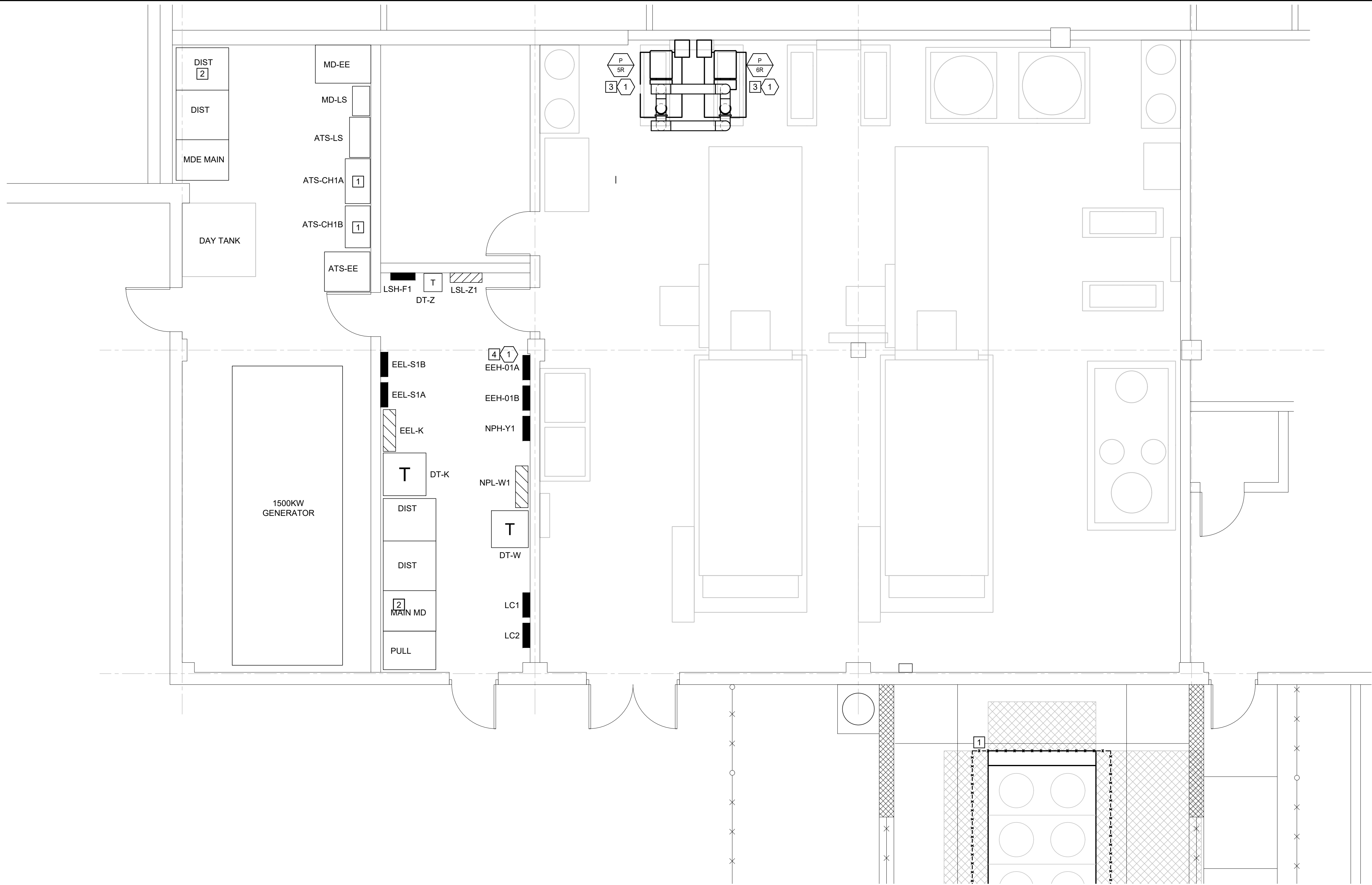
- 1 DISCONNECT AND REMOVE EXISTING POWER FEEDER FROM (E)CH-1A AND (E)CH-1B BACK TO RESPECTIVE ASU UNIT.
- 2 REPLACE (2) EXISTING (600A) RATED CIRCUIT BREAKER PLUG (SERVING CH-1A AND CH-1B) WITH (2) 600A RATED PLUG IN THE NORMAL SWITCHBOARD MD. (DIST. SECTION) AND IN THE EMERGENCY SWITCHBOARD MDE (DIST. SECTION).
- 3 DISCONNECT AND REMOVE EXISTING POWER FEEDER FROM (E)P5-R AND (E)P6-R BACK TO RESPECTIVE PANEL SOURCE (PANEL EEH-OIA)
- 4 REPLACE (2) EXISTING 600-3P CIRCUIT BREAKERS (MOLDED CASE TYPE SERVING EXISTING PUMPS P5-R AND P6-R WITH (2) NEW 100A-3P CIRCUIT BREAKERS

D9	DEMOLITION KEYED NOTES

- 1 PROVIDE NEW 100A FEEDER FROM NEW 100A-3P CIRCUIT BREAKER IN EXISTING PANEL EEH-OIA TO POWER TERMINATION POINT IN VFD AT PUMP. PROVIDE FLEXIBLE FEEDER BETWEEN VFD AND PUMP MOTOR TERMINAL. FEEDER SIZE SHALL BE 4# 1 AND 1 #8 GRD IN A 1-1/2" CONDUIT.

