



TWAIN HARTE COMMUNITY SERVICES DISTRICT

TWAIN HARTE, CALIFORNIA

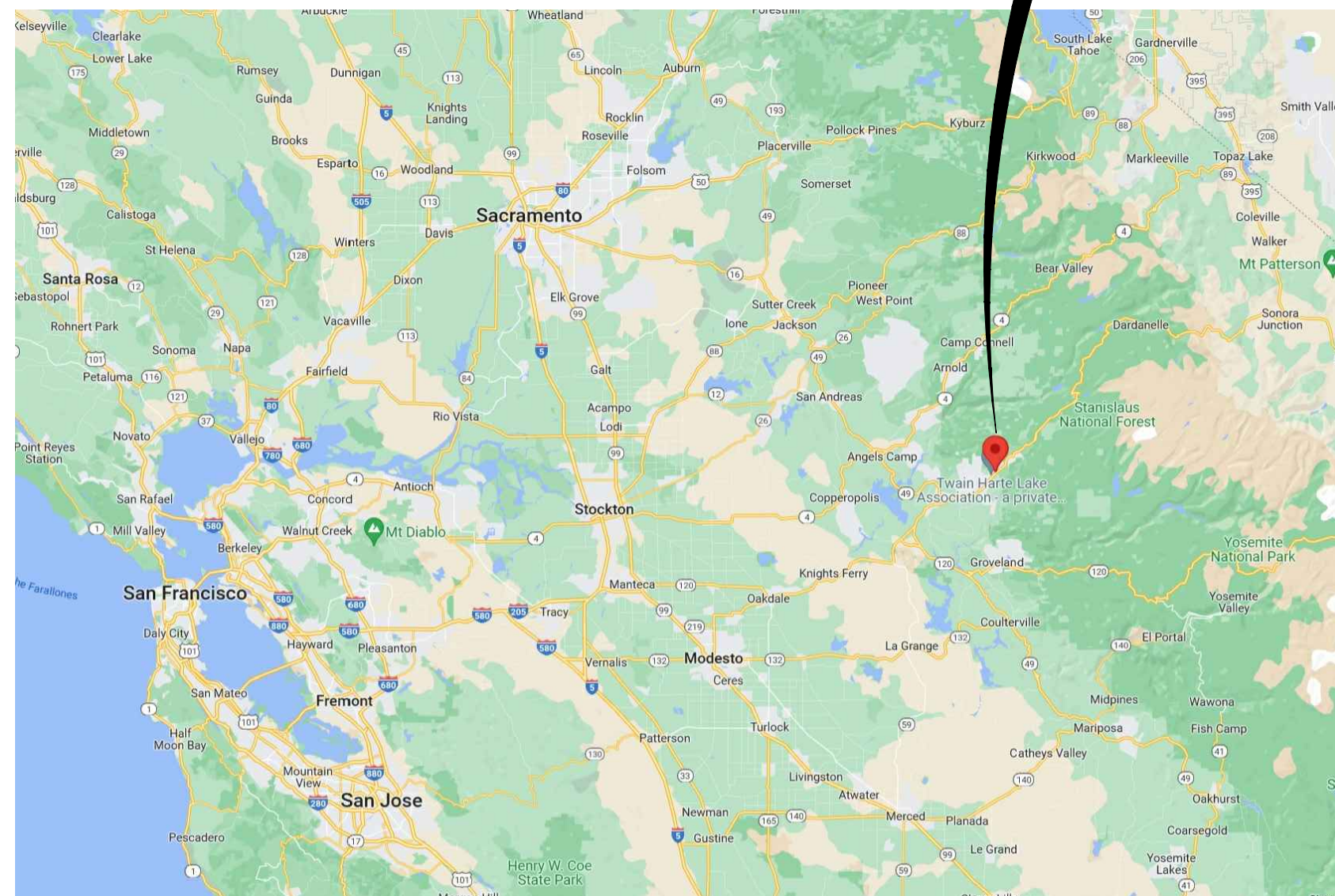
MCC REPLACEMENT

PROJECT SITE
 APN 040-010-054
 (AT INTERSECTION OF MOUNTAIN DR AND
 TIMBERWOOD TRAIL)
 TWAIN HARTE, CA 95383

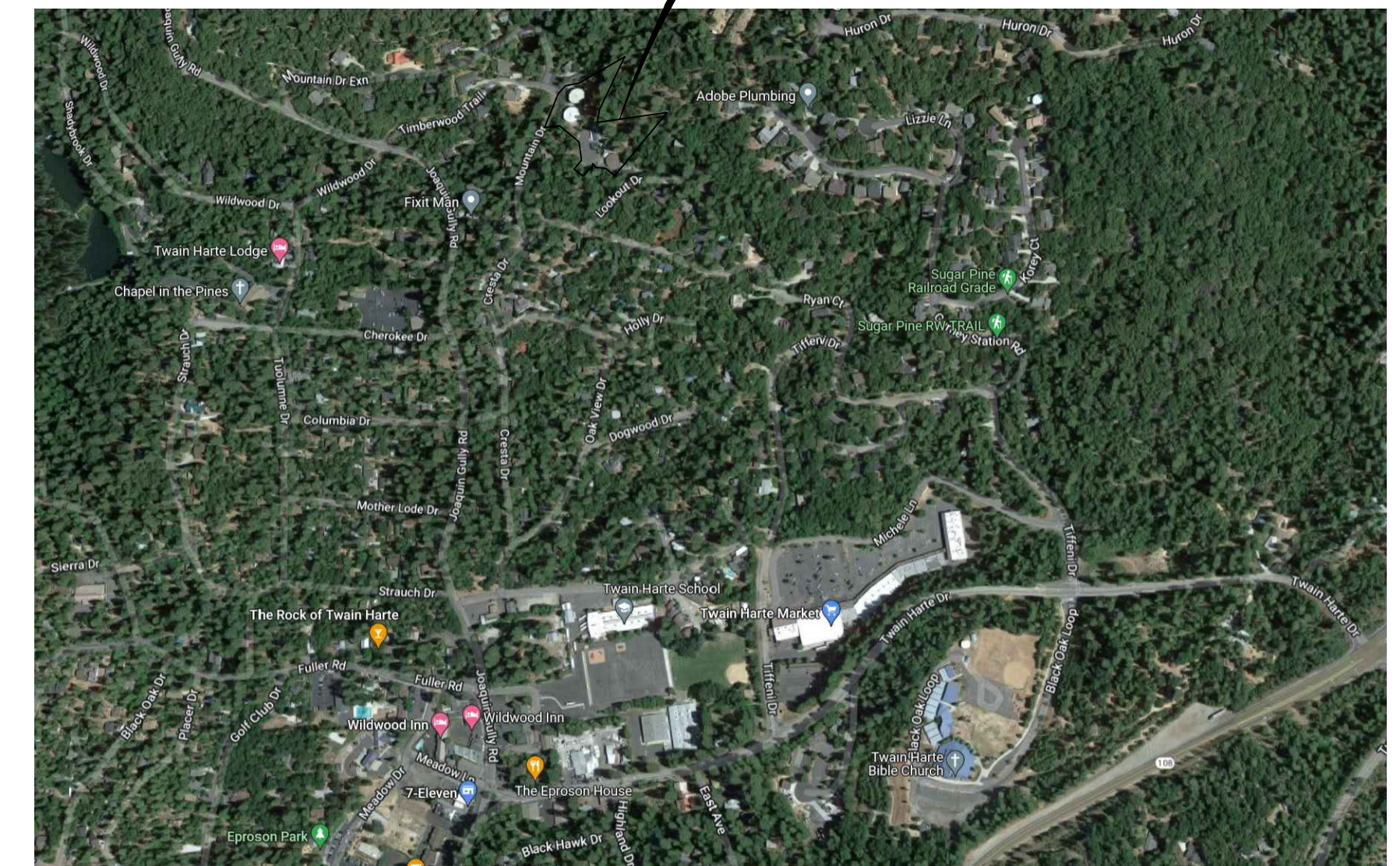
PROJECT DESCRIPTION

REPLACEMENT OF AN EXISTING 600A, 240V, 3 PHASE, MOTOR CONTROL CENTER.

TWAIN HARTE, CA



AREA MAP



VICINITY MAP

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION
G-1	COVER SHEET
E-1	NOTES, LEGEND, AND ABBREVIATIONS
E-2	DEMOLITION PLAN
E-3	SITE PLAN
E-4	SINGLE LINE DIAGRAM
E-5	MCC ELEVATION
E-6	PANELBOARD SCHEDULE
E-7	CONTROL SCHEMATIC DIAGRAMS
E-8	CONDUIT BLOCK DIAGRAM AND SCHEDULE
E-9	PUMP GALLERY BUILDING PLAN

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES
 0" = 1"
 0" = 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED
ZCD
 DRAWN
ZCD
 CHECKED
JRM

