



CALICO PHASE 2 ADVANCE WASTEWATER TREATMENT PROJECT

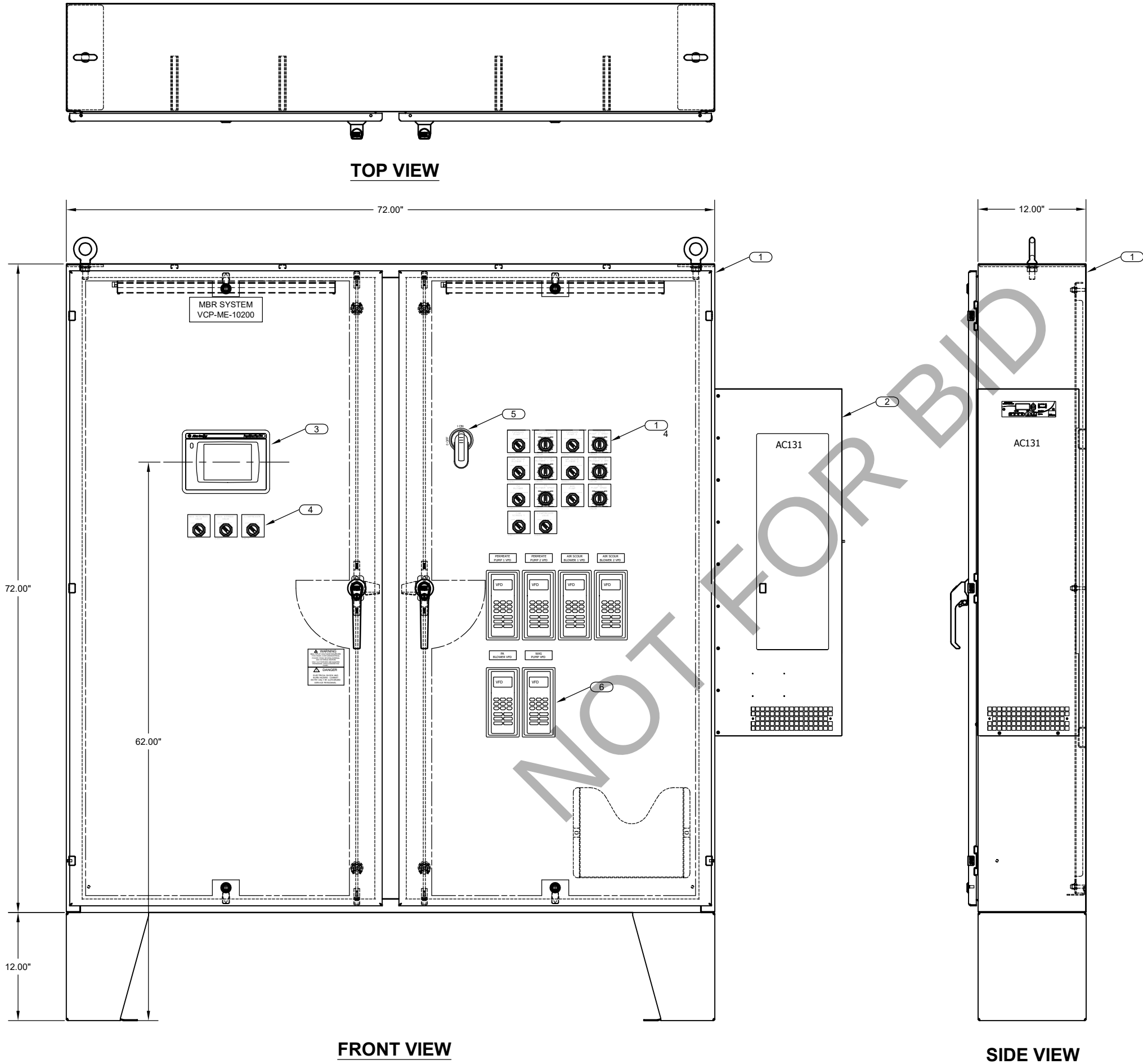
FOR

**CALICO GHOST TOWN REGIONAL PARK
YERMO, CALIFORNIA
PROJECT NO.: 30.30.0074**

WARNING

ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL DESIGN PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING THE PROJECT.

5/25/2021 C:\USERS\MICHAEL JOHNSON\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\998 INSTRUMENTATION\998-1302.DWG



NOTES

- 1 NEMA 4X STAINLESS STEEL FREE STANDING CONTROL PANEL. DIMENSIONS SHOWN ARE AN APPROXIMATION, ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE VENDOR AND THROUGH THE SUBMITTAL PROCESS.
- 2 NEMA 4X AIR CONDITIONER WITH HEATER OPTION.
- 3 NEMA 4X ALLEN-BRADLEY PANEL-VIEW TOUCH SCREEN.
- 4 NEMA 4X PILOT DEVICES.
- 5 NEMA 4X MAIN PANEL DISCONNECT.
- 6 NEMA 4X VFD KEYPADS.



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		DRAWN		CHECKED		REVISIONS	
NO.	DATE	DESIGN	DATE	DRAWN	DATE	MPJ	DCL	MPJ	MPJ		
B	06/01/2021										

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
INSTRUMENTATION - PLC DRAWINGS
VCP-ME-10200 PANEL LAYOUT

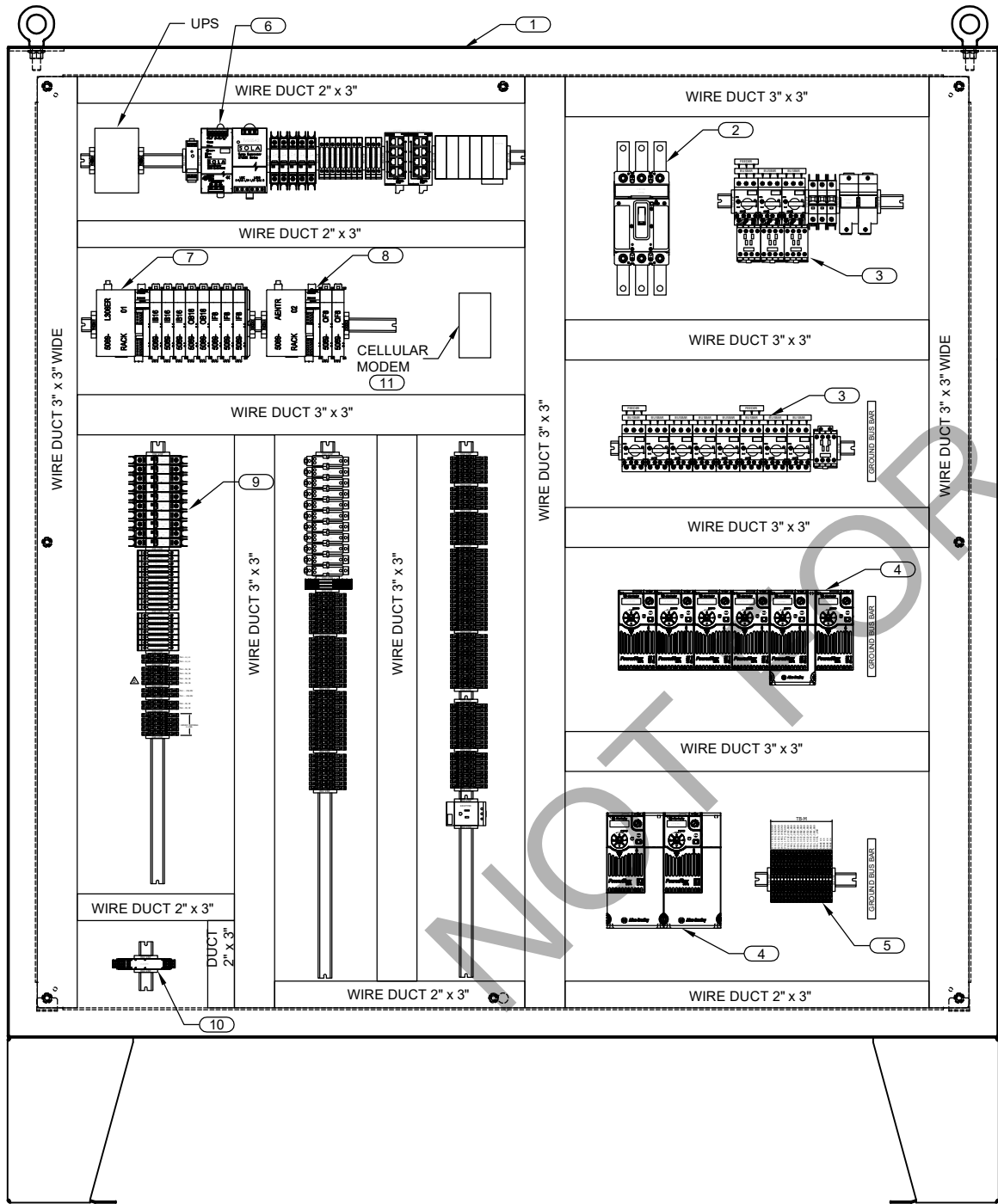
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Nelson Antk 6/16/21 DATE
PROJECT ENGINEER DATE
RECOMMENDED DATE

DRAWING NO.
I302
SHEET 43 of 58



NOTES

- PANEL SUBPANEL. DIMENSIONS SHOWN ARE AN APPROXIMATION. ACTUAL DIMENSION SHALL BE DETERMINED BY THE VENDOR AND THROUGH THE SUBMITTAL PROCESS.
- PANEL MAIN CIRCUIT BREAKER AND INCOMING POWER TERMINATION LOCATION.
- 480V POWER DISTRIBUTION AND MOTOR CONTROLLERS AS REQUIRED.
- 480V VFD'S AS REQUIRED.
- MOTOR TERMINATION LOCATION AS REQUIRED.
- 120VAC AND 24VDC CONTROL POWER. PANEL SHALL BE SUPPLIED WITH SURGE PROTECTION, AC UPS WITH 12AH BATTERY PACK, ETHERNET SWITCHES, BREAKERS AND FUSING AS REQUIRED.
- PLC RACK 1 ASSEMBLY THAT CONSISTS OF A COMPACLOGIX 5069-L306ER PROCESSOR AND 8 I/O MODULES AS SHOWN ON THE I/O LIST ON SHEET I801.
- PLC RACK 2 ASSEMBLY THAT CONSISTS OF A COMPACLOGIX 5069-AENTR ADAPTER AND 2 I/O MODULES AS SHOWN ON THE I/O LIST ON SHEET I801.
- I/O POWER DISTRIBUTION AND TERMINATION BLOCKS.
- INTRINSICALLY SAFE BARRIERS FOR INTRINSICALLY SAFE CIRCUITS AS REQUIRED.
- CELLULAR MODEM PROVIDED BY OWNER.



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REVISIONS			

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CALICO GHOST TOWN PH 2 AWWT
INSTRUMENTATION - PLC DRAWINGS
PLC-10200 SUB-PANEL LAYOUT

