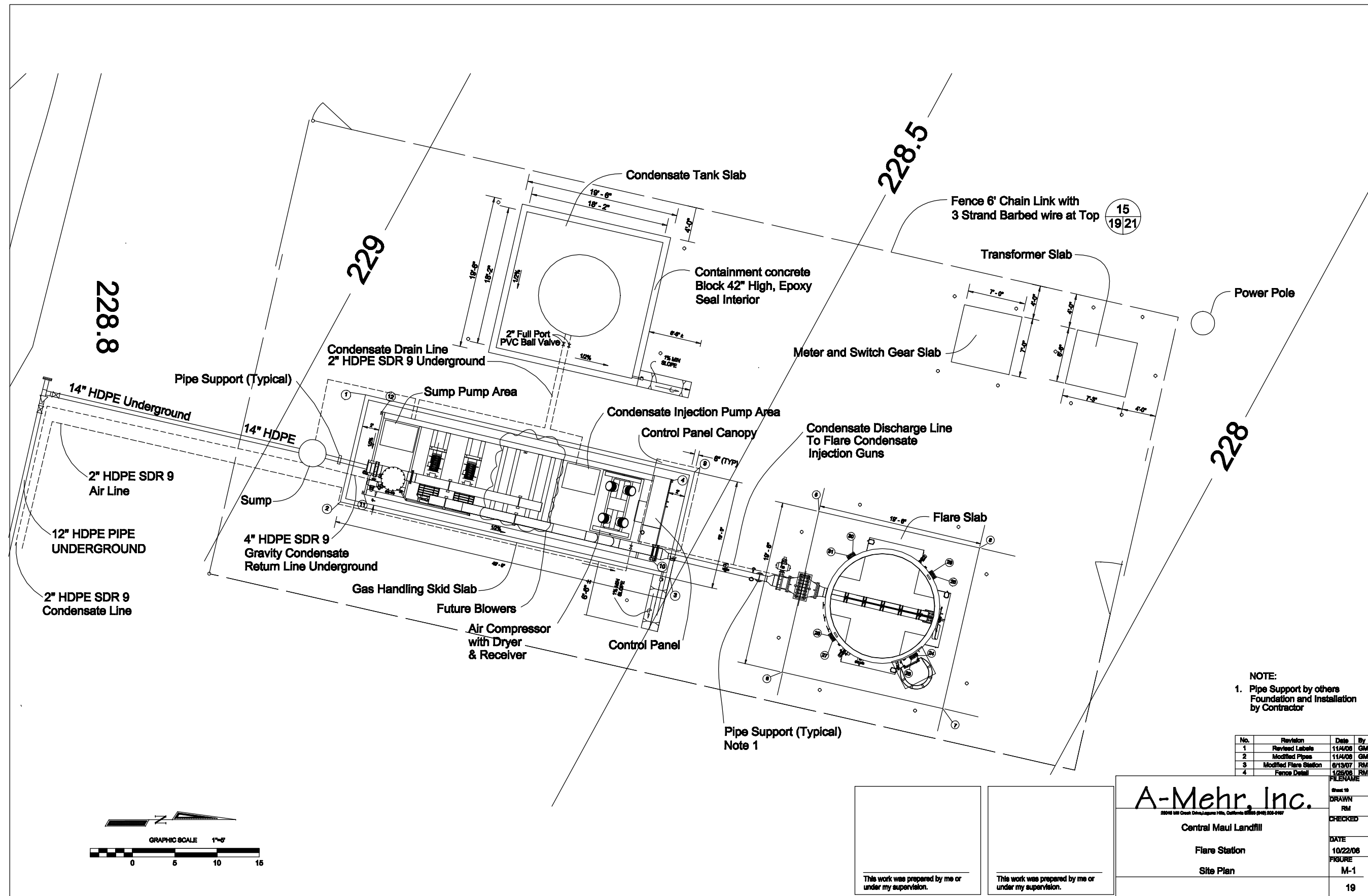
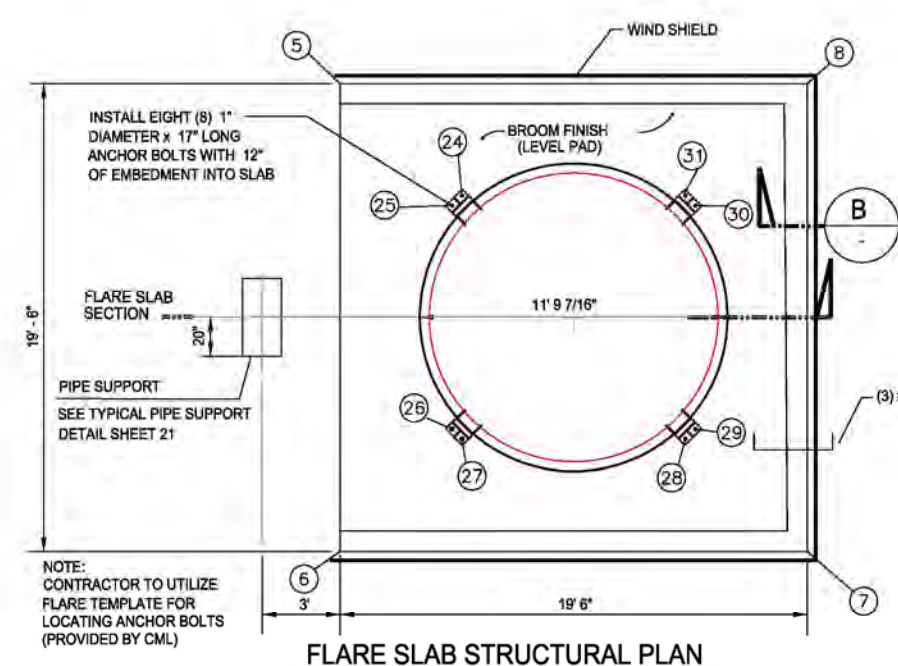
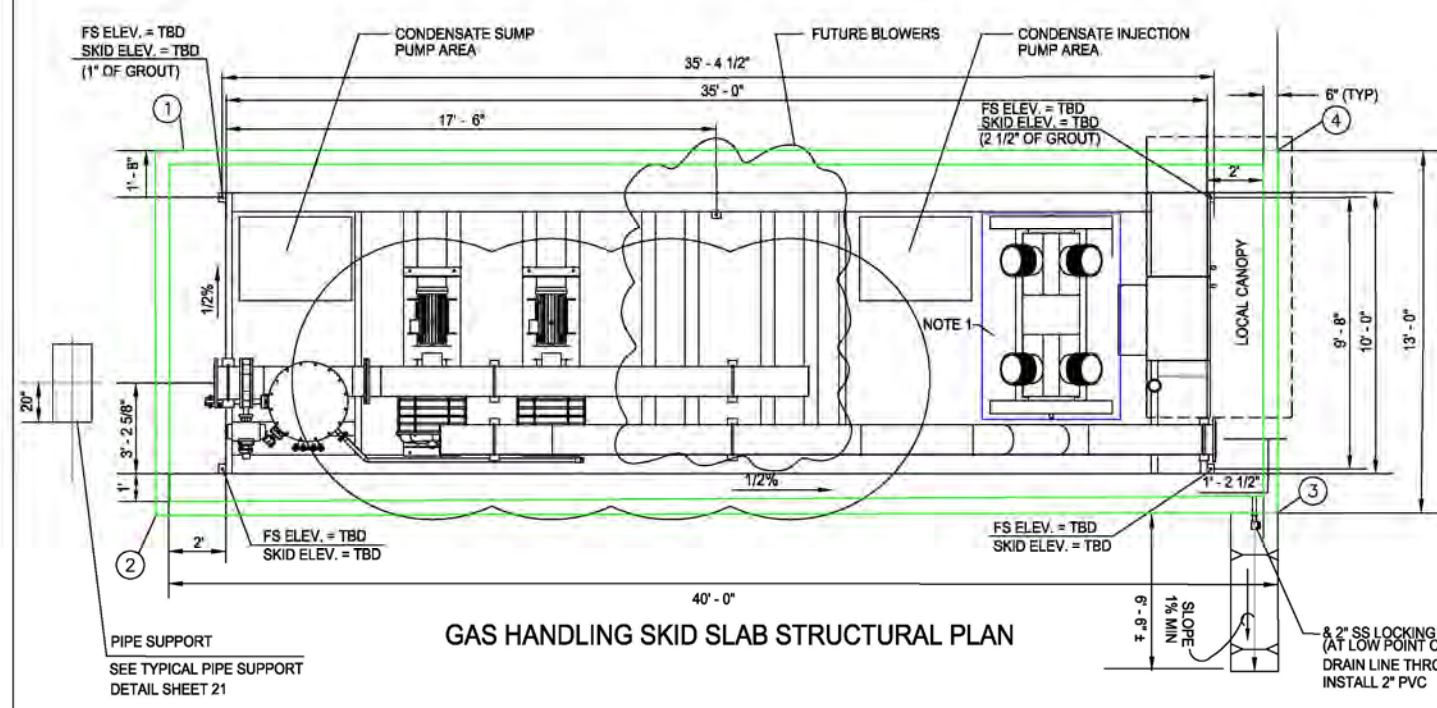
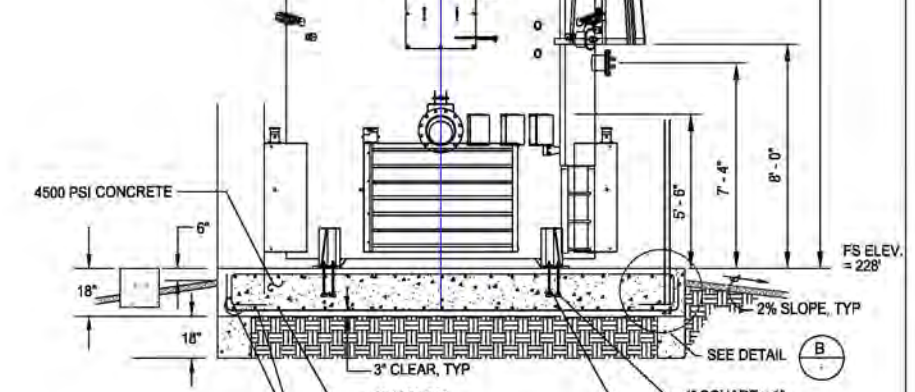
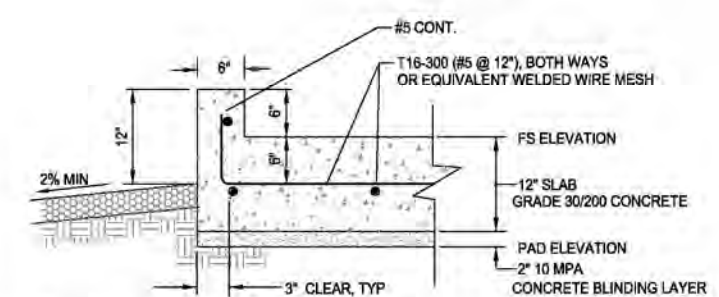
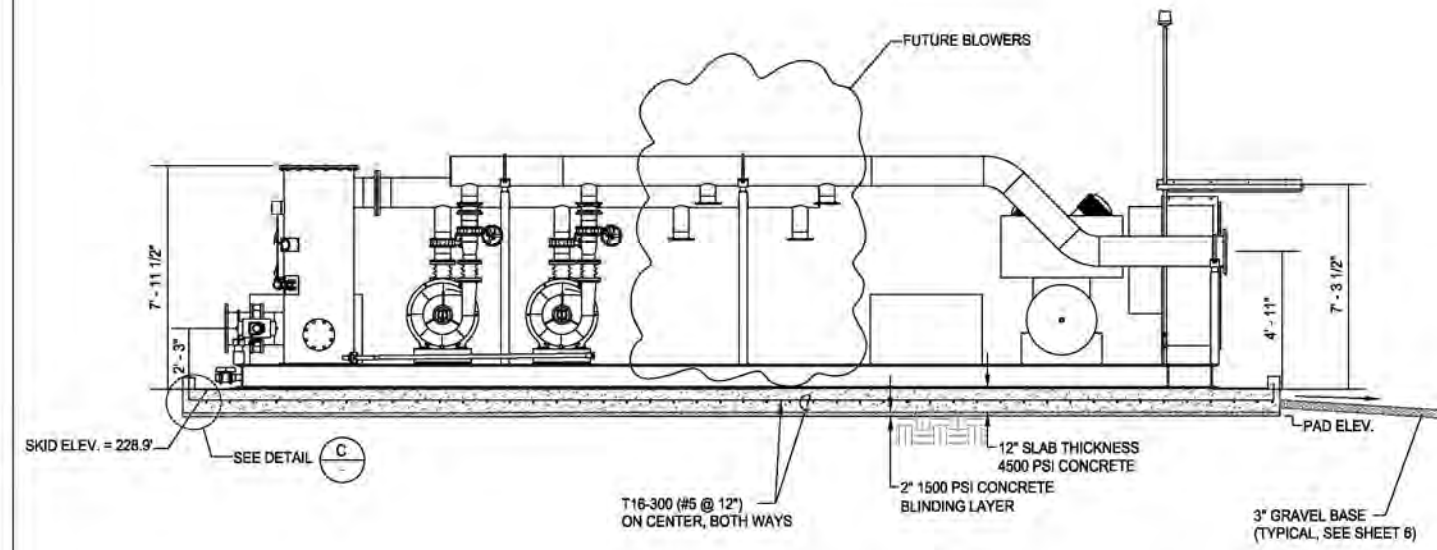
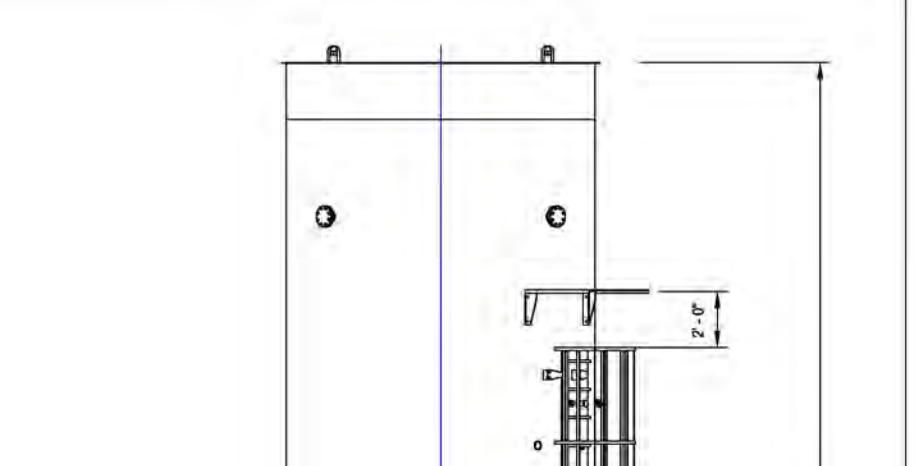
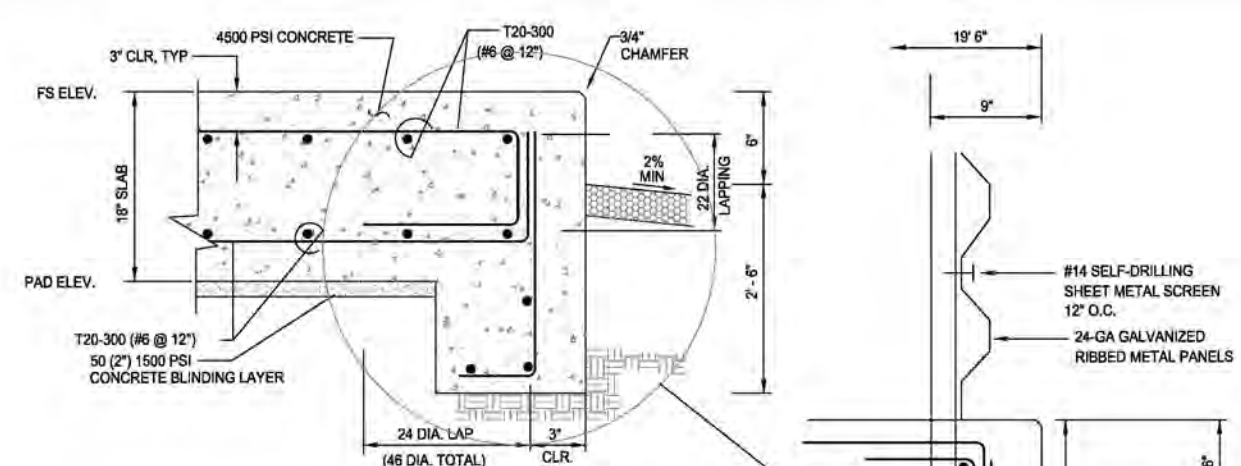
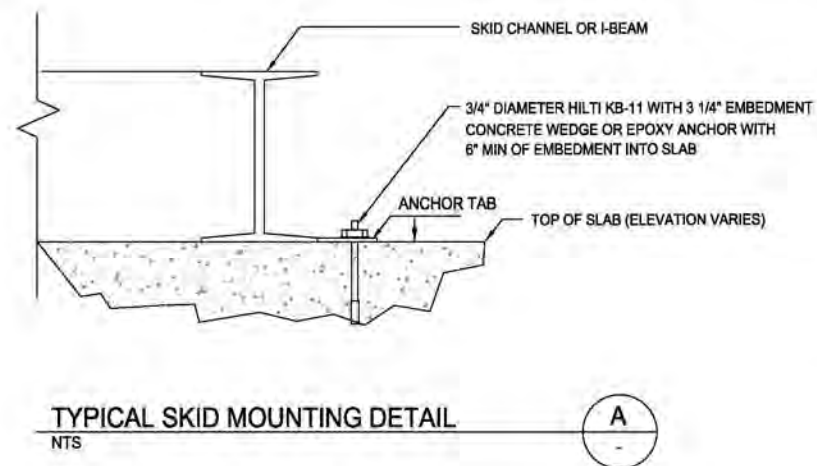