TWAIN HARTE COMMUNITY SERVICES DISTRICT
 TWAIN HARTE, CA

MCC REPLACEMENT



GENERAL
 COVER SHEET

SCALE
NO SCALE
 JOB NO
2270002.00
 DATE
AUGUST 2022
 SHEET --- OF ---
 G-01

ABBREVIATIONS			
a	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS CLOSED	FO	FIBER OPTIC
A	AMMETER, AMPERES	FREQ	FREQUENCY
AC	ALTERNATING CURRENT	FT	FEET, FOOT
A/D	ANALOG TO DIGITAL	FU	FUSE
ADJ	ADJUSTABLE	(F)	FUTURE
AF	AMPERE FRAME	FVNR	FULL VOLTAGE, NON REVERSING
AFF	ABOVE FINISHED FLOOR	FVR	FULL VOLTAGE, REVERSING
AHF	ACTIVE HARMONIC FILTER	FWD	FORWARD
AIC	AMPERES INTERRUPTING CAPACITY	GA	GAUGE
AL	ALUMINUM	GALV	GALVANIZED
ALT	ALTERNATOR	GEN	GENERATOR
A/M	AUTO/MANUAL CONTROLLER	GFI	GROUND FAULT INTERRUPTER
APPROX	APPROXIMATE	GND	GROUND
AS	AMMETER SWITCH	GRS	GALVANIZED RIGID STEEL
ASD	ADJUSTABLE SPEED DRIVE (DC)	H ₂ O ₂	HYDROGEN PEROXIDE
AT	AMMETER TRIP	HH	HANDHOLE
ATS	AUTOMATIC TRANSFER SWITCH	HMI	HUMAN MACHINE INTERFACE
AUTO	AUTOMATIC	HOA	HAND-OFF-AUTOMATIC
AUX	AUXILIARY	HOR	HAND-OFF-REMOTE
AWG	AMERICAN WIRE GAGE	HORIZ	HORIZONTAL
b	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS OPEN	HP	HORSEPOWER
BCG	BARE COPPER GROUND	HPS	HIGH PRESSURE SODIUM
BLDG	BUILDING	HTR	HEATER
C	CONDUIT, CONTACTOR	HV	HIGH VOLTAGE
CAB	CABINET	HZ	HERTZ (CYCLES PER SECOND)
CAP	CAPACITOR	IND LT	INDICATING LIGHT
CB	CIRCUIT BREAKER	INCAND	INCANDESCENT
CC	CONTROL CABLE, CLOSING COIL	INSTR	INSTRUMENT, INSTRUMENTATION
CHH	COMMUNICATION HANDHOLE	I/O	INPUT/OUTPUT
CL	CHLORINE	JB	JUNCTION BOX
CKT	CIRCUIT	KA	KILOAMPERES
CMH	COMMUNICATION MANHOLE	KCMIL	THOUSANDS OF CIRCULAR MILS
CO	CONDUIT ONLY	KV	KILOVOLTS
COMM	COMMUNICATION	KVA	KILOVOLT AMPERES
COND	CONDUCTOR	KVAR	KILOVOLT AMPERES REACTIVE
CONT	CONTINUED, CONTINUATION	KVARH	KILOVOLT AMPERES REACTIVE HOURS
CPT	CONTROL POWER TRANSFORMER	KW	KILOWATTS
CP	CONTROL PANEL	KWH	KILOWATT HOURS
CR	CONTROL RELAY	LCP	LOCAL CONTROL PANEL
CS	CONTROL SWITCH	LOR	LOCAL-OFF-REMOTE
CT	CURRENT TRANSFORMER	LP	LIGHTING PANEL
CWP	COLD WATER PIPE	LPS	LOW PRESSURE SODIUM
DC	DIRECT CURRENT	LTG	LIGHTING
DCS	DISTRIBUTED CONTROL SYSTEM	LT(S)	LIGHT(S)
DIA	DIAMETER	(M)	MODIFIED
DIAG	DIAGRAM	mA	MILLIAMPERES
DISC	DISCONNECT	MAX	MAXIMUM
DISTR	DISTRIBUTION	MCB	MAIN CIRCUIT BREAKER
DN	DOWN	MCC	MOTOR CONTROL CENTER
DP	DISTRIBUTION PANEL	MCP	MOTOR CIRCUIT PROTECTOR
DWG	DRAWING	MFR	MANUFACTURER
(E)	EXISTING	MH	MANHOLE
EA	EACH	MIN	MINIMUM
EF	EXHAUST FAN	MISC	MISCELLANEOUS
EHH	ELECTRICAL HANDHOLE	MLO	MAIN LUG ONLY
EL, ELEV	ELEVATION	MOV	MOTOR OPERATED VALVE
ELEC	ELECTRIC, ELECTRICAL	MS	MOTOR STARTER
ELEM	ELEMENTARY	MTD	MOUNTED
EMERG	EMERGENCY	MTG	MOUNTING
ENCL	ENCLOSURE	MTS	MANUAL TRANSFER SWITCH
EFFL	EFFLUENT	(N)	NEW
EQ	EQUAL	NC	NORMALLY CLOSED
EQPT	EQUIPMENT	NEC	NATIONAL ELECTRICAL CODE
ETM	ELAPSED TIME METER	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
FACP	FIRE ALARM CONTROL PANEL	NEUT	NEUTRAL
FDR	FEEDER	NIC	NOT IN CONTRACT
FF	FINISHED FLOOR	NO	NORMALLY OPEN, NUMBER
FLEX	FLEXIBLE	NTS	NOT TO SCALE
FLUOR	FLUORESCENT	OH	OVERHEAD
		OT	OVER TEMPERATURE

GENERAL NOTES:

G1. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

G2. THIS IS A GENERALIZED LEGEND SHEET. THIS CONTRACT MAY NOT USE ALL INFORMATION SHOWN.

G3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS. LACK OF INFORMATION OR ANY OTHER REASON, NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN FAVORABLY REVIEWED BY THE ENGINEER.

G4. INFORMATION SHOWN MAY NOT BE ALL INCLUSIVE. SEE ALSO ANSI C37.2, Y1.1, Y32.2, AND Y32.9.

G5. VERIFY ALL COLOR REQUIREMENTS BEFORE ORDERING MATERIALS.

G6. REFER TO THE MECHANICAL DRAWINGS FOR CERTAIN CONTROL DIAGRAMS AND EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND FOR CERTAIN CONNECTIONS TO BE MADE TO ELECTRICAL CIRCUITS.

PLAN NOTES:

P1. CONDUIT SIZE AND FILL SHALL BE AS INDICATED. WHERE NO SIZE IS SHOWN, THE CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED BY THE AUTHORITY HAVING CODE ENFORCEMENT JURISDICTION. WHERE NO FILL IS INDICATED, THE FILL SHALL BE 2#12. PROVIDE 3/16 INCH NYLON PULL ROPE IN EACH EMPTY CONDUIT.

P2. LOWER CASE LETTERS ADJACENT TO A SWITCH OR LIGHT FIXTURE INDICATE A SWITCHED CIRCUIT. FOR FOUR LAMP FIXTURES WIRED IN PAIRS WITHIN EACH FIXTURE, THE "a" SWITCH CONTROLS THE OUTER LAMPS AND THE "b" SWITCH CONTROLS THE INNER LAMPS; WIRE 3 LAMP FIXTURES SIMILARLY.

P3. CONDUIT AND WIRE LAYOUT FOR LIGHTING AND RECEPTACLES NOT SHOWN. PROVIDE PER NEC.

PLAN SYMBOLS	
	OVERHEAD POWER LINE
	UNDERGROUND CONDUIT
	MULTIPLE CONDUIT RUN
	GROUNDING
	CONDUIT WITH SEAL FITTING
	CONDUIT EXPOSED
	CONDUIT CONCEALED IN FLOOR
	CONDUIT CONCEALED IN WALL OR CEILING
	CALLOUT INDICATING CONDUIT SIZE, NUMBER OF WIRES AND WIRE SIZE
	CALLOUT INDICATING CONDUIT PER SCHEDULE
	CONDUIT RUN, HATCH MARKS INDICATE NO. OF #12 CONDUCTORS NO HATCH MARKS IS 2#12 UNLESS OTHERWISE NOTED
	HOME RUN TO PANELBOARD OR AS INDICATED
	FLEXIBLE CONDUIT
	CAP ON CONDUIT STUB
	OPEN CIRCLE DENOTES UPWARD CONDUIT RISER
	SEMI CIRCLE DENOTES DOWNWARD CONDUIT RISER
	INDICATES REMOVAL
	FIRE ALARM CONDUIT
	TELEPHONE CONDUIT
	SECURITY SYSTEM CONDUIT
	SURFACE MOUNTED PANELBOARD
	MOTOR
	DISCONNECT SAFETY SWITCH
	COMBINATION MOTOR STARTER
	MANUAL MOTOR STARTER
	CONTROL STATION
	EQUIPMENT MOUNTING STAND
	GROUND ROD AND BOX
	INSTRUMENT
	EQUIPMENT CONNECTION
	EQUIPMENT CONNECTION WITH CONDUIT SEAL
	INTRUSION REMOTE KEY PAD
	INTRUSION DOOR SWITCH
	SECURITY ALARM PANEL
	SECURITY CAMERA