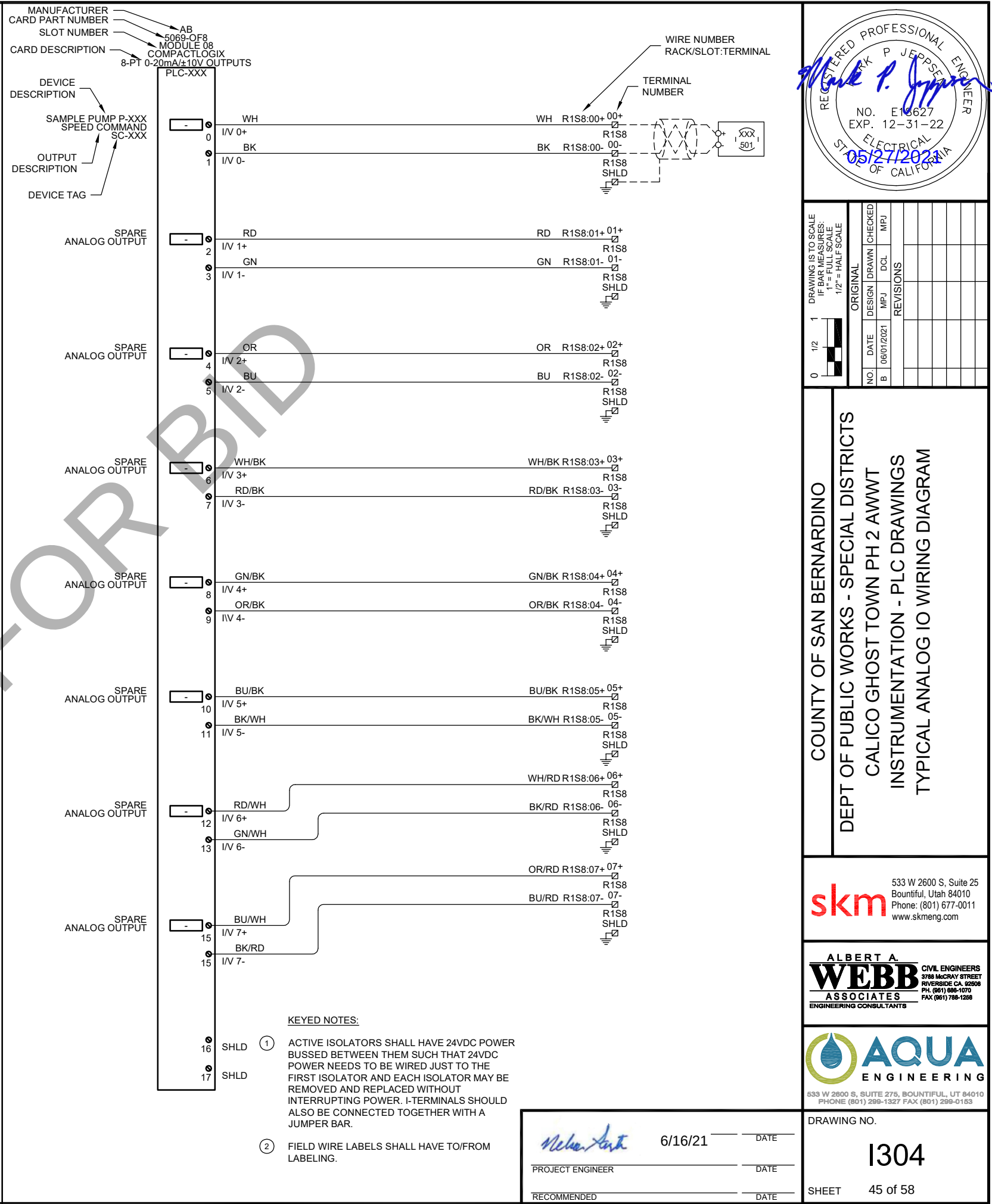
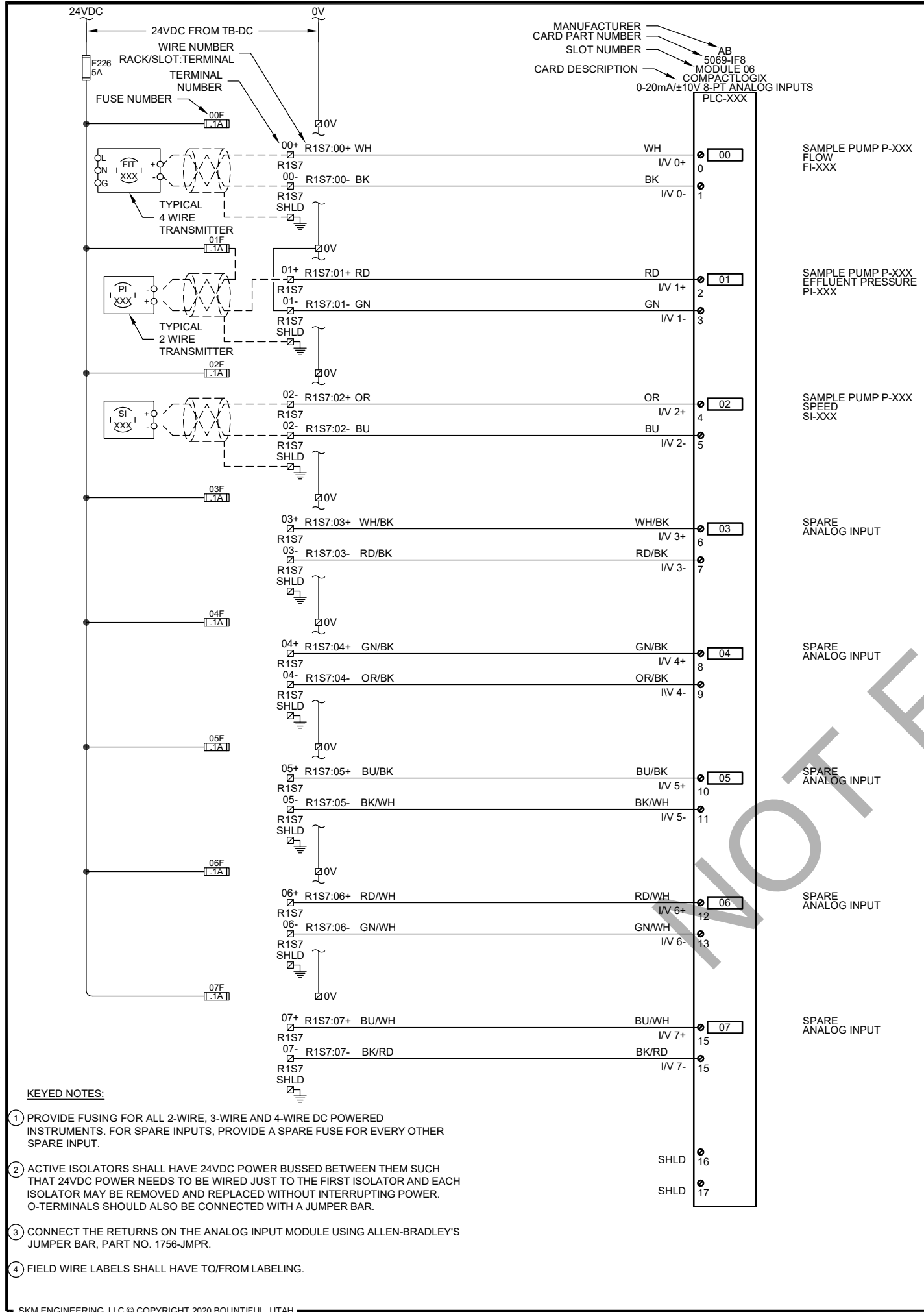
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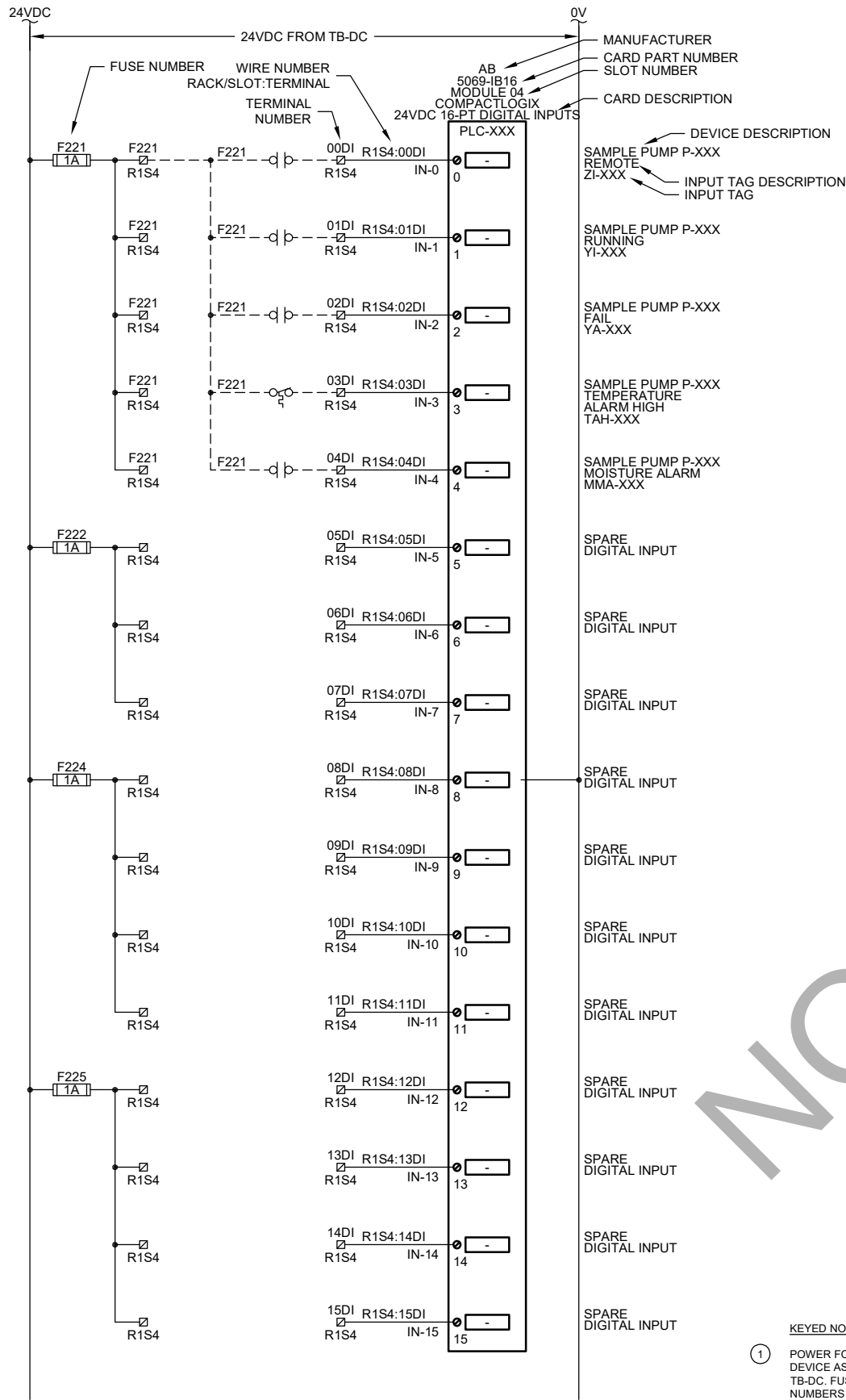
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Nelson Ant 6/16/21 _____ DATE
PROJECT ENGINEER _____ DATE
RECOMMENDED _____ DATE

DRAWING NO.
I303
SHEET 44 of 58





TYPICAL 16PT 24VDC DIGITAL INPUTS
WIRING DIAGRAM



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		DRAWN		CHECKED		REVISIONS	
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B	06/01/2021										

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
INSTRUMENTATION - PLC DRAWINGS
TYPICAL DIGITAL INPUTS WIRING DIAGRAM

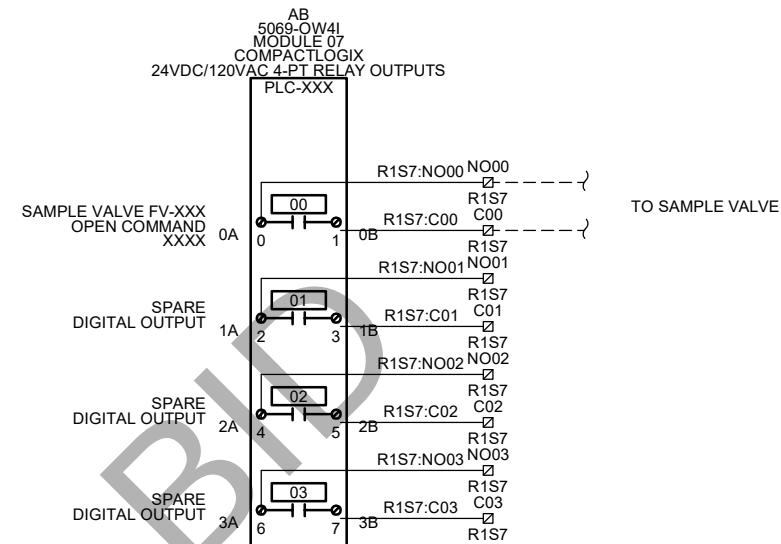
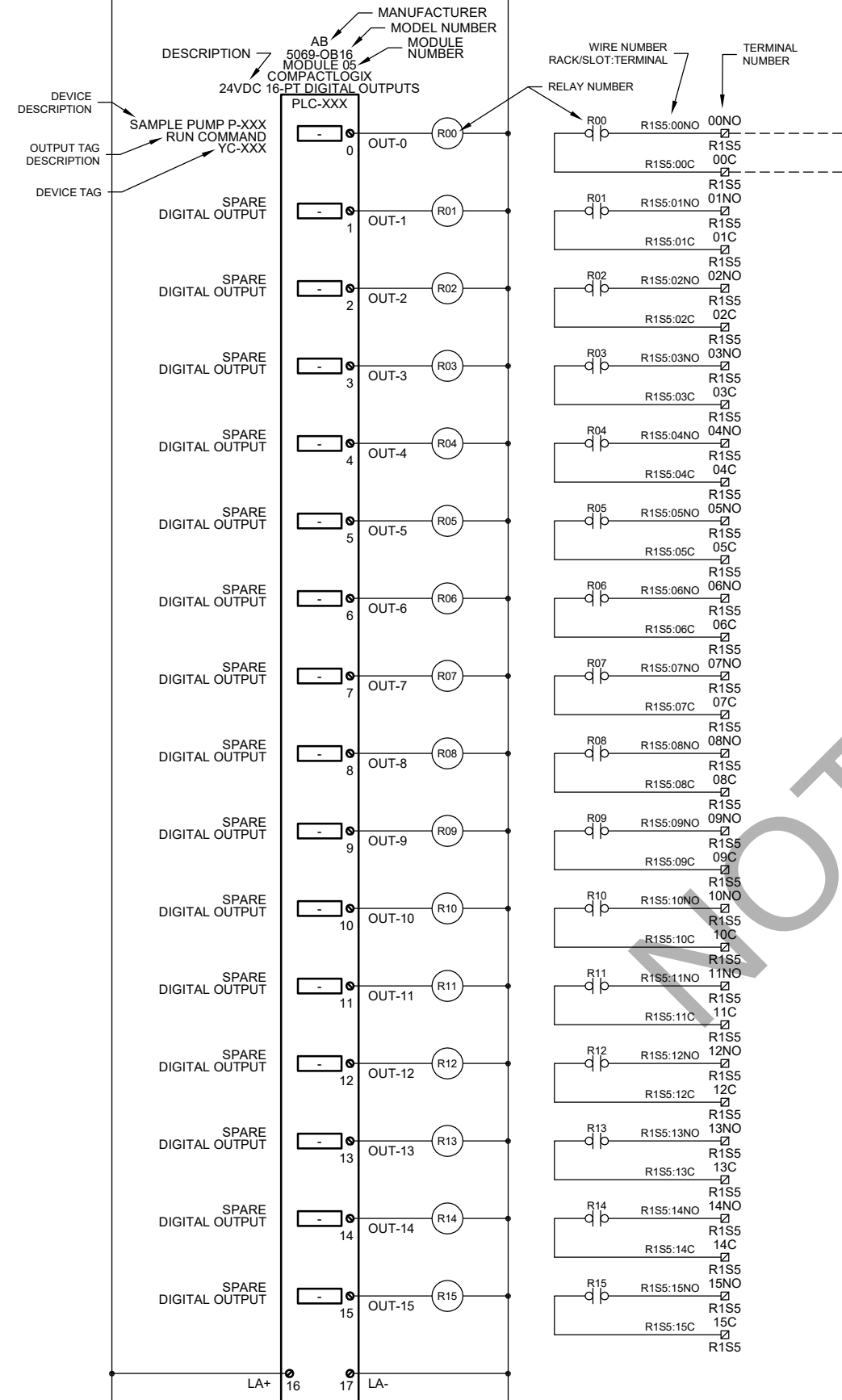
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6/16/21 DATE
PROJECT ENGINEER
RECOMMENDED

DRAWING NO.
I305
SHEET 46 of 58



KEYED NOTES:

① FIELD WIRE LABELS SHALL HAVE TO/FROM LABELING.

