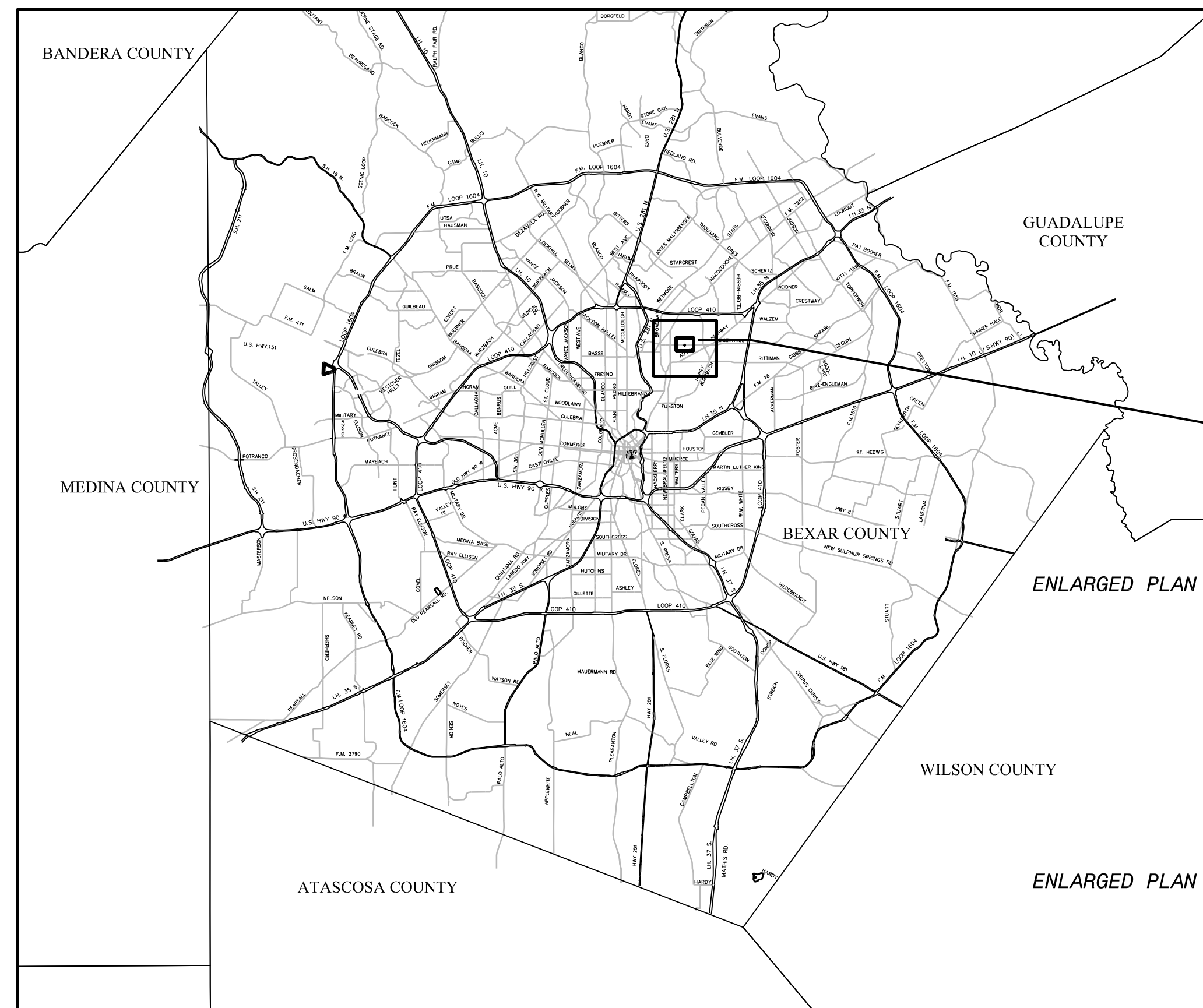
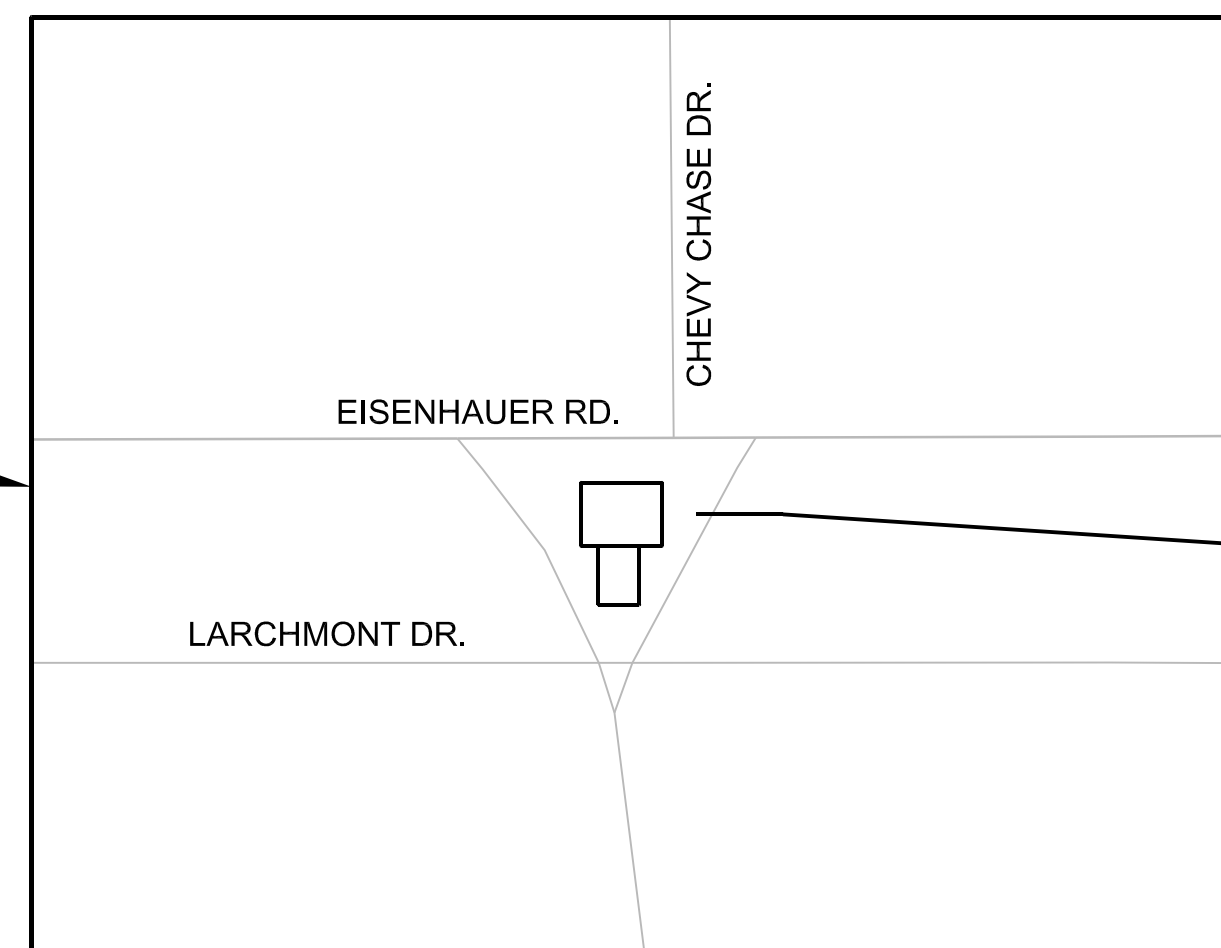