**ATTACHMENT 5**

***FLARE DRAWINGS***





This work was prepared by me or under my supervision.

**A-Mehr, Inc.**

23015 181 Creek Drive, Laguna Hills, California 92653 (949) 266-0157

Central Maui Landfill

Flare Station Structural Slab

Plans and Sections

FILENAME: Sheet 30

DRAWN: RM

CHECKED:

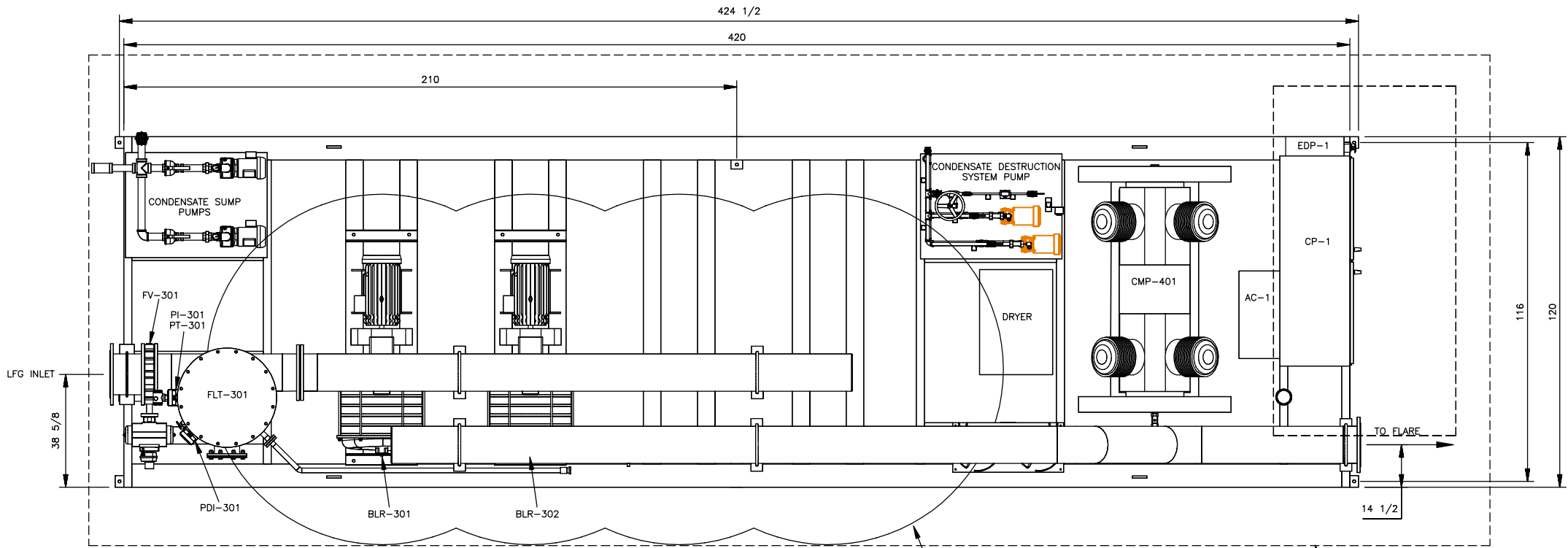
DATE: 10/22/06

FIGURE: M-2

No.	Revision	Date	By
1	Added Labels	11/4/06	GM
2	Revised Flare Station	6/13/07	GM
3	Engineer Stamps	1/25/08	GM

NOTE 1: AIR COMPRESSOR SKID TO BE SHIPPED SEPARATE. CONTRACTOR TO SET AND ANCHOR WITH 3/4\"/>

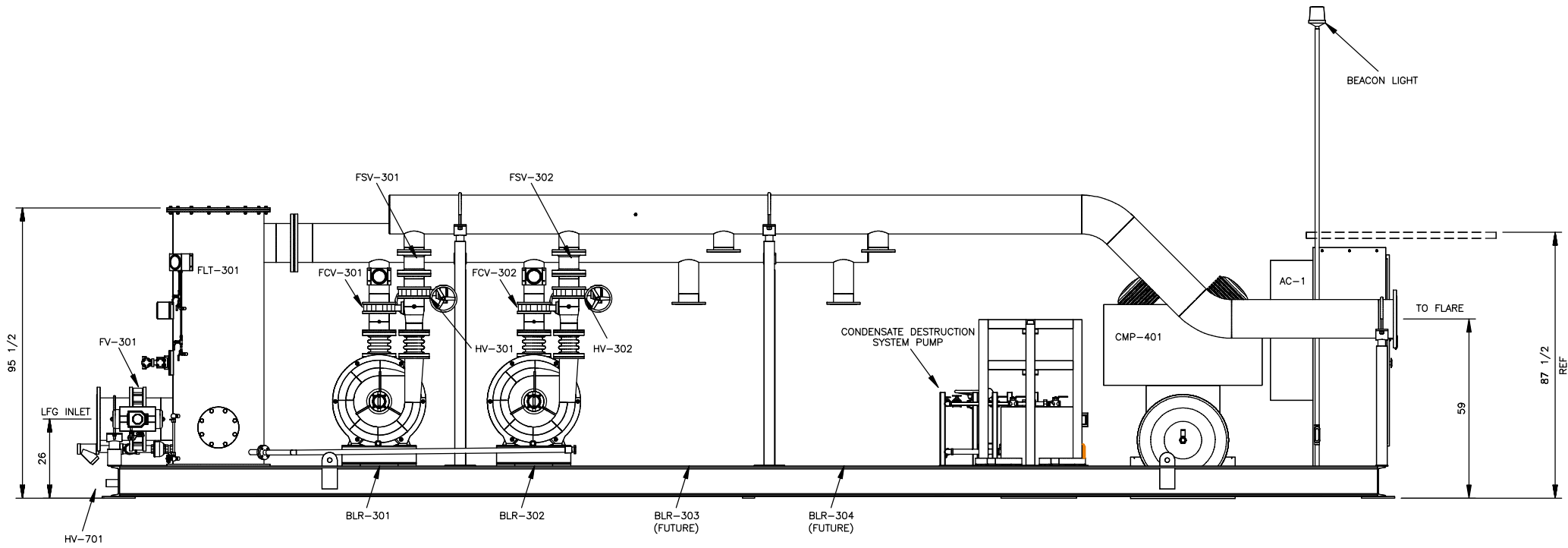
I:\ACAD\F1501-1550\1542\PA-001-0496 R4 S1.dwg, 4/27/2009 4:11:46 PM, Printed from CAD-2



PLAN VIEW  
SCALE: 1=24


CLASS 1 DIV 2 AREA

PROPOSED SLAB  
40' X 14'



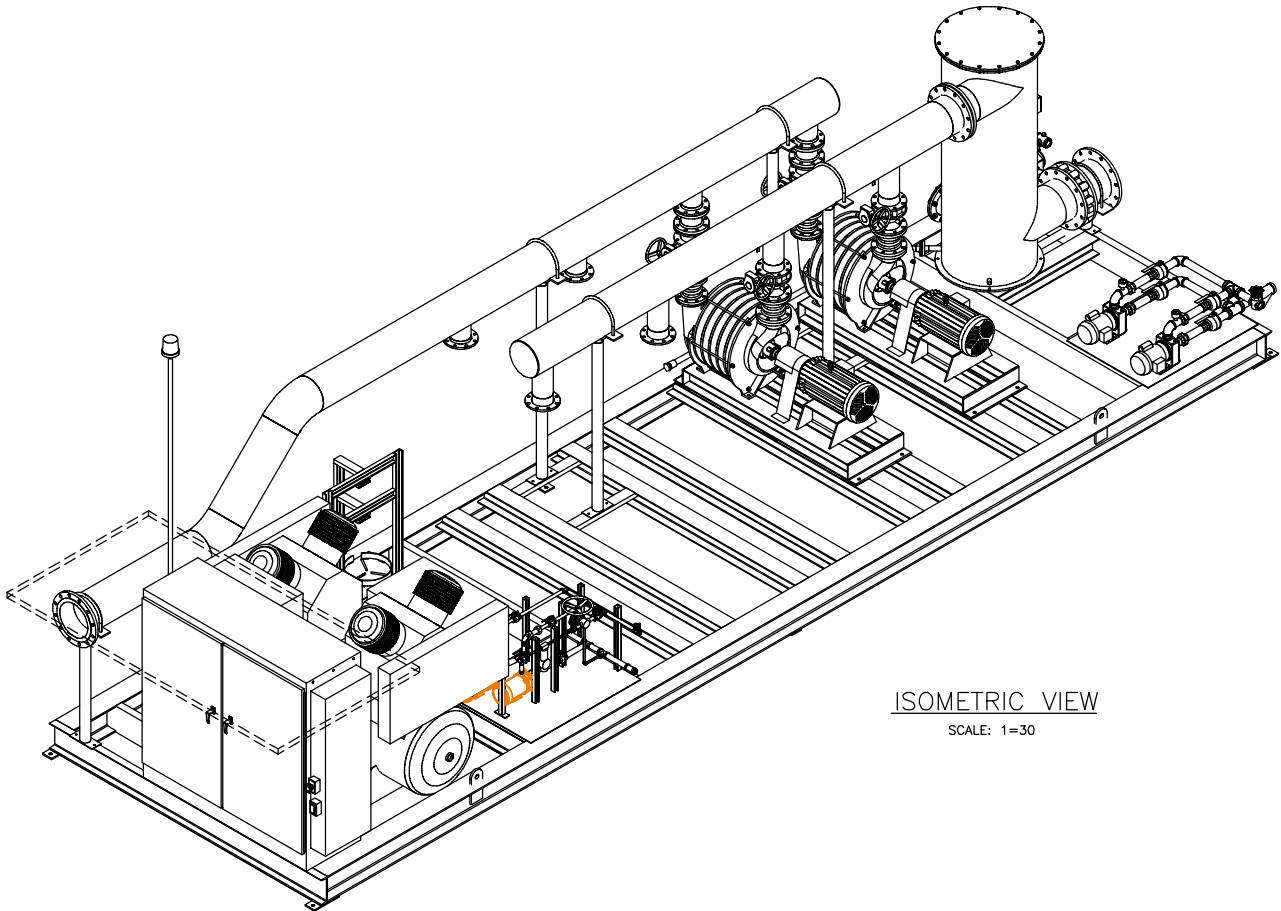
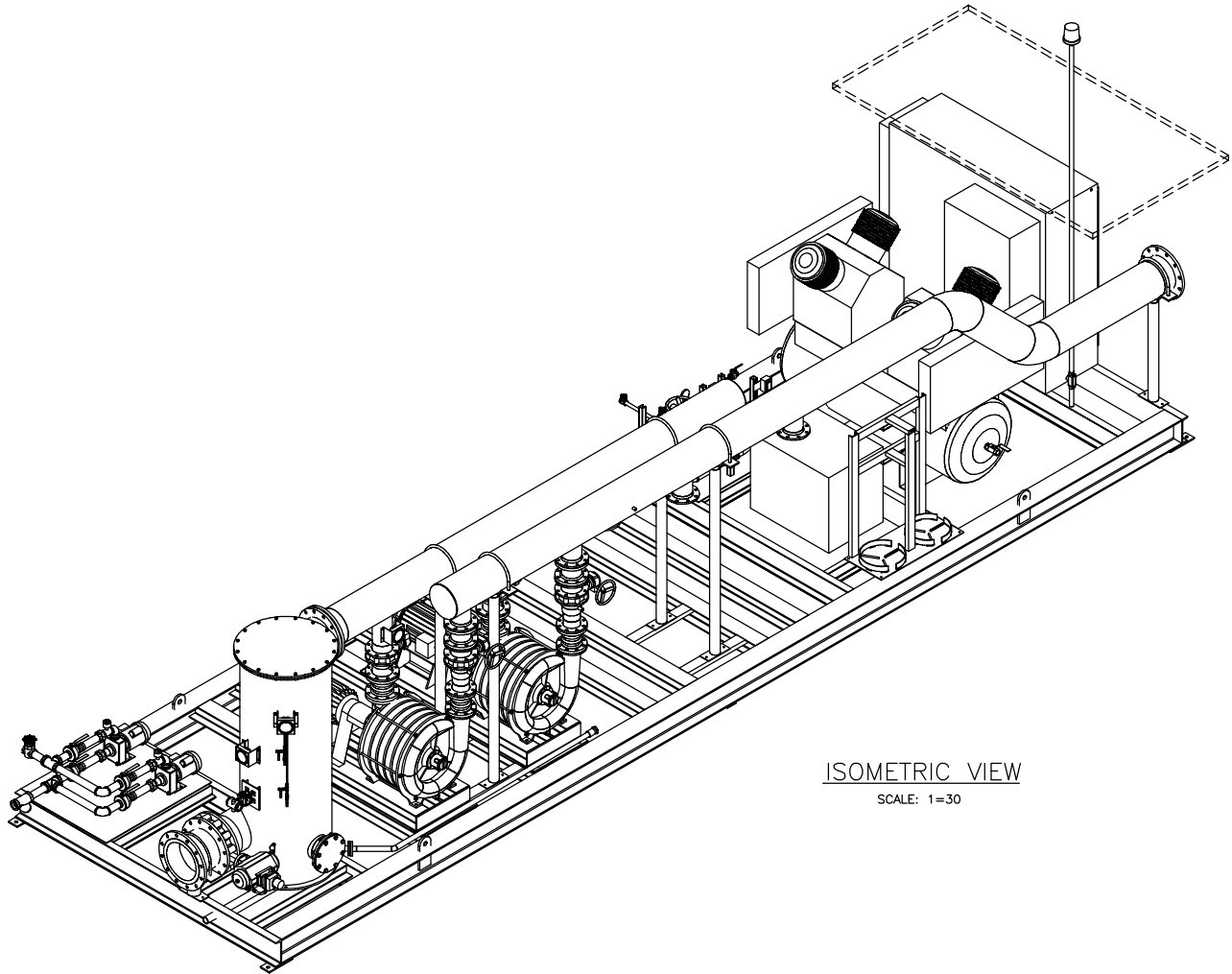
FRONT ELEVATION  
SCALE: 1=24

