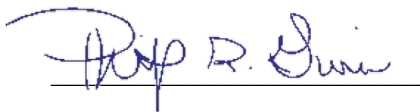


ADDENDUM NO. 1
SULLIVAN WATER TREATMENT PLANT REHABILITATION PROJECT – PHASE 2
EQUIPMENT BUILDING & CLEARWELL REHAB
DWSRF PROJECT FS010412-01
NEEL SCHAFFER PROJECT NS.17174.000

October 9, 2023

Replace the following drawing sheets with the attached: Drawing E-04, sheet 21 of 38 with drawing E-04R, sheet 21 of 38; Drawing E07, sheet 24 of 38 with drawing E-07R, sheet 24 of 38; Drawing E-08, sheet 25 of 38 with drawing E-08R, sheet 25 of 38 and Drawing E-18, sheet 34 of 38 with drawing E-18R, sheet 34 of 38. These revised drawings shall be added to the contract documents and shall carry the same weight as though they were included in the original contract documents:





10/09/23

Phillip R. Guin, P.E.

MAIN BREAKER SCHEDULE - MB-1														
PANEL TYPE: SQUARE 'D' ENCLOSED MOLDED CASE CIRCUIT BREAKER					AIC RATING: 30KAIC (MINIMUM)									
VOLTAGE: 277/480V-3P-4W					MOUNTING: SURFACE									
AMPS & TYPE: 250/3 MAIN BKR					LOCATION: SULLIVAN WELL									
FED FROM: UTILITY					FEEDER: 4-250MCM-3°C									
CIR. NO.	DESCRIPTION	VOLTS	P	HP	KW OR KVA	AMPS	BKR SIZE	LOCAL SAFETY SW. RATING	WIRE AND COND. SIZE	REMARKS				
1	ATS-1 (N)	277/480	3		94.1		250/3	-	4-250MCM & 1#4G-3°C					
TOTAL CONNECTED LOAD:						122.7 KVA	NOTES: 1. MAIN BREAKER SHALL BE SERVICE-ENTRANCE RATED. 2. PROVIDE EXTERNAL HANDLE/DISCONNECT.							
TOTAL DEMAND LOAD:						90.7 KVA								
TOTAL COMPUTED LOAD:						94.1 KVA								
						117.6 AMPS								

AUTOMATIC TRANSFER SWITCH SCHEDULE - ATS-1														
KAIC / WCR RATING: 30KAIC (MINIMUM)					NORMAL FED FROM: MB-1									
VOLTAGE: 277/480V-3P-4W					NORMAL FEEDER: SEE MAIN BREAKER SCHEDULE - MB-1									
AMP RATING: 250 AMP					EMERGENCY FED FROM: GEN-1									
LOCATION: SULLIVAN WELL					EMERGENCY FEEDER: SEE GENERATOR SCHEDULE - GEN-1									
LOAD SIDE FEEDER DESCRIPTION	VOLTS	P	HP	KW OR KVA	AMPS	BKR SIZE	LOCAL SAFETY SW. RATING	WIRE AND COND. SIZE	REMARKS					
MCC-1	277/480	3		94.1		250/3	-	4-250MCM & 1#4G-3°C						
EMERGENCY						122.7 KVA	NOTES:							
TOTAL CONNECTED LOAD:						122.7 KVA								
TOTAL DEMAND LOAD:						90.7 KVA								
TOTAL COMPUTED LOAD:						94.1 KVA								
						117.6 AMPS								
						117.6 AMPS								

GENERATOR SCHEDULE - GEN-1														
KW RATING: 125KW (MINIMUM) (SEE NOTE 1)					SKVA RATING (AT 35%V. DIP):									
VOLTAGE: 277/480V-3P-4W					SOUND ATTENUATION: CRITICAL SILENCER									
FUEL TYPE: NATURAL GAS					LOCATION: SULLIVAN WELL									
CIR. NO.	DESCRIPTION	VOLTS	P	HP	KW OR KVA	AMPS	BKR SIZE	SWITCH SIZE	WIRE AND COND. SIZE	REMARKS				
1	ATS-1 (E)	277/480	3		94.1		250/3		4-250MCM & 1#4G-3°C					
TOTAL CONNECTED LOAD:						122.7 KVA	NOTES: 1. REFER TO 'SULLIVAN WTP GENERATOR MINIMUM SIZING REQUIREMENTS' SUMMARY FOR ADDITIONAL REQUIREMENTS. 2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING REQUIREMENTS AND AVAILABILITY OF NATURAL GAS FUEL SERVICE (PER SPECIFICATION REQUIREMENTS) FOR THE GENERATOR PRIOR TO SUBMITTING SHOP DRAWINGS.							
TOTAL DEMAND LOAD:						90.7 KVA								
TOTAL COMPUTED LOAD:						94.1 KVA								
						117.6 AMPS								