KLAUS PUMP STATION



LOCATION MAP
SCALE 1"=15000'



SITE MAP

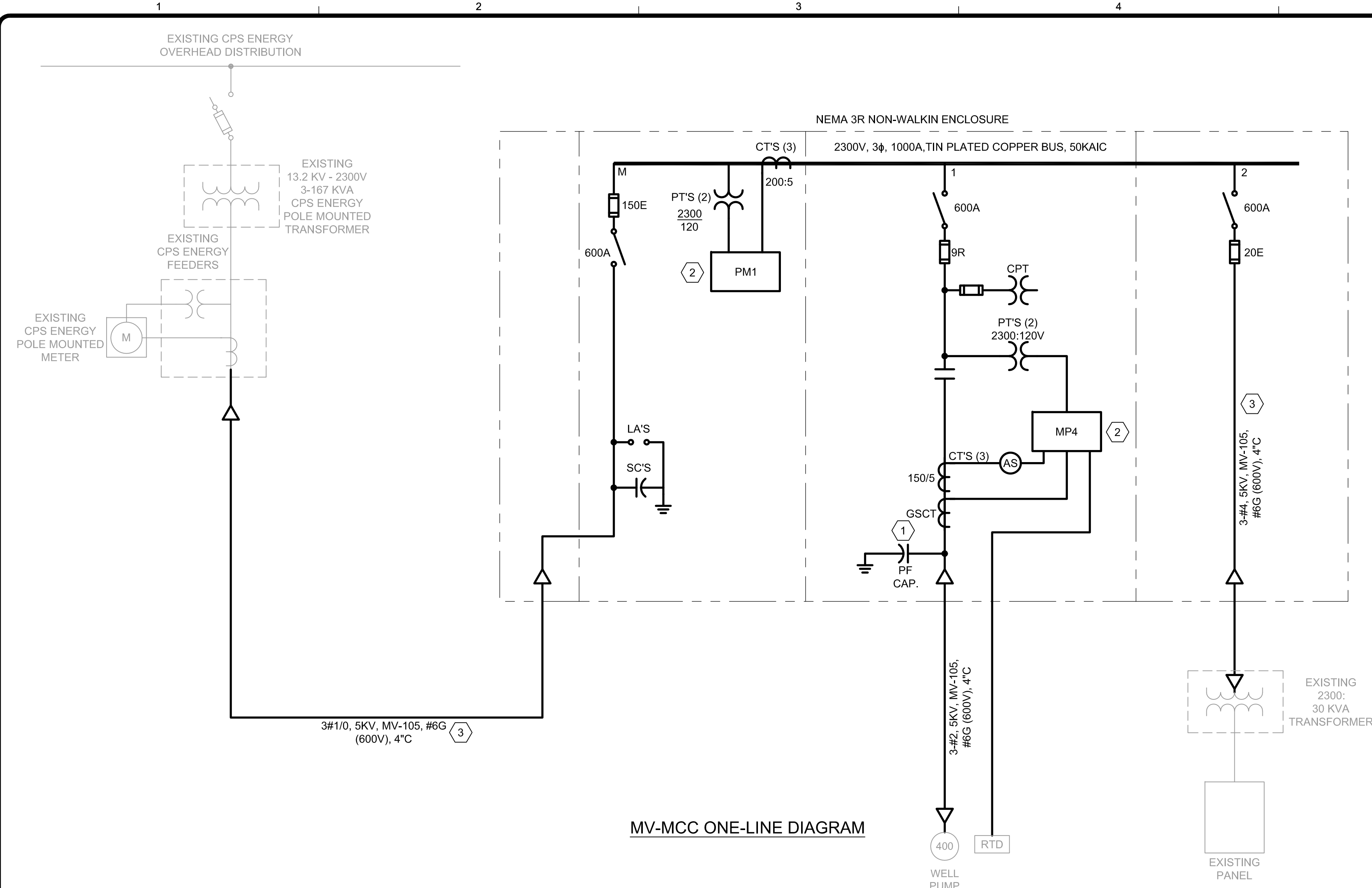