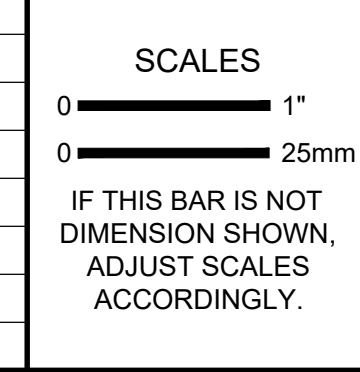
SINGLE LINE SYMBOLS	
	SINGLE POLE SWITCH 2 = 2 POLE, 3 = 3 WAY, 4 = 4 WAY, K = KEY OPERATED WR = WEATHER RESISTANT D = DIMMER P = SWITCH WITH PILOT LIGHT
	SINGLE POLE SWITCH (NOTE P2)
	FIXTURE (NOTE P2) SEE FIXTURE SCHEDULE
	FIXTURE WITH NIGHT LIGHTING (UNSWITCHED) OR FIXTURE WITH SELF-CONTAINED EMERGENCY BALLAST/BATTERY
	WALL/CEILING MOUNTED FIXTURE
	WALL/CEILING MOUNTED FIXTURE NIGHT LIGHTING (UNSWITCHED)
	POLE MOUNTED FIXTURE
	WALL/CEILING MOUNTED EXIT LIGHT - DIRECTIONAL ARROW WHERE INDICATED, SHADED AREA INDICATES ILLUMINATED FACE
	EMERGENCY LIGHT WITHOUT SELF CONTAINED BATTERY
	LIGHT FIXTURE IDENTIFICATION
	SINGLE RECEPTACLE, 120V
	SINGLE RECEPTACLE, 240V
	DUPLEX WALL RECEPTACLE, 120V WR = WEATHER RESISTANT G = GROUNDING IG = ISOLATED GROUND GFI = GROUND FAULT INTERRUPTER EXP = CLASS 1, DIV 1 AND 2
	RECEPTACLE, 480V
	WALL/CEILING MOUNTED JUNCTION BOX
	FLOOR RECESS MOUNTED JUNCTION BOX
	THERMOSTAT, WALL MOUNTED
	GO/NOGO FLASHING LIGHT
	GO/NOGO HORN
	FIRE ALARM PULL STATION
	FIRE ALARM FLASHING LIGHT
	FIRE ALARM HORN
	BELL
	BUZZER
	HEAT DETECTOR
	SMOKE DETECTOR
	WALL SENSOR
	FIRE ALARM CONTROL PANEL
	ANTENNA
	GROUND CONNECTION
	SWITCH, 3 POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED.
	AUTOMATIC TRANSFER SWITCH 3 POLE, RATING AS NOTED
	SHUNT TRIP
	FUSE
	FUSE CUTOUT
	CIRCUIT BREAKER, 3-POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED. TOP INDICATION IS FRAME SIZE, BOTTOM IS TRIP RATING.
	MCP CIRCUIT BREAKER, 3-POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED. BOTTOM INDICATION IS INSTANTANEOUS TRIP RATING.
	THERMAL-MAGNETIC CIRCUIT BREAKER, 3-POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED. BOTTOM INDICATION IS INSTANTANEOUS TRIP RATING.
	POWER CIRCUIT BREAKER DRAWN OUT ABOVE 1500V RATING AS NOTED
	CURRENT TRANSFORMER
	VOLTAGE TRANSFORMER
	POWER OR DISTRIBUTION TRANSFORMER RATING AS NOTED
	MOTOR. NUMBER INDICATES HORSEPOWER
	GENERATOR
	CONTROL PACKAGE PROVIDED WITH THE DRIVEN EQUIPMENT
	BUS STAB ON MCC OR SWITCHGEAR, CORD & PLUG CONNECTION FOR MOTORS
	THERMAL OVERLOAD
	AMMETER SWITCH
	VOLTMETER SWITCH
	ELEMENTARY DIAGRAM REFERENCE NUMBER
	KIRK KEY INTERLOCK
	POWER RECEPTACLE FOR PORTABLE EQUIPMENT
	RELAY DEVICE FUNCTION, # PER ANSI NUMBER C37.2
	TERMINATOR / POTHEAD
	SPLICE, TERMINATION
	MOTOR STARTER NUMBER INDICATES NEMA SIZE
	CAPACITOR - KVAR INDICATED
	VFD - VARIABLE FREQUENCY DRIVE SS - SOLID STATE STARTER
	SURGE PROTECTIVE DEVICE
	MOTOR HEATER

ELEMENTARY DIAGRAM SYMBOLS	
	FUSE. RATING IN AMPERES
	MOTOR
	ELAPSED TIME METER
	CONTROL DEVICE COIL. PREFIX NUMBER, WHEN USED, DISTINGUISHES BETWEEN DEVICES OF THE SAME TYPE.
	RELAY
	INDICATING LIGHT
	PUSH-TO-TEST INDICATING LIGHT COLORS: A - AMBER B - BLUE C - CLEAR G - GREEN
	SINGLE POLE SWITCH NORMALLY OPEN / CLOSED
	EMERGENCY PUSHBUTTON NORMALLY OPEN / CLOSED
	PUSHBUTTON NORMALLY OPEN / CLOSED
	LIMIT SWITCHES
	SWITCH 1-POLE / 3-POLE
	MULTI-POSITION SELECTOR SWITCH
	HAND-OFF-AUTOMATIC SWITCH X-INDICATES CONTACTS CLOSED
	HAND-OFF-REMOTE SWITCH X-INDICATES CONTACTS CLOSED
	TERMINAL
	CONTROL POWER TRANSFORMER
	AMP/FRAME
	CIRCUIT BREAKER, MCP 1-POLE / 3-POLE
	GROUND CONNECTION
	INSTRUMENT
	THERMAL OVERLOAD
	CONTACT NORMALLY OPEN / CLOSED
	BUS STAB ON MCC; CORD & PLUG CONNECTION FOR MOTORS
	SCR
	CROSS REFERENCE TO ANOTHER DIAGRAM
	NORMALLY OPEN CONTACT ON THE OTHER DIAGRAM
	NORMALLY CLOSED CONTACT ON THIS DIAGRAM
	SPARE CONTACTS ON RELAY. IF OMITTED, THEN THE SPEC. REQUIREMENTS REGARDING SPARE CONTACTS APPLY.
	LEGEND PLATE REQUIREMENT FOR THAT PARTICULAR DEVICE. ANY ADDITIONAL NAMEPLATES ARE INDICATED ON ELEVATIONS WITH THE REQUIRED NAMEPLATE INSCRIPTIONS.
	"NORMAL" STATUS OF SWITCHES OR CONTACTS IS THE SHELF POSITION.
	NUMBERS AND LETTERS IDENTIFY DEVICE.

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY



DESIGNED ZCD
DRAWN ZCD
CHECKED JRM

DESIGNED BY: ZCD
DRAWN BY: ZCD
CHECKED BY: JRM

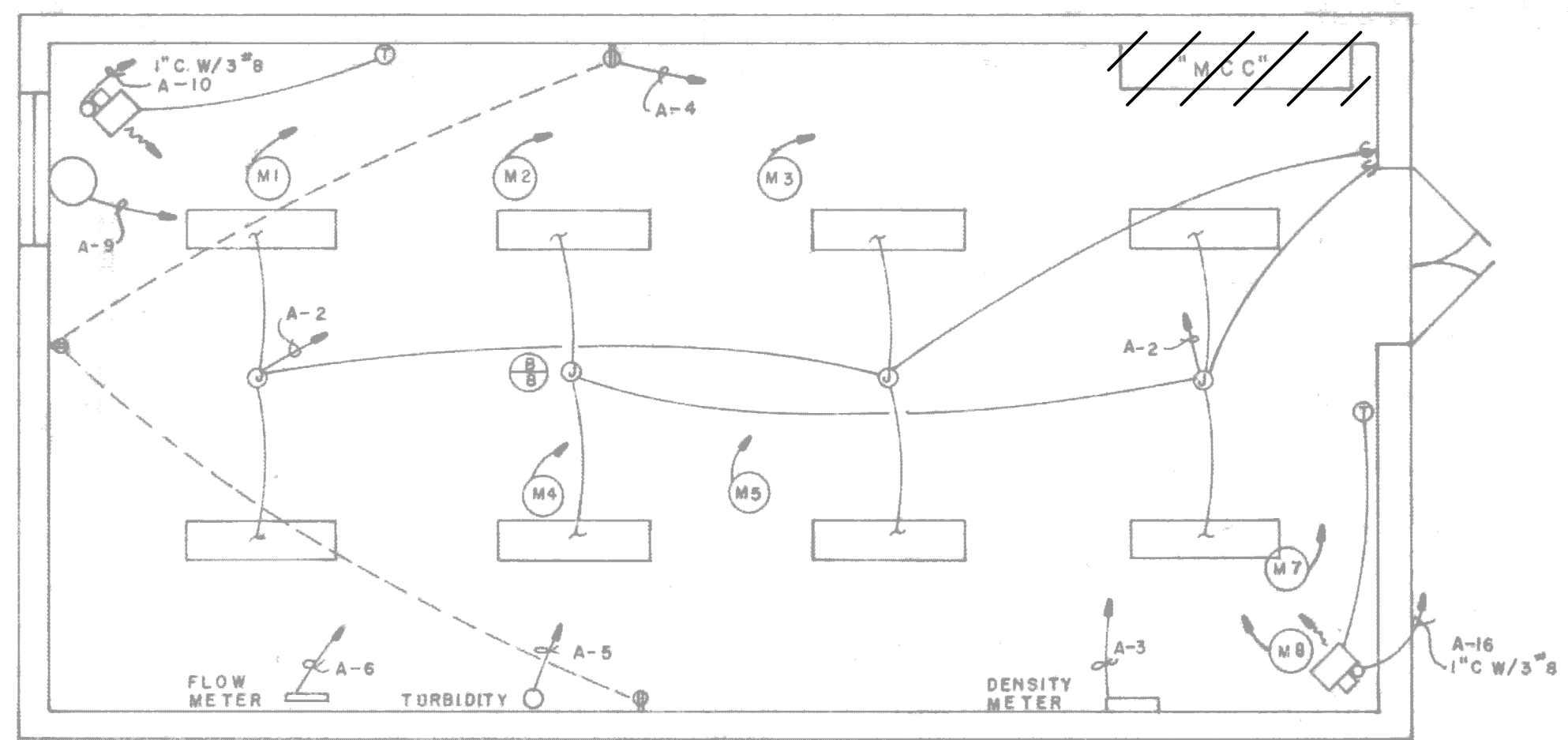
TWAIN HARTE COMMUNITY SERVICES DISTRICT
TWAIN HARTE, CA

MCC REPLACEMENT

ELECTRICAL

NOTES, LEGEND, AND ABBREVIATIONS

SCALE: NO SCALE
JOB NO: 2270002.00
DATE: AUGUST 2022
SHEET: --- OF ---
E-01



PIPE GALLERY ELECTRICAL
1/4" = 1'-0"

NOTE: HEATER SUPPORTS PER MFG.