[illegible]

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWWT
INSTRUMENTATION - PLC DRAWINGS
TYPICAL DIGITAL OUTPUTS WIRING DIAGRAM

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DRAWING NO.

1306

SHEET 47 of 58

	6/16/21	DATE
PROJECT ENGINEER		DATE
RECOMMENDED		DATE

TYPE	SIGNAL	LOOP POWERED	RACK:SLOT:POINT	TAGNAME	DESCRIPTION	P&ID SHEET	STATUS
DI	24VDC		1:1:00	LAH-10102	EQ TANK LEVEL ALARM HIGH	I101	NEW
DI	24VDC		1:1:01	LAL-10102	EQ TANK LEVEL ALARM LOW	I101	NEW
DI	24VDC		1:1:02	ZI-10110	INFLUENT PUMP 1 REMOTE	I101	NEW
DI	24VDC		1:1:03	YI-10110	INFLUENT PUMP 1 RUNNING	I101	NEW
DI	24VDC		1:1:04	YA-10110	INFLUENT PUMP 1 FAULT	I101	NEW
DI	24VDC		1:1:05	ZI-10120	INFLUENT PUMP 2 REMOTE	I101	NEW
DI	24VDC		1:1:06	YI-10120	INFLUENT PUMP 2 RUNNING	I101	NEW
DI	24VDC		1:1:07	YA-10120	INFLUENT PUMP 2 FAULT	I101	NEW
DI	24VDC		1:1:08	FQI-10130	INFLUENT PUMPS FLOW TOTAL	I101	NEW
DI	24VDC		1:1:09	ZI-41110	MIXING PUMP REMOTE	I101	NEW
DI	24VDC		1:1:10	YI-41110	MIXING PUMP RUNNING	I101	NEW
DI	24VDC		1:1:11	YA-41110	MIXING PUMP FAULT	I101	NEW
DI	24VDC		1:1:12	TAH-41110	MIXING PUMP TEMP ALARM HIGH	I101	NEW
DI	24VDC		1:1:13	MMA-41110	MIXING PUMP MOISTURE ALARM	I101	NEW
DI	24VDC		1:1:14		INSTALLED SPARE		
DI	24VDC		1:1:15		INSTALLED SPARE		
DI	24VDC		1:2:00	LAH-10203	FINE SCREEN LEVEL ALARM HIGH	I102	NEW
DI	24VDC		1:2:01	ZI-10210	FINE SCREEN REMOTE	I102	NEW
DI	24VDC		1:2:02	YI-10210	FINE SCREEN RUNNING	I102	NEW
DI	24VDC		1:2:03	LAL-20123	MEMBRANE LEVEL LOW ALARM	I102	NEW
DI	24VDC		1:2:04	ZI-23240	AIR EXTRACTION COMPRESSOR REMOTE	I102	NEW
DI	24VDC		1:2:05	YI-23240	AIR EXTRACTION COMPRESSOR RUNNING	I102	NEW
DI	24VDC		1:2:06	ZI-23242	AIR EXTRACTION VALVE REMOTE	I102	NEW
DI	24VDC		1:2:07	ZI-23310	PERMEATE PUMP 1 REMOTE	I102	NEW
DI	24VDC		1:2:08	YI-23310	PERMEATE PUMP 1 RUNNING	I102	NEW
DI	24VDC		1:2:09	ZI-23320	PERMEATE PUMP 2 REMOTE	I102	NEW
DI	24VDC		1:2:10	YI-23320	PERMEATE PUMP 2 RUNNING	I102	NEW
DI	24VDC		1:2:11	LAH-23341	PERMEATE TANK LEVEL ALARM HIGH	I102	NEW
DI	24VDC		1:2:12	LAL-23341	PERMEATE TANK LEVEL ALARM LOW	I102	NEW
DI	24VDC		1:2:13		INSTALLED SPARE		
DI	24VDC		1:2:14		INSTALLED SPARE		
DI	24VDC		1:2:15		INSTALLED SPARE		
DI	24VDC		1:3:00	ZI-21201	WAS PUMP REMOTE	I103	NEW
DI	24VDC		1:3:01	YI-21201	WAS PUMP RUNNING	I103	NEW
DI	24VDC		1:3:02	ZI-21211	WAS STORAGE VALVE REMOTE	I103	NEW
DI	24VDC		1:3:03	ZSO-21211	WAS STORAGE TO FINE SCREEN OPEN	I103	NEW
DI	24VDC		1:3:04	ZSC-21211	WAS STORAGE TO FINE SCREEN CLOSED	I103	NEW
DI	24VDC		1:3:05	ZI-21212	WAS RE-SCREEN VALVE REMOTE	I103	NEW
DI	24VDC		1:3:06	ZSO-21212	WAS RE-SCREENING TO FINE SCREEN OPEN	I103	NEW
DI	24VDC		1:3:07	ZSC-21212	WAS RE-SCREENING TO FINE SCREEN CLOSED	I103	NEW
DI	24VDC		1:3:08	ZI-23401	AIR SCOUR BLOWER 1 REMOTE	I103	NEW
DI	24VDC		1:3:09	YI-23401	AIR SCOUR BLOWER 1 RUNNING	I103	NEW
DI	24VDC		1:3:10	ZI-23411	AIR SCOUR BLOWER 2 REMOTE	I103	NEW
DI	24VDC		1:3:11	YI-23411	AIR SCOUR BLOWER 2 RUNNING	I103	NEW
DI	24VDC		1:3:12	ZI-23421	PROCESS AIR BLOWER REMOTE	I103	NEW
DI	24VDC		1:3:13	YI-23421	PROCESS AIR BLOWER RUNNING	I103	NEW
DI	24VDC		1:3:14	FAH-10201	EMERGENCY EYEWASH FLOW ALARM HIGH	I103	NEW
DI	24VDC		1:3:15		INSTALLED SPARE		
DO	RELAY		1:4:00	YC-10110	INFLUENT PUMP 1 START COMMAND	I101	NEW
DO	RELAY		1:4:01	YC-10120	INFLUENT PUMP 2 START COMMAND	I101	NEW
DO	RELAY		1:4:02	YC-41110	MIXING PUMP START COMMAND	I101	NEW
DO	RELAY		1:4:03	YC-10210	FINE SCREEN START COMMAND	I102	NEW
DO	RELAY		1:4:04	YC-23240	AIR EXTRACTION COMPRESSOR START COMMAND	I102	NEW
DO	RELAY		1:4:05	ZCO-23242	AIR EXTRACTION VALVE OPEN COMMAND	I102	NEW
DO	RELAY		1:4:06	YC-23310	PERMEATE PUMP 1 START COMMAND	I102	NEW
DO	RELAY		1:4:07	YC-23320	PERMEATE PUMP 2 START COMMAND	I102	NEW
DO	RELAY		1:4:08	YC-21201	WAS PUMP START COMMAND	I103	NEW
DO	RELAY		1:4:09	ZCO-21211	WAS STORAGE VALVE OPEN COMMAND	I103	NEW
DO	RELAY		1:4:10	ZCO-21212	WAS RE-SCREEN VALVE OPEN COMMAND	I103	NEW
DO	RELAY		1:4:11	YC-30201	SODIUM HYPOCHLORITE PUMP START COMMAND	I103	NEW
DO	RELAY		1:4:12	YC-30301	ACID PUMP START COMMAND	I103	NEW
DO	RELAY		1:4:13	YC-23501	MICRO-C PUMP START COMMAND	I103	NEW
DO	RELAY		1:4:14	YC-23401	AIR SCOUR BLOWER 1 START COMMAND	I103	NEW
DO	RELAY		1:4:15	YC-23411	AIR SCOUR BLOWER 2 START COMMAND	I103	NEW
DO	RELAY		1:5:00	YC-23411	AIR SCOUR BLOWER 2 START COMMAND	I103	NEW
DO	RELAY		1:5:01		INSTALLED SPARE		
DO	RELAY		1:5:02		INSTALLED SPARE		
DO	RELAY		1:5:03		INSTALLED SPARE		
DO	RELAY		1:5:04		INSTALLED SPARE		
DO	RELAY		1:5:05		INSTALLED SPARE		
DO	RELAY		1:5:06		INSTALLED SPARE		
DO	RELAY		1:5:07		INSTALLED SPARE		
DO	RELAY		1:5:08		INSTALLED SPARE		
DO	RELAY		1:5:09		INSTALLED SPARE		
DO	RELAY		1:5:10		INSTALLED SPARE		
DO	RELAY		1:5:11		INSTALLED SPARE		
DO	RELAY		1:5:12		INSTALLED SPARE		
DO	RELAY		1:5:13		INSTALLED SPARE		
DO	RELAY		1:5:14		INSTALLED SPARE		
DO	RELAY		1:5:15		INSTALLED SPARE		

I/O SCHEDULE

TYPE	SIGNAL	LOOP POWERED	SLOT:POINT	TAGNAME	DESCRIPTION	P&ID SHEET	STATUS
AI	4-20mA	YES	1:6:00	LI-10101	EQ BASIN LEVEL	I101	NEW
AI	4-20mA	NO	1:6:01	SI-10110	INFLUENT PUMP 1 SPEED	I101	NEW
AI	4-20mA	NO	1:6:02	SI-10120	INFLUENT PUMP 2 SPEED	I101	NEW
AI	4-20mA	NO	1:6:03	FI-10130	INFLUENT PUMPS FLOW	I101	NEW
AI	4-20mA	YES	1:6:04	LI-41101	SOLIDS HOLDING TANK LEVEL	I101	NEW
AI	4-20mA	NO	1:6:05	SI-10210	FINE SCREEN SPEED	I102	NEW
AI	4-20mA	NO	1:6:06	AI-20122A	MEMBRANE ZONE 2 DO	I102	NEW
AI	4-20mA	NO	1:6:07	AI-20122B	MEMBRANE ZONE 2 TEMP	I102	NEW
AI	4-20mA	NO	1:7:00	AI-20124	MEMBRANE ZONE 2 TSS	I102	NEW
AI	4-20mA	NO	1:7:01	AI-20114A	MEMBRANE ZONE 1 DO	I102	NEW
AI	4-20mA	NO	1:7:02	AI-20114B	MEMBRANE ZONE 1 TEMP	I102	NEW
AI	4-20mA	NO	1:7:03	AI-20112	MEMBRANE ZONE 1 TSS	I102	NEW
AI	4-20mA	NO	1:7:04	LI-20113	MEMBRANE LEVEL	I102	NEW
AI	4-20mA	NO	1:7:05	PI-23230	PERMEATE LINE PRESSURE	I102	NEW
AI	4-20mA	NO	1:7:06	FI-23231	PERMEATE LINE FLOW	I102	NEW
AI	4-20mA	NO	1:7:07	AI-23330	PERMEATE TURBIDITY	I102	NEW
AI	4-20mA		1:8:00	FI-21210	PERMEATE FLOW	I103	NEW
AI	4-20mA		1:8:01	FI-23431	SCOUR AIR TO MBR FLOW	I103	NEW
AI	4-20mA		1:8:02		INSTALLED SPARE		
AI	4-20mA		1:8:03		INSTALLED SPARE		
AI	4-20mA		1:8:04		INSTALLED SPARE		
AI	4-20mA		1:8:05		INSTALLED SPARE		
AI	4-20mA		1:8:06		INSTALLED SPARE		
AI	4-20mA		1:8:07		INSTALLED SPARE		
AO	4-20mA		2:1:00	SC-10110	INFLUENT PUMP 1 SPEED COMMAND	I101	NEW
AO	4-20mA		2:1:01	SC-10120	INFLUENT PUMP 2 SPEED COMMAND	I101	NEW
AO	4-20mA		2:1:02	SC-23310	PERMEATE PUMP 1 SPEED COMMAND	I102	NEW
AO	4-20mA		2:1:03	SC-23320	PERMEATE PUMP 2 SPEED COMMAND	I102	NEW
AO	4-20mA		2:1:04	SC-21201	WAS PUMP SPEED COMMAND	I103	NEW
AO	4-20mA		2:1:05	SC-30201	SODIUM HYPOCHLORITE PUMP SPEED COMMAND	I103	NEW
AO	4-20mA		2:1:06	SC-30301	ACID PUMP SPEED COMMAND	I103	NEW
AO	4-20mA		2:1:07	SC-23501	MICRO-C PUMP SPEED COMMAND	I103	NEW
AO	4-20mA		2:2:00	SC-23401	AIR SCOUR BLOWER 1 SPEED COMMAND	I103	NEW
AO	4-20mA		2:2:01	SC-23411	AIR SCOUR BLOWER 2 SPEED COMMAND	I103	NEW
AO	4-20mA		2:2:02	SC-23421	PROCESS AIR BLOWER SPEED COMMAND	I103	NEW
AO	4-20mA		2:2:03		INSTALLED SPARE		
AO	4-20mA		2:2:04		INSTALLED SPARE		
AO	4-20mA		2:2:05		INSTALLED SPARE		
AO	4-20mA		2:2:06		INSTALLED SPARE		
AO	4-20mA		2:2:07		INSTALLED SPARE		



DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

[illegible]

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DRAWING NO.