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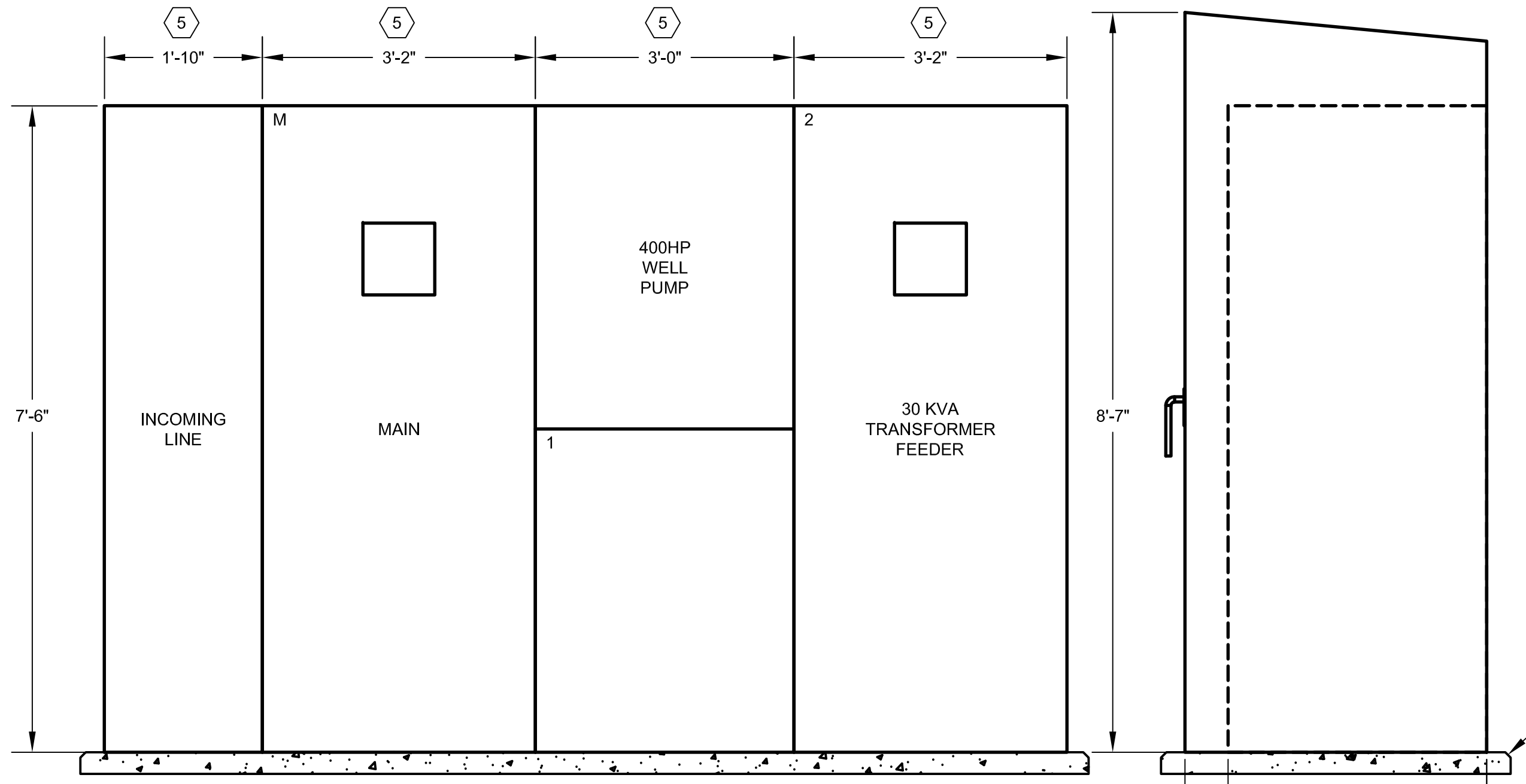
DRAWING INDEX

- E-001 ONE-LINE DIAGRAM
- E-002 SCHEMATIC - 1