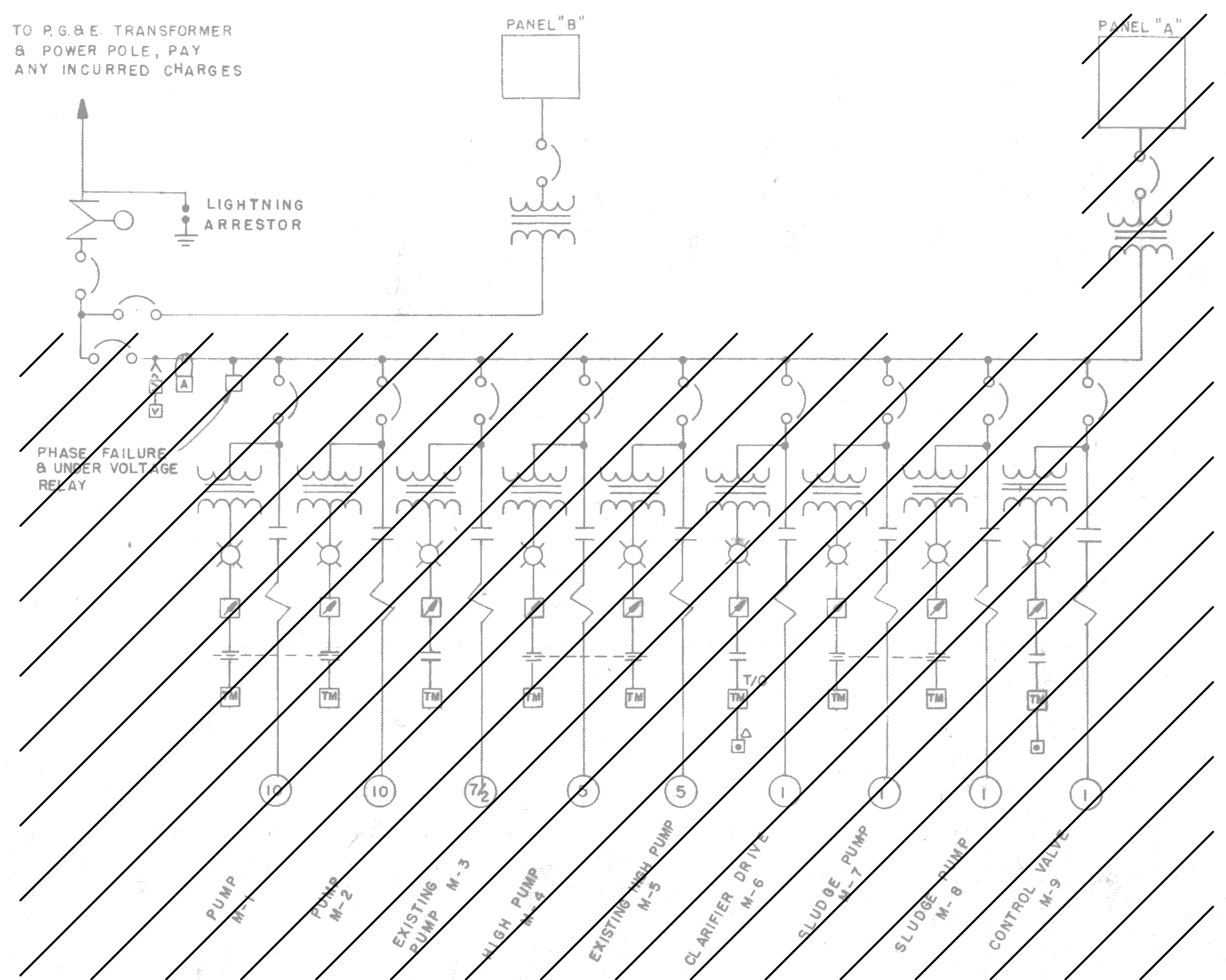
NOTES:
1. DISCONNECT AND REMOVE EXISTING MCC. PROTECT IN PLACE ALL CONCEALED CONDUITS, AND ADJACENT EQUIPMENT TO REMAIN.



INSTRUMENTATION/RELAY SECTION TO REMAIN. PROTECT IN PLACE.

DISCONNECT AND REMOVE

EXISTING MCC



ONE LINE DIAGRAM

ISSUED FOR BID

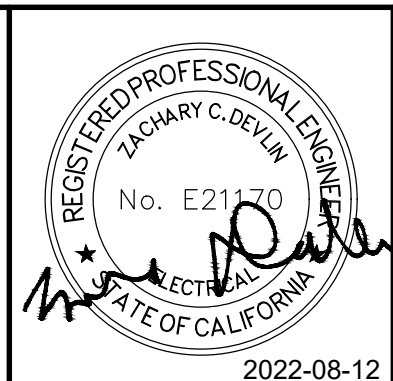
ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES

0" = 1"
0" = 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED: ZCD
DRAWN: ZCD
CHECKED: JRM

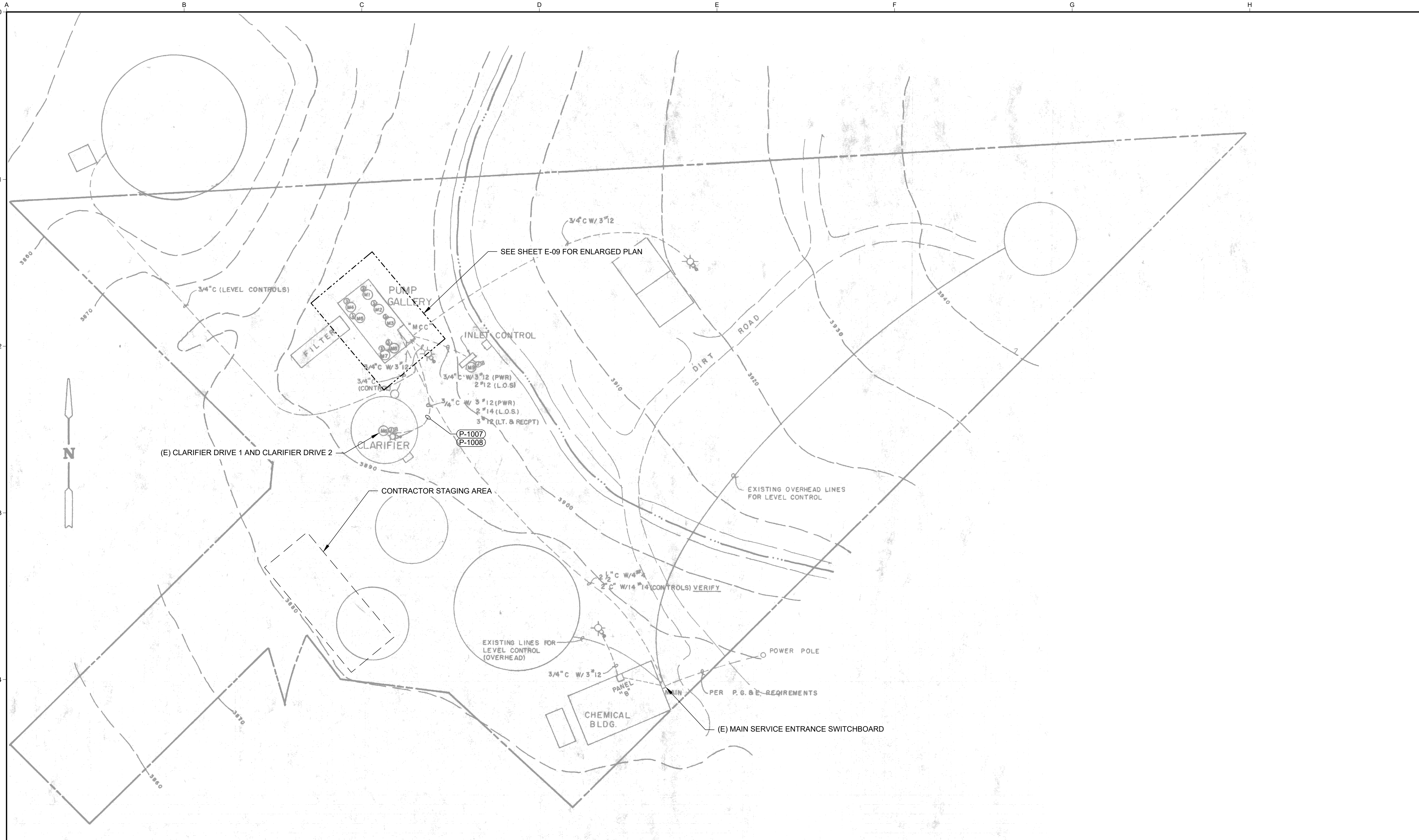
TWAIN HARTE COMMUNITY SERVICES DISTRICT
TWAIN HARTE, CA

MCC REPLACEMENT

Kennedy Jenks

ELECTRICAL DEMOLITION PLAN

SCALE: NO SCALE
JOB NO: 2270002.00
DATE: AUGUST 2022
SHEET: --- OF ---
E-02



ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES

0 ——— 1"
0 ——— 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED
ZCD

DRAWN
ZCD

CHECKED
JRM

TWAIN HARTE COMMUNITY SERVICES DISTRICT
TWAIN HARTE, CA

MCC REPLACEMENT

KJ Kennedy Jenks

ELECTRICAL SITE PLAN

SCALE 1" = 20'-0"