REDUCED  
FROM ORIGINAL  
SIZE


4	AS BUILT (5/27/08)		
LTR	DESCRIPTION	DATE	APPROVED
REVISIONS			
APPLICABLE JOB NO(S): CENTRAL MAUI LF		 1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com	
This Drawing Contains Proprietary Data and May Not Be Duplicated, Copied, Reproduced or Otherwise Used in Any Manner Not in the Best Interest of Perennial Energy, Inc. All Ideas and Concepts Remain the Property of Perennial Energy, Inc.			
ENGINEERING SIGNATURES		TITLE	
DESIGNED BY: DATE K.WADE 4/23/07		GAS HANDLING SYSTEM TOP ASSEMBLY	
DRAWN BY: DATE T.HAVILAND 4/23/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE D 34x22	DWG. NO.  PA-001-0496
MATERIAL: AS NOTED	SCALE: AS NOTED	FILE NO. PA-001-0496 R4 S1.DWG	SHEET 1 OF 2

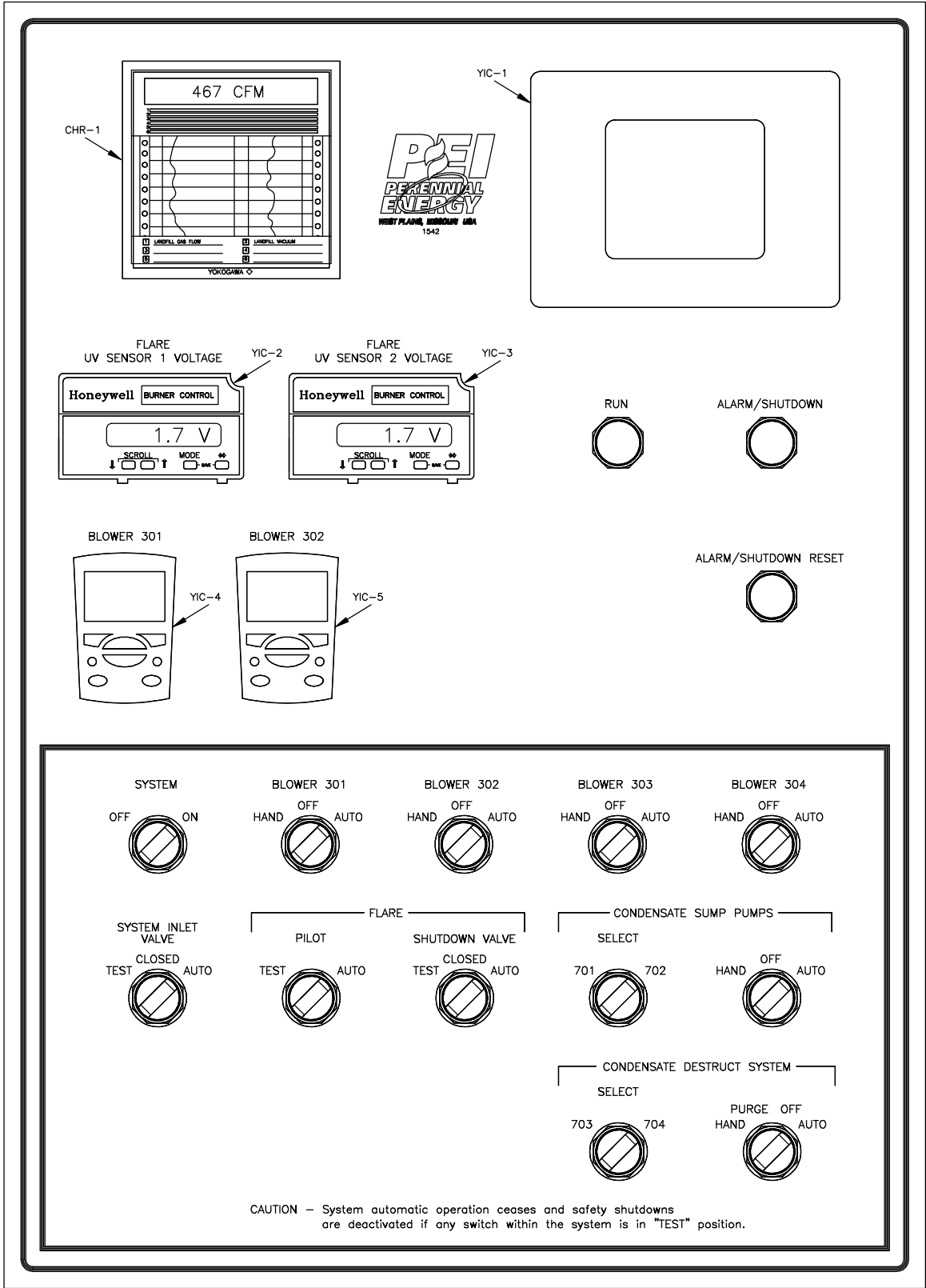


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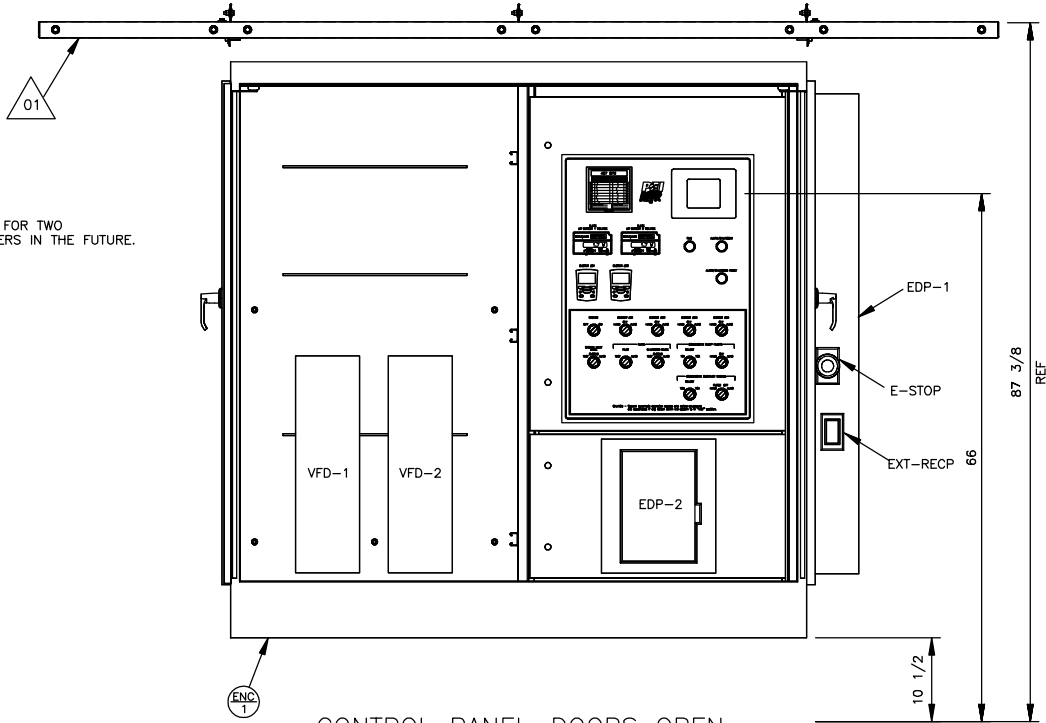
REDUCED  
FROM ORIGINAL  
SIZE

4	AS BUILT	5/27/08		
LTR	DESCRIPTION		DATE	APPROVED
REVISIONS				
APPLICABLE JOB NO(S):		1542		
CENTRAL MAUI LF				
1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com				
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ENGINEERING SIGNATURES			TITLE	
DESIGNED BY: DATE			GAS HANDLING SYSTEM TOP ASSEMBLY	
K.WADE 4/23/07				
DRAWN BY: DATE				
T.HAVILAND 4/23/07				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30			SIZE	DWG. NO.
			D 3/4x22	PA-001-0496
MATERIAL: AS NOTED			SCALE AS NOTED	FILE NO. PA-001-0496 R4 S2.DWG
			SHEET 2 OF 2	



CONTROL PANEL-LEGEND  
SCALE: 1=2

NOTE: LEAVE SPACE FOR TWO MOTOR STARTERS IN THE FUTURE.



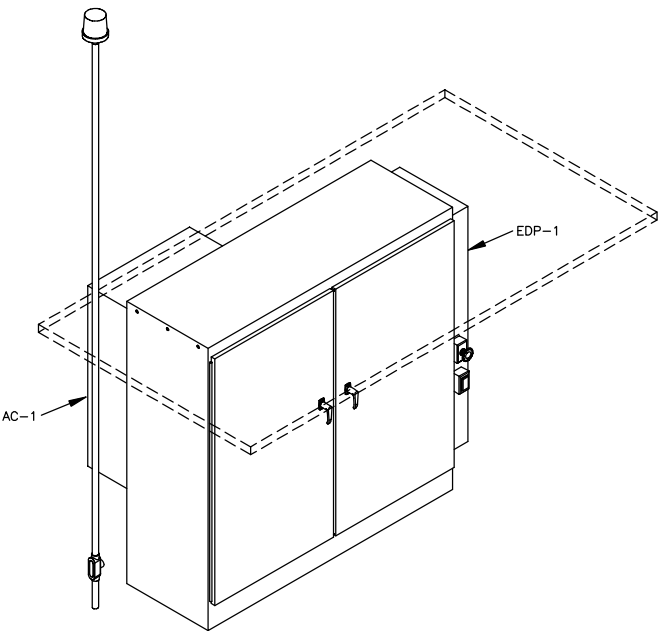
CONTROL PANEL-DOORS OPEN  
SCALE: 1=12

XX REFERENCED PARTS

Part ID	Section	Drawing ID	RefDes	RefDesQty	UnitQty	TotalQty	Component	MFG / Material / Type	Description
2003	CP	PA-002-0265	CP-ENC-1	1 ea	1 ea	1 ea	Enclosure	Schaefer	SPFS0-727224-0065, RH swing sect, LH high volt sect .per PEI dwg # PP-025-0065
5445	CP	PA-002-0265	CP-LEG-1	1 ea	1 ea	1 ea	Legend	Metal Photo	PA-018-0268, Per spec #1542


XX REFERENCED DRAWINGS

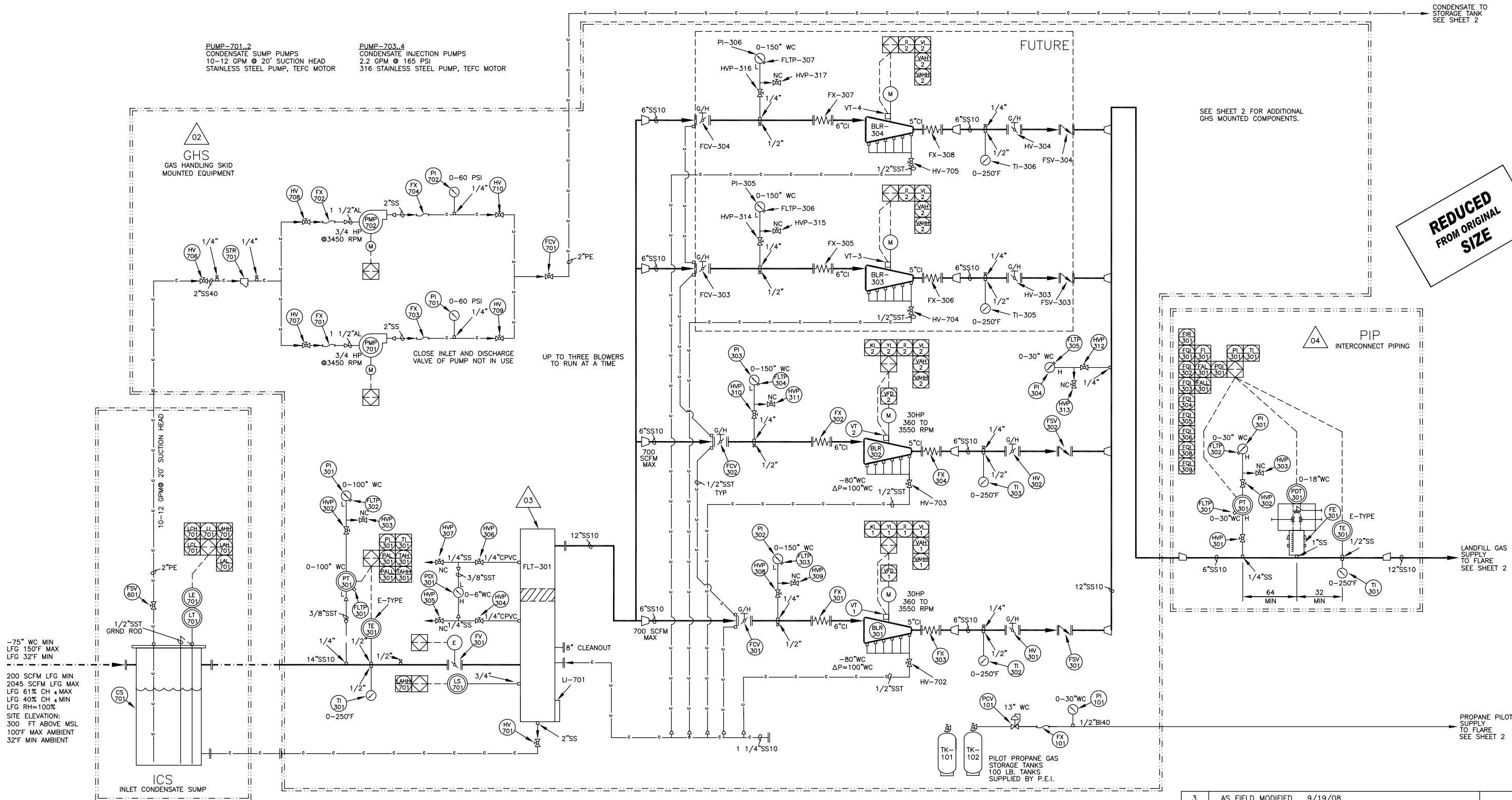
Drawing ID	RefDes	RefDesQty	Component
PP-025-0036		1 ea	Sun/Rain Shield-120" x 62" Four Piece