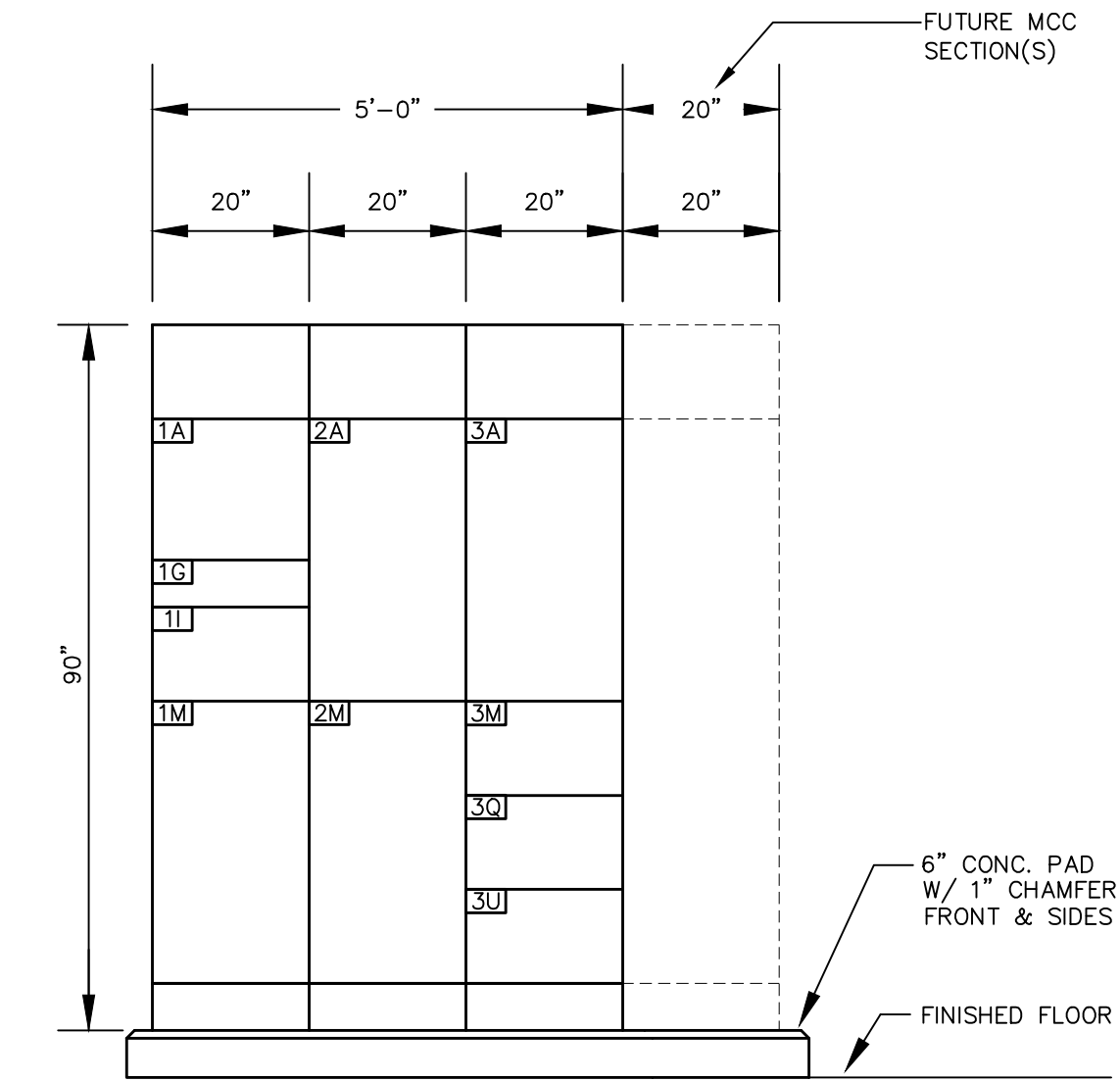
SULLIVAN WTP GENERATOR MINIMUM SIZING REQUIREMENTS				
GENERAL REQUIREMENTS:				
MINIMUM KW:	125KW			
MAXIMUM VOLTAGE DIP:	20%			
MAXIMUM FREQ. DIP:	10%			
ALTITUDE:	400FT			
AMBIENT TEMP:	120°F			
STEP LOADS:				
STEP #1:	25KVA 3PHASE LINEAR MISC. LOAD & (1) 1 1/2HP-3PHASE PUMP MOTOR - ACROSS THE LINE STARTER			
STEP #2:	(1) 15HP-3PHASE PUMP MOTOR - REDUCED VOLTAGE SOLID STATE - STARTING WITH 400% CURRENT LIMIT			
STEP #3:	(1) 15HP-3PHASE PUMP MOTOR - REDUCED VOLTAGE SOLID STATE - STARTING WITH 400% CURRENT LIMIT			
STEP #4:	(1) 30HP-3PHASE PUMP MOTOR - REDUCED VOLTAGE SOLID STATE - STARTING WITH 400% CURRENT LIMIT			
NOTES:				
1. GENERATOR SHALL BE SIZED TO ACCOMMODATE THE STEP LOADS WHILE MEETING THE GENERAL REQUIREMENTS LISTED.				
2. SUBMITTALS SHALL INCLUDE SIZING REPORT SHOWING COMPLIANCE WITH THESE GENERATOR SIZING REQUIREMENTS.				

PANELBOARD SCHEDULE - RP-1														
PANEL TYPE: SQUARE 'D' TYPE NQ					AIC RATING: 10KAIC (MINIMUM)									
VOLTAGE: 120/208V-3P-4W					MOUNTING: SURFACE									
AMPS & TYPE: 150/3 MAIN BKR					LOCATION: SULLIVAN WELL									
FED FROM: MCC-1					FEEDER: 4#1/0 & 1#6G-2°C									
CKT. NO.	NOTES	BKR	DESCRIPTION	WATTS	PHASE	WATTS	DESCRIPTION	BKR	NOTES	CKT. NO.	REMARKS			
1	-	20/1	EXTERIOR LIGHTING	400	A	2,210	ELEC. ROOM HVAC MINI-SPLIT	30/2	VC	22				
2	-	20/1	INTERIOR LIGHTING	360	B	2,210				23				
3	VC	20/1	HOIST	1,000	C	800	EXHAUST FAN	20/1	VC	24				
4	-	20/1	EXTERIOR RECEPTACLES	800	A	800	EXHAUST FAN	20/1	VC	25				
5	-	20/1	INTERIOR RECEPTACLES	800	B	1,250	CHLORINE ROOM HEATER	20/2	VC	26				
6	-	20/1	INTERIOR RECEPTACLES	600	C	1,250				27				
7	GFI	20/1	INTERIOR RECEPTACLES	600	A	1,666	CHEMICAL FEED ROOM HEATER	20/2	VC	28				
8	LON	20/1	CLEARWELL LOW LV. CUTOFF C.P.	100	B	1,666				29				
9	GFI	20/1	AERATOR HEATER	1,000	C	1,250	GEN-1 BLOCK HEATER	20/2	-	30				
10	-	20/1	PHOSPHATE CHEMICAL FEED PUMP	100	A	1,250			-	31				
11	-	20/1	CAUSTIC CHEMICAL FEED PUMP	100	B	500	GEN-1 BATTERY CHARGER	20/1	-	32				
12	-	20/1	SPARE		C	500	HEAT TRACING	20/1	GFI	33				
13	LON	20/1	CHLORINE LEAK ALARM DETECTOR	200	A		SPARE	20/1	-	34				
14	LON	20/1	CL2 VAC ALARM DETECTOR	200	B		SPARE	20/1	-	35				
15	LON	20/1	SCADARTU	500	C		SPARE	20/1	-	36				
16	-	20/1	CLEARWELL ULTRASONIC LVL XMTR	200	A			20/1	-	37				
17	-	20/1	CLEARWELL RECEPT	200	B			20/1	-	38				
18	-	20/1	CL2 CYLINDER WEIGHT (LVL) XMTR	200	C			20/1	-	39				
19	-	20/1	SPARE		A			20/1	-	40				
20	-	20/1	SPARE		B			20/1	-	41				
21	-	20/1	SPARE		C			20/1	-	42				
NOTES:				PH. A.	PH. B.	PH. C.	TOTAL CONNECTED LOAD:			22.7 KVA				
1. PROVIDE INTEGRAL 160KA (PER PHASE) SURGE PROTECTION DEVICE.				8,226	7,386	7,100	TOTAL DEMAND LOAD:			22.7 KVA				
							TOTAL COMPUTED LOAD:			63.1 AMPS				
										26.1 KVA				
										72.5 AMPS				

TRANSFORMER SCHEDULE								
MARK	SIZE (KVA)	DESCRIPTION	PRIMARY VOLTAGE & PHASE	SECONDARY VOLTAGE & PHASE	PANEL FED	MOUNTING	GROUND SIZE	REMARKS
T-1	45	DRY-TYPE	480V-3P-3W	120/208V-3P-4W	RP-1	6" CONCRETE PAD	#6	
TRANSFORMER SCHEDULE NOTES:								
1. EXACT TRANSFORMER LOCATIONS SHALL BE FIELD COORDINATED TO PROVIDE CODE-REQUIRED CLEARANCES AND WORKING SPACES AROUND TRANSFORMERS AND ADJACENT EQUIPMENT (SUCH AS PANELBOARDS).								
2. ALL TRANSFORMERS SHALL BE MOUNTED ON VIBRATION ISOLATORS PER SPECIFICATION REQUIREMENTS.								