JOB NO 2270002.00

DATE AUGUST 2022

SHEET --- OF ---

E-03

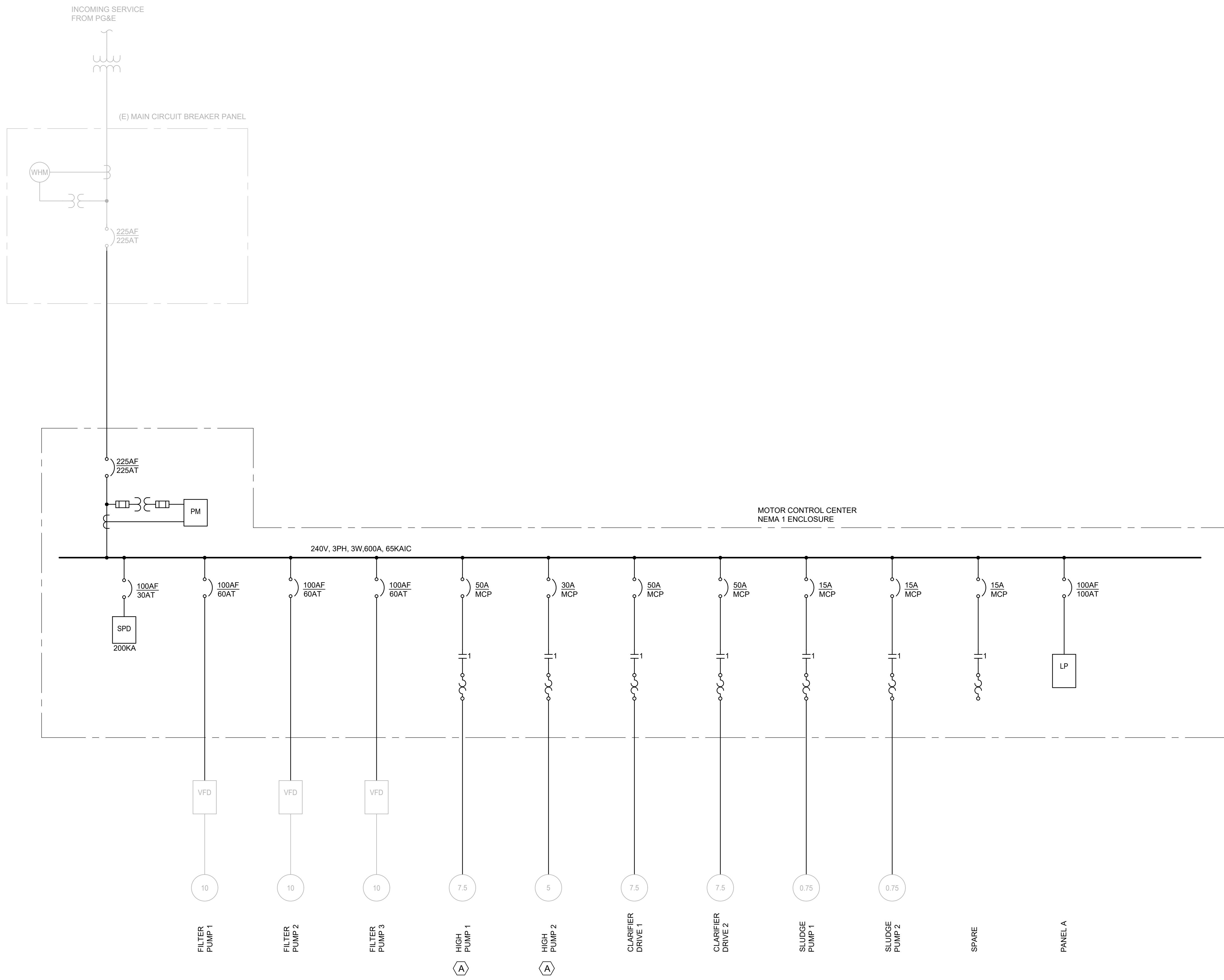
Plot Date: 8/12/2022 3:28 PM

User: ZACH DEVLIN

File: C:\Sacramento\2022\2270002.00_THCS_MCC Replacement\Project\10-EngDesign\10.06-Drawings\Electrical\2270002.00-E-04.DWG

SHEET KEYNOTES

A. PROVIDE TEMPORARY ALTERNATE SOURCE OF POWER TO KEEP THESE LOADS OPERATIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.



ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES

0 — 1" = 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED: ZCD
 DRAWN: ZCD
 CHECKED: JRM
 2022-08-12

TWAIN HARTE COMMUNITY SERVICES DISTRICT
 TWAIN HARTE, CA
MCC REPLACEMENT

Kennedy Jenks

ELECTRICAL SINGLE LINE DIAGRAM

SCALE: NO SCALE
 JOB NO: 2270002.00
 DATE: AUGUST 2022
 SHEET: --- OF ---
E-04

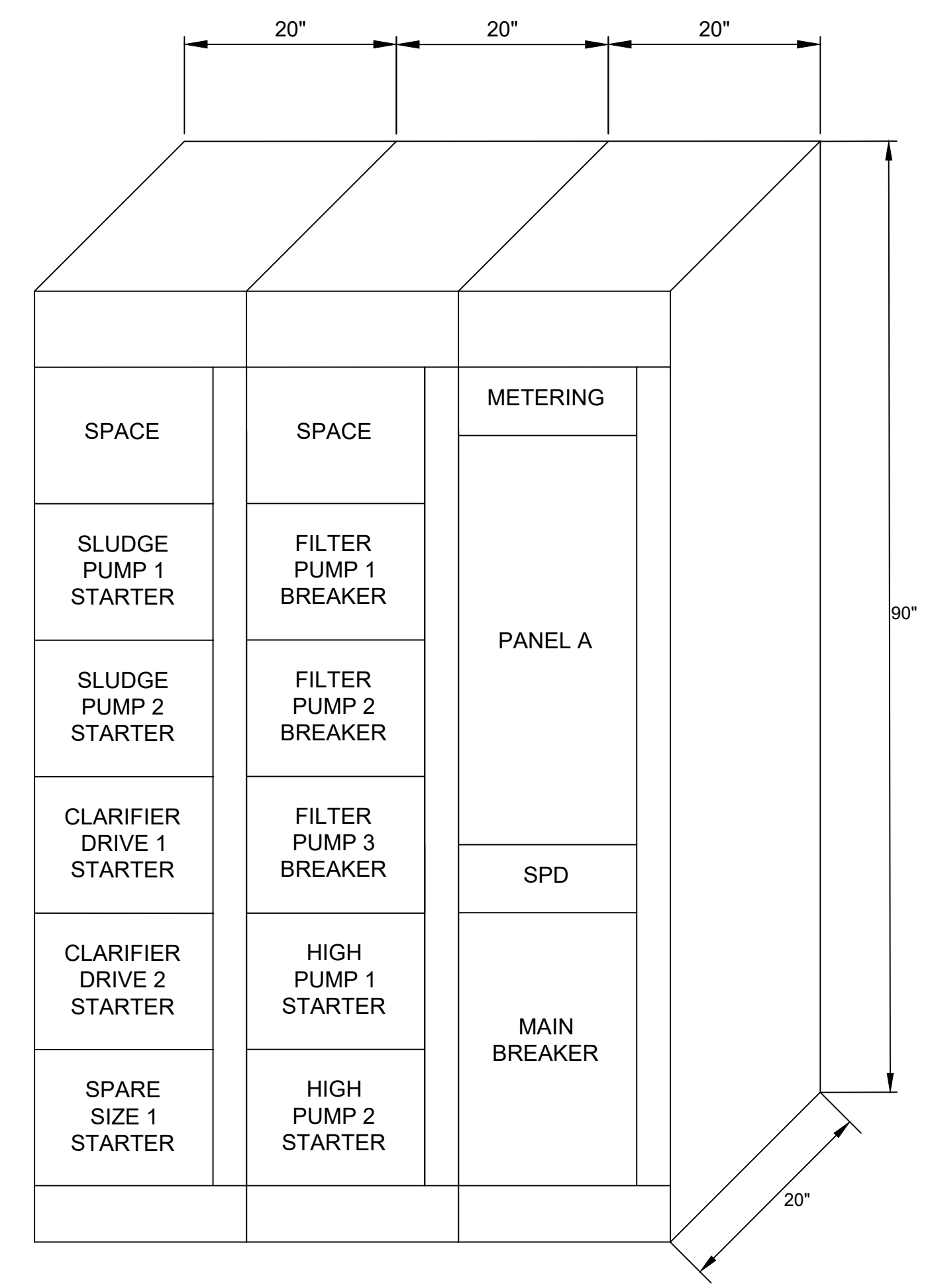
Plot Date: 8/12/2022 3:29 PM

User: ZACH DEVLIN

File: C:\Sacramento\2022\2270002.00_THCSO_MCC Replacement\Project\10-Eng\Design\10_06-Drawings\Electrical\2270002.00-E-05.DWG

GENERAL SHEET NOTES

- EXISTING MCC CONSISTS OF FOUR VERTICAL SECTIONS. THE LEFT-MOST INSTRUMENTATION/RELAY SECTION WILL REMAIN. DISCONNECT AND REMOVE THREE RIGHT-MOST SECTIONS, AND PROVIDE REPLACEMENT MCC AS SHOWN.
- PROTECT IN PLACE FIELD WIRING AND CONDUITS FOR RECONNECTION TO REPLACEMENT MCC.

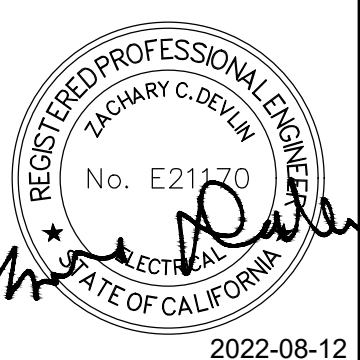


ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES
 0 ——— 1"
 0 ——— 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED
ZCD
 DRAWN
ZCD
 CHECKED
JRM

TWAIN HARTE COMMUNITY SERVICES DISTRICT
 TWAIN HARTE, CA
MCC REPLACEMENT



**ELECTRICAL
 MCC ELEVATION**

SCALE
NO SCALE
 JOB NO
2270002.00
 DATE
AUGUST 2022
 SHEET --- OF ---
E-05

Plot Date: 8/12/2022 3:29 PM

User: ZACH DEVLIN

File: C:\Sacramento\2022\2270002_00_THCSO_MCC Replacement\Project\10-EngDesign\10_06-Drawings\Electrical\2270002_00-E-06.DWG

GENERAL SHEET NOTES

- ALL CIRCUITS ARE EXISTING, FED FROM PANELBOARD IN EXISTING MCC. PROTECT IN PLACE ALL BRANCH CIRCUIT CONDUCTORS DURING DEMOLITION OF EXISTING MCC AND RE-CONNECT TO NEW PANELBOARD AS SHOWN.
- SYSTEM IS A 240V THREE PHASE DELTA. CLEARLY MARK ALL HIGH-LEG CIRCUITS.