1801

SHEET 48 of 58

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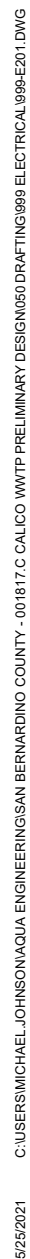
PROJECT ENGINEER _____ DATE _____

RECOMMENDED _____ DATE _____

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5/26/2021

SCHEMATIC LINETYPES		ELECTRICAL PLAN LINETYPES		ABBREVIATIONS		NOTES				
	ELECTRICAL BUS		EXISTING OR FUTURE MANUFACTURER/SHOP WIRE		EXPOSED CONDUIT		BARE COPPER GROUND CONDUCTOR	A AMPERE	AMPERE	1. THE COMPLETED INSTALLATION SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE COMPLETED IN A NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH THE LATEST NEC STANDARDS OF INSTALLATION UNDER COMPETENT SUPERVISION. INSTALL GROUNDING PER NEC. 2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND OTHER FACTORS, WHICH MAY AFFECT THE EXECUTION OF THE WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL. 3. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITIES PROVIDING SERVICES ON THIS PROJECT, AND SHALL COMPLY WITH ALL THEIR INSTALLATION REQUIREMENTS. 4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE. 5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR THE OWNER, WILL BE REJECTED AS DEFECTIVE. 6. LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK. DAMAGED PAINT AND FINISHES SHALL BE TOUCHED UP OR REPAINTED WITH MATCHING COLOR PAINT AND FINISH. 7. CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THWN STRANDED COPPER. #4 AWG THROUGH #2 AWG SHALL BE XHHW STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW-2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 AWG GROUND. ALL WIRE TO BE SIZED PER NEC TABLE 316-10, 75° C BASED ON A 30° C AMBIENT. 8. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH. MINIMUM CONDUIT DEPTH UNDER SLAB SHALL BE 1 INCH. 9. CONDUITS SHALL BE MARKED AT EACH END WITH MATCHING NUMBERED BRASS OR NYLON TAGS. SPARE CONDUITS SHALL HAVE A PULL STRING INSTALLED AND SECURED. 10. EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS). MINIMUM SIZE 3/4 INCH, UNLESS OTHERWISE NOTED ON THE PLANS. 11. SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED, AND RATED FOR HEAVY DUTY SERVICE. 12. WIRING DEVICES SHALL BE SPECIFICATION GRADE. 13. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING, SCHEDULING, DOCUMENTING, AND PERFORMING THE WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM FOR THE FACILITY IS PROVIDED. ACCURATE SHOP AND RECORD DRAWINGS, AND OEM MANUALS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK. 14. TYPICAL DETAILS SHALL APPLY IN ALL CASES, WHETHER SPECIFICALLY REFERRED TO OR NOT. 15. REFER TO SPECIFICATION 260533 "RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS" FOR CONDUIT SPACING AND ROUTING REQUIREMENTS.
	EXISTING OR FUTURE ELECTRICAL BUS		FIELD/CONTRACTOR INSTALLED WIRE		EXISTING OR FUTURE EXPOSED CONDUIT		ELECTRICAL EQUIPMENT	AI ANALOG INPUT	ANALOG INPUT	
	MANUFACTURER/SHOP WIRE TYPICALLY INSTALLED OFF-SITE		EXISTING OR FUTURE FIELD/CONTRACTOR INSTALLED WIRE		UNDERGROUND CONDUIT		EXISTING OR FUTURE ELECTRICAL EQUIPMENT	AO ANALOG OUTPUT	ANALOG OUTPUT	
					EXISTING OR FUTURE UNDERGROUND CONDUIT		DEMOLITION	AS AIR SUPPLY	AIR SUPPLY	
					CONDUIT DUCTBANK		CAPPED UNDERGROUND CONDUIT	ATS AUTOMATIC TRANSFER SWITCH	AUTOMATIC TRANSFER SWITCH	
					EXISTING OR FUTURE CONDUIT DUCTBANK					
SCHEMATIC SYMBOLS				ELECTRICAL PLAN HAZARDOUS LOCATION CLASSIFICATION LINETYPES						
	DEVICE CONNECTION LUG OR TERMINAL		HARMONIC FILTER		C1D1 CLASS I DIV 1		C2D1 CLASS II DIV 1			
	SCHEMATIC POINT OF CONNECTION		LOAD REACTOR		C1D2 CLASS I DIV 2		C2D2 CLASS II DIV 2			
	POWER STABS BUS CONNECTION		VARIABLE FREQUENCY DRIVE							
	POWER STABS LOAD CONNECTION		REDUCED VOLTAGE SOFT STARTER							
CIRCUIT BREAKER										
	100AF FRAME SIZE									
	50AT TRIP RATING									
	MCP BREAKER TYPE									
DISCONNECT										
	30A AMPERE RATING									
	4X NEMA RATING									
FUSE										
	30A AMPERE RATING									
	R FUSE TYPE									
FUSED DISCONNECT										
	30A AMPERE RATING									
	4X NEMA RATING									
	30A AMPERE RATING									
	R FUSE TYPE									
	TRANSFORMER									
CURRENT TRANSFORMER										
	100:5 CT TURNS RATIO									
	3 NUMBER OF CTS									
POTENTIAL TRANSFORMER										
	480:120 PT VOLTAGE RATIO									
	3 NUMBER OF PT'S									
METERING EQUIPMENT										
	UM METER TYPE DESIGNATION									
AM = AMMETER										
SSM = SOLID STATE METER										
UM = UTILITY METER										
VM = VOLTMETER										
WHM = WATT HOUR METER										
WM = WATT METER										
	GENERATOR									
MANUAL OR AUTOMATIC TRANSFER SWITCH										
	600A AMPERE RATING									
	3R NEMA RATING									
TRANSIENT VOLTAGE SURGE SUPPRESSOR										
	TVSS									
	CLASS C									
TRANSIENT VOLTAGE SURGE SUPPRESSOR										
	600A AMPERE RATING									
	3R NEMA RATING									
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	30A AMPERE RATING									



NOTES

1. CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY. ALL EXPOSED CONDUIT SHALL BE PVC COATED. PANELS SHALL BE STAINLESS STEEL NEMA 4X.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN TO THE ELECTRICAL ENGINEER FOR APPROVAL.
3. LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.

[illegible]

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWWT
ELECTRICAL - SITE
SITE PLAN

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DRAWING NO.

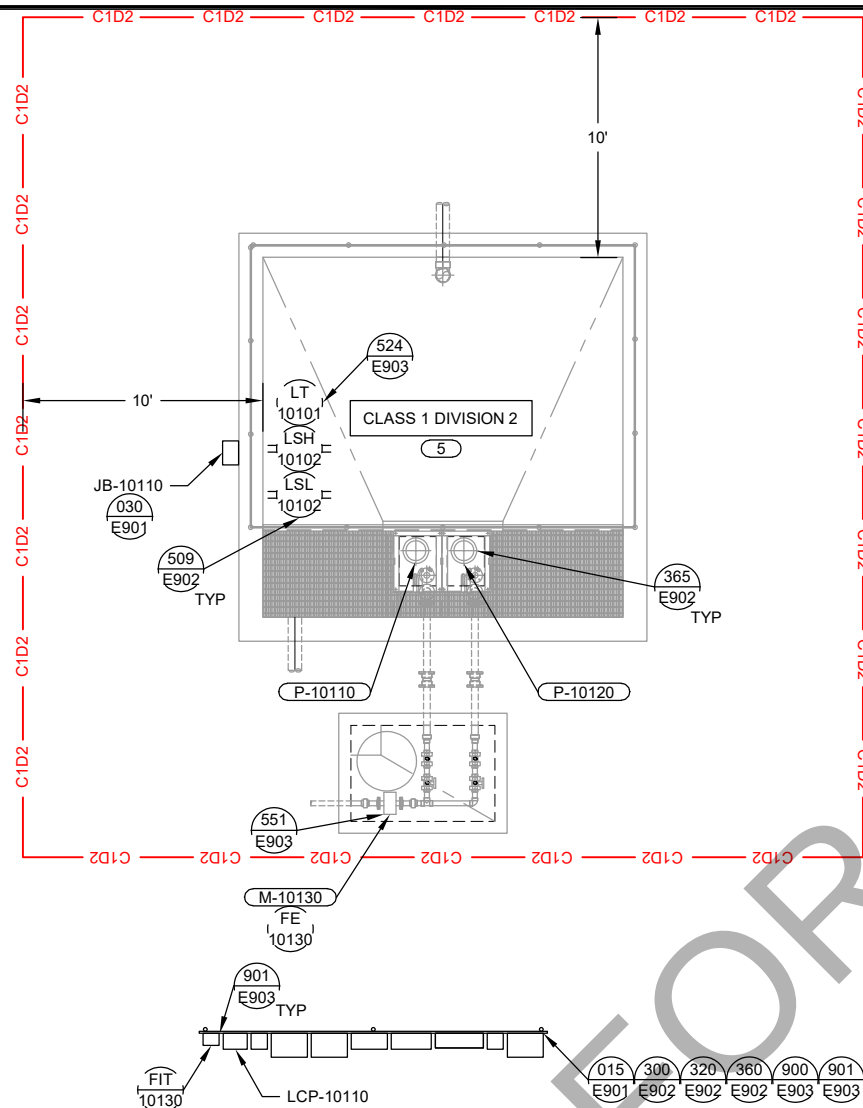
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SHEET 50 of 58

Nelson Smith 6/16/21 _____ DATE

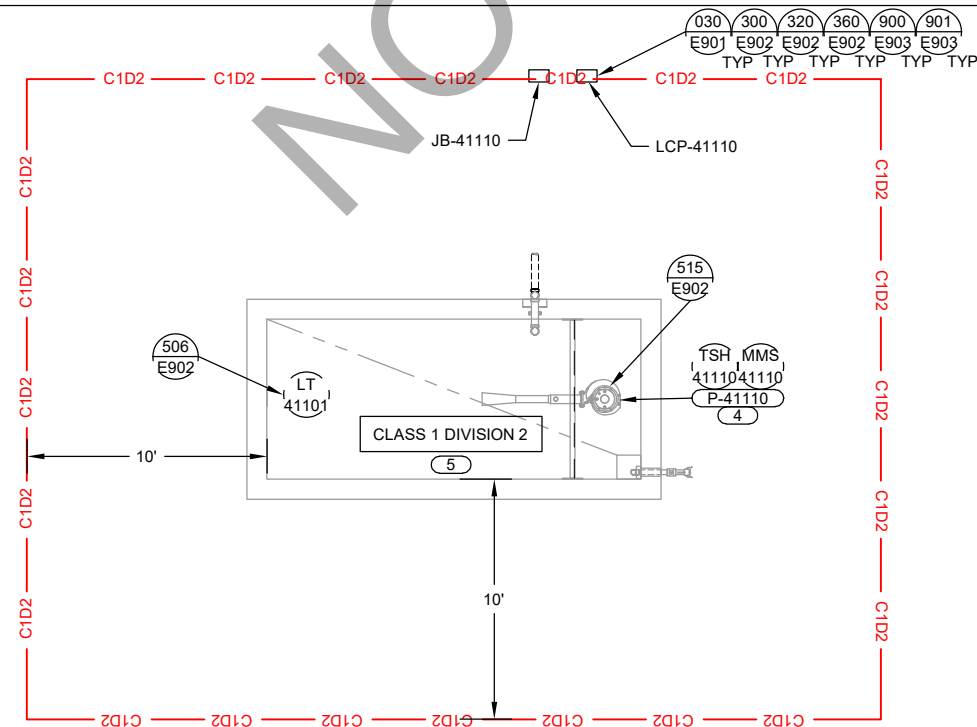
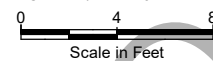
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RECOMMENDED _____ DATE



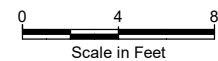
EQUALIZATION TANK PLAN

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



SOLIDS HOLDING TANK PLAN

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

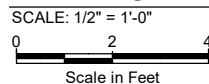


NOTES

- 1 CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY. ALL EXPOSED CONDUIT SHALL BE PVC COATED. PANELS SHALL BE STAINLESS STEEL NEMA 4X.
- 2 CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN TO THE ELECTRICAL ENGINEER FOR APPROVAL.
- 3 LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.
- 4 TIE EQUIPMENT TO GROUND GRID.
- 5 THE HAZARDOUS CLASSIFICATION OF THE EQUALIZATION TANK AND SOLIDS HOLDING TANK EXTENDS OUT 10 FEET HORIZONTALLY AND 1.5 FEET VERTICALLY IS RATED CLASS 1, DIVISION 2 (SEE NFPA 820 FIGURE A.5.2). IN THIS CLASSIFIED AREA, ALL ELECTRICAL COMPONENTS SHALL BE RATED CLASS 1 DIV. 2 SEAL OFFS SHALL BE UTILIZED PER THE REQUIREMENTS OF NEC. FOR THE UNCLASSIFIED SPACE SURROUNDING THIS AREA, ALL COMPONENTS SHALL BE CORROSION RESISTANT AND PANELS SHALL BE 316SS NEMA 4X. ALL EXPOSED CONDUITS AND FITTINGS SHALL BE PVC COATED GRS. ALL ASSOCIATED HARDWARE SHALL BE 316SS. CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY.