PANELBOARD/EQUIPMENT SCHEDULE(S) KEYED NOTES LEGEND	
KEYED NOTE	DESCRIPTION
GFI	INDICATED BREAKER SHALL BE TYPE GFI.
GFI	INDICATED BREAKER SHALL BE TYPE GFI—EPD TYPE (30mA TRIP).
LON	INDICATED BREAKER SHALL BE PROVIDED WITH LOCK—ON HARDWARE.
VC	CONTRACTOR SHALL VERIFY REQUIRED BREAKER & CIRCUITRY REQUIREMENTS OF INDICATED CIRCUIT WITH EQUIPMENT SUPPLIER PRIOR TO SUBMITTING SHOP DRAWINGS OR ROUGHING IN CONDUITS.

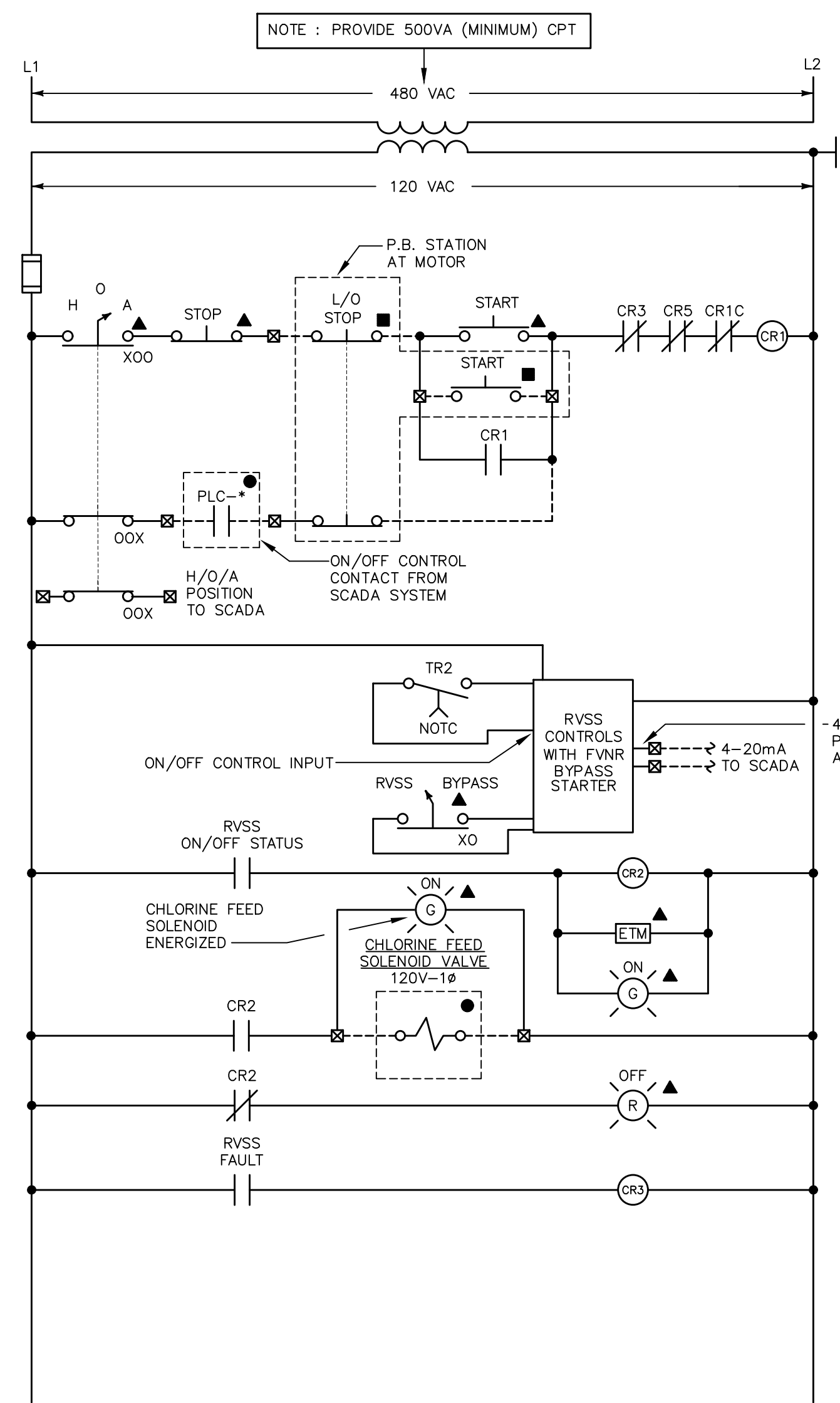
MOTOR CONTROL CENTER SCHEDULE - MCC-1															
MCC TYPE: SQUARE 'D' MODEL 6 MCC					AIC RATING: 30KAIC (MINIMUM)										
VOLTAGE: 277/480V-3P-4W					LOCATION: SULLIVAN WELL WTP										
MAIN AMPS: 600 AMP - MLO					REMARKS:										
FED FROM: ATS-1					FEEDER: SEE AUTOMATIC TRANSFER SWITCH SCHEDULE - ATS-1										
UNIT NO.	NAMEPLATE DESCRIPTION	MCC UNIT TYPE	ELECT. EQUIP. CHARACTERISTICS				STARTER NEMA OR AMPERAGE RATING	CIR. BKR. OR MCP	ELEM. DIAG. NO.	LOCAL SAFETY SWITCH RATING	WIRE AND COND. SIZE	REMARKS			
			V	P	HP	KW OR KVA	AMPS								
1 A	MAIN LUGS	SEE ABOVE	277/480	3							SEE AUTOMATIC TRANSFER SWITCH SCHEDULE - ATS-1				
1 G	MCC SURGE PROTECTION DEVICE	240KA (PER PHASE) SURGE PROTECTION DEVICE	277/480	3											
1 I	MCC POWER METER	SQUARE D #PM563 WITH DOOR-MOUNTED DISPLAY AND ETHERNET COMMUNICATION CARD	277/480	3											
1 M	WELL PUMP	COMBINATION REDUCED VOLTAGE SOFT STARTER (RVSS) WITH MCP & FVNR BYPASS STARTER	480	3	15			27 AMPS	MCP PER MANUF.	1	-	3#8 & 1#10G-1" C			
2 A	HIGH SERVICE PUMP NO. 1	COMBINATION REDUCED VOLTAGE SOFT STARTER (RVSS) WITH MCP	480	3	15			27 AMPS	MCP PER MANUF.	2	-	3#8 & 1#10G-1" C			
2 M	HIGH SERVICE PUMP NO. 2	COMBINATION REDUCED VOLTAGE SOFT STARTER (RVSS) WITH MCP	480	3	30			52 AMPS	MCP PER MANUF.	2	-	3#4 & 1#6G-1 1/4" C			
3 A	HIGH SERVICE PUMP NO. 3	COMBINATION REDUCED VOLTAGE SOFT STARTER (RVSS) WITH MCP	480	3	30			52 AMPS	MCP PER MANUF.	2	-	3#4 & 1#6G-1 1/4" C			
3 M	AERATOR BLOWER	COMBINATION FVNR STARTER WITH MCP	480	3	1 1/2				NEMA 1	MCP PER MANUF.	3	-	3#12 & 1#12G-3/4" C		
3 Q	RP-1 (45 KVA X-FORMER)	80/3 BREAKER	480	3		26.1					-	3#4 & 1#6G-1 1/4" C			
3 U	SPACE	PROVISIONS FOR FUTURE PLUG-IN UNITS	277/480	3							-/3				
TOTAL CONNECTED LOAD:							122.7 KVA	NOTES:							
TOTAL DEMAND LOAD:							90.7 KVA								
TOTAL COMPUTED LOAD:							94.1 KVA								
							117.6 AMPS								