CONTROL PANEL-DOORS CLOSED  
SCALE: 1=20

REDUCED  
FROM ORIGINAL  
SIZE

2	AS BUILT	12/5/07		
LTR	DESCRIPTION		DATE	APPROVED
REVISIONS				
APPLICABLE JOB NO(S).		1542	 <div>1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com</div>	
CENTRAL MAUI LF				
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ENGINEERING SIGNATURES			TITLE  CONTROL PANEL	
DESIGNED BY:	DATE			
K.WADE	4/24/07			
DRAWN BY:	DATE		SIZE D	
A.PARKER	4/24/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30			DWG. NO.  PA-002-0265	
MATERIAL: AS NOTED			SCALE AS NOTED	FILE NO. PA-002-0265 R2 S1.DWG SHEET 1 OF 2




CONTROL PANEL MOUNTED LOGIC ELEMENTS  
REFERENCE DESIGNATORS OF LOGIC OR CONTROL  
PANEL MOUNTED EQUIPMENT. IDENTIFICATION  
LETTERS CONFORM TO ISA'S INSTRUMENTATION  
SYMBOLS AND IDENTIFICATION MANUAL #1

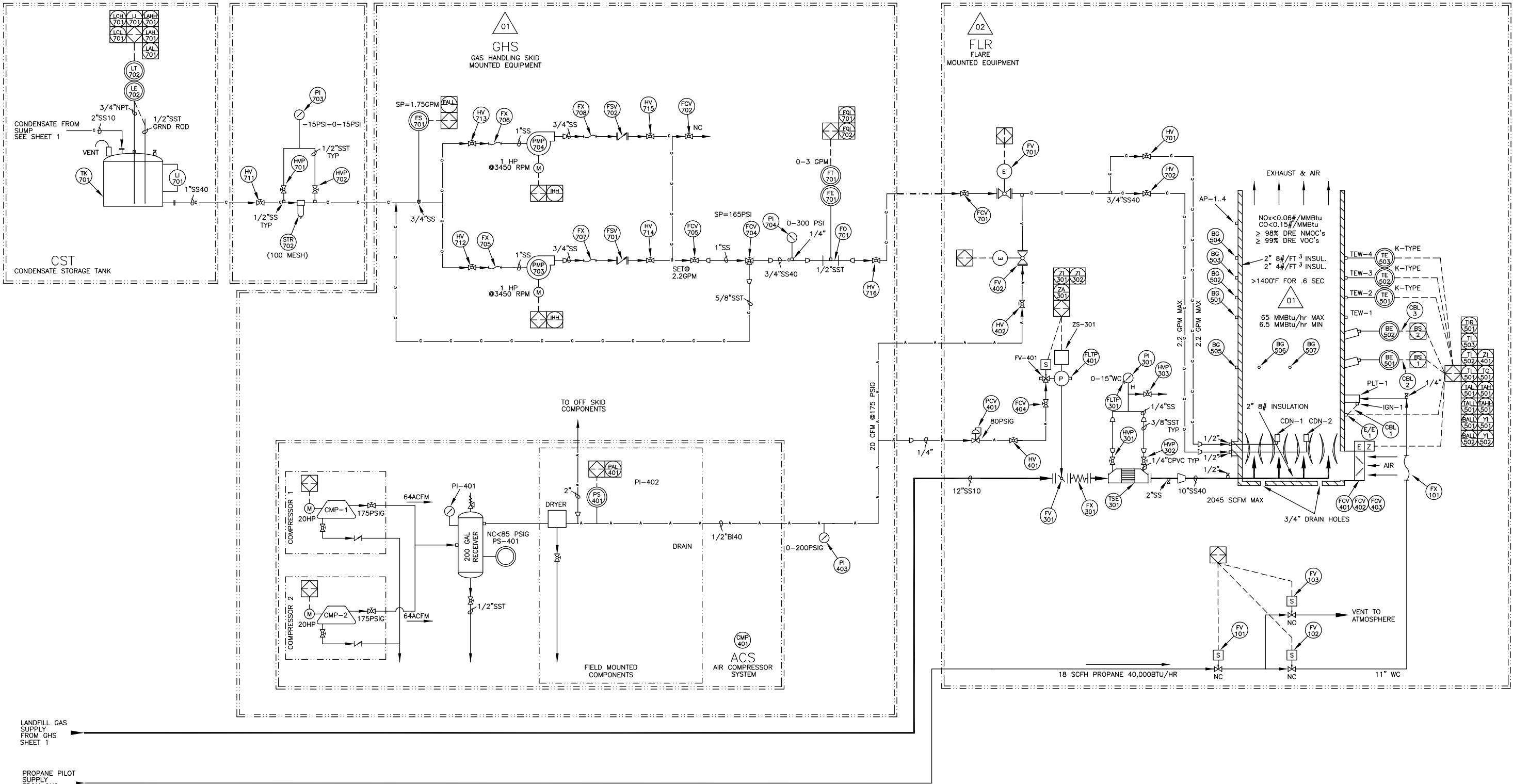
ALL VALVES NORMALLY OPEN  
UNLESS OTHERWISE NOTED

PIPING MATERIALS LEGEND  
AL: ALUMINUM  
BI: BLACK IRON  
CI: CAST IRON  
CPVC: CHLORO POLYVINYL CHLORIDE  
CS: CARBON STEEL  
EPDM: ETHYLENE PROPYLENE DIENE MONOMER  
FB: FIBERGLASS  
GS: GALVANIZED STEEL  
HDPE: HIGH DENSITY POLYETHYLENE  
SS: STAINLESS STEEL  
PVC: POLYVINYL CHLORIDE  
(EXAMPLE: 6"AL40 = 6" ALUMINUM SCHEDULE 40 PIPE)

P&ID LINES LEGEND  
----- ELECTRICAL CONNECTIONS  
----- INSULATION  
----- MAIN PIPING  
----- SUB PIPING  
----- CONDENSATE PIPING  
----- COMPRESSED AIR PIPING  
----- CUSTOMER SUPPLIED PIPING  
----- LOCATION BORDER

PID LOOPS					
LOOP #	NAME	CONTROLLED ELEMENT	CONTROLLER, OUTPUT ELEMENT	PROCESS VARIABLE, UNITS	PV SENSOR
1	LANDFILL VACUUM CONTROL	VFD-1..2	PLC, A01-CH1, CH2	LANDFILL VACUUM, 0.0 INWC	PT-301
2	LANDFILL FLOW CONTROL	VFD-1..2	PLC, A01-CH1, CH2	LFG FLOWRATE, SCFM	CALCULATED MASS FLOW
3	FLARE TEMPERATURE CONTROL	FCV-401, 402, 403	PLC, A01-CH7	FLARE TEMPERATURE, °F	SELECTED FLARE THERMOCOUPLE
4					

3	AS FIELD MODIFIED	9/19/08		
LTR	DESCRIPTION		DATE	APPROVED
REVISIONS				
APPLICABLE JOB NO(S):		1542		
CENTRAL MAUI LF			1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com	
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ENGINEERING SIGNATURES		TITLE		
DESIGNED BY:	DATE	FLARE STATION P&ID		
K.WADE	4/17/07			
DRAWN BY:	DATE	ME-009-0214		
A.PARKER	4/17/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE D 34x22	DWG. NO.	
MATERIAL: AS NOTED		SCALE AS NOTED	FILE NO. ME-009-0214 R3 S1.DWG	SHEET 1 OF 3



CONTROL PANEL MOUNTED LOGIC ELEMENTS

REFERENCE DESIGNATORS OF LOGIC OR CONTROL PANEL MOUNTED EQUIPMENT. IDENTIFICATION LETTERS CONFORM TO ISA'S INSTRUMENTATION SYMBOLS AND IDENTIFICATION MANUAL TABLE #1

PIPING MATERIALS LEGEND

AL: ALUMINUM	10: SCH 10 PIPE
BI: BLACK IRON	40: SCH 40 PIPE
CI: CAST IRON	80: SCH 80 PIPE
CPVC: CHLORO POLYVINYL CHLORIDE	H: I.D. HOSE
CS: CARBON STEEL	T: O.D. TUBING
EPDM: ETHYLENE PROPYLENE DIENE MONOMER	
FB: FIBERGLASS	
GS: GALVANIZED STEEL	
HDP: HIGH DENSITY POLYETHYLENE	
SS: STAINLESS STEEL	
PVC: POLYVINYL CHLORIDE	


(EXAMPLE: 6"AL40 = 6" ALUMINUM SCHEDULE 40 PIPE)

P&ID LINES LEGEND

-----	ELECTRICAL CONNECTIONS
=====	MAIN PIPING
-----	SUB PIPING
-----	CONDENSATE PIPING
-----	COMPRESSED AIR PIPING
-----	CUSTOMER SUPPLIED PIPING
-----	LOCATION BORDER

#### Fluid Designators

Ref Des	Fluid
1XX	Fossil Fuels
2XX	Oils
3XX	Biogas
4XX	Air
5XX	Combustion Exhaust
6XX	Coolants
7XX	Condensate
8XX	Inert Gases
9XX	Digester Fluids


3	AS FIELD MODIFIED	9/19/08		
LTR	DESCRIPTION		DATE	APPROVED
REVISIONS				
APPLICABLE JOB NO(S):		1542		
CENTRAL MAUI LF			1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com	
This Drawing Contains Proprietary Data and May Not Be Duplicated, Copied, Reproduced or Otherwise Used in Any Manner Not in the Best Interest of Perennial Energy, Inc. All Ideas and Concepts Remain the Property of Perennial Energy, Inc.				
ENGINEERING SIGNATURES		TITLE		
DESIGNED BY:	DATE	FLARE STATION P&ID		
K.WADE	4/20/07			
DRAWN BY:	DATE			
A.PARKER	4/20/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE D 3/4x22	DWG. NO.  ME-009-0214	
MATERIAL: AS NOTED		SCALE AS NOTED	FILE NO. ME-009-0214 R2 S2.DWG	SHEET 2 OF 3