SHEET KEYNOTES

- EXISTING CIRCUITS ARE CONNECTED TO HIGH LEG OF EXISTING SYSTEM. CONTRACTOR SHALL FIELD VERIFY THAT THE LOAD EQUIPMENT IS SUITABLY RATED FOR 208V. REARRANGE CIRCUITS AS NEEDED SO THAT ALL LOADS ARE FED AT A SUITABLE VOLTAGE.
- PROVIDE TEMPORARY ALTERNATE SOURCE OF POWER TO KEEP THESE LOADS OPERATIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.

PANEL A						FED FROM: MCC						
CKT. NO.	DESCRIPTION	BUS: 100A			AIC: 10KA	TRIP AMPS/POLES	CKT. NO.	DESCRIPTION	MOUNTING: IN MCC			TRIP AMPS/POLES
		CONNECTED KVA							CONNECTED KVA			
		A	B	C					A	B	C	
1						2						
3	HEATER				30/3	4	RECLAIM BASIN PUMP VFD				30/3	
5						6						
7						8	FLOATS				15/2	
9	HIGH PUMP C/B PANEL				25/3	10						
11						12	SPARE				20/1	
13	SPARE				20/2	14	FLOW METER + OLD PLC				20/1	
15						16	BACKWASH, RECLAIM, SLUDGE CTRL CKTS				20/1	
17	J-BOX #1- ZINK PUMP				20/1	18	OVERHEAD LIGHTING				20/1	
19	SHADY BROOK ALARM				20/1	20	NORTH WALL RECEPT EAST WALL				20/1	
21	TURBIDITY MONITOR				20/1	22	PHONE RECEPTACLE				20/1	
23	J-BOX #2				20/1	24	YARD LIGHTS				20/1	
25						26	ALARM PANEL				20/1	
27	CHEM BUILDING				100/2	28	EMERG LTG				20/1	
29	NTU ALARM				20/1	30	EAST WALL RECEPT				20/1	
31	WEST WALL RECEPT				20/1	32	COMPUTER UPS				20/1	
33	UPS				15/1	34	AUTODIALER				20/1	
35	HYDRO PANEL				20/1	36	SPARE				20/1	
37	SPARE				20/1	38	SPARE				20/1	
39	SPARE				15/1	40	SPARE				20/1	
41	SPARE				20/1	42	SPARE				20/1	
PHASE SUBTOTALS (KVA):		0.0	0.0	0.0				0.0	0.0	0.0		
PHASE TOTALS (KVA):								0.0	0.0	0.0		
TOTAL KVA:										0.0	KVA	
TOTAL AMPERES:										0	A	

(A)
(B)
(B)(A)

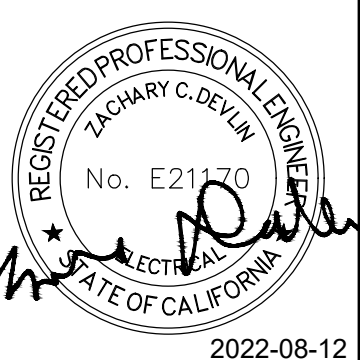
(B)
(A)
(B)
(A)
(B)
(A)(B)

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES
 0 ——— 1"
 0 ——— 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



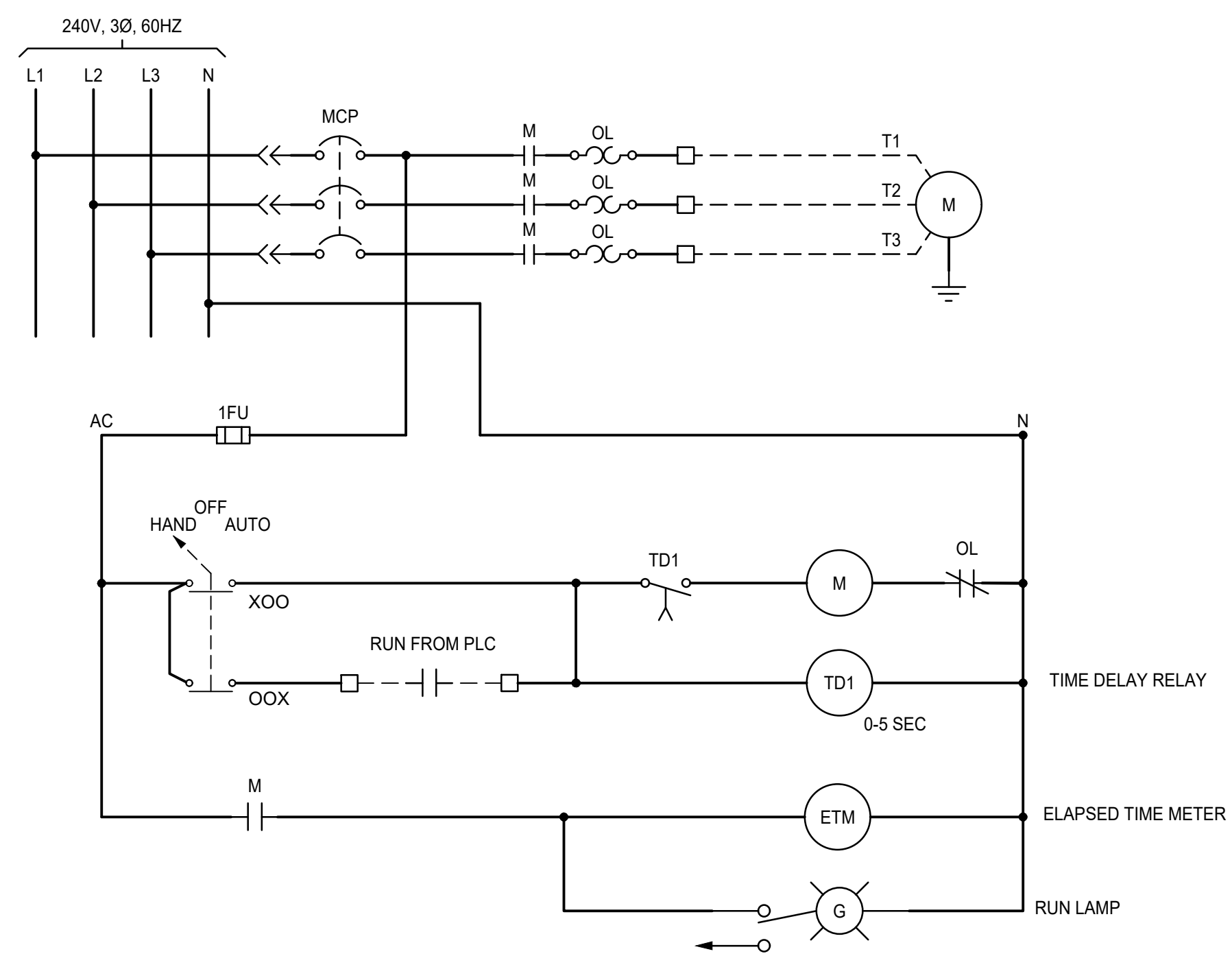
DESIGNED ZCD
 DRAWN ZCD
 CHECKED JRM
 2022-08-12

TWAIN HARTE COMMUNITY SERVICES DISTRICT
 TWAIN HARTE, CA
MCC REPLACEMENT

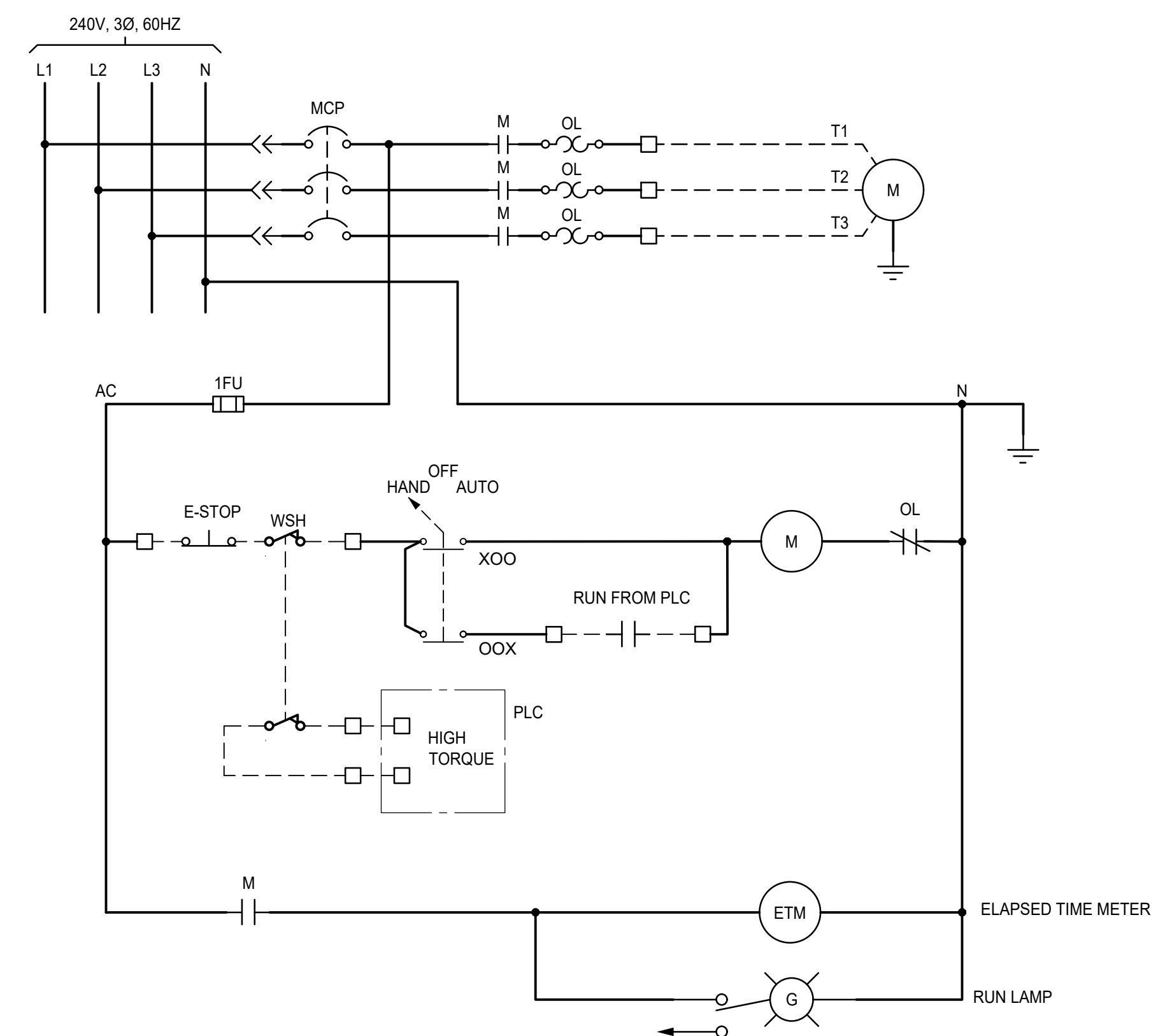
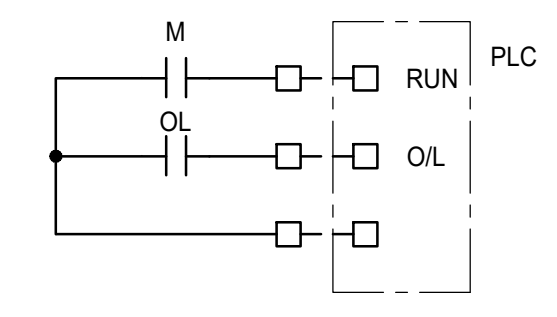