MCC-1 ELEVATION
SCALE : 1/2" = 1'-0"

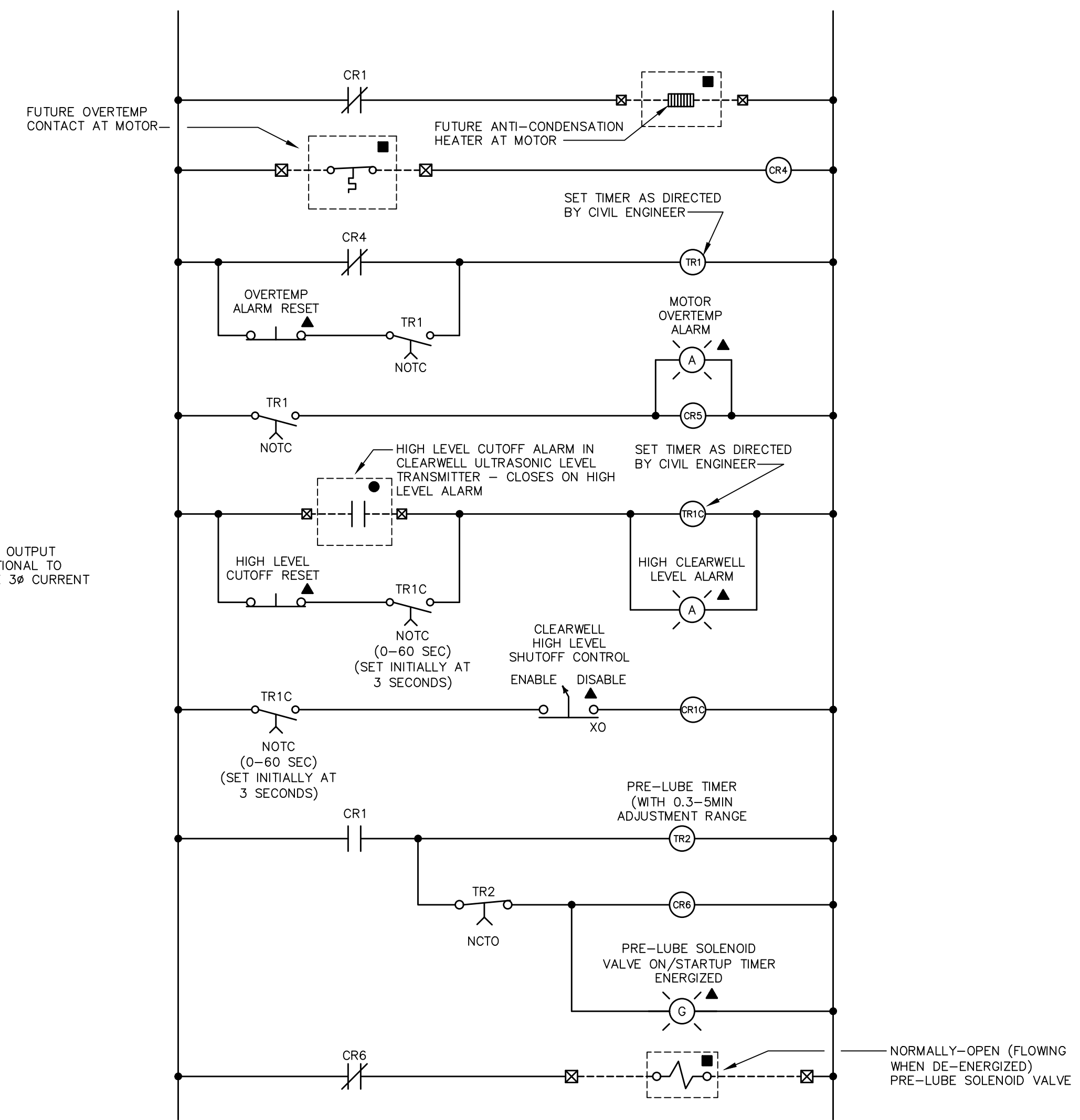
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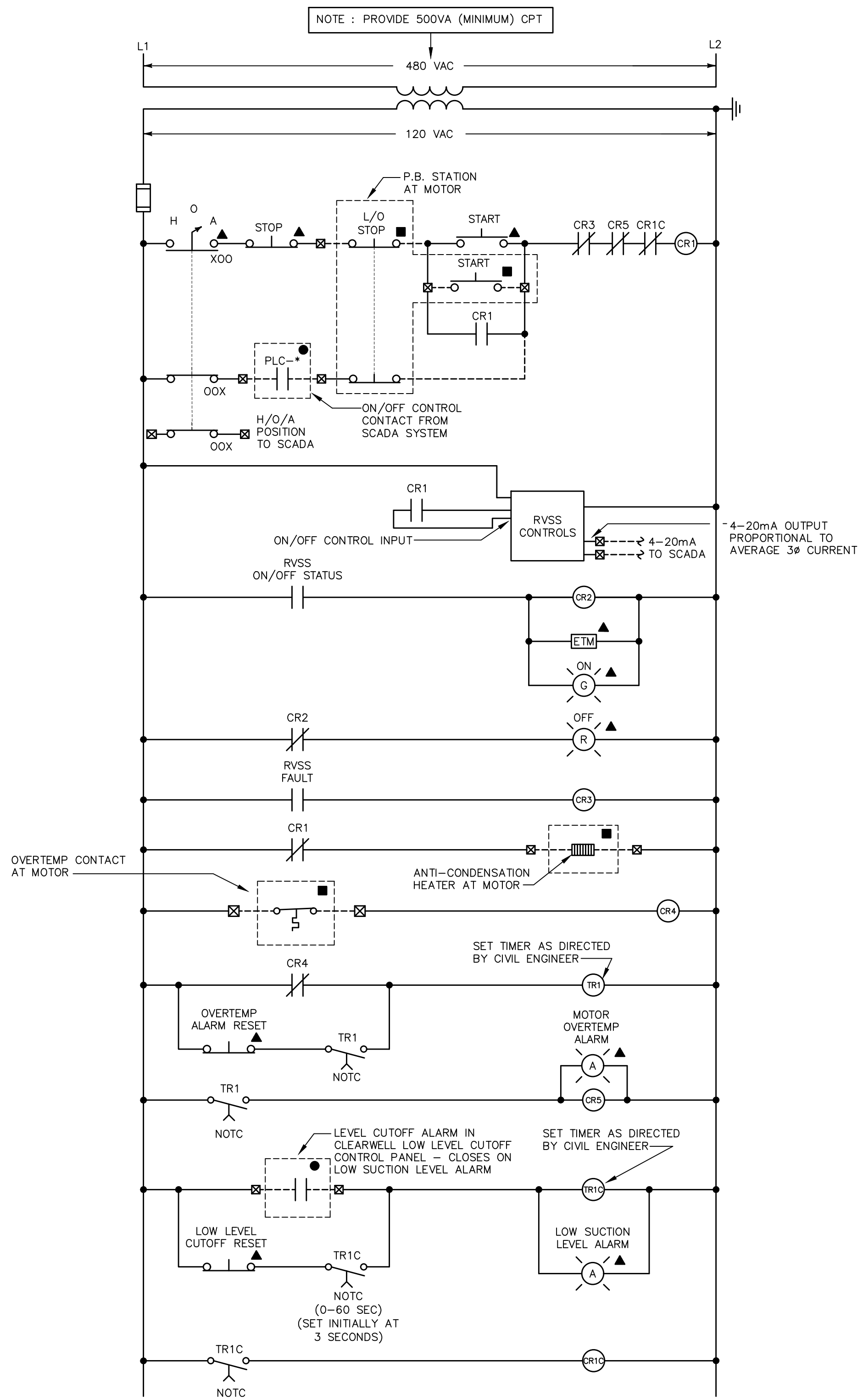
ELEMENTARY DIAGRAM LEGEND	
	PUSHBUTTON - START - NORMALLY OPEN - MOMENTARY CONTACT.
	PUSHBUTTON - STOP - NORMALLY CLOSED - MOMENTARY CONTACT.
	PUSHBUTTON - EMERGENCY STOP - NORMALLY CLOSED - MAINTAINED CONTACT - MUSHROOM HEAD.
	SELECTOR SWITCH - HAND-OFF-AUTOMATIC - MAINTAINED CONTACT - "XOO" INDICATES THAT CONTACT IS ONLY CLOSED IN THE FIRST (HAND) POSITION (MAY BE USED WITH OTHER COMBINATIONS OF "X" & "O").
	SELECTOR SWITCH - ON-OFF - MAINTAINED CONTACT - "XO" INDICATES THAT CONTACT IS ONLY CLOSED IN THE FIRST (ON) POSITION (MAY BE USED WITH OTHER COMBINATIONS OF "X" & "O").
	MOTOR STARTER COIL.
	BYPASS MOTOR STARTER COIL.
	OVERLOAD RELAY CONTACT.
	CONTROL RELAY COIL.
	CONTROL CONTACT - NORMALLY OPEN.