xx REFERENCED PARTS

Part ID	Section	Drawing ID	RefDes	RefDesQty	UnitQty	TotalQty	Component	MFG / Material / Type	Description
5576	ACS	ME-009-0214	ACS-CMP-401	1 ea	1 ea	1 ea	Compressor-Air	Quincy	F380, duplex 64 acfm, 175 psi, 20 HP, w/240 gal tank, w/DHT-100 ref. air dryer, per quote #QCY-48404
5595	CST	ME-009-0214	CST-LE-702	1 ea	1 ea	1 ea	Probe-Capacitance	Robertshaw	740A-B-132-N-4, 132" active length, 316L Stainless Steel ground wire probe
615	CST	ME-009-0214	CST-LT-702	1 ea	1 ea	1 ea	Transmitter-Level	Robertshaw	167-A1, 4-20mA, field adjustable
5609	CST	ME-009-0214	CST-TK-701	1 ea	1 ea	1 ea	Tank-Storage	Chem-Tainer	TC4000A, misc. fittings and vent per quote dated 7/23/07
5408	FLR	ME-009-0214	FLR-BE-501.2	2 ea	1 ea	2 ea	Lens-Focusing	Honeywell	124204, Fused quartz lens
4100	FLR	ME-009-0214	FLR-BE-501.2	2 ea	1 ea	2 ea	UV Scanner	Honeywell	C7061A1046
139	FLR	ME-009-0214	FLR-BG-501.7	7 ea	1 ea	7 ea	Port-View	Stemmerich	P1030-8, 2" Plated Outdoor Use
49	FLR	ME-009-0214	FLR-CBL-1	1 ea	1 ft	1 ft	Cable-Ignition	Mallory	8 mm
4101	FLR	ME-009-0214	FLR-CBL-2	1 ea	1 ea	1 ea	Cable-UV Scanner	Woodhead	105000A01F120, 12' long
4389	FLR	ME-009-0214	FLR-CBL-3	1 ea	1 ea	1 ea	Cable-UV Scanner	Woodhead	105000A01F250, 25' long
68	FLR	ME-009-0214	FLR-E/E-1	1 ea	1 ea	1 ea	Transformer	Honeywell	Q624A1014
80	FLR	ME-009-0214	FLR-FCV-401..3	3 ea	1 ea	3 ea	Actuator	Honeywell	M7284A1004, 30 sec, 90 deg, 150 in lbs
79	FLR	ME-009-0214	FLR-FCV-401..3	3 ea	1 ea	3 ea	Arm-Crank	Honeywell	#221455A
78	FLR	ME-009-0214	FLR-FCV-401..3	6 ea	1 ea	6 ea	Joint-Ball	Honeywell	#102546
4025	FLR	ME-009-0214	FLR-FCV-401..3	3 ea	1 ea	3 ea	Louver	Swartwout	822A3-OB w/CRKL, 400 DEG F, 42" H X 60" W
4829	FLR	ME-009-0214	FLR-FCV-404	1 ea	1 ea	1 ea	Valve-Flow Control	Granger	27851 - Flow Control Valve, 1/4 male NPT x 1/4 female NPT, 150 psi max
3507	FLR	ME-009-0214	FLR-FCV-701	1 ea	1 ea	1 ea	Valve-Globe	CF	GL20S-3/4", SS
4811	FLR	ME-009-0214	FLR-FLTP-301	1 ea	1 ea	1 ea	Filter	McMaster-Carr	4427K72, 1/4" NPT, (Cat 112 Pg 313)
4810	FLR	ME-009-0214	FLR-FLTP-401	1 ea	1 ea	1 ea	Filter	McMaster-Carr	4427K71, 1/8" NPT, (Cat 112 Pg 313)
1102	FLR	ME-009-0214	FLR-FSV-401	1 ea	1 ea	1 ea	Valve-Check	Apollo	62-103, 1/2" NPT, SS
5501	FLR	ME-009-0214	FLR-FSV-701	1 ea	1 ea	1 ea	Valve-Check	Apollo	62-104, 3/4" NPT, SS
56	FLR	ME-009-0214	FLR-FV-101.2	2 ea	1 ea	2 ea	Valve-Solenoid	Asco	8215G20, 1/2" NPT, 120 VAC
5447	FLR	ME-009-0214	FLR-FV-103	1 ea	1 ea	1 ea	Valve-Solenoid	Asco	8215G23, 1/2" NPT, N.O., 120 VAC
5470	FLR	ME-009-0214	FLR-FV-301	1 ea	1 ea	1 ea	Valve-Actuated Package	ABZ	12" 919-953-ISO, CI/SS/TEF, w/ Elomatic ESA600-4 Pneumatic Actuator, ASCO WTB551A1MS solenoid, ASCO VR3 Limit switch, w/MO160 manual override
3308	FLR	ME-009-0214	FLR-FV-402	1 ea	1 ea	1 ea	Valve-Solenoid	Asco	8210G87V, 1/2" NPT, 120VAC, stainless steel, Viton seat
3510	FLR	ME-009-0214	FLR-FV-701	1 ea	1 ea	1 ea	Valve-Solenoid	Asco	8210G88V, 3/4" NPT, 120VAC, stainless steel
5286	FLR	ME-009-0214	FLR-FX-101	1 ea	1 ea	1 ea	Flex	RGA	1/2", SS Braid, hex male NPT, female union, 18"L
4882	FLR	ME-009-0214	FLR-FX-301	1 ea	1 ea	1 ea	Flex-Floating	Macken Industries, Inc.	FJ-1200B, 12" pipe, 9" O.A.L.
60	FLR	ME-009-0214	FLR-HV-401	1 ea	1 ea	1 ea	Valve-Ball	Apollo	70-101, 1/4" NPT, Bronze
497	FLR	ME-009-0214	FLR-HV-402	1 ea	1 ea	1 ea	Valve-Ball	Apollo	70-103, 1/2" NPT, Bronze
3619	FLR	ME-009-0214	FLR-HV-701.2	2 ea	1 ea	2 ea	Valve-Ball	Apollo	76-104F, 3/4" NPT, S.S.
561	FLR	ME-009-0214	FLR-HVP-301..3	3 ea	1 ea	3 ea	Valve-Ball	Warren	1/4" NPT SS
5502	FLR	ME-009-0214	FLR-PCV-401	1 ea	1 ea	1 ea	Regulator-Air	Norgren	11-002-019, 1/4", 5-125 PSI, w/gauge
735	FLR	ME-009-0214	FLR-PI-301	1 ea	1 ea	1 ea	Gauge-Pressure	Dwyer	Capsuhelic #4015LT, 0-15" WC
73	FLR	ME-009-0214	FLR-PI-301	1 ea	1 ea	1 ea	Mount-Gauge	Dwyer	A-370
4145	FLR	ME-009-0214	FLR-TE-501..3	3 ea	1 ea	3 ea	Thermocouple	Pyromation	K63U-024-00-BHN31, 24" length, 1/2" bushing, 3/8" Dia., AL head, K-type, Un-grounded, MgO Fill
801	FLR	ME-009-0214	FLR-TSE-301	1 ea	1 ea	1 ea	Flame Arrester	Varec	5010-1-1, 12", AL body, AL element
5431	GHS	ME-009-0214	GHS-BLR-301.2	2 ea	1 ea	2 ea	Blower	Houston Service, Inc.	5206, CI heads and sections, aluminum impellers, 30 HP EPACT efficient motor/ VFD compatible. Per job #1542, ref. data sheet 15518, quote 013100-1, rev.1
5511	GHS	ME-009-0214	GHS-FCV-301.2	2 ea	1 ea	2 ea	Valve-Butterfly	ABZ	6", 919-953, CI/SS/TEF, gear-op w/handwheel
5508	GHS	ME-009-0214	GHS-FCV-701	1 ea	1 ea	1 ea	Valve-Globe	CF	GL20SC-2", SS
3507	GHS	ME-009-0214	GHS-FCV-702	1 ea	1 ea	1 ea	Valve-Globe	CF	GL20S-3/4", SS
5826	GHS	ME-009-0214	GHS-FCV-703	1 ea	1 ea	1 ea	Valve-Globe	Sharpe	40276, 3/4", SS
5824	GHS	ME-009-0214	GHS-FCV-704	1 ea	1 ea	1 ea	Valve-Ball	Triac	38-TH-0100-ITR, T-port, 1" FNPT, w/gear-op and handwheel
2423	GHS	ME-009-0214	GHS-FE-701	1 ea	1 ea	1 ea	Flow Element	Hoffer	MF1/2X175B-0.00-3.0-B-1MX-MS, .30 to 3.0 GPM
4811	GHS	ME-009-0214	GHS-FLTP-301..5	5 ea	1 ea	5 ea	Filter	McMaster-Carr	4427K72, 1/4" NPT, (Cat 112 Pg 313)
1692	GHS	ME-009-0214	GHS-FO-701	1 ea	1 ea	1 ea	Flow Section	Hoffer	FK-1/2-UD10XS-B-X-X-X, butt-weld installation kit
5828	GHS	ME-009-0214	GHS-FS-701	1 ea	1 ea	1 ea	Switch-Flow	Omega	FST-211-SPST, 3/4" NPT
5201	GHS	ME-009-0214	GHS-FSV-301.2	2 ea	1 ea	2 ea	Valve-Check	Technocheck	67 EHF AL AL V.32 050 FF, Flanged, AL body, Al internals, Viton seal, 302SS spring
5514	GHS	ME-009-0214	GHS-FSV-701.2	2 ea	1 ea	2 ea	Valve-Check	Hayward	TC20075ST, 3/4" CPVC True Union Check Valve, Socket/Threaded, Viton
5393	GHS	ME-009-0214	GHS-FI-701	1 ea	1 ea	1 ea	Flow Transmitter	Hoffer	CA11-3/0-7-0-D-X, 4mA=0 GPM, 20mA=3.0 GPM, 4-20mA output
5451	GHS	ME-009-0214	GHS-FV-301	1 ea	1 ea	1 ea	Valve-Actuated Package	ABZ	14", 919-953-001, O/SS/TEF, w/Elomatic ELQ500-XP electric actuator, 120V, ON/OFF
4439	GHS	ME-009-0214	GHS-FX-101	1 ea	1 ea	1 ea	Hose-Propane W/adaptor	WP Propane	36" long hose for 100# propane tank
4197	GHS	ME-009-0214	GHS-FX-101	1 ea	1 ea	1 ea	Hose-Propane W/adaptor	WP Propane	3/8" MNPT to 3/8" Flare adaptor (100#)
4196	GHS	ME-009-0214	GHS-FX-101	1 ea	1 ea	1 ea	Hose-Propane W/adaptor	WP Propane	1/2" MNPT to 3/8" Flare adaptor (100#)
4198	GHS	ME-009-0214	GHS-FX-101	1 ea	1 ea	1 ea	Piping/Tubing/Hose	WP Propane	1/4" MNPT to Bottle adaptor (100 #)
5449	GHS	ME-009-0214	GHS-FX-301.2	2 ea	1 ea	2 ea	Flex-Floating	Macken Industries, Inc.	DO NOT USE - FJ-600B, 6" pipe, 8" O.A.L., w/tiner
5277	GHS	ME-009-0214	GHS-FX-303.4	2 ea	1 ea	2 ea	Flex-Floating	Macken Industries, Inc.	FJ- 500B, 5" pipe, 8" O.A.L.
5507	GHS	ME-009-0214	GHS-FX-701.4	4 ea	1 ea	4 ea	Flex	RGA	2", SS Braid, hex male NPT, female union, 12"L
4470	GHS	ME-009-0214	GHS-FX-705.6	2 ea	1 ea	2 ea	Flex	RGA	1", SS Braid, hex male NPT, female union, 12"L
5506	GHS	ME-009-0214	GHS-FX-707.8	2 ea	1 ea	2 ea	Flex	RGA	3/4", SS Braid, hex male NPT, female union, 12"L
5511	GHS	ME-009-0214	GHS-HV-301.2	2 ea	1 ea	2 ea	Valve-Butterfly	ABZ	6", 919-953, CI/SS/TEF, gear-op w/handwheel
3064	GHS	ME-009-0214	GHS-HV-701	1 ea	1 ea	1 ea	Valve-Ball	Hayward	TB2200ST, 2", CPVC/VITON
4960	GHS	ME-009-0214	GHS-HV-706	1 ea	1 ea	1 ea	Valve-Ball	Apollo	76F-108, 2" NPT, SS, full port
4960	GHS	ME-009-0214	GHS-HV-707..10	4 ea	1 ea	4 ea	Valve-Ball	Apollo	76F-108, 2" NPT, SS, full port
4957	GHS	ME-009-0214	GHS-HV-711..13	3 ea	1 ea	3 ea	Valve-Ball	Apollo	76F-105, 1" NPT, SS, full port
4956	GHS	ME-009-0214	GHS-HV-714..16	3 ea	1 ea	3 ea	Valve-Ball	Apollo	76F-104, 3/4" NPT, SS, full port
561	GHS	ME-009-0214	GHS-HVP-301.13	13 ea	1 ea	13 ea	Valve-Ball	Warren	1/4" NPT SS
4954	GHS	ME-009-0214	GHS-HVP-701.2	2 ea	1 ea	2 ea	Valve-Ball	Apollo	76F-103, 1/2" NPT, SS, full port
3591	GHS	ME-009-0214	GHS-LI-701	1 ea	1 ea	1 ea	Gauge-Liquid level	Conbraco	23-651-00, 1/2" NPT, 14" C to C, SS/Vit
5749	GHS	ME-009-0214	GHS-LS-701	1 ea	1 ea	1 ea	Level Switch	Omega	LVF-210-R-25, Optical
4199	GHS	ME-009-0214	GHS-PCV-101	1 ea	1 ea	1 ea	Regulator-Propane	Marshall	Model # 290 propane regulator (For 100# Tank)
575	GHS	ME-009-0214	GHS-PDI-301	1 ea	1 ea	1 ea	Gauge-Pressure	Dwyer	Capsuhelic #4006LT, 0-6" WC
73	GHS	ME-009-0214	GHS-PDI-301	1 ea	1 ea	1 ea	Mount-Gauge	Dwyer	A-370
69	GHS	ME-009-0214	GHS-PI-101	1 ea	1 ea	1 ea	Gauge-Pressure	McMaster-Carr	4026K1, 2 1/2" Bottom 0" to 30" WC (Cat 112 Page 539)
611	GHS	ME-009-0214	GHS-PI-301	1 ea	1 ea	1 ea	Gauge-Pressure	Dwyer	Capsuhelic #4100LT, 0-100" WC
73	GHS	ME-009-0214	GHS-PI-301.4	4 ea	1 ea	4 ea	Mount-Gauge	Dwyer	A-370
1517	GHS	ME-009-0214	GHS-PI-302..3	2 ea	1 ea	2 ea	Gauge-Pressure	Dwyer	Capsuhelic #4150LT, 0-150" WC
616	GHS	ME-009-0214	GHS-PI-304	1 ea	1 ea	1 ea	Gauge-Pressure	Dwyer	Capsuhelic #4030LT, 0-30" WC
5510	GHS	ME-009-0214	GHS-PI-403	1 ea	1 ea	1 ea	Gauge-Pressure	McMaster-Carr	4053KB, 2 1/2" Back Connection 0-200psi (Cat 112 Page 541)
5753	GHS	ME-009-0214	GHS-PI-701.2	2 ea	1 ea	2 ea	Gauge-Pressure	Winters	P823, 0-60 PSI, 1/4" NPT Bottom connection
5827	GHS	ME-009-0214	GHS-PI-703	1 ea	1 ea	1 ea	Gauge-Pressure	McMaster-Carr	3860SK3, 4" Dial, 1/2" NPT Bottom Conn., Compound, 0 to -30" Hg/0-15 PSI
5754	GHS	ME-009-0214	GHS-PI-704	1 ea	1 ea	1 ea	Gauge-Pressure	Winters	P827, 0-300 PSI, 1/4" NPT Bottom connection
5503	GHS	ME-009-0214	GHS-PMP-701.2	2 ea	1 ea	2 ea	Pump-Condensate	AMT	2820-98, 1 1/2" NPT suction and discharge, 3/4 HP, 115/230 V, TEFC
5504	GHS	ME-009-0214	GHS-PMP-703.4	2 ea	1 ea	2 ea	Pump-Condensate	MTH	T41, 1" NPT suction and discharge, 1 HP, 3450 RPM, 480V, 3Ph TEFC motor
1792	GHS	ME-009-0214	GHS-PS-401	1 ea	1 ea	1 ea	Switch-Pressure	Asco	HC21A214, 40-120 PSI, Nema 4, 1/4" MNPT connection
5128	GHS	ME-009-0214	GHS-PT-301	1 ea	1 ea	1 ea	Transmitter-Pressure	Rosemount	1151DP4S22B2Q4, 4-20 mA, Calibrate 0-100" WC, Smart DP, 316 SST Flanges
5505	GHS	ME-009-0214	GHS-STR-701	1 ea	1 ea	1 ea	Strainer	McMaster-Carr	4745K58, Stainless Steel Y-Strainer 2" NPT Female, 40 Mesh
5519	GHS	ME-009-0214	GHS-STR-702	1 ea	1 ea	1 ea	Strainer	McMaster-Carr	4745K55, Stainless Steel Y-Strainer 1" NPT Female, 40 Mesh
5825	GHS	ME-009-0214	GHS-STR-702	1 ea	1 ea	1 ea	Strainer-Basket	Hayward	Model 72 Simplex, 1" FNPT, 316 SS body, Viton Seals, 100 mesh Basket
568	GHS	ME-009-0214	GHS-TE-301	1 ea	1 ea	1 ea	Thermocouple	Omega	NB2-CXSS-14U-4, 4" long type E
3061	GHS	ME-009-0214	GHS-TI-301..3	3 ea	1 ea	3 ea	Temperature Indicator	WIKA	50040D206G4, 0-250 degF, 5"face, 4" stem
3034	GHS	ME-009-0214	GHS-TK-101.2	2 ea	1 ea	2 ea	Tank-Propane	Generic	100 lb.
5384	GHS	ME-009-0214	GHS-VI-1.2	2 ea	1 ea	2 ea	Vibration Transmitter	Balmac	191-1, 0 to 1 in/sec, with lead wires, 1/2" NPT connection
5684	ICS	ME-009-0214	ICS-CS-701	1 ea	1 ea	1 ea	Sump-Condensate	Hisco	HDPE Main Sump, 24" dia. X 10" tall, SDR17, misc. fittings per quote dated 7/23/07 AND per revised drawing dated 9/24/07
5835	ICS	ME-009-0214	ICS-FSV-701	1 ea	1 ea	1 ea	Screen-Foot Valve	Hayward	FV20200SA, 2" CPVC, 3/16" perf., for True Union Check Valve
5834	ICS	ME-009-0214	ICS-FSV-701	1 ea	1 ea	1 ea	Valve-Check	Hayward	TC20200ST, 2" CPVC True Union Check Valve, Socket/Threaded, Viton
5594	ICS	ME-009-0214	ICS-LE-701	1 ea	1 ea	1 ea	Probe-Capacitance	Robertshaw	740A-B-114-N-4, 114" active length, 316L Stainless Steel ground wire probe
615	ICS	ME-009-0214	ICS-LT-701	1 ea	1 ea	1 ea	Transmitter-Level	Robertshaw	167-A1, 4-20mA, field adjustable
3482	PIP	ME-009-0214	PIP-FE-301	1 ea	1 ea	1 ea	Flow Element	Veris	V100-6" SCH 10-10-H-M, Integral manifold
4811	PIP	ME-009-0214	PIP-FLTP-301.2	2 ea	1 ea	2 ea	Filter	McMaster-Carr	4427K72, 1/4" NPT, (Cat 112 Pg 313)
561	PIP	ME-009-0214	PIP-HVP-301..3	3 ea	1 ea	3 ea	Valve-Ball	Warren	1/4" NPT SS
4941	PIP	ME-009-0214	PIP-PDT-301	1 ea	1 ea	1 ea	Transmitter-Pressure	Rosemount	1151DP3S22B2Q4, 4-20 mA, Calibrate 0-18" WC, Smart DP, 316 SST Flanges
616	PIP	ME-009-0214	PIP-PI-301	1 ea	1 ea	1 ea	Gauge-Pressure	Dwyer	Capsuhelic #4030LT, 0-30" WC
73	PIP	ME-009-0214	PIP-PI-301	1 ea	1 ea	1 ea	Mount-Gauge	Dwyer	A-370
4979	PIP	ME-009-0214	PIP-PT-301	1 ea	1 ea	1 ea	Transmitter-Pressure	Rosemount	1151DP3S22B2Q4, 4-20 mA, Calibrate 0-30" WC, Smart DP, 316 SST Flanges
568	PIP	ME-009-0214	PIP-TE-301	1 ea	1 ea	1 ea	Thermocouple	Omega	NB2-CXSS-14U-4, 4" long type E
3061	PIP	ME-009-0214	PIP-TI-301	1 ea	1 ea	1 ea	Temperature Indicator	WIKA	50040D206G4, 0-250 degF, 5"face, 4" stem