**ELECTRICAL
 PANELBOARD SCHEDULE**

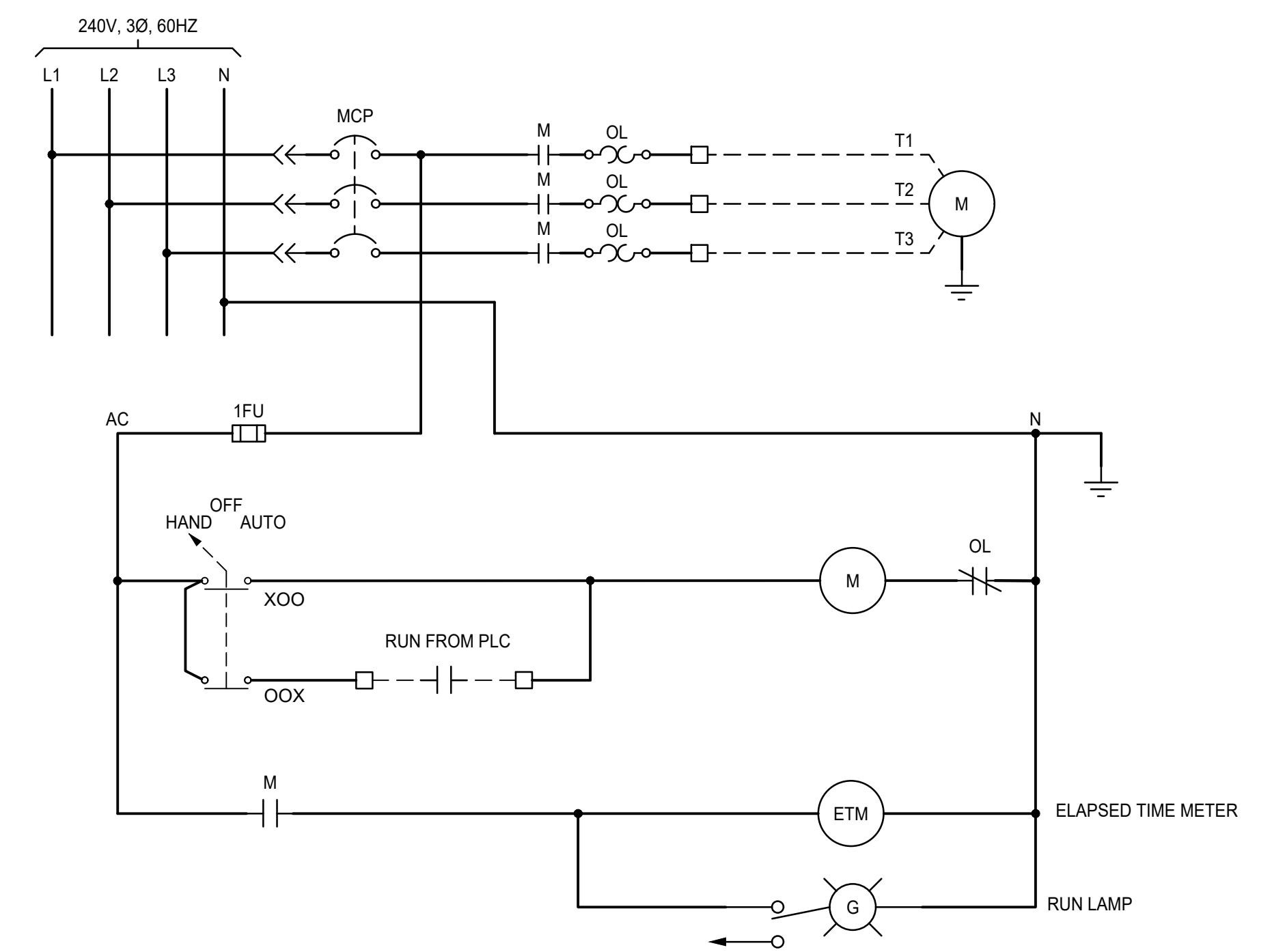
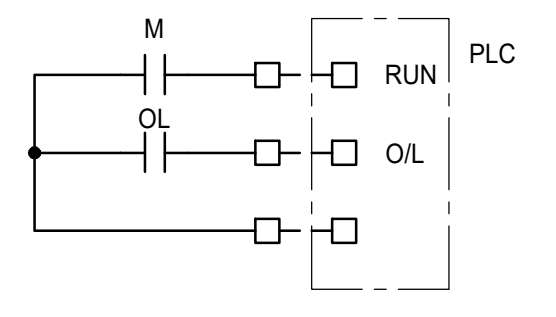
SCALE NO SCALE
 JOB NO 2270002.00
 DATE AUGUST 2022
 SHEET --- OF ---
E-06



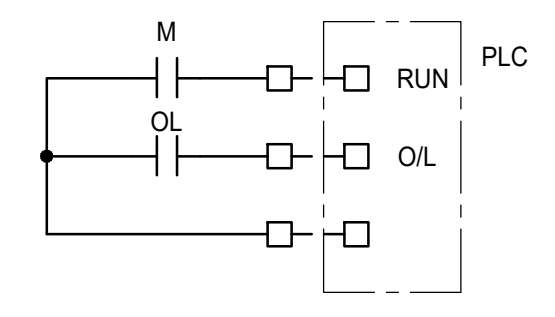
HIGH PUMP
TYPICAL OF HIGH PUMPS 1 AND 2



CLARIFIER DRIVE
TYPICAL OF CLARIFIER DRIVES 1 AND 2



SLUDGE PUMP
TYPICAL OF SLUDGE PUMPS 1 AND 2



LEGEND

—————	WIRING INTERNAL TO MCC
- - - - -	FIELD WIRING
□	TERMINAL BLOCKS

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES

0 ——— 1"
0 ——— 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED: ZCD
DRAWN: ZCD
CHECKED: JRM

TWAIN HARTE COMMUNITY SERVICES DISTRICT
TWAIN HARTE, CA
MCC REPLACEMENT

Kennedy Jenks

ELECTRICAL CONTROL SCHEMATIC DIAGRAMS

SCALE: NO SCALE
JOB NO: 2270002.00
DATE: AUGUST 2022
SHEET --- OF ---
E-07

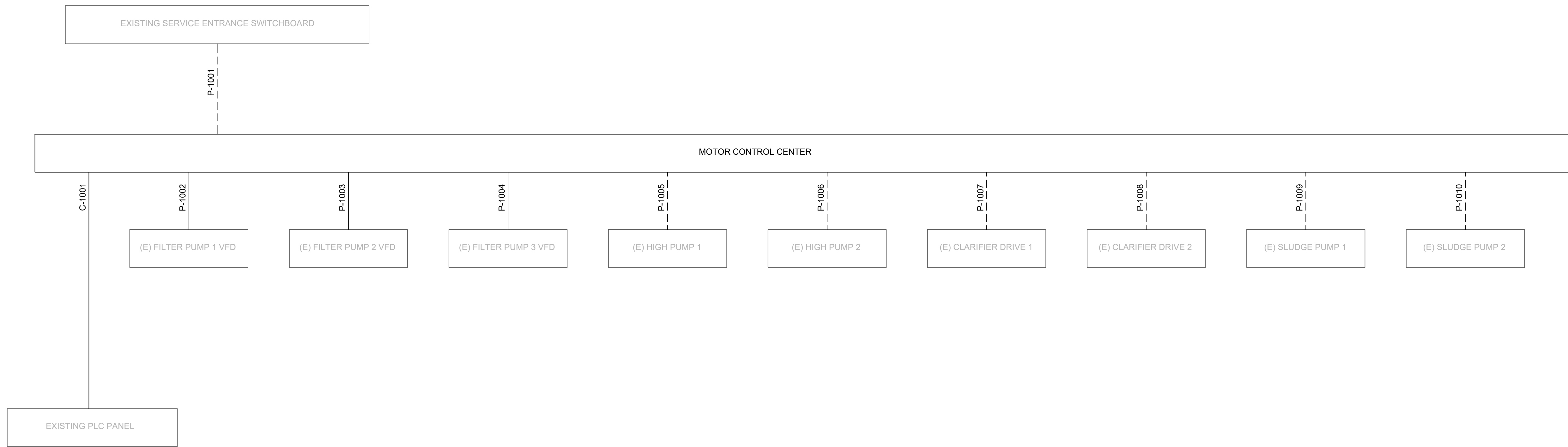
Plot Date: 8/12/2022 3:22 PM

User: ZACH DEVLIN

File: C:\Sacramento\2022\2270002_00_THCSD_MCC Replacement\Project\10-EngDesign\10_06-Drawings\Electrical\2270002_00-E-08.DWG

GENERAL SHEET NOTES

1. CABLE AND CONDUITS FOR BRANCH CIRCUITS FED FROM PANEL A (LOCATED IN MCC) ARE NOT SHOWN. RECONNECT EXISTING CONDUITS AND CONDUCTORS TO NEW MCC. SEE SHEET E-6 FOR ADDITIONAL INFORMATION ON CIRCUITS TO BE RECONNECTED.