	CONTROL CONTACT - NORMALLY CLOSED.
	INDICATOR LIGHT - COLOR AS SHOWN.
	CONTROL TRANSFORMER.
	ELAPSED TIME METER.
	DEVICE LOCATED ON STARTER DOOR.
	DEVICE LOCATED ADJACENT TO MOTOR.
	DEVICE LOCATED REMOTE - SEE PLAN.
	TERMINAL BLOCK WITHIN STARTER UNIT.
	FLOAT SWITCH - CLOSING ON RISING LEVEL.
	FLOAT SWITCH - CLOSING ON FALLING LEVEL.
	PRESSURE SWITCH - CLOSING ON INCREASE PRESSURE.
	PRESSURE SWITCH - CLOSING ON DECREASE PRESSURE.
	LIMIT SWITCH - NORMALLY OPEN - HELD CLOSED.
	LIMIT SWITCH - NORMALLY CLOSED - HELD OPEN.
	TIME DELAY RELAY COIL.
	TIME DELAY RELAY CONTACT - NORMALLY CLOSED, TIME OPEN.
	TIME DELAY RELAY CONTACT - NORMALLY OPEN, TIME CLOSED.
	TIME DELAY RELAY CONTACT - NORMALLY OPEN, TIME OPEN.
	TIME DELAY RELAY CONTACT - NORMALLY CLOSED, TIME CLOSED.
	SOLENOID VALVE.
	THERMOSTAT - NORMALLY CLOSED, OPENS ON HIGH TEMP.
	THERMOSTAT - NORMALLY OPEN, CLOSING ON HIGH TEMP.
	ALARM HORN.