DRAWING IS TO SCALE		IF BAR MEASURES:		1" = FULL SCALE		1/2" = HALF SCALE	
ORIGINAL		DESIGN		DRAWN		CHECKED	
NO.		DATE		MPJ		DCJ	
B		06/01/2021		MPJ		MPJ	
REVISIONS							

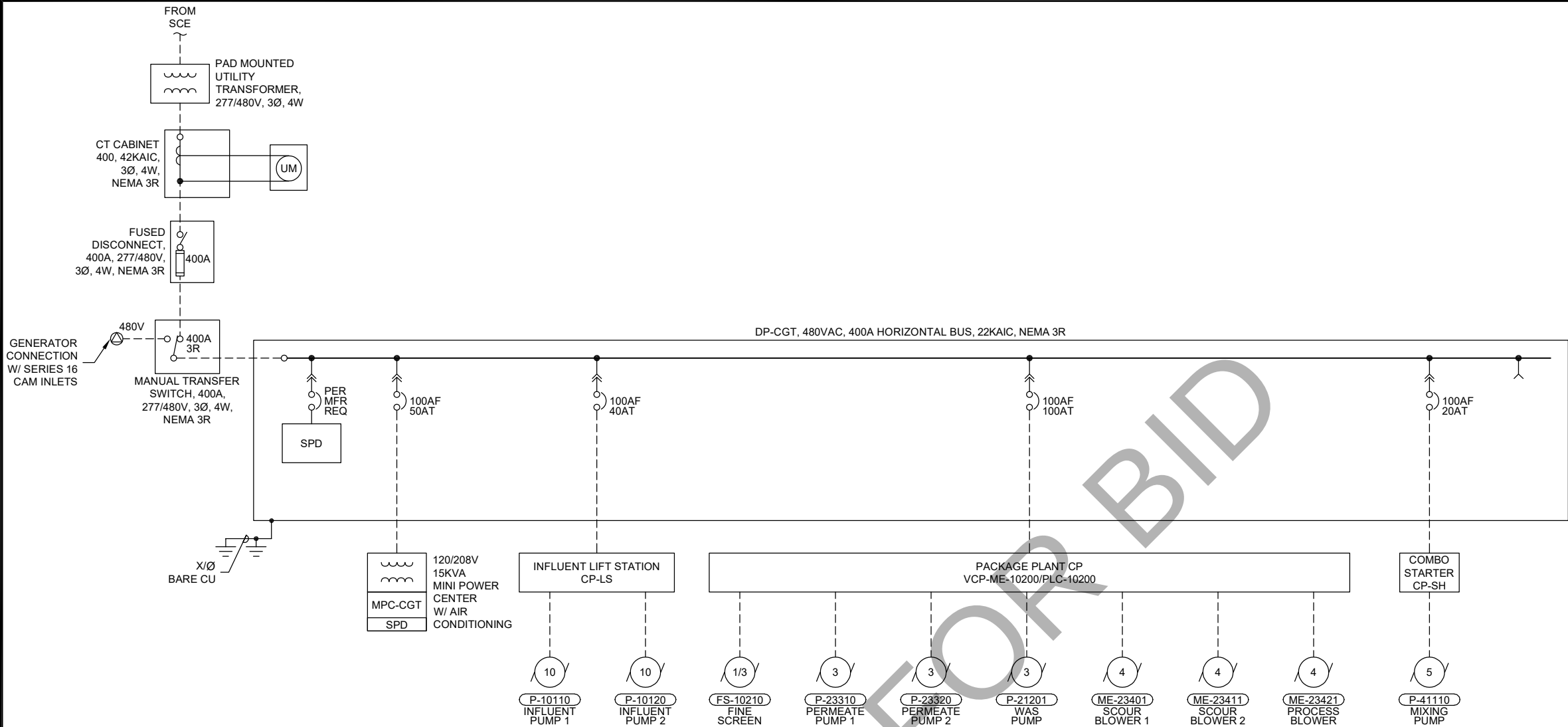


SHEET 52 of 58

Nelson Smith 6/16/21 _____ DATE

PROJECT ENGINEER _____ DATE

RECOMMENDED _____ DATE



ONELINE DIAGRAM

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
INFLUENT PUMP 1 (P-10110)		10.0	14.0
INFLUENT PUMP 2 (P-10120)		10.0	14.0
			0.0
MIXING PUMP (P-41110)		5.0	7.6
			0.0
			0.0
			0.0
			0.0
NON-MOTOR LOADS			
VENDOR CP			100.0
15KVA MINI POWER CENTER			18.0
SUBTOTAL			153.6
+ 25% OF LARGEST MOTOR			3.5
TOTAL AMPS @ 480V/3PHASE			157.1
SERVICE SIZE (AMPS)			400.0

DP-CGT CALCULATIONS

PANEL: MPC-CGT		VOLTAGE: 120/208		MAIN CB: 100 AMP		BUS AMPS: 100 AMP	
		BUS A.I.C: 22KA		BKR AIC: 22KA		MOUNTING: SURFACE	
CIRCUIT DESCRIPTION	BKR	CIRCUIT	LOAD	PHASE	LOAD	CIRCUIT	BKR
WALL PACKS (6)	20/1	1	216	A		2	20/1
OUTLETS (3)	20/1	3	540	B		4	20/1
OUTLETS (3)	20/1	5	540	C		6	20/1
FIT-10130	20/1	7	100	A		8	20/1
	20/1	9		B		10	20/1
	20/1	11		C		12	20/1
	20/1	13		A		14	20/1
	20/1	15		B		16	20/1
	20/1	17		C		18	20/1
	20/1	19		A		20	20/1
	20/1	21		B		22	20/1
	20/1	23		C		24	20/1
	20/1	25		A		26	20/1
	20/1	27		B		28	20/1
	20/1	29		C		30	20/1
		PHASE A	PHASE B	PHASE C	NOTES:		
CONNECTED VA PER PHASE		316.0	540.0	540.0			
CONNECTED AMPS PER PHASE		2.6	4.5	4.5			
25% OF CONTINUOUS & LIGHTING LOAD (VA)		79.0	135.0	135.0			
CODE VA PER PHASE		395.0	675.0	675.0			
CODE AMPS PER PHASE		3.3	5.6	5.6			

MPC-CGT CALCULATIONS

6/16/21 DATE
PROJECT ENGINEER DATE
RECOMMENDED DATE



ORIGINAL		DESIGN	DRAWN	CHECKED	DATE
1		MPJ	DCJ	MPJ	06/01/2021
REVISIONS		NO.	DATE	BY	DESCRIPTION
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COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
ELECTRICAL - POWER DISTRIBUTION
ONELINE DIAGRAM & CALCULATIONS

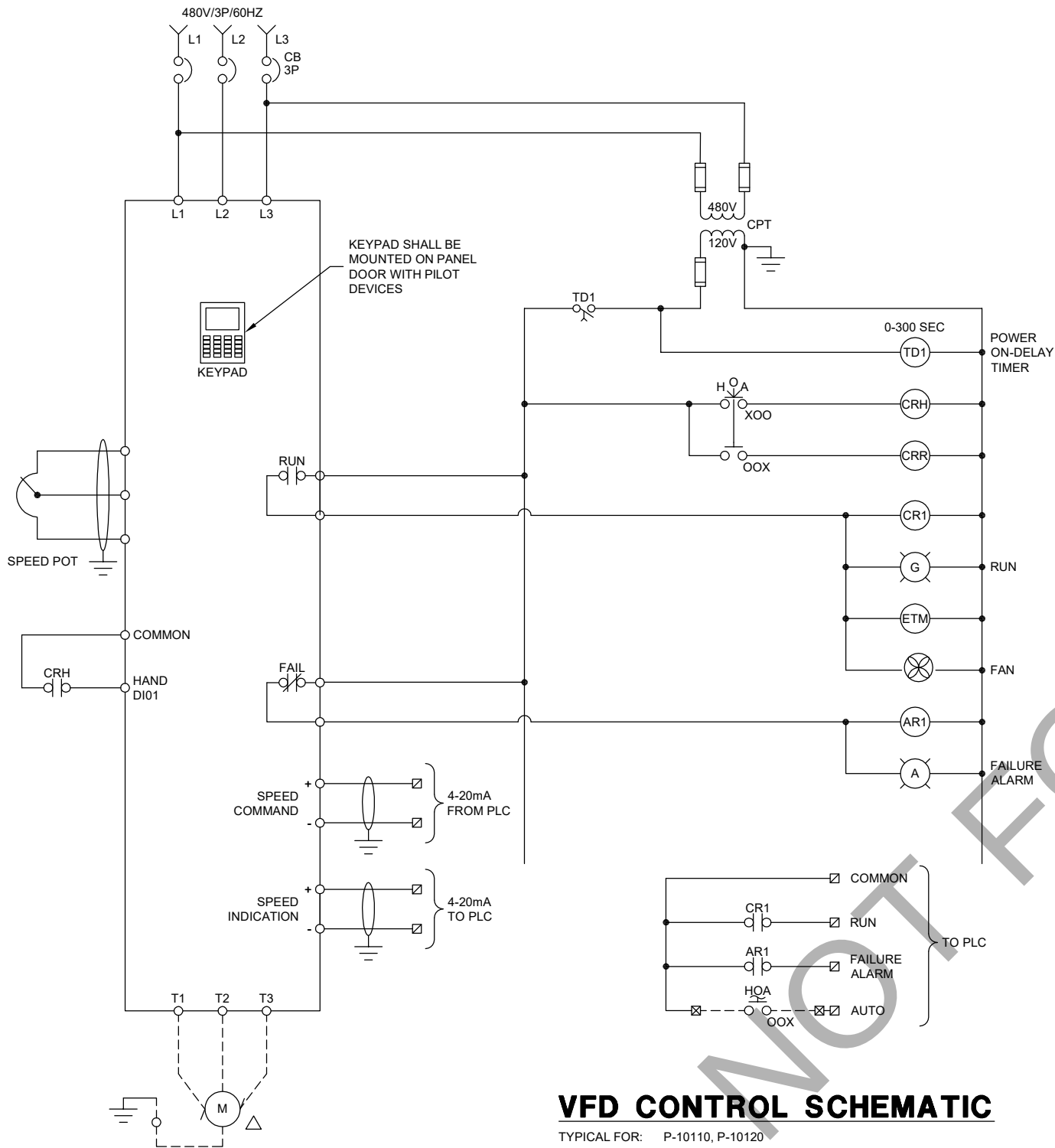
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DRAWING NO.
E501
SHEET 53 of 58

5/26/2021 C:\USERS\MICHAEL JOHNSON\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\999 ELECTRICAL\999-E502.DWG



VFD CONTROL SCHEMATIC

TYPICAL FOR: P-10110, P-10120

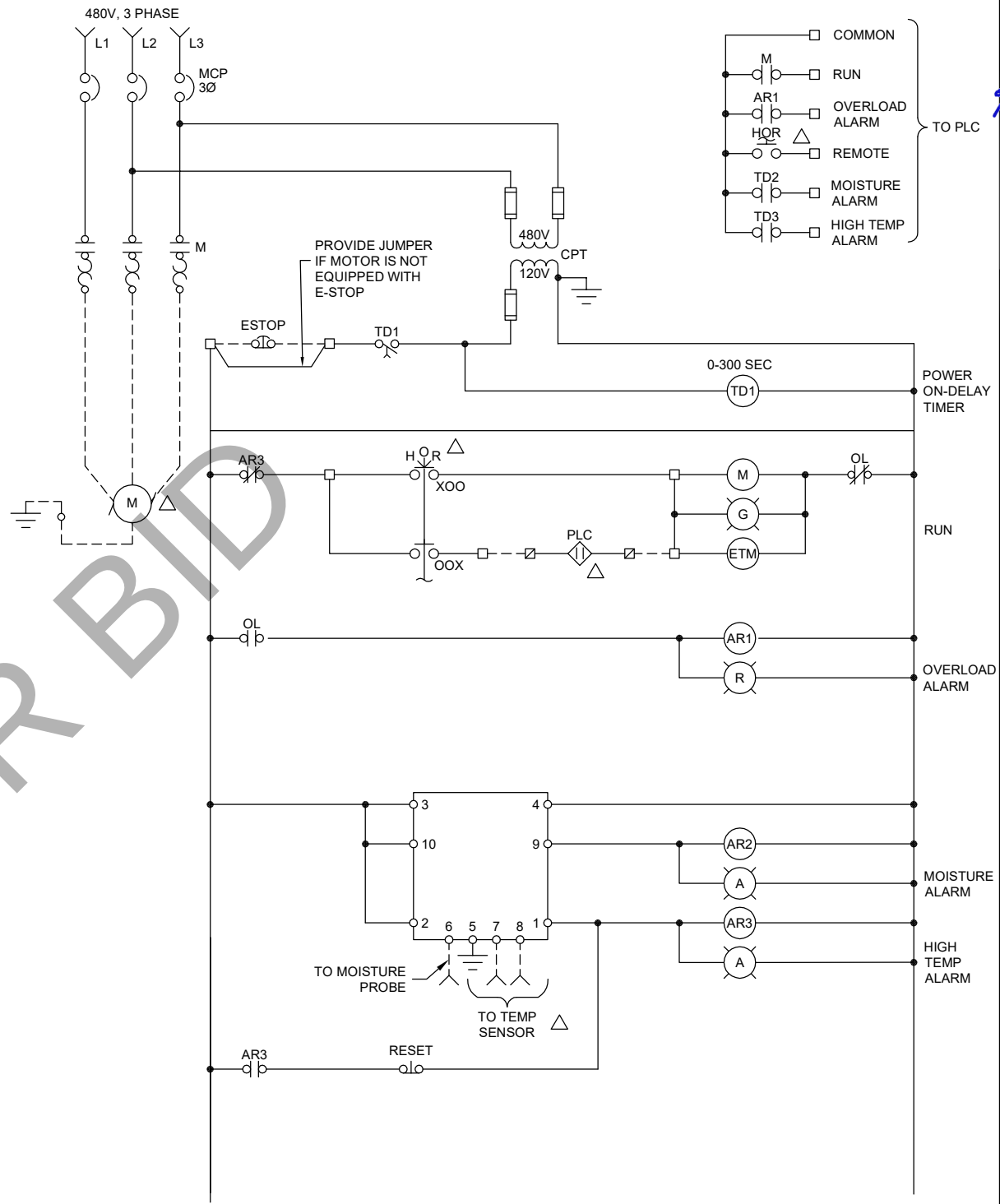
NOTES:

- 1 TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT.
- 2 CONTROL POWER TRANSFORMERS (CPT) SHALL BE ADEQUATELY SIZED AND SHALL BE PROVIDED WITH PROPERLY SIZED FUSES FOR BOTH THE PRIMARY AND SECONDARY WINDINGS.
- 3 FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- 4 ADJUST TIME DELAY RELAYS PRIOR TO STARTUP. STAGGER TIMER SETTINGS FOR POWER ON-DELAY RELAYS.
- 5 CONTROL SWITCHES SHALL BE DOOR MOUNTED ON THEIR RESPECTIVE PANELS. DEVICES SHALL BE RATED FOR LINE VOLTAGE AND 125% OF LOAD CURRENT.
- 6 LOCAL CONTROLS SHALL BE INSTALLED ACCORDING TO P&ID'S AND NOT NECESSARILY AS SHOWN ON SCHEMATICS.