F7	KEYED NOTES

- |  |  |
|--|--|
|     | PANELBOARD ~ FLUSH MOUNTED   |
|     | FUSED DISCONNECT SWITCH  |
|     | NON-FUSED DISCONNECT SWITCH  |
| 00  | MOTOR STARTER ~ NUMBER INDICATES NEMA SIZE   |
| 00  | COMBINATION MOTOR STARTER/FUSED DISCONNECT   |
|     | MOTOR OR FAN   |
|     | METER AND CABINET  |
|     | JUNCTION BOX ~ CEILING MOUNTED   |
|     | JUNCTION BOX ~ WALL MOUNTED  |
|     | TRANSFORMER ~ NUMBER INDICATES DESIGNATION SEE TRANSFORMER SCHEDULE                    |
|     | VARIABLE FREQUENCY DRIVE   |
|     | TRANSIENT VOLTAGE SURGE SUPPRESSOR   |
|     | EMERGENCY SHUTOFF SWITCH ~ WALL MOUNTED 48" TO CENTERLINE ~ PROVIDE TAMPER-PROOF COVER |
|     | CONDUIT TURNING UP   |
|     | CONDUIT TURNING DOWN   |
|     | WIRING UNDERGROUND OR UNDERSLAB  |
|     | HOMERUN ~ (2)#12+(1)#12G UNO (EXCEPT LIGHTING CIRCUITS: (1)#12+(1)#10N+(1)#12G UNO)    |
|     | SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT                    |
|     | 3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT                         |
|     | FLEXIBLE CONNECTION  |
|     | GROUNDING SYSTEM   |
|     | RECEPTACLE PROVIDED BY MANUFACTURER  |



A1	BOILER ROOM ELECTRICAL PART PLAN
1/4"=1'-0"	

A9	ELECTRICAL LEGEND
NO SCALE	

REVISIONS

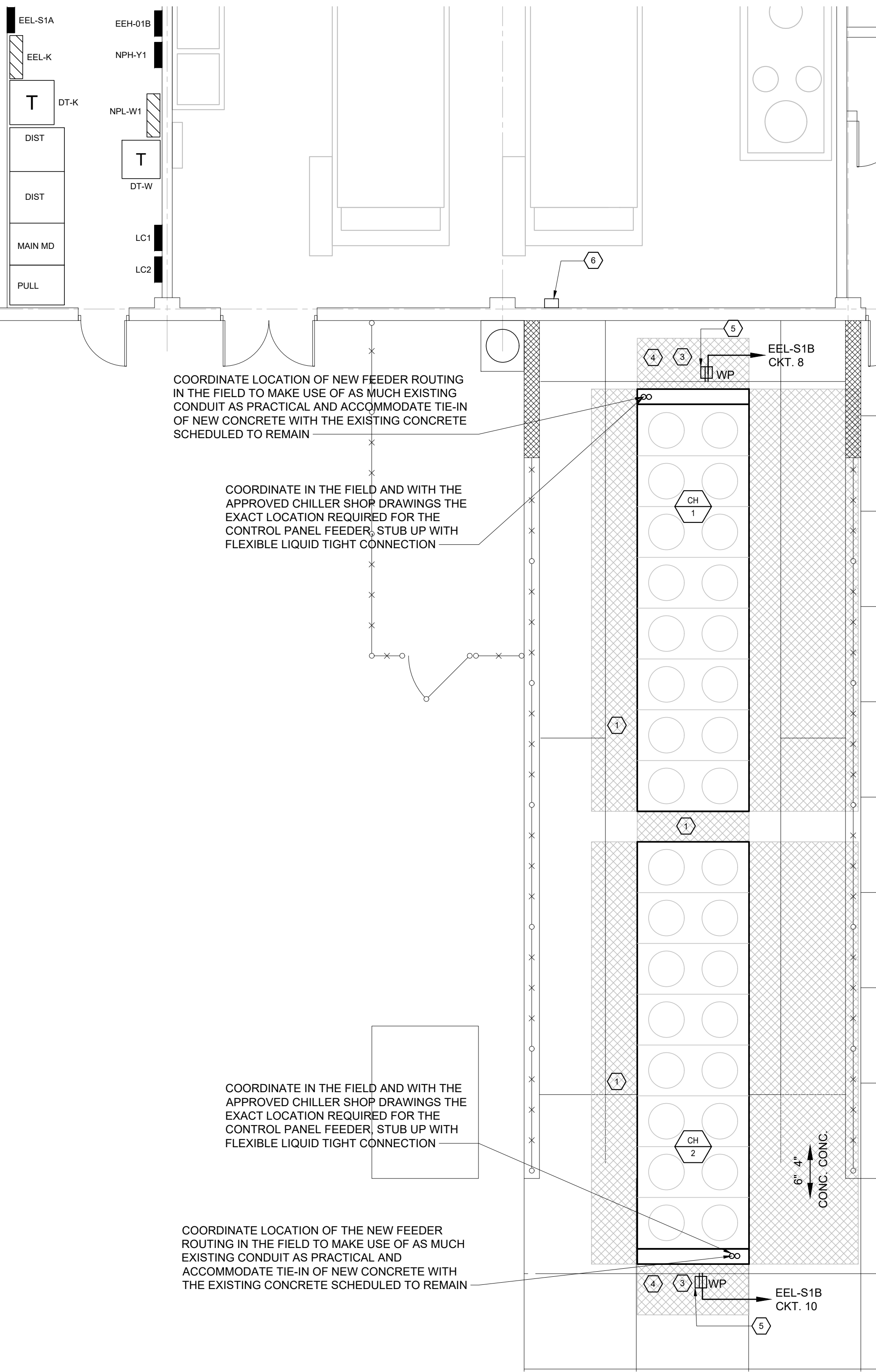
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	Drawn By: PMC		Checked By: BTG
	Project Mgr.: ASD		Project No.: 21076
	Riverview Psychiatric Center ~ Chiller Replacement		Cad File: 21076E.DWG
	Augusta, Maine		Graphic Scale: 1" = 0'