REDUCED  
FROM ORIGINAL  
SIZE

3	AS FIELD MODIFIED	9/19/08		
LTR	DESCRIPTION		DATE	APPROVED
REVISIONS				
APPLICABLE JOB NO(S).		1542		
CENTRAL MAUI LF			1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 www.PerennialEnergy.com	
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ENGINEERING SIGNATURES		TITLE		
DESIGNED BY:	DATE	FLARE STATION P&ID		
K.WADE	4/20/07			
DRAWN BY:	DATE			
A.PARKER	4/20/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE D 3/4x22	DWG. NO.  ME-009-0214	
MATERIAL: AS NOTED		SCALE AS NOTED	FILE NO. ME-009-0214 R3 S3.DWG	SHEET 3 OF 3

COLOR OF WIRE	COLOR SYMBOL	VOLTAGE	NUMBER RANGE
GREEN	G	GROUND	
WHITE	W	NEUTRAL	
GRAY SHLD		4-20ma	1000-99099
YELLOW SHLD		K THERMOCPPL	001-049
PURPLE SHLD		E THERMOCPPL	001-049
BLACK SHLD		J THERMOCPPL	001-049
GRAY SHLD		RTD	050-099
BROWN	B	5VDC	100-199
YELLOW	Y	*	200-299
BLUE	U	24-32VDC	300-399
PURPLE	P	32VAC	300-399
RED	R	120VAC	400-599
BLACK	K	208VAC	600-699
BLACK	K	480VAC	700-799
BLACK	K	4160VAC	800-849


\* POWERED FROM EXTERNAL SOURCE

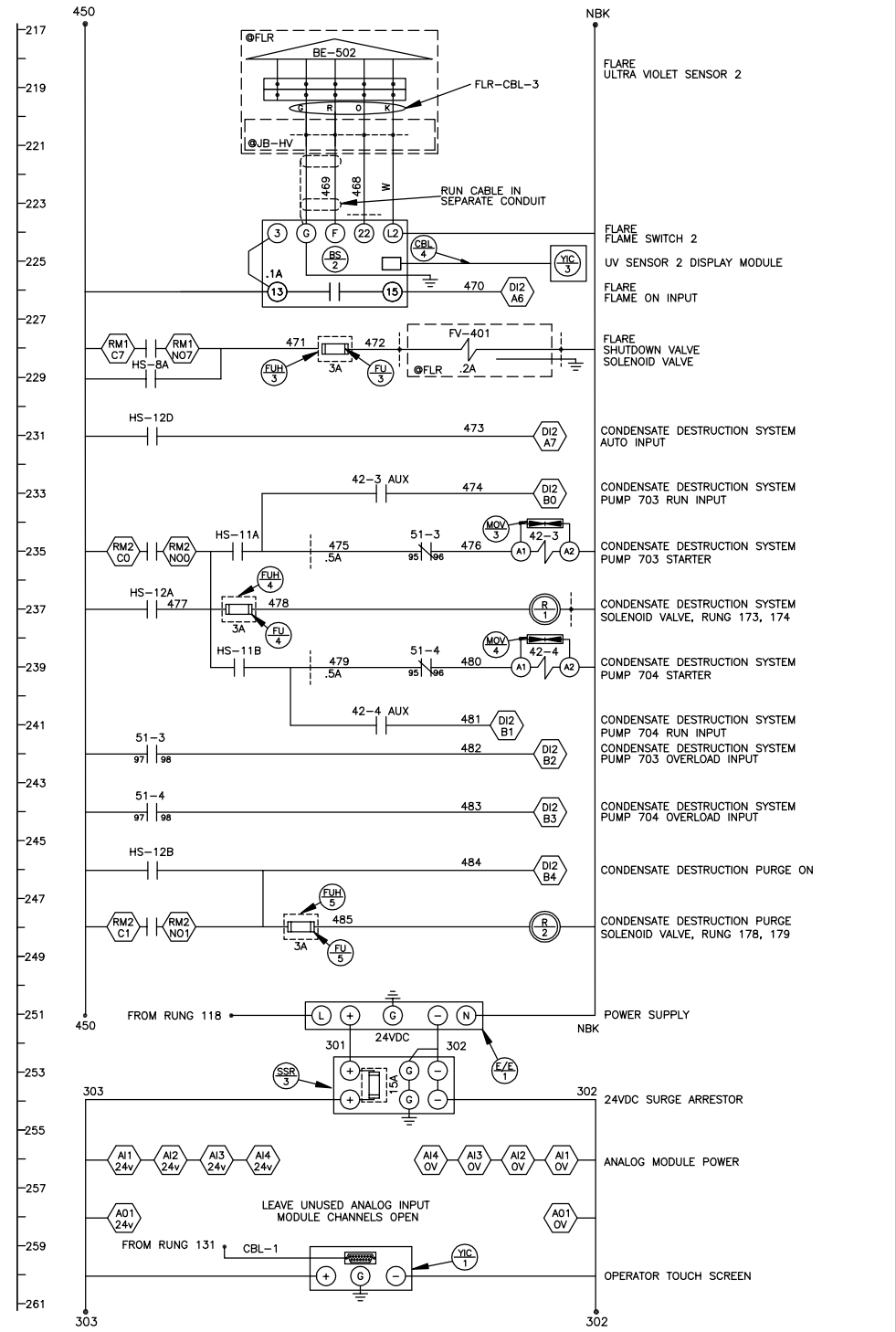
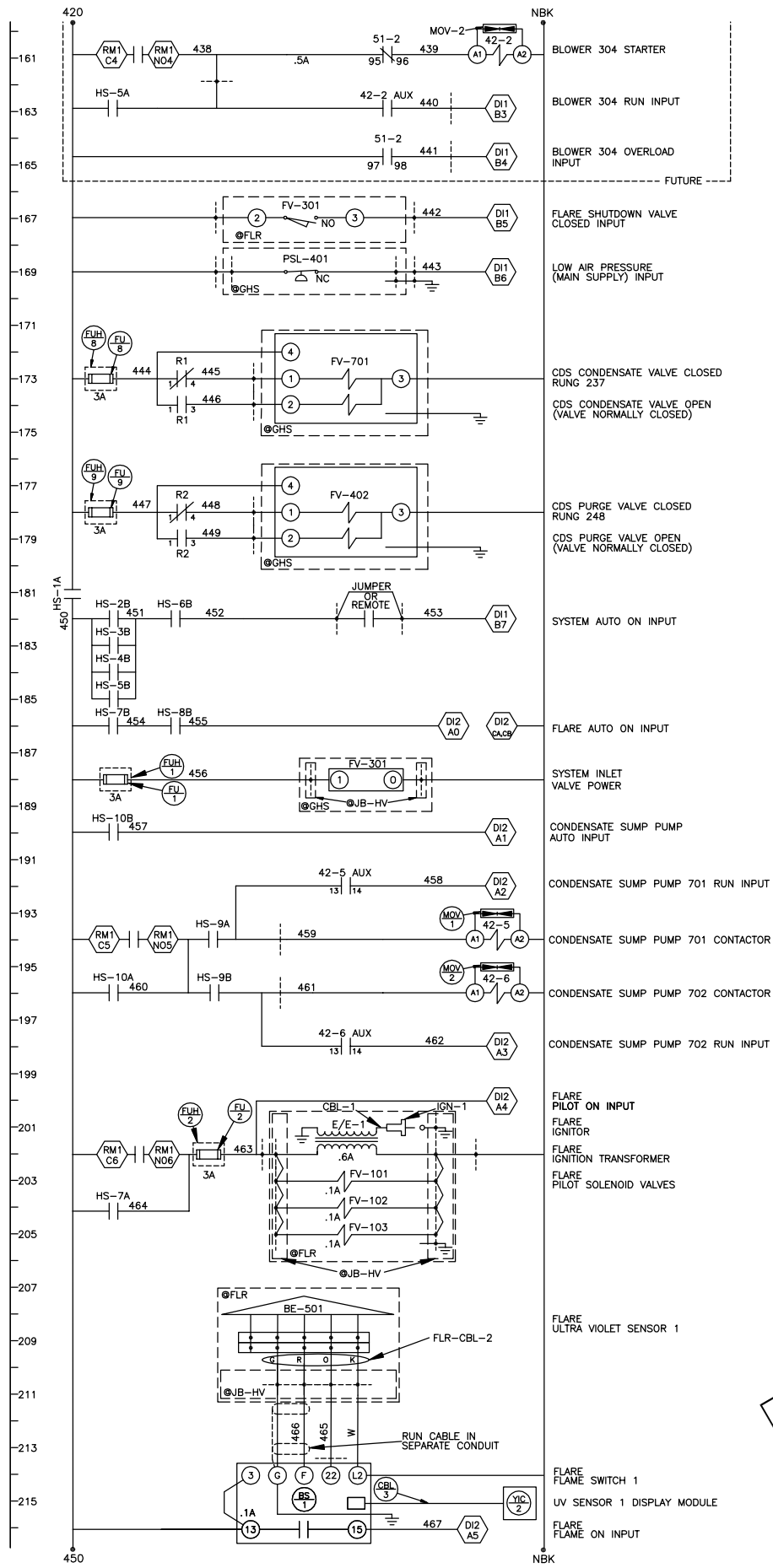
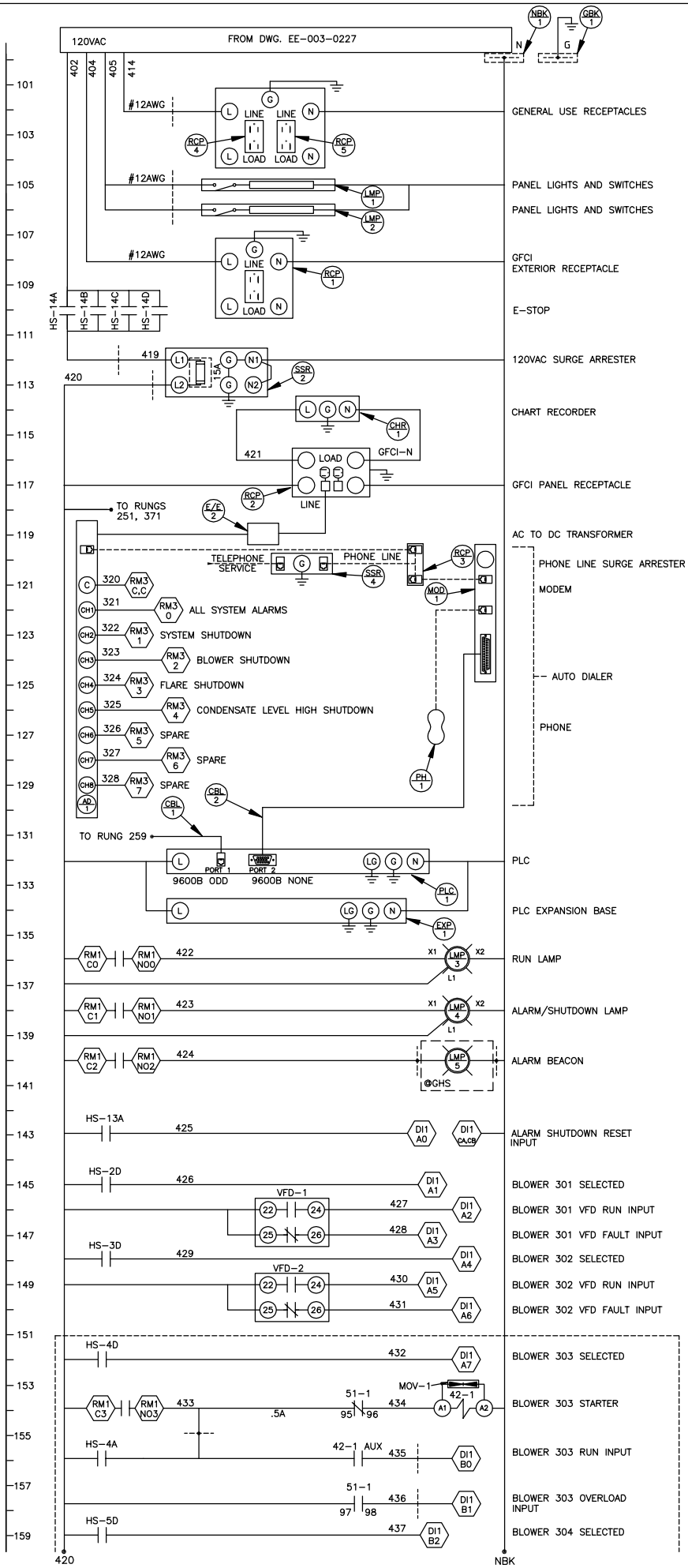
UP TO THREE BLOWERS  
TO RUN AT A TIME