VFD CONTROL DESCRIPTION

WHEN THE HOA SWITCH IS IN THE HAND POSITION, THE MOTOR SHOULD RUN, WHEN THE HOA SWITCH IS IN THE OFF POSITION, THE MOTOR SHOULD STOP AND WHEN THE HOA SWITCH IS IN THE AUTO POSITION, THE MOTOR IS CONTROLLED BY THE PLC. THE PLC WILL BE ABLE TO MONITOR WHETHER THE HOA IS IN THE HAND OR AUTO POSITION.

WHEN THE HOA SWITCH IS IN THE HAND POSITION, THE SPEED COMMAND COMES FROM THE POTENTIOMETER. WHEN IN THE AUTO POSITION, THE SPEED COMMAND COMES FROM THE PLC.



FVNR CONTROL SCHEMATIC

TYPICAL FOR: P-41110

FVNR CONTROL DESCRIPTION

WHEN THE HOA SWITCH IS IN THE HAND POSITION, THE MOTOR SHOULD RUN, WHEN THE HOA SWITCH IS IN THE OFF POSITION, THE MOTOR SHOULD STOP AND WHEN THE HOA SWITCH IS IN THE AUTO POSITION, THE MOTOR IS CONTROLLED BY THE PLC. THE PLC WILL BE ABLE TO MONITOR WHETHER THE HOA IS IN THE HAND OR AUTO POSITION.

6/16/21 DATE

PROJECT ENGINEER

RECOMMENDED

DATE



NO.	DATE	DESIGN	DRAWN	CHECKED	MPJ	DCL	MPJ	REVISIONS
B	06/01/2021							

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
ELECTRICAL - POWER DISTRIBUTION
SCHEMATICS

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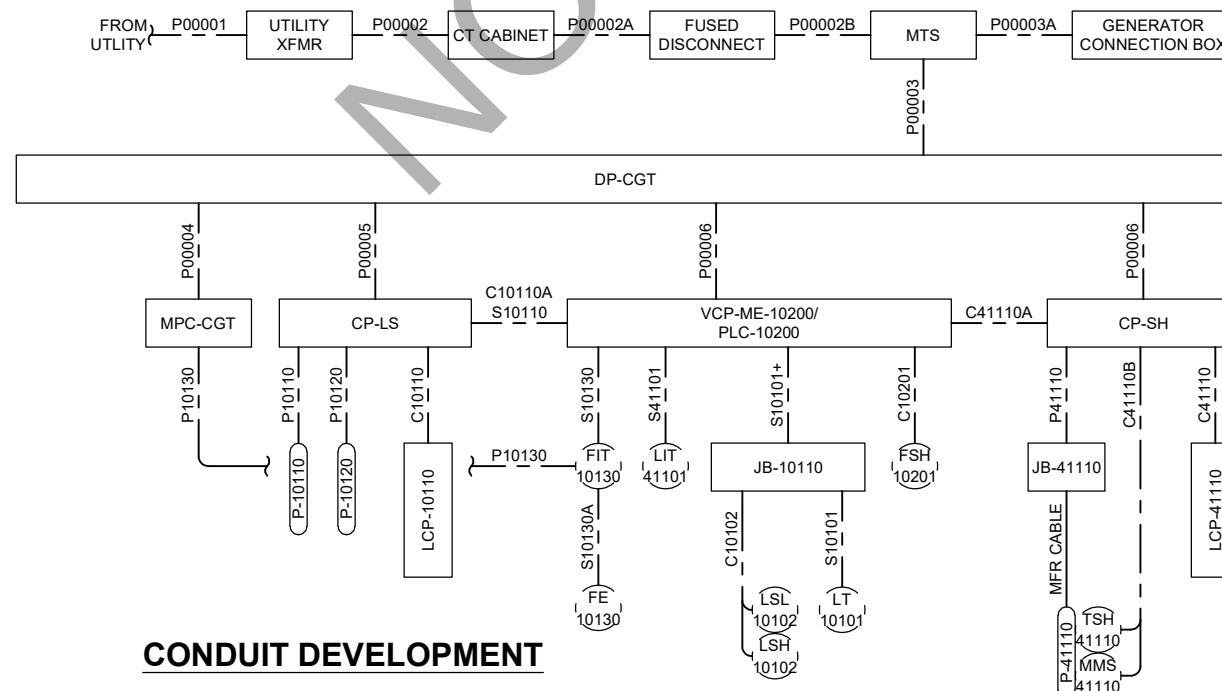
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SHEET 54 of 58

CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	DUCTBANKS	NOTES
P00001	5"	BY UTILITY		POWER POLE	UTILITY TRANSFORMER	DB-1	
P00002	2-3"	2 SETS 3 3/0 W/#3 GND	480VAC	UTILITY TRANSFORMER	CT CABINET	DB-2	
P00002A	2-3"	2 SETS 3 3/0 W/#3 GND	480VAC	CT CABINET	FUSED DISCONNECT		
P00002B	2-3"	2 SETS 3 3/0 W/#3 GND	480VAC	FUSED DISCONNECT	MANUAL TRANSFER SWITCH		
P00003	2-3"	2 SETS 3 3/0 W/#3 GND	480VAC	MANUAL TRANSFER SWITCH	DP-CGT		
P00003A	2-3"	2 SETS 3 3/0 W/#3 GND	480VAC	GENERATOR CONNECTION BOX	MANUAL TRANSFER SWITCH		
P00004	1"	3#12 W/#12 GND	480VAC	DP-CGT	MPC-CGT		
P00005	1"	3#12 W/#12 GND	480 VAC	CP-LS	DP-CGT		LIFT STATION CP
P00006	1"	3#12 W/#12 GND	480VAC	CP-SH	DP-CGT		FVNR COMBO STARTER PANEL
P10110	1"	3#12 W/#12 GND	480VAC	CP-LS	P-10110	DB-3	
P10120	1"	3#12 W/#12 GND	480VAC	CP-LS	P-10120	DB-3	
P10130	1"	3#12 W/#12 GND	120VAC	FIT-10130	MCP-CGT	DB-3	
P10200	3"	3#3 W/#3 GND	480VAC	VCP-ME-10200	DP-CGT	DB-5	
P41110	1"	3#12 W/#12 GND	480VAC	CP-SH	JB-41110	DB-4	MFR CABLE FROM JB-41110 TO P-41110
C10102	1"	4#12	24VDC	LSL-10102, LSH-10102	PLC-10200		THROUGH JB-10110
C10110	1"	4#12	24VDC	LCP-10110	CP-LS	DB-3	
C10110A	1.5"	24#12	24VDC	CP-LS	PLC-10200	DB-5	
C10201	3/4"	2 #14 W/#14 GND	24VDC	FSH-10201	PLC-10200		
C41110	1"	2#12	24VDC	LCP-41110	CP-SH	DB-4	
C41110A	1"	8#12	24VDC	CP-SH	PLC-10200	DB-5	
C41110B	1"	4#12	24VDC	TSH-41110, MMS-41110	CP-SH	DB-4	
S10101	1"	TSP	SIGNAL	LT-10101	PLC-10200		THROUGH JB-10110
S10110	1"	2TSP	SIGNAL	CP-LS	PLC-10200	DB-5	
S10130	1"	TSP	SIGNAL	FIT-10130	PLC-10200	DB-5	
S10130A	1"	TSP	SIGNAL	FE-10130	FIT-10130	DB-3	
S41101	1"	TSP	SIGNAL	LIT-41101	PLC-10200	DB-4	
CONDUIT	SIZE	CONDUITS	SERVICE	FROM	TO	DUCTBANKS	NOTES
S10101+	1"	S10101, C10102	SIGNAL/24VDC	JB-10110	PLC-10200	DB-3, DB-5	

CONDUIT SCHEDULE

SHEET	TAG	DESCRIPTION	MAKE	MODEL	SUPPLY	RANGE	COMMENTS
I101	LT-10101	EQ TANK LEVEL	DWYER	PLBTX-10-40-PU	24VDC	0-10 FT	
I101	LSL-10102	EQ TANK LOW LEVEL SWITCH	FLYGT	ENM-10	NC CONTACT	1 FT	
I101	LSH-10102	EQ TANK HIGH LEVEL SWITCH	FLYGT	ENM-10	NC CONTACT	10 FT	
I101	FE/FIT-10130	FLOW TO PACKAGED PLANT	ABB	WATERMASTER	120VAC	0-100 GPM	
I101	LT-41101	SOLIDS HOLDING TANK RADAR LEVEL	SIEMENS	LR200	24VDC	0-10 FT	EXPLOSION-PROOF
I103	FSH-10201	EMERGENCY EYEWASH HIGH FLOW SWITCH	DWYER	V6EPB-B-S-5-B	NO/NC CONTACT		

INSTRUMENT SCHEDULE



CONDUIT DEVELOPMENT

NOTES:

- 1 CONDUIT DEVELOPMENT IS NOT ALL INCLUSIVE. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE TO PROVIDE A FULLY FUNCTIONAL FACILITY. INTERCONNECTION OF LOW VOLTAGE DEVICES MAY NOT BE SHOWN. CONDUIT AND CONDUCTORS TO LIGHTS AND RECEPTACLES ARE NOT INCLUDED IN THE CONDUIT DEVELOPMENT.

[illegible]

COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
ELECTRICAL - POWER DISTRIBUTION
SCHEDULES & DEVELOPMENT

skm 533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
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3788 McCray Street
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AQUA
ENGINEERING

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PHONE (801) 298-1327 FAX (801) 298-0153

DRAWING NO.

E801

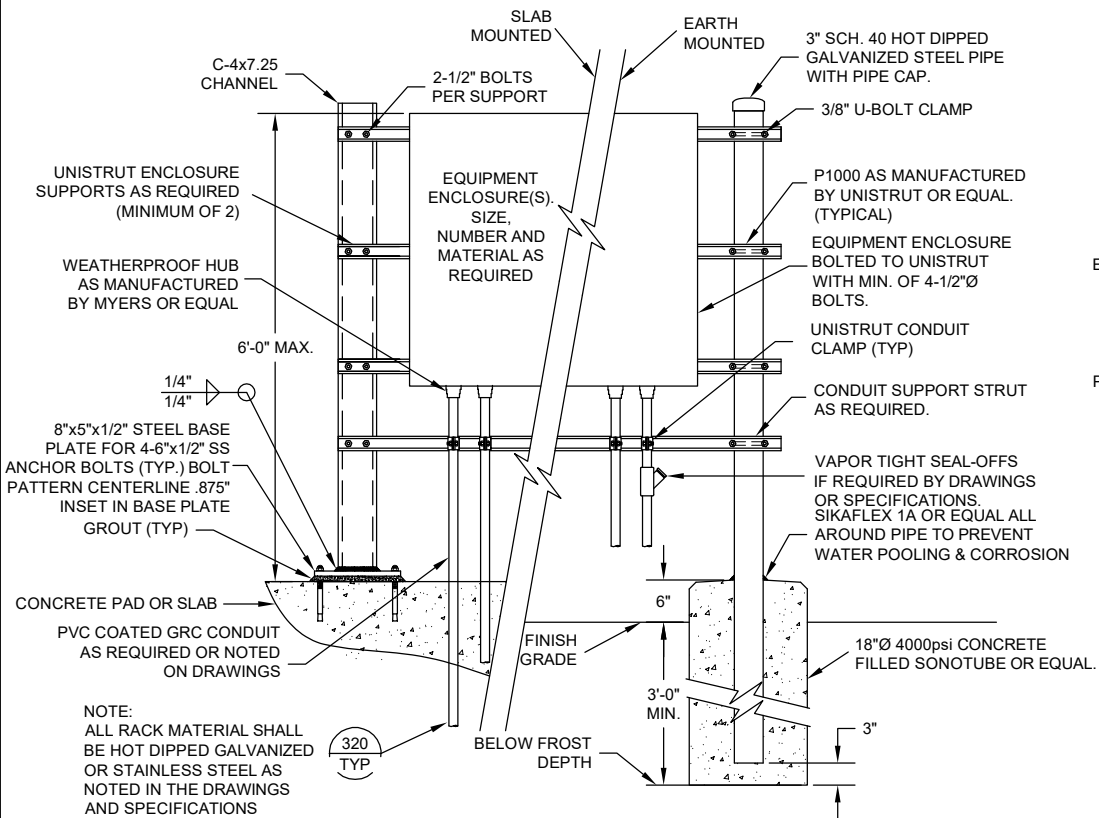
SHEET 55 of 58

Nelson Smith 6/16/21 _____ DATE

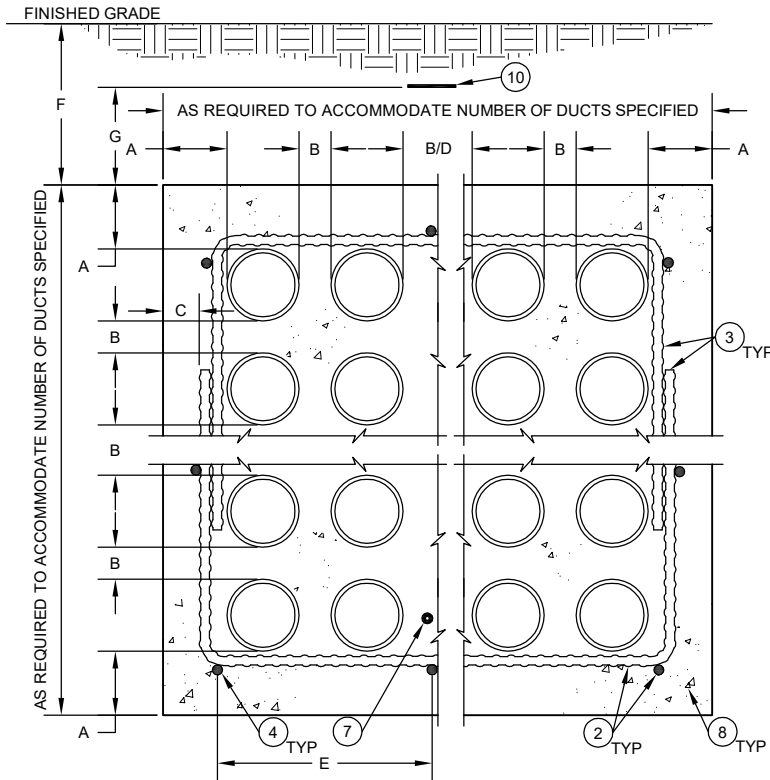
PROJECT ENGINEER _____ DATE

RECOMMENDED _____ DATE

5/24/2021 C:\USERS\MICHAEL JOHNSON\AQUA ENGINEERING\SAN BERNARDINO COUNTY - 001817.C CALICO WWTP PRELIMINARY DESIGN\050 DRAFTING\999 ELECTRICAL\999-E901.DWG