	CR2 RVSS ON/OFF STATUS TO SCADA		CR3 RVSS ALARM STATUS TO SCADA		CR2 AERATOR ON/OFF CONTROL CONTACT		CR2 CAUSTIC METERING PUMP ON/OFF CONTROL CONTACT
	CR2 SPARE ON/OFF STATUS		CR5 MOTOR OVERTEMP ALARM STATUS TO SCADA		CR2 PHOSPHATE METERING PUMP ON/OFF CONTROL CONTACT		TR1C HIGH CLEARWELL LEVEL ALARM TO SCADA

ELEMENTARY DIAGRAM NO. 1
WELL PUMP RVSS STARTER: MCC-1



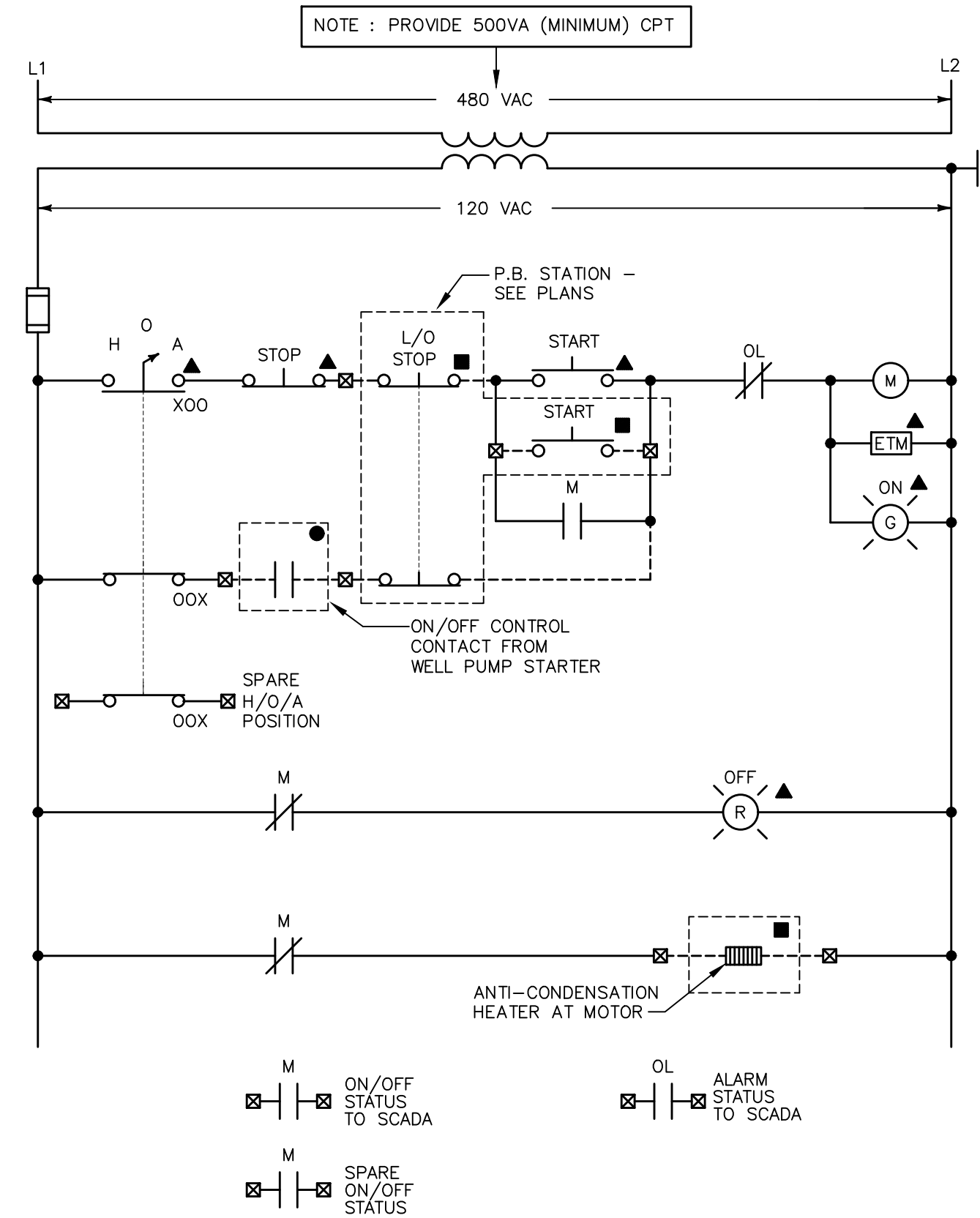


ELEMENTARY DIAGRAM NO. 2

HIGH SERVICE PUMP NO. 1 RVSS STARTER: MCC-1

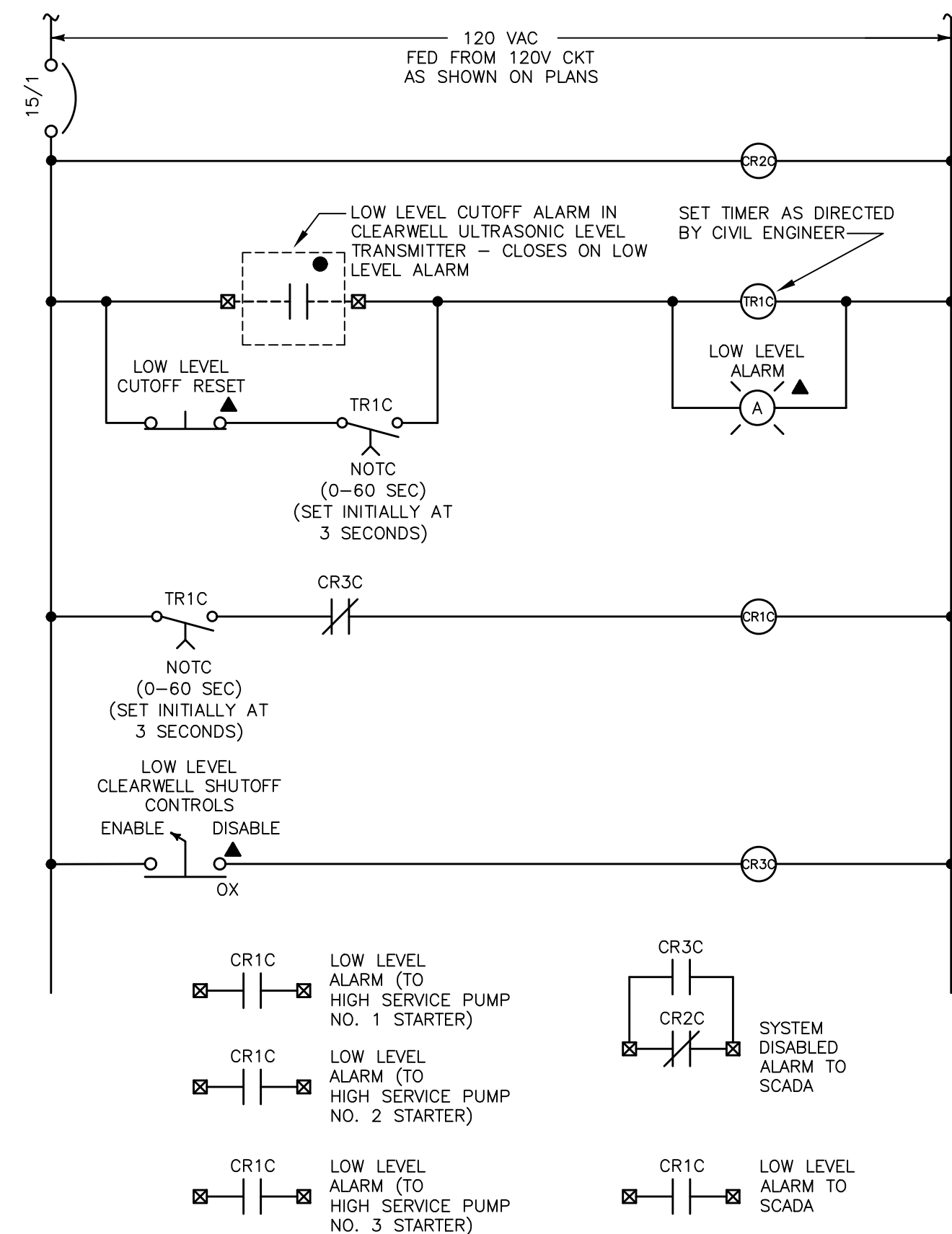
HIGH SERVICE PUMP NO. 2 RVSS STARTER: MCC-1