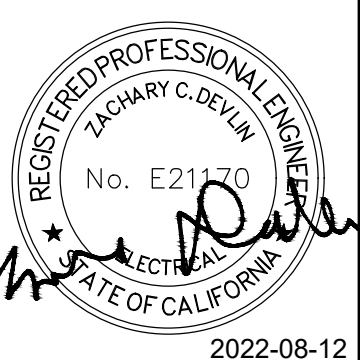
CONDUIT AND WIRE SCHEDULE							
NUMBER	FROM	TO	SIZE (")	POWER	CONTROL	SIGNAL	COMMENTS
C-1001	MOTOR CONTROL CENTER	(E) PLC PANEL	1-1/2"			40-#14, 1-#14 GND	NEW CONDUIT AND CONDUCTORS
P-1001	EXISTING SERVICE ENTRANCE SWITCHBOARD	MOTOR CONTROL CENTER	2-1/2"	4-#4/0 AWG			EXISTING CONDUIT. TEST CONDUCTORS AND RECONNECT TO NEW MCC.
P-1002	MOTOR CONTROL CENTER	(E) FILTER PUMP 1 VFD	3/4"	3-#6 AWG, 1-#8 AWG GND			NEW CONDUIT AND CONDUCTORS
P-1003	MOTOR CONTROL CENTER	(E) FILTER PUMP 2 VFD	1"	3-#6 AWG, 1-#8 AWG GND			NEW CONDUIT AND CONDUCTORS
P-1004	MOTOR CONTROL CENTER	(E) FILTER PUMP 3 VFD	1"	3-#6 AWG, 1-#8 AWG GND			NEW CONDUIT AND CONDUCTORS
P-1005	MOTOR CONTROL CENTER	(E) HIGH PUMP 1	3/4"	4-#10 AWG			EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.
P-1006	MOTOR CONTROL CENTER	(E) HIGH PUMP 2	3/4"	4-#12 AWG			EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.
P-1007	MOTOR CONTROL CENTER	(E) CLARIFIER DRIVE 1	3/4"	4-#10 AWG	4-#14 AWG		EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.
P-1008	MOTOR CONTROL CENTER	(E) CLARIFIER DRIVE 2	3/4"	4-#10 AWG	4-#14 AWG		EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.
P-1009	MOTOR CONTROL CENTER	(E) SLUDGE PUMP 1	3/4"	4-#12 AWG			EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.
P-1010	MOTOR CONTROL CENTER	(E) SLUDGE PUMP 2	3/4"	4-#12 AWG			EXISTING CONDUIT. PROVIDE NEW CONDUCTORS.

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

NO	REVISION	DATE	BY

SCALES
 0" = 1"
 0" = 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

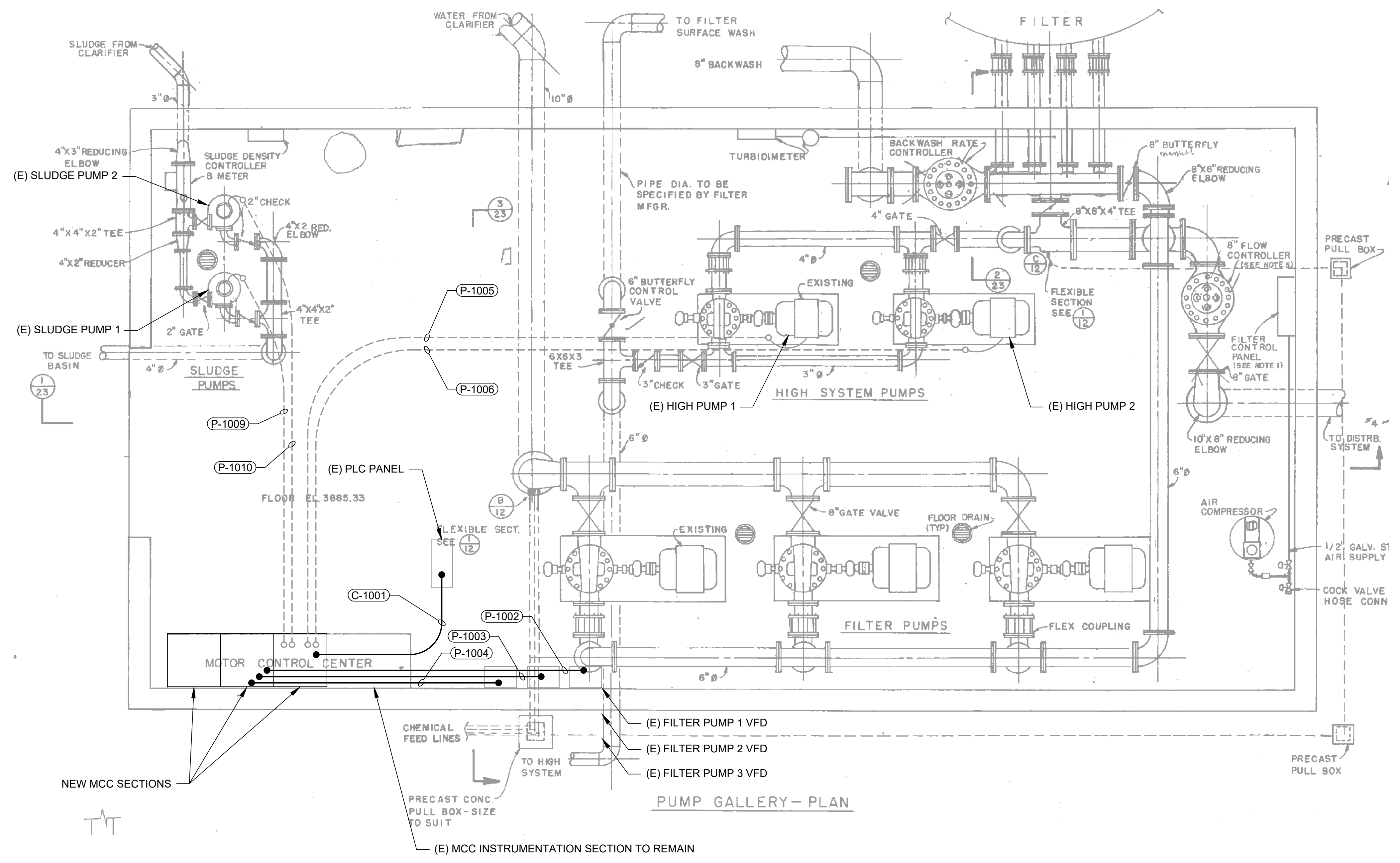


DESIGNED
ZCD
 DRAWN
ZCD
 CHECKED
JRM
 2022-08-12

TWAIN HARTE COMMUNITY SERVICES DISTRICT
 TWAIN HARTE, CA
MCC REPLACEMENT

ELECTRICAL
CONDUIT BLOCK DIAGRAM AND SCHEDULE

SCALE
NO SCALE
 JOB NO
2270002.00
 DATE
AUGUST 2022
 SHEET --- OF ---
E-08



PUMP GALLERY - PLAN

ISSUED FOR BID

ANY PRINTS NOT BEARING THIS STAMP MAY HAVE BEEN PRINTED PRIOR TO ADVERTISING AND CANNOT BE CONSIDERED AS BID DOCUMENTS. USERS OF THIS DOCUMENT IN EDITABLE ELECTRONIC FORMATS ARE CAUTIONED AGAINST USE WITHOUT FIRST DETERMINING WHETHER CHANGES MAY HAVE BEEN MADE SUBSEQUENT TO ITS PREPARATION.

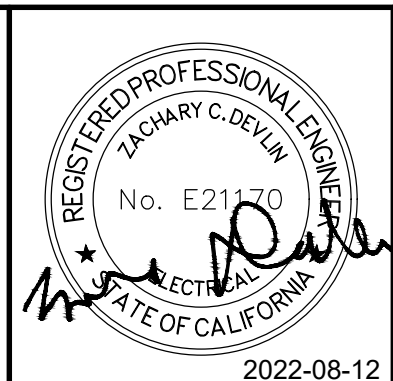
NO	REVISION	DATE	BY

SCALES

0" = 1"

0" = 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED: ZCD
DRAWN: ZCD
CHECKED: JRM

TWAIN HARTE COMMUNITY SERVICES DISTRICT
TWAIN HARTE, CA
MCC REPLACEMENT

Kennedy Jenks

**ELECTRICAL
PUMP GALLERY BUILDING PLAN**

SCALE: 1/2" = 1'-0"
JOB NO: 2270002.00
DATE: AUGUST 2022
SHEET --- OF ---
E-09