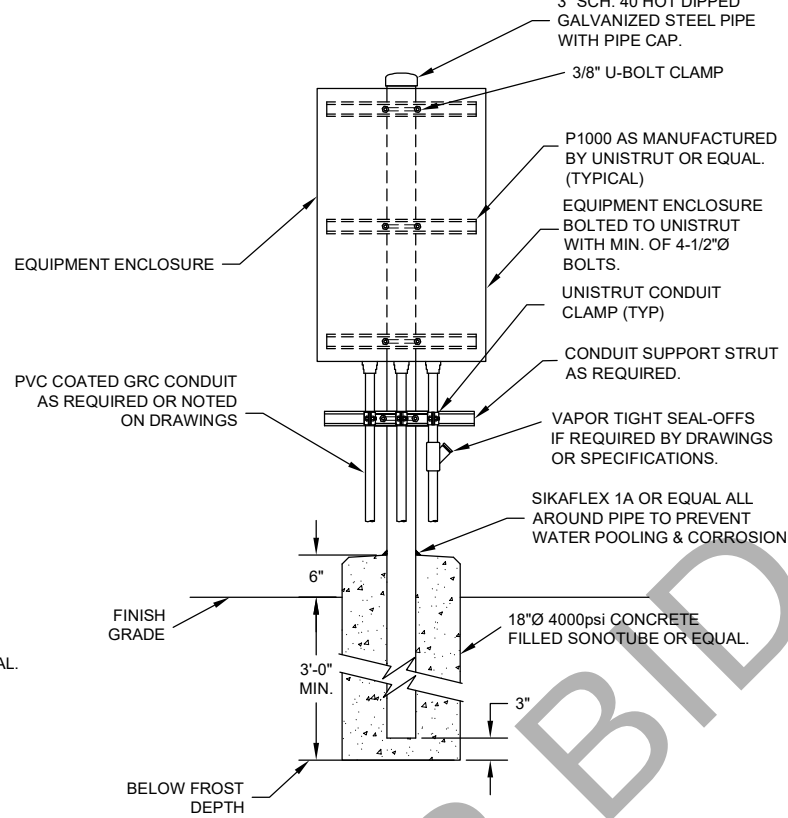
015
TYP NO SCALE
EQUIPMENT RACK DETAIL



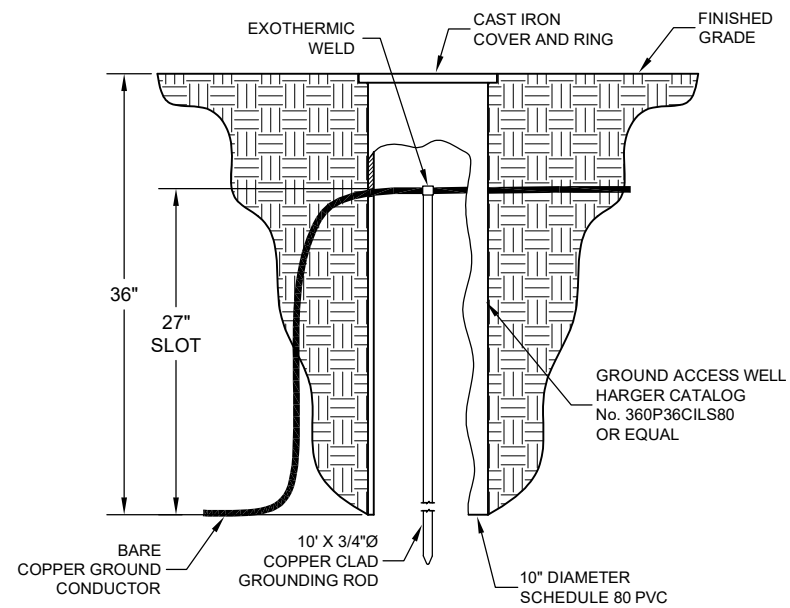
DIMENSION TABLE	
A	4" MIN. TYP.
B	2" MIN. SEE NOTE 12
C	2" MIN. SEE NOTE 2
D	12" MIN. SEE NOTE 13
E	18" MAX. SEE NOTE 4
F	18" MIN. 30" MAX.
G	12"

202
TYP SCALE: N.T.S.
MULTIPLE DUCT DUCTBANK DETAIL

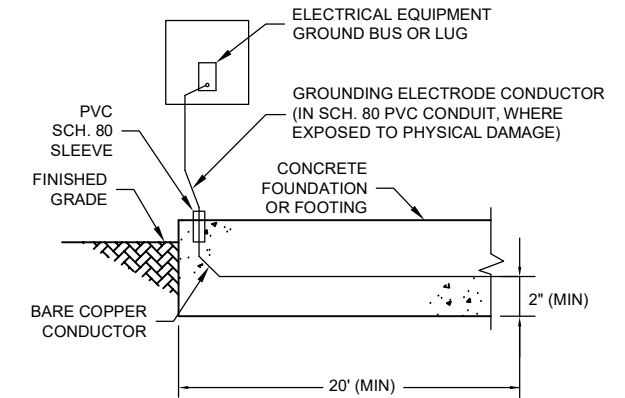
- NOTES:
- ALL DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - ALL REBAR SHALL BE #4 BAR AND HAVE A MINIMUM CONCRETE EMBEDMENT OF 2" (EDGE OF REBAR TO OUTSIDE SURFACE OF CONCRETE).
 - REBAR HOOPS SHALL OVERLAP 9" MINIMUM AND SHALL BE PROVIDED EVERY 4 FEET HORIZONTALLY. HOOPS SHALL NOT BE REQUIRED ON SINGLE ROW DUCTBANKS.
 - HORIZONTAL REBAR SHALL BE PLACED @ A MAXIMUM OF 18" ON CENTER ALL AROUND THE DUCTBANK ENVELOPE AND SHALL BE SUPPORTED EVERY 4 FEET LONGITUDINALLY. SINGLE ROW DUCTBANKS LESS THAN 24" WIDE SHALL HAVE A MIN. OF 2 HORIZONTAL BARS.
 - DUCT SPACERS (SADDLES) SHALL BE PROVIDED FOR PROPER SUPPORT OF CONDUIT DUCTS. SPACERS SHALL BE PROVIDED HORIZONTALLY AS RECOMMENDED BY THE MANUFACTURER AND TO PREVENT ANY SAGGING OF THE DUCTS (LOW SPOTS WILL NOT BE ALLOWED).
 - DUCTS SHALL BE SECURED TO PREVENT FLOATING DURING THE CONCRETE ENCASEMENT.
 - PROVIDE A 4/0 BARE CONTINUOUS COPPER GROUND. SEE GROUNDING SPECIFICATION SECTION 16170.
 - DUCTBANK CONCRETE SHALL BE COLOR DYED RED BY MIXING 3 LBS. IRON OXIDE PER CUBIC YARD OF CONCRETE.
 - ALL DUCTBANKS SHALL BE SLOPED @ 1/4" PER 10 FEET TO ALLOW DRAINAGE.
 - A 3" WIDE DETECTABLE PLASTIC MARKER TAPE WITH INSCRIPTION "CAUTION ELECTRICAL LINES BURIED BELOW" (BLACK LETTERS ON RED BACKGROUND) SHALL BE INSTALLED 12" ABOVE THE TOP OF ALL CONCRETE ENCASED DUCTBANKS.
 - REFER TO CONDUIT SCHEDULE FOR WIRE FILL OF ALL DUCTS.
 - ALL DUCTS OF THE SAME DUTY (480V POWER, 120V POWER, 120V CONTROL, AND SIGNAL) SHALL BE SEPARATED BY A MINIMUM OF 2".
 - SIGNAL AND FIBER DUCTS SHALL BE SEPARATED FROM 480V POWER BY A MIN. OF 12", FROM 120V POWER BY A MIN. OF 6" AND FROM 120V CONTROL BY MIN. OF 4" UNLESS NOTED OTHERWISE ON THE DRAWINGS. 120V POWER AND 120V CONTROL DUCTS SHALL BE SEPARATED FROM 480V POWER BY A MIN. OF 4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.



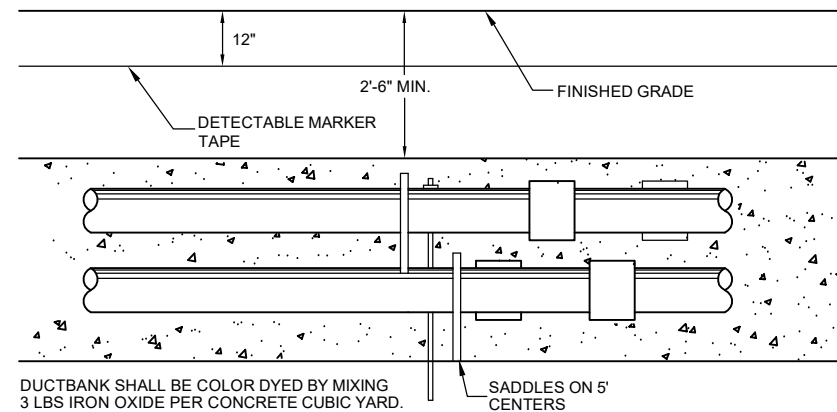
030
TYP NO SCALE
ELECTRICAL PANEL EARTH MOUNTED DETAIL



100
TYP SCALE: NONE
GROUND ROD WITH ACCESS WELL



NOTE:
ALL WORK SHALL BE PER NATIONAL ELECTRICAL CODE AND LOCAL GOVERNING AUTHORITY.
140
TYP SCALE: NONE
UGFER GROUNDING DETAIL



ALL DUCTBANKS SHALL BE SLOPED 1/4" PER DUCT 10' TO ALLOW DRAINAGE. NO LOW SPOTS WILL BE ALLOWED IN RACEWAY

203
TYP SCALE: NONE
DUCTBANK DETAIL

6/16/21
PROJECT ENGINEER
RECOMMENDED
DATE
DATE
DATE



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		CHECKED		REVISIONS	
NO.	DATE	DESIGN	DRAWN	CHECKED	MPJ	DCJ	MPJ		
B	06/01/2021								

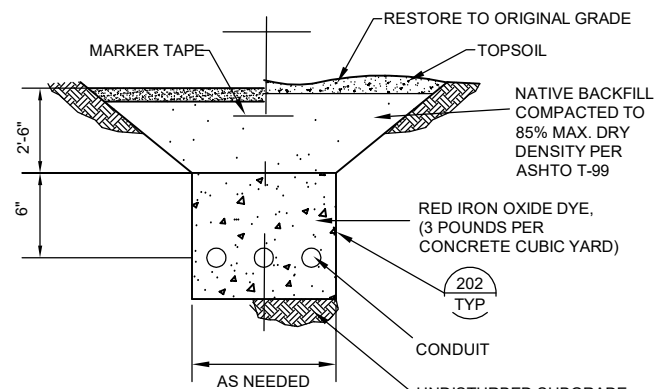
COUNTY OF SAN BERNARDINO
DEPT OF PUBLIC WORKS - SPECIAL DISTRICTS
CALICO GHOST TOWN PH 2 AWWT
ELECTRICAL - DETAILS
DETAILS 1

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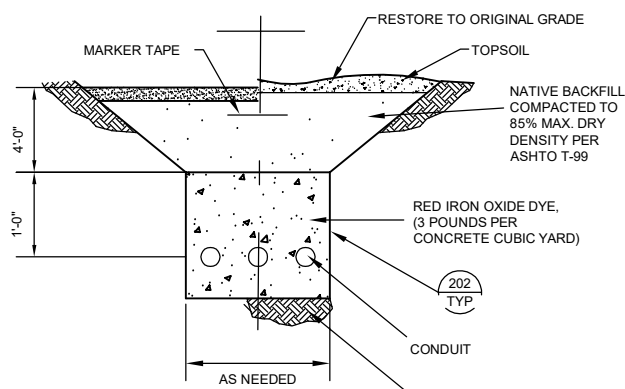
ALBERT A. WEBB
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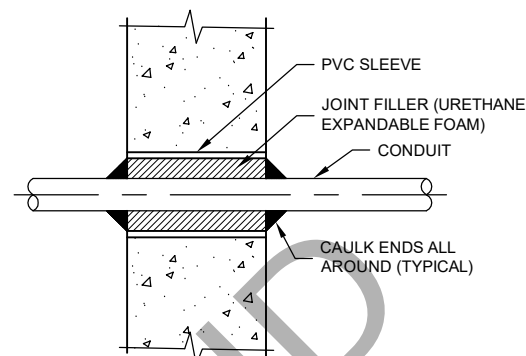
DRAWING NO.
E901
SHEET 56 of 58