HIGH SERVICE PUMP NO. 3 RVSS STARTER: MCC-1



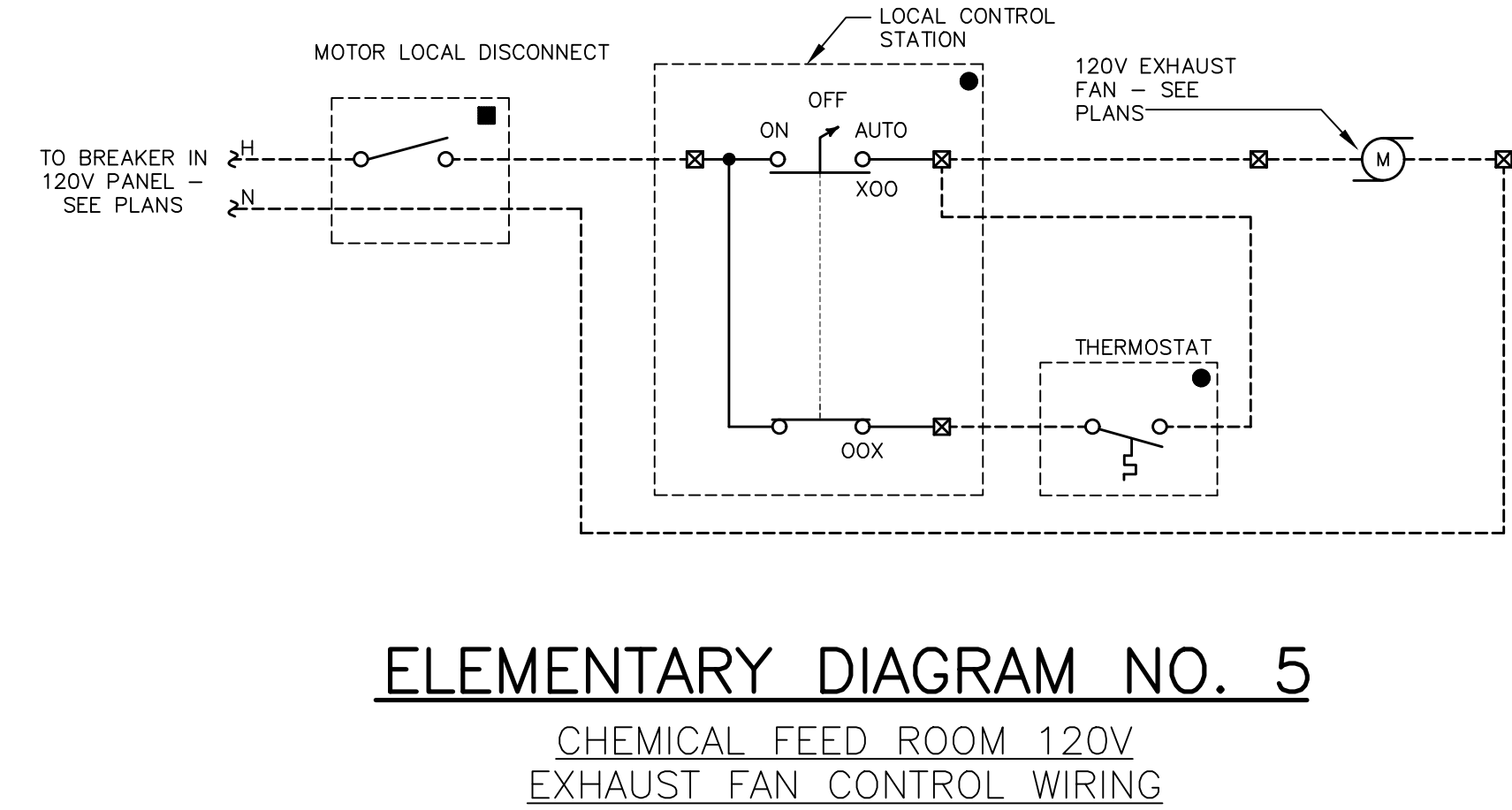
ELEMENTARY DIAGRAM NO. 3

AERATOR BLOWER STARTER: MCC-1



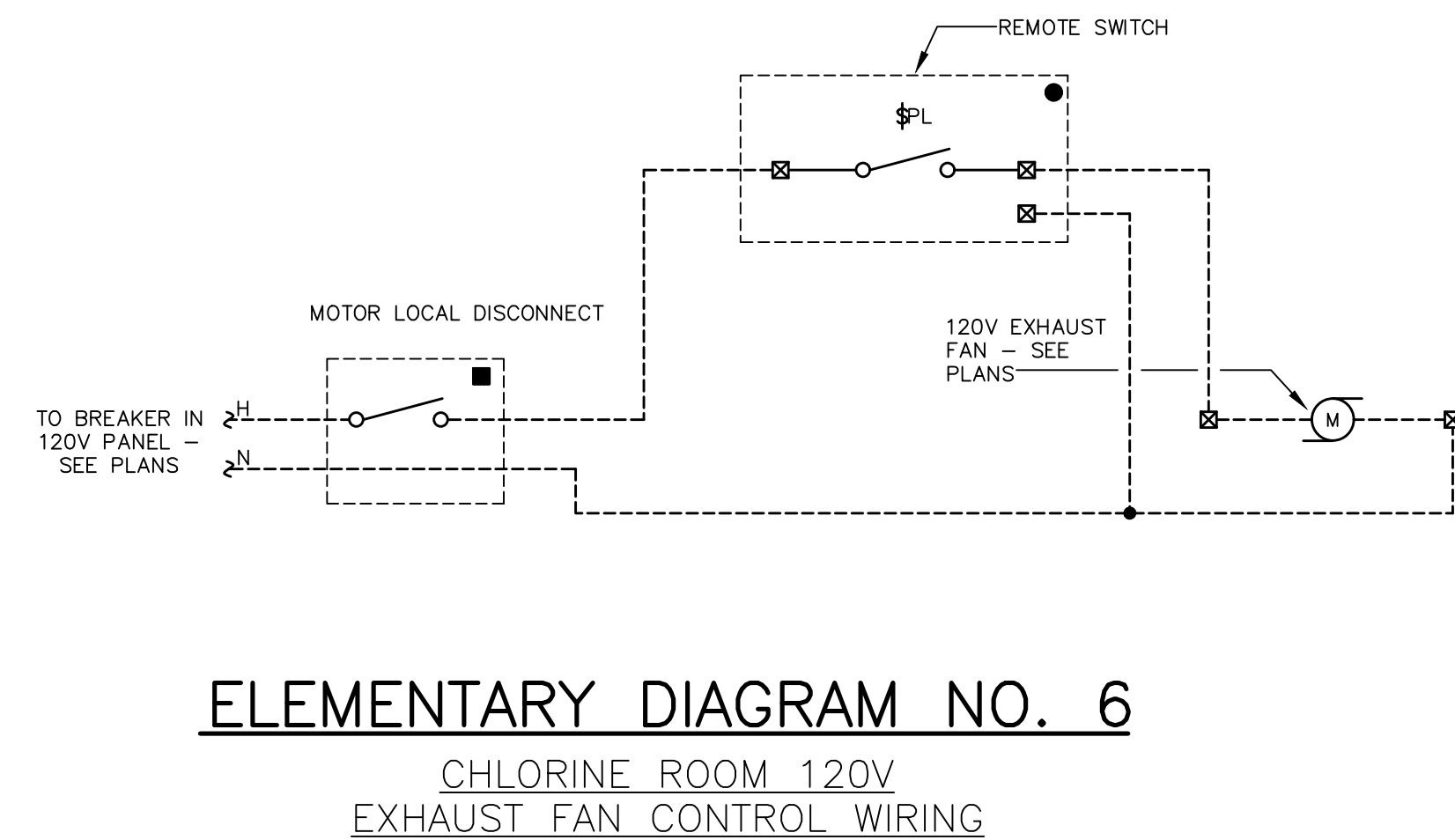
ELEMENTARY DIAGRAM NO. 4

CLEARWELL LOW LEVEL CUTOFF CONTROL PANEL
(SEPARATELY-ENCLOSED CONTROL PANEL)



ELEMENTARY DIAGRAM NO. 5

CHEMICAL FEED ROOM 120V
EXHAUST FAN CONTROL WIRING



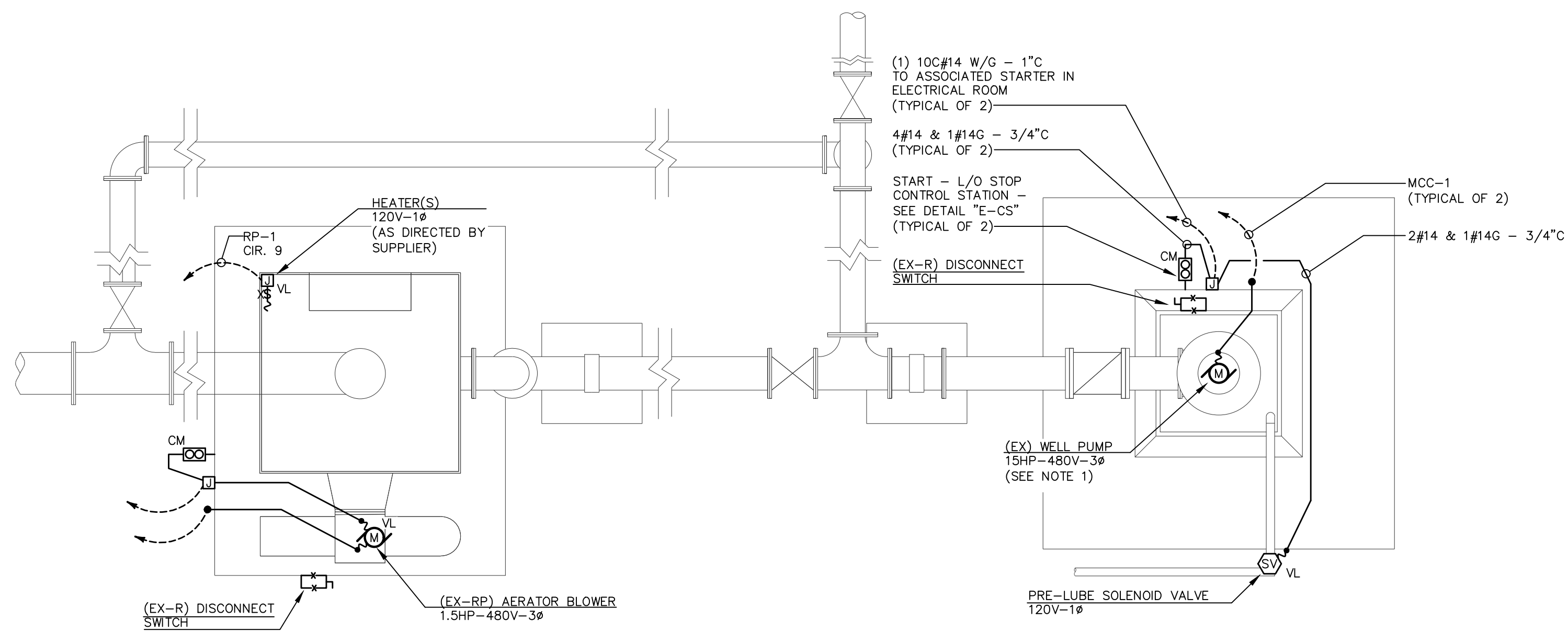
ELEMENTARY DIAGRAM NO. 6

CHLORINE ROOM 120V
EXHAUST FAN CONTROL WIRING



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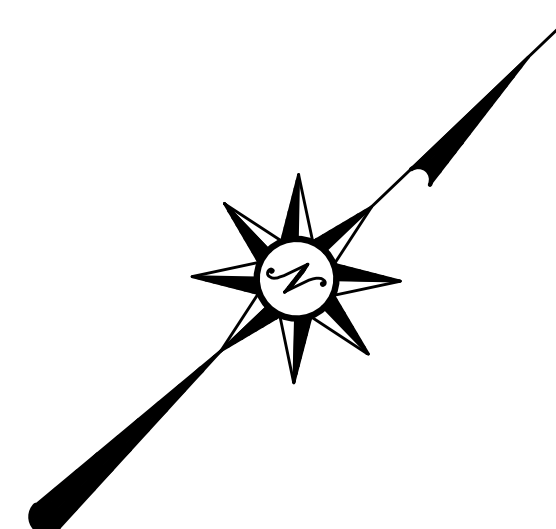
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SULLIVAN WTP AERATOR & WELL PUMP ELECTRICAL PLAN
 SCALE : 1/2" = 1'-0"

NOTES THIS SHEET ONLY

1. CONTRACTOR SHALL VERIFY EXISTING MOTOR HP/V/Ø RATINGS PRIOR TO SUBMITTING MCC SHOP DRAWINGS OR ROUGH-IN, AND SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES FOUND WITH THESE PLANS.



NEEL-SCHAFFER
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 Birmingham, Alabama 35243
 (205) 397-3800
 (205) 397-3800 (FAX)



SULLIVAN WTP AER. & WELL PUMP ELEC. PLAN
 GORDO WATER, GAS, AND SEWER BOARD
 SULLIVAN WATER TREATMENT PLANT
 REHABILITATION, PHASE 2 - EQUIPMENT
 BUILDING & CLEARWELL REHAB
 DWSRF PROJECT #FS010412-01
 PICKENS COUNTY

DATE	REVISION	CAD FILE:	RGN	DATE:	JOB NO.:
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E-18
 R
 SHEET NO. 34 OF 38