Part ID	Section	Drawing ID	RefDes	RefDesQty	UnitQty	TotalQty	Component	MFG / Material / Type	Description
1851	CP	EE-003-0227	CP-42-3..4	2 ea	1 ea	2 ea	Heater Pack	Cutler-Hammer	H200SB-3
5719	CP	EE-003-0227	CP-42-5..6	2 ea	1 ea	2 ea	Contactlor	Cutler-Hammer	CE15BNSZAB, Size B, 120V Coil Voltage
1850	CP	EE-003-0227	CP-51-3..4	2 ea	1 ea	2 ea	Starter	Cutler-Hammer	AE16ANSOAC, IEC size A
4462	CP	EE-003-0227	CP-AC-1	1 ea	1 ea	1 ea	Air Conditioner	Bard	WA-121-A-03-B-XXXXJ, 1 Ton, 3 KW heater,plus BOP-1A blank-off plate kit.
4845	CP	EE-003-0227	CP-CBL-5..6	2 ea	1 ea	2 ea	Ethernet Cable	Communication Cable Co.	4545C5-12, 12ft, Cat 5e Patch Cable, RJ45-RJ45
5471	CP	EE-003-0227	CP-EDP-1	1 ea	1 ea	1 ea	Load Center	Cutler-Hammer	Pow-R-Line3a, 200A Main Breaker, 480V, 3ph, w/grnd bar, Nema3R, Spec#1542
5701	CP	EE-003-0227	CP-EDP-1	1 ea	1 ea	1 ea	Load Center-Enclosure Only	Cutler-Hammer	LWPQ2060, Type 3R Enclosure
646	CP	EE-003-0227	CP-EDP-2	1 ea	1 ea	1 ea	Breaker	Cutler-Hammer	CH220, 20A, 2 pole
2313	CP	EE-003-0227	CP-EDP-2	3 ea	1 ea	3 ea	Breaker	Cutler-Hammer	CH215, 15A, 2 pole
647	CP	EE-003-0227	CP-EDP-2	1 ea	1 ea	1 ea	Breaker	Cutler-Hammer	CH280, 80A, 2 pole
25	CP	EE-003-0227	CP-EDP-2	2 ea	1 ea	2 ea	Breaker	Cutler-Hammer	CH120, 20 Amp
24	CP	EE-003-0227	CP-EDP-2	3 ea	1 ea	3 ea	Breaker	Cutler-Hammer	CH115, 15 Amp
1373	CP	EE-003-0227	CP-EDP-2	1 ea	1 ea	1 ea	Breaker Retainer	Cutler-Hammer	CH125RB
1015	CP	EE-003-0227	CP-EDP-2	1 ea	1 ea	1 ea	Cover	Cutler-Hammer	CH8BF
645	CP	EE-003-0227	CP-EDP-2	1 ea	1 ea	1 ea	Load Center	Cutler-Hammer	CH16L125B MLO
981	CP	EE-003-0227	CP-FUJ-1..4	4 ea	1 ea	4 ea	Fuse	Gould	TR10R, 10A, 250V
980	CP	EE-003-0227	CP-FUH-1..4	4 ea	1 ea	4 ea	Fuse Holder	Gould	20306R, 30A, 250V, 1 Pole
467	CP	EE-003-0227	CP-RCP-6	1 ea	1 ea	1 ea	Box	Generic	BWF875
5575	CP	EE-003-0227	CP-RCP-6	1 ea	1 ea	1 ea	Receptacle	Hubbell	HBL5662I, 250V, 15A, Duplex, Ivory
129	CP	EE-003-0227	CP-SSR-1	1 ea	1 ea	1 ea	Arrestor-Surge	Square D	SDSA 3650
5050	CP	EE-003-0227	CP-TSH-1	1 ea	1 ea	1 ea	Thermostat	Bard	8403-057, heat/cool, auto/on, digital
3834	CP	EE-003-0227	CP-VFD-1..2	2 ea	1 ea	2 ea	Variable Frequency Drive	ABB	ACS550-U1-044A-(N), 30 HP Variable Torque, 480 V, 3 Phase, Nema 1
5434	GHS	EE-003-0227	GHS-E/E-1	1 ea	1 ea	1 ea	Transformer	Hammond	NMF015LE, 15KVA, 480 to 120/240 VAC single phase, floor mount, Energy Efficient



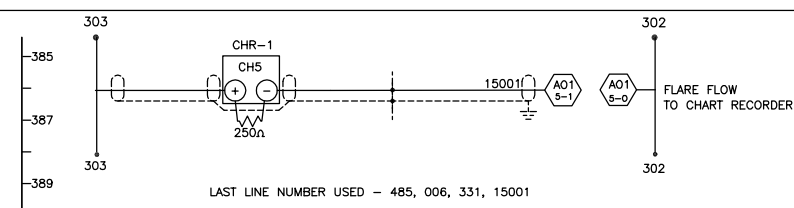
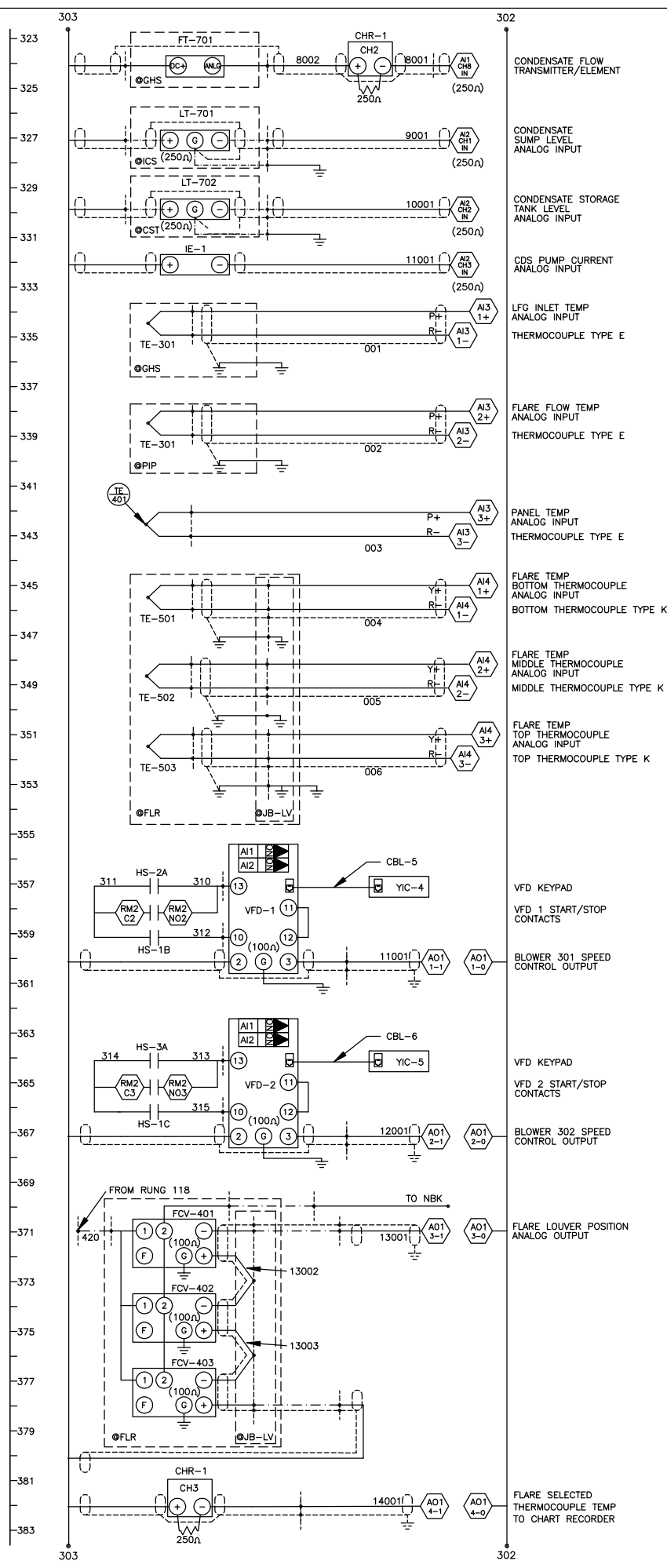
U.L. LISTED


1	AS BUILT 2/22/08		
LTR	DESCRIPTION	DATE	APPROVED
<div style="text-align: center;">REVISIONS</div>			
APPlicable JOB NO(S). 1542 CENTRAL MAUI LF		 <div style="float: right; text-align: right;">           1375 COUNTY ROAD 8690            WEST PLAINS, MO 65775  <a href="http://www.PerennialEnergy.com">www.PerennialEnergy.com</a> </div>	
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ENGINEERING SIGNATURES		TITLE	
DESIGNED BY: DATE K.WADE 4/25/07 DRAWN BY: DATE A.PARKER 4/25/07		480 VOLT 3 PHASE ELEMENTARY  EE-003-0227	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30			
MATERIAL: AS NOTED		SIZE <div style="font-size: 2em; font-weight: bold; border: 1px solid black; padding: 5px; display: inline-block;">D</div> <small>34x22</small>	DWG. NO.  EE-003-0227
SCALE AS NOTED		FILE NO. EE-003-0227 R1 S1.DWG	SHEET 1 OF 1



REDUCED  
FROM ORIGINAL  
SIZE

2	AS FIELD MODIFIED (9/18/08)		
LTR	DESCRIPTION	DATE	APPROVED
REVISIONS			
APPLICABLE JOB NO(S): 1542		CENTRAL MAUI LF	
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ENGINEERING SIGNATURES		TITLE	
DESIGNED BY: K.WADE	DATE: 4/30/07	120VAC & INSTRUMENTATION ELEMENTARY	
DRAWN BY: T.HAVILAND	DATE: 4/30/07		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE D	DWG. NO. EE-005-0252
MATERIAL: AS NOTED		SCALE: AS NOTED	FILE NO. EE-005-0252 R2 S1.DWG SHEET 1 OF 3



2	AS FIELD MODIFIED (9/18/08)		
LTR	DESCRIPTION	DATE	APPROVED
<div style="text-align: center;">REVISIONS</div>			
APPLICABLE JOB NO(S): 1542 CENTRAL MAUI LF		 1375 COUNTY ROAD 8690 WEST PLAINS, MO 65775 <a href="http://www.PerennialEnergy.com">www.PerennialEnergy.com</a>	
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ENGINEERING SIGNATURES		TITLE	
DESIGNED BY: DATE K.WADE 4/30/07		120VAC & INSTRUMENTATION ELEMENTARY	
DRAWN BY: DATE T.HAVILAND 4/30/07			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACT .XX ANGLES ±1/16 ±.03 ±0°30		SIZE <div style="font-size: 2em; font-weight: bold; border: 1px solid black; padding: 5px; display: inline-block;">D</div>	DWG. NO. <div style="font-size: 1.5em; font-weight: bold; padding: 10px; display: inline-block;">EE-005-0252</div>
MATERIAL: AS NOTED		SCALE AS NOTED	FILE NO. EE-005-0252 R2 S2.DWG SHEET 2 OF 3