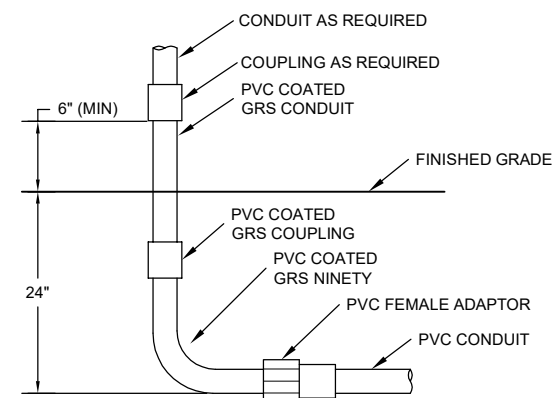
**TYPICAL TRENCH DETAIL
FOR BELOW 600 VOLTS**



**TYPICAL TRENCH DETAIL
FOR ABOVE 600 VOLTS**

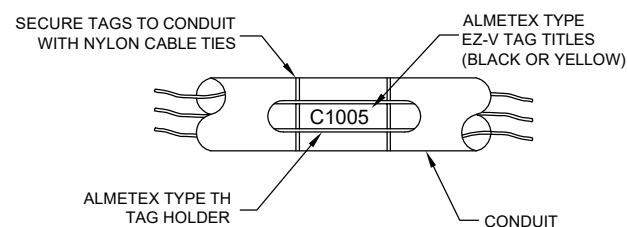


300 CONDUIT PENETRATION AT NEW WALL OR SLAB

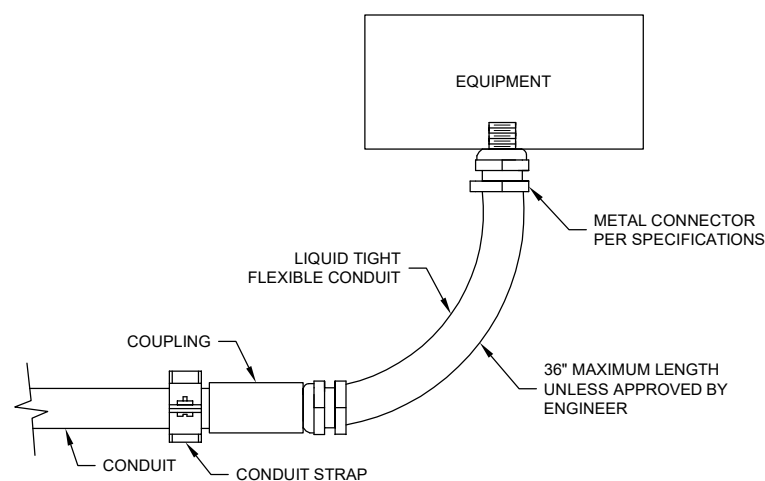


- NOTES:
1. WHERE CONDUITS ARE INSTALLED IN OR UNDER A CONCRETE SLAB, THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
 2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.

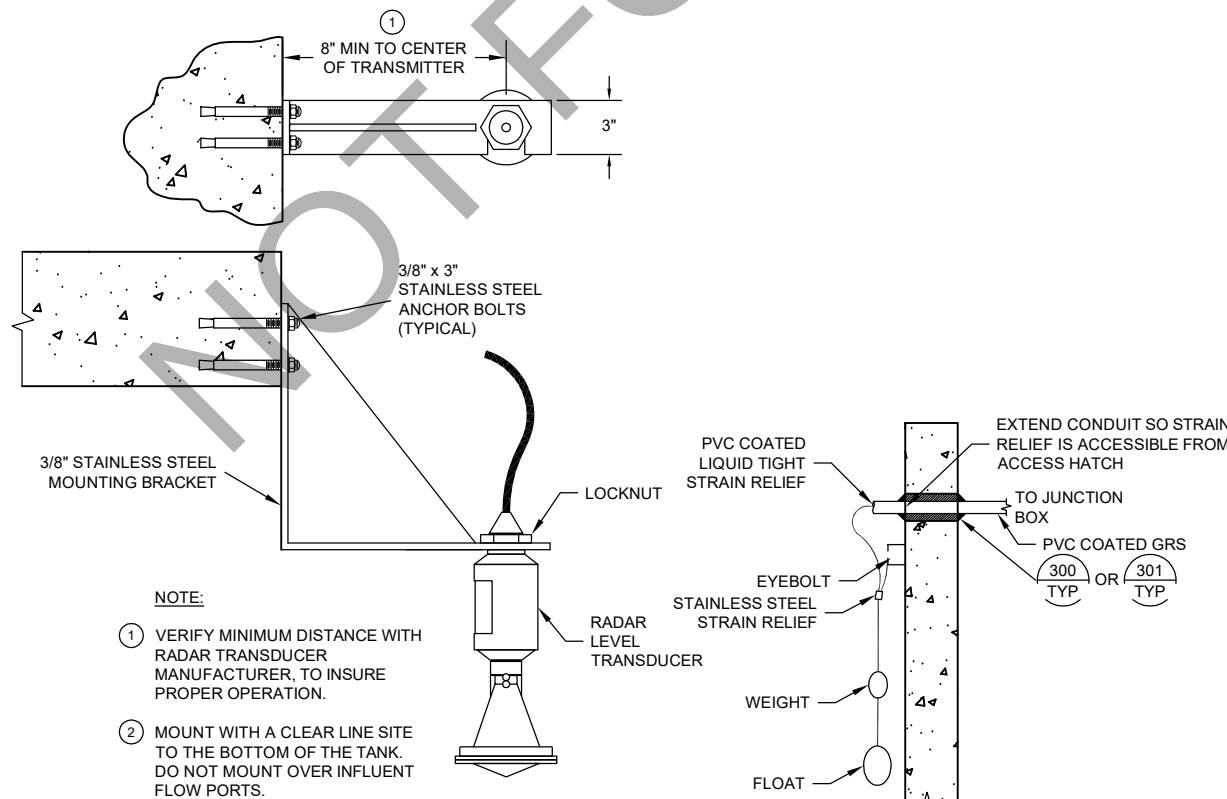
320 GRS STUB UP DETAIL
TYP SCALE: NONE



CONDUIT MARKING SYSTEM

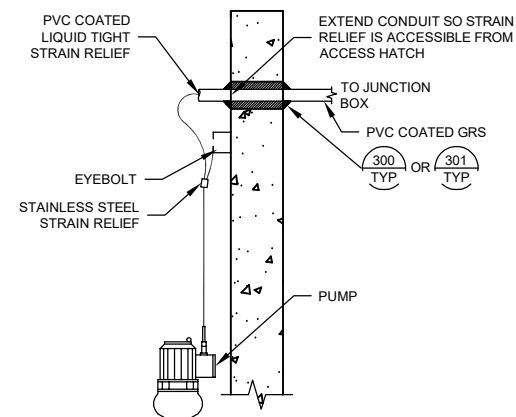


365 FLEXIBLE CONDUIT DETAIL
TYP SCALE: NONE



- NOTE:**
1. VERIFY MINIMUM DISTANCE WITH RADAR TRANSDUCER MANUFACTURER, TO INSURE PROPER OPERATION.
 2. MOUNT WITH A CLEAR LINE SITE TO THE BOTTOM OF THE TANK. DO NOT MOUNT OVER INFLUENT FLOW PORTS.

OPEN TANK RADAR LEVEL
TRANSDUCER MOUNTING

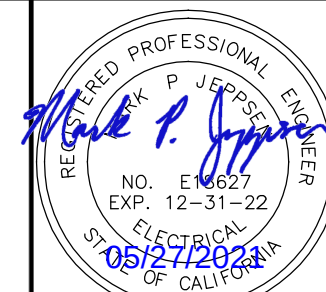


SUSPENDED
MOTOR LEADS DETAIL

 6/16/21 _____ DATE

PROJECT ENGINEER _____ DATE

RECOMMENDED _____ DATE

[illegible]

COUNTY OF SAN BERNARDINO
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DETAILS 2

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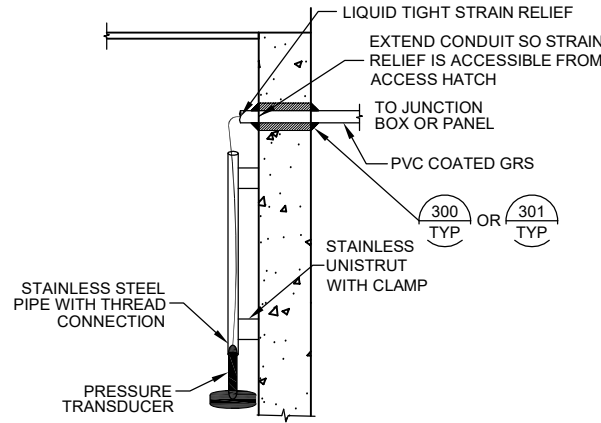
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DRAWING NO.

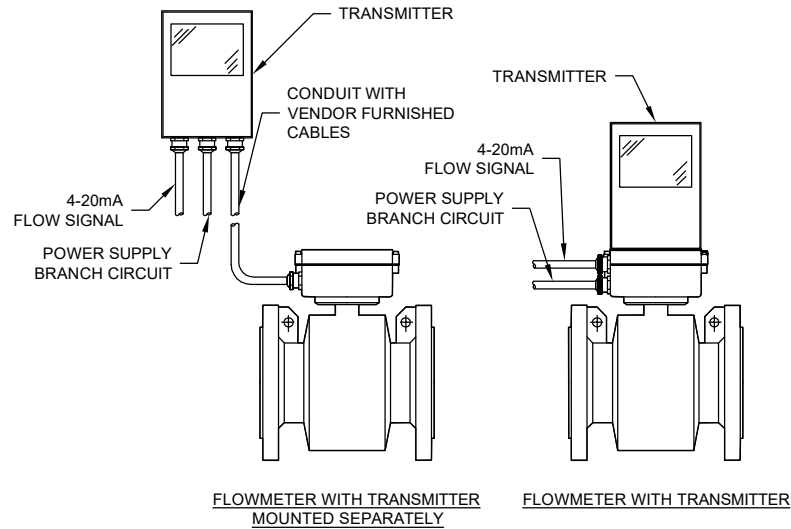
E902

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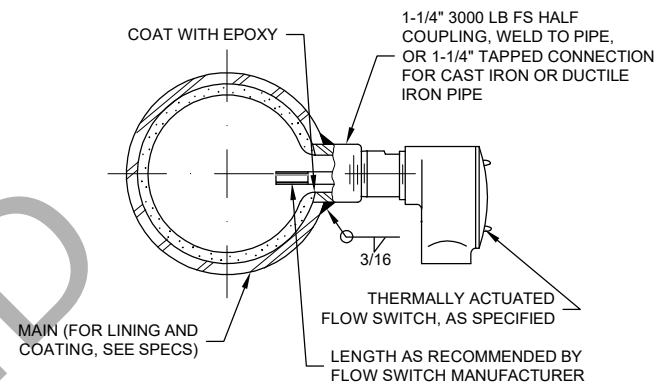


524
TYP **PRESSURE TRANSDUCER
(LARGE HEAD) DETAIL**
SCALE: NONE

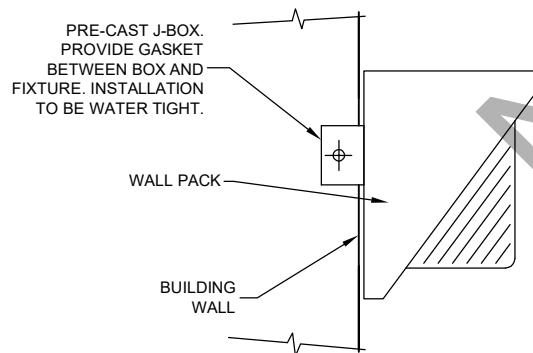


- NOTES:
1. ALL VENDOR FURNISHED CABLES SHALL BE CUT TO LENGTH AND TERMINATED PER MANUFACTURER'S RECOMMENDATIONS.
 2. GROUND PER MANUFACTURER'S RECOMMENDATIONS.

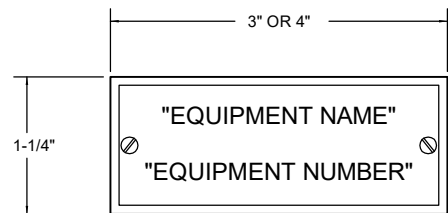
551
TYP **MAGNETIC FLOWMETER DETAIL**
SCALE: NONE



553
TYP **FLOW SWITCH DETAIL**
SCALE: NONE

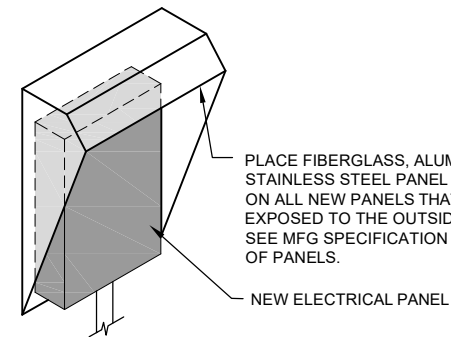


810
TYP **WALL MOUNTED LIGHT
FIXTURE DETAIL**
SCALE: NONE



- NOTES:
1. ALL LETTERS TO BE 1/4\"/>
 2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
 3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
 4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.

900
TYP **NAMEPLATE DETAIL**
SCALE: NONE



901
TYP **PANEL SHADE**
SCALE: NONE



DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE		ORIGINAL		DESIGN		DRAWN		CHECKED		REVISIONS	
NO.	DATE	DESIGN	DATE	DRAWN	DATE	CHECKED	DATE	MPJ	DCL	MPJ	DATE
B	06/01/2021										

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6/16/21 DATE
PROJECT ENGINEER DATE
RECOMMENDED DATE

DRAWING NO.
E903
SHEET 58 of 58