# E-100

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- 1 REUSE EXISTING DEDICATED HEAT TRACE POWER CIRCUIT TO EXISTING END TERMINATION BOX. HEAT TRACE WIRING SHALL BE EXTENDED AND INSTALLED TO PIPING UNDER DIVISION 23, TO THE NEW EXTERIOR CHILLED WATER PIPING (MAXIMUM 100 LINEAR FEET OF HEAT TRACE TAPE PER CIRCUIT). REUSE THE EXISTING 20A, 120 VOLT, GFPE CIRCUIT BREAKER IN EXISTING PANEL EEL-S1A OR EEL-S1B TO SERVE EACH MODIFIED HEAT TRACE POWER CIRCUIT. PROVIDE NEW POWER CIRCUITS FOR HEAT TRACE, AS REQUIRED, IF NEW PIPING LENGTHS EXCEED THE EXISTING PIPE LENGTHS. REFER TO THE MECHANICAL PLAN FOR ADDITIONAL INFORMATION ON THE REMOVED AND THE NEW PIPE LENGTHS AND ROUTES THAT REQUIRE HEAT TRACE PROTECTION. EXISTING POWER SOURCE PANEL FOR HEAT TRACE END TERMINATION BOX IS EEL-S1A. IF NEW BREAKERS FOR NEW CIRCUITS ARE NEEDED, THEN INSTALL THEM INTO PANEL EEL-S1B.
- 2 PROVIDE NEW FEEDER FROM POWER TERMINATION POINT ON NEW THE CHILLER CONTROL PANEL TO THE EXISTING ATS-CH1A; UTILIZE THE EXISTING (2) 3" CONDUITS WHERE PRACTICAL AND EXTEND THEM TO THE NEW CHILLER CONTROL PANEL LOCATION. RUN A NEW FEEDER BETWEEN THE EXISTING ATS-CH1A AND THE NEW CHILLER CONTROL PANEL. FEEDER SIZE SHALL BE (2) SETS OF 4# 250 KCMIL AND 1#2 GND.
- 3 PROVIDE NEW FEEDER FROM POWER TERMINATION POINT ON THE NEW CHILLER CONTROL PANEL TO THE EXISTING ATS-CH1B; UTILIZE THE EXISTING (2) 3" CONDUITS WHERE PRACTICAL AND EXTEND THEM TO THE NEW CHILLER CONTROL PANEL LOCATION. RUN A NEW FEEDER BETWEEN THE EXISTING ATS-CH1B AND THE NEW CHILLER CONTROL PANEL. FEEDER SIZE SHALL BE (2) SETS OF 4# 250 KCMIL AND 1#2 GND.
- 4 REUSE EXISTING CHILLER CONTROL PANEL CIRCUIT THAT SERVED THE REMOVED CHILLER CONTROL PANEL AND EXTEND THE RESPECTIVE BRANCH CIRCUIT WIRING TO THE NEW CHILLER CONTROL PANEL.. EXISTING POWER SOURCE PANEL IS EEL-S1A.
- 5 PROVIDE BRANCH CIRCUIT TO UNIT MOUNTED CONVENIENCE RECEPTACLE PROVIDED BY MANUFACTURER. UTILIZE EXISTING SPARE BREAKER(S) IN PANEL EEL-S1B AS IDENTIFIED ON PLAN.
- 6 APPROXIMATE LOCATION FOR EXISTING ELECTRICAL HEAT TRACING END TERMINATION BOX.

F4	KEYED NOTES
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A4	MECHANICAL PART PLAN ~ BUILDING EXTERIOR - NEW
----	--

$$3/16'' = 1'-0''$$

**E-101**

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