XX REFERENCED PARTS

Part ID	Section	Drawing ID	RefDes	RefDesQty	UnitQty	TotalQty	Component	MFG / Material / Type	Description
5591	CP	EE-005-0252	CP-AD-1	1 ea	1 ea	1 ea	Antenna-Wireless Terminal	Telular	301104, 5 dB Gain Dual-Band
3975	CP	EE-005-0252	CP-AD-1	1 ea	1 ea	1 ea	Autodialer	Sensaphone	2000, 8 input channels,w/10 hour battery back-up
5592	CP	EE-005-0252	CP-AD-1	1 ea	1 ea	1 ea	Mount-Antenna	Telular	BMC, 3/4" NMO, w/Cable kit & TNC Male Connector -- TERMINATED
5590	CP	EE-005-0252	CP-AD-1	1 ea	1 ea	1 ea	Terminal-Wireless	Telular	SX5T-515C CDMA 1X Fixed, 800/1900 MHz, Voice/Fax, Sprint, w/Battery back-up system, w/Rechargeable 6-volt battery
969	CP	EE-005-0252	CP-AI-1,2	2 ea	1 ea	2 ea	Analog Input Module	Koyo	F2-08AD-1, 8 inputs, 4-20ma
439	CP	EE-005-0252	CP-AI-3,4	2 ea	1 ea	2 ea	Thermocouple Input Module	Koyo	F2-04THM, 4 points
3583	CP	EE-005-0252	CP-AO-1	1 ea	1 ea	1 ea	Analog Output Module	Koyo	F2-08DA-1, 8 outputs, 4-20ma
4030	CP	EE-005-0252	CP-BS-1,2	2 ea	1 ea	2 ea	Amplifier	Honeywell	R7861A1026
442	CP	EE-005-0252	CP-BS-1,2	2 ea	1 ea	2 ea	Flame Switch	Honeywell	FM7823A1016
443	CP	EE-005-0252	CP-BS-1,2	2 ea	1 ea	2 ea	Sub Base	Honeywell	Q7800A1005
4804	CP	EE-005-0252	CP-CBL-1	1 ea	1 ea	1 ea	Cable-Touchscreen	Koyo	EA-20BL From C-more touchscreen to RJ12
4853	CP	EE-005-0252	CP-CBL-2	1 ea	1 ea	1 ea	Cable-Modem	Communication Cable Co.	PP-043-0003, 5FT -- HD15 Male to DB25 Male (Quote #AAAQ10153)
2757	CP	EE-005-0252	CP-CBL-3,4	2 ea	1 ea	2 ea	Cable-Display	Honeywell	221818C, 120" length
3057	CP	EE-005-0252	CP-CBL-7	1 ea	1 ea	1 ea	Expansion Cable	Koyo	D2-EXCBL-1, 1 meter, for D2-EM
4579	CP	EE-005-0252	CP-CHR-1	1 ea	1 ea	1 ea	Chart Recorder	Johnson/Yokogawa	FX112-4-2, DAQ Station, 12 channel,compact flash memory of 32M, English Language
3055	CP	EE-005-0252	CP-CM-1	1 ea	1 ea	1 ea	Remote Master	Koyo	D2-CM
446	CP	EE-005-0252	CP-DI-1,2	2 ea	1 ea	2 ea	Digital Input Module	Koyo	D2-16NA, 16 points
4712	CP	EE-005-0252	CP-DI-3	1 ea	1 ea	1 ea	Digital Input Module	Koyo	D2-08ND3, 8 points, 24V DC Input
1702	CP	EE-005-0252	CP-E/E-1	1 ea	1 ea	1 ea	Power Supply	IDEC	P55R-E24, 100W, 24V
2182	CP	EE-005-0252	CP-E/E-2	1 ea	1 ea	1 ea	Power Adapter	Radio Shack	273-1773, 12VDC, 500 mA
3056	CP	EE-005-0252	CP-EM-1,2	2 ea	1 ea	2 ea	Remote Slave	Koyo	D2-EM
3109	CP	EE-005-0252	CP-EXP-1	1 ea	1 ea	1 ea	Base	Koyo	D2-06B-1, 6 Slot Base
788	CP	EE-005-0252	CP-FILL-1,2	2 ea	1 ea	2 ea	Filler Module	Koyo	D2-FILL
4118	CP	EE-005-0252	CP-FU-1,5	5 ea	1 ea	5 ea	Fuse	Gould	GSA3, 3A, ceramic, time delay, 1.25" x .25"
4991	CP	EE-005-0252	CP-FU-6,7	2 ea	1 ea	2 ea	Fuse	Gould	ATDR3, 3 AMP, 600 VAC, 300VDC, 1-1/2" x 13/32"
1294	CP	EE-005-0252	CP-FUH-1,5	5 ea	1 ea	5 ea	Fuse Holder	Automation Direct	DN-F6L110
2323	CP	EE-005-0252	CP-FUH-6,7	2 ea	1 ea	2 ea	Fuse Holder	Automation Direct	DN-FM6L, 600V, indicating light, for use with midget type fuses
4215	CP	EE-005-0252	CP-HS-1	1 ea	1 ea	1 ea	Selector Switch	Cutler-Hammer	10250T1311, 2 Position Maintained, 60" Throw, Black
450	CP	EE-005-0252	CP-HS-1,5	6 ea	1 ea	6 ea	Contact Block	Cutler-Hammer	10250T2
1455	CP	EE-005-0252	CP-HS-12	1 ea	1 ea	1 ea	Selector Switch	Cutler-Hammer	10250T46KB
4750	CP	EE-005-0252	CP-HS-13	1 ea	1 ea	1 ea	Selector Switch	Cutler-Hammer	10250T23B
670	CP	EE-005-0252	CP-HS-14	2 ea	1 ea	2 ea	Contact Block	Cutler-Hammer	10250T3
2139	CP	EE-005-0252	CP-HS-14	1 ea	1 ea	1 ea	Emergency Stop Switch	Cutler-Hammer	10250T-5J63-1X
448	CP	EE-005-0252	CP-HS-2,5,8,10	6 ea	1 ea	6 ea	Selector Switch	Cutler-Hammer	10250T21KB
5521	CP	EE-005-0252	CP-HS-6	1 ea	1 ea	1 ea	Selector Switch	Cutler-Hammer	10250T22KB
447	CP	EE-005-0252	CP-HS-7,9,11	3 ea	1 ea	3 ea	Selector Switch	Cutler-Hammer	10250T20KB
4263	CP	EE-005-0252	CP-ISE-1,2	2 ea	1 ea	2 ea	Intrinsic Safety Barrier	MTL	MTL7706+
453	CP	EE-005-0252	CP-LMP-1,2	2 ea	1 ea	2 ea	Panel Lamp	American Fluorescent	2V692
454	CP	EE-005-0252	CP-LMP-3	1 ea	1 ea	1 ea	Lens-Green	Cutler-Hammer	10250T014N
455	CP	EE-005-0252	CP-LMP-3,4	2 ea	1 ea	2 ea	Lamp	Cutler-Hammer	10250T231N
456	CP	EE-005-0252	CP-LMP-4	1 ea	1 ea	1 ea	Lens-Red	Cutler-Hammer	10250T013N
1229	CP	EE-005-0252	CP-LMP-5	1 ea	1 ea	1 ea	Alarm Beacon	Federal Signal	Model 225, 120VAC, Red
3418	CP	EE-005-0252	CP-MOD-1	1 ea	1 ea	1 ea	Modem	Automation Direct	MDM-T6L, industrial,with Null Modem Adaptor
4296	CP	EE-005-0252	CP-MOV-3,4	2 ea	1 ea	2 ea	Surge Arrester	Generic	MOV (Metal Oxide Varistor) Voltage spiked protector for 120 VAC circuits
62	CP	EE-005-0252	CP-NBK,CBK-1	1 ea	1 ea	1 ea	Block	Square D	PK180CA-1
63	CP	EE-005-0252	CP-NBK-1	1 ea	1 ea	1 ea	Isolator-Neutral	Square D	PKGTAB
673	CP	EE-005-0252	CP-PH-1	1 ea	1 ea	1 ea	Phone	Generic	Wall, U.L. listed
3101	CP	EE-005-0252	CP-PLC-1	1 ea	1 ea	1 ea	Base	Koyo	D2-09B-1, 9 Slot Base
3070	CP	EE-005-0252	CP-PLC-1	1 ea	1 ea	1 ea	CPU	Koyo	D2-250-1
462	CP	EE-005-0252	CP-PLC-1	1 ea	1 ea	1 ea	CPU Battery	Koyo	D2-BAT-1
5062	CP	EE-005-0252	CP-PLC-1	1 ea	1 ea	1 ea	Software	Koyo	PC-DSOFT5, DirectSoft, DL05/06/105/205/305/405
465	CP	EE-005-0252	CP-RCP-1	1 ea	1 ea	1 ea	Cover	Killark	WCEG
466	CP	EE-005-0252	CP-RCP-1,2	2 ea	1 ea	2 ea	Receptacle-GFI	PNS	120V P/N: 209115
467	CP	EE-005-0252	CP-RCP-1,3	3 ea	1 ea	3 ea	Box	Generic	BWBF75
683	CP	EE-005-0252	CP-RCP-3	1 ea	1 ea	1 ea	Phone Receptacle	Generic	Double RJ11
748	CP	EE-005-0252	CP-RCP-4,5	2 ea	1 ea	2 ea	Receptacle	Generic	15A Duplex w/ground
468	CP	EE-005-0252	CP-RM-1,2	2 ea	1 ea	2 ea	Relay Module	Koyo	F2-08TRS, 8 commons, 8 outputs,no fuse
3102	CP	EE-005-0252	CP-RM-3	1 ea	1 ea	1 ea	Relay Module	Koyo	F2-08TR, 2 isolated commons, 8 outputs
469	CP	EE-005-0252	CP-SSR-2	1 ea	1 ea	1 ea	Surge Arrester	MCG	#415, 120V, 15A
470	CP	EE-005-0252	CP-SSR-3	1 ea	1 ea	1 ea	Surge Arrester	MCG	MCG-24A, 24VDC, 15A
471	CP	EE-005-0252	CP-SSR-4	1 ea	1 ea	1 ea	Surge Arrester	MCG	DLP-4,71-200, RJ11
343	CP	EE-005-0252	CP-TE-401	1 ea	1 ea	1 ea	Thermocouple	Omega	WTE-10-12
5589	CP	EE-005-0252	CP-YIC-1	2 ea	1 ea	2 ea	Software	Koyo	EA-PGMSW, C-more programming
4413	CP	EE-005-0252	CP-YIC-1	1 ea	1 ea	1 ea	Touchscreen	Koyo	EA7-T6C, 6" COLOR, C-more, TFT
473	CP	EE-005-0252	CP-YIC-2,3	2 ea	1 ea	2 ea	UV Sensor Display	Honeywell	S7800A1001

PROVIDE WIRE COILED AT END OF SKID TO INTERCONNECT AT FLARE.

DISTANCE TO FLARE: 24 FEET

NOTES:

- U.L. LISTED PANEL
- UNLESS OTHERWISE NOTED, ALL COMPONENTS SHOWN ARE MOUNTED IN OR ON THE CONTROL PANEL
- EXACT CONTROL SETPOINTS TO BE DETERMINED ON SITE
- SEPARATE 120VAC WIRING FROM LOW VOLTAGE SIGNAL WIRING. CROSS 120VAC AND SIGNAL WIRES AT 90 DEGREES
- WIRE NUMBERS ARE THE SAME ON BOTH SIDES OF THE TERMINAL BLOCK
- TERMINAL BLOCK NO. SAME AS THE WIRE NO.
- ALL PLC NON SHIELDED WIRING TO BE 18GA THHN OR THWN. ALL OTHER NON SHIELDED WIRING TO BE 16GA THHN OR THWN UNLESS OTHERWISE INDICATED.
- ALL WIRE COLORS ARE ACCORDING TO ATTACHED TABLE
- ALL SHIELDED WIRE 22GA BELDEN 8761 (2 WIRE), OR 8771 (3 WIRE).
- ALL THERMOCOUPLE EXTENSION WIRE TYPE 20GA SHIELDED.

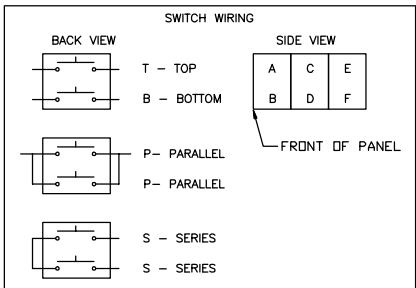
-  INDICATES PLC TERMINAL

- PARALLEL RUNS OF THERMOCOUPLE EXTENSION WIRE MUST BE OF THE SAME LENGTH AND POINT OF ORIGIN
- SYMBOL FOR WIRES LEAVING ENCLOSURE WITH AND WITHOUT TERMINAL BLOCK RESPECTIVELY

- USE FINGER SHROUDS ON ALL OUTSIDE BOUNDARY CONTACT BLOCKS CUTLER HAMMER P/N 10250T-A101

COLOR OF WIRE	COLOR SYMBOL	VOLTAGE	NUMBER RANGE
GREEN	G	GROUND	
WHITE	W	NEUTRAL	
GRAY SHLD		mADC, mVDC	1000-99099
YELLOW SHLD		K THERMOCPL	001-049
PURPLE SHLD		E THERMOCPL	001-049
BLACK SHLD		J THERMOCPL	001-049
GRAY SHLD		RTD	050-099
BROWN	B	5VDC	100-199
YELLOW	Y	*	200-299
BLUE	U	24-32VDC	300-399
PURPLE	P	32VAC	300-399
RED	R	120VAC	400-599
BLACK	K	208VAC	600-699
BLACK	K	480VAC	700-799
BLACK	K	4160VAC	800-849

\* POWERED FROM EXTERNAL SOURCE



REDUCED FROM ORIGINAL SIZE

SYSTEM		OP	HS
		T1311	1
OFF	ON	BLOCK	RUNG
A	O	X	T 181
B	O	X	B 359
C	O	X	T 366
D	O	X	B

BLOWER 301		OP	HS
		T21KB	2
HAND	OFF	AUTO	BLOCK
A	X	O	T 357
B	O	O	B 182
C	X	O	T
D	O	O	T2 B 145

BLOWER 302		OP	HS
		T21KB	3
HAND	OFF	AUTO	BLOCK
A	X	O	T 364
B	O	O	B 183
C	X	O	T
D	O	O	T2 B 148

BLOWER 303		OP	HS
		T21KB	4
HAND	OFF	AUTO	BLOCK
A	X	O	T 156
B	O	O	B 184
C	X	O	T
D	O	O	T2 B 152

BLOWER 304		OP	HS
		T21KB	5
HAND	OFF	AUTO	BLOCK
A	X	O	T 163
B	O	O	B 175
C	X	O	T
D	O	O	T2 B 159

SYSTEM INLET VALVE		OP	HS
		T22KB	6
TEST	CLOSED	AUTO	BLOCK
A	X	O	T 267
B	O	O	B 182
C	O	X	S 261
D	O	X	S 261

FLARE PILOT		OP	HS
		T20KB	7
TEST	AUTO	BLOCK	RUNG
A	X	O	T 204
B	O	X	B 186

FLARE SHUTDOWN VALVE		OP	HS
		T21KB	8
TEST	CLOSED	AUTO	BLOCK
A	X	O	T 229
B	O	O	B 186

COND SUMP PUMPS SELECT		OP	HS
		T20KB	9
	701	702	BLOCK
A	X	O	T 194
B	O	X	B 196

COND SUMP PUMPS		OP	HS
		T21KB	10
HAND	OFF	AUTO	BLOCK
A	X	O	T 196
B	O	O	B 190

COND DESTRUCT SYSTEM PUMP SELECT		OP	HS
		T20KB	11
	703	704	BLOCK
A	X	O	T 235
B	O	X	B 239

FLARE CONDENSATE DESTRUCT SYSTEM		OP	HS
		T46KB	12
HAND	PURGE	OFF	AUTO
A	X	O	O
B	O	X	O
C	O	O	X
D	O	O	X

ALARM/SHUTDOWN RESET		OP	HS
		T23B	13
OUT	IN	BLOCK	RUNG
A	O	X	T 143
B	O	X	B

EMERGENCY STOP			OP		HS 14
			*		
	OUT	IN	BLOCK		RUNG
A	X	O	T3	P	110
B	X	O		P	110
C	X	O	T3	P	110
D	X	O		P	110

• T-5J63-1X

PLC DIGITAL INPUT MODULE			DI 1
TERM	ADDRESS	DESCRIPTION	RUNG
A0	X150	ALARM SHUTDOWN RESET	143
A1	X151	BLOWER 301 SELECTED	145
A2	X152	BLOWER 301 VFD RUN	146
A3	X153	BLOWER 301 VFD FAULT	147
A4	X154	BLOWER 302 SELECTED	148
A5	X155	BLOWER 302 VFD RUN	149
A6	X156	BLOWER 302 VFD FAULT	150
A7	X157	BLOWER 303 SELECTED	152
B0	X160	BLOWER 303 RUN	156
B1	X161	BLOWER 303 OVERLOAD	158
B2	X162	BLOWER 304 SELECTED	159
B3	X163	BLOWER 304 RUN	163
B4	X164	BLOWER 304 OVERLOAD	165
B5	X165	FLR SHUTDOWN VALVE CLOSED	167
B6	X166	LOW AIR PRESSURE	169
B7	X167	SYSTEM AUTO ON	182

PLC DIGITAL INPUT MODULE			(D/2)
TERM	ADDRESS	DESCRIPTION	RUNG
A0	X170	FLARE AUTO ON	186
A1	X171	COND SUMP PUMP AUTO	190
A2	X172	COND SUMP PUMP 701 RUN	192
A3	X173	COND SUMP PUMP 702 RUN	198
A4	X174	FLARE PILOT ON	200
A5	X175	FLARE FLAME ON	216
A6	X176	FLARE FLAME ON	226
A7	X177	COND DESTRUCTION SYS AUTO	231
B0	X200	CDS PUMP 703 RUN	233
B1	X201	CDS PUMP 704 RUN	241
B2	X202	CDS PUMP 703 OVERLOAD	242
B3	X203	CDS PUMP 704 OVERLOAD	244
B4	X204	CDS PURGE ON	246
B5	X205		
B6	X206		
B7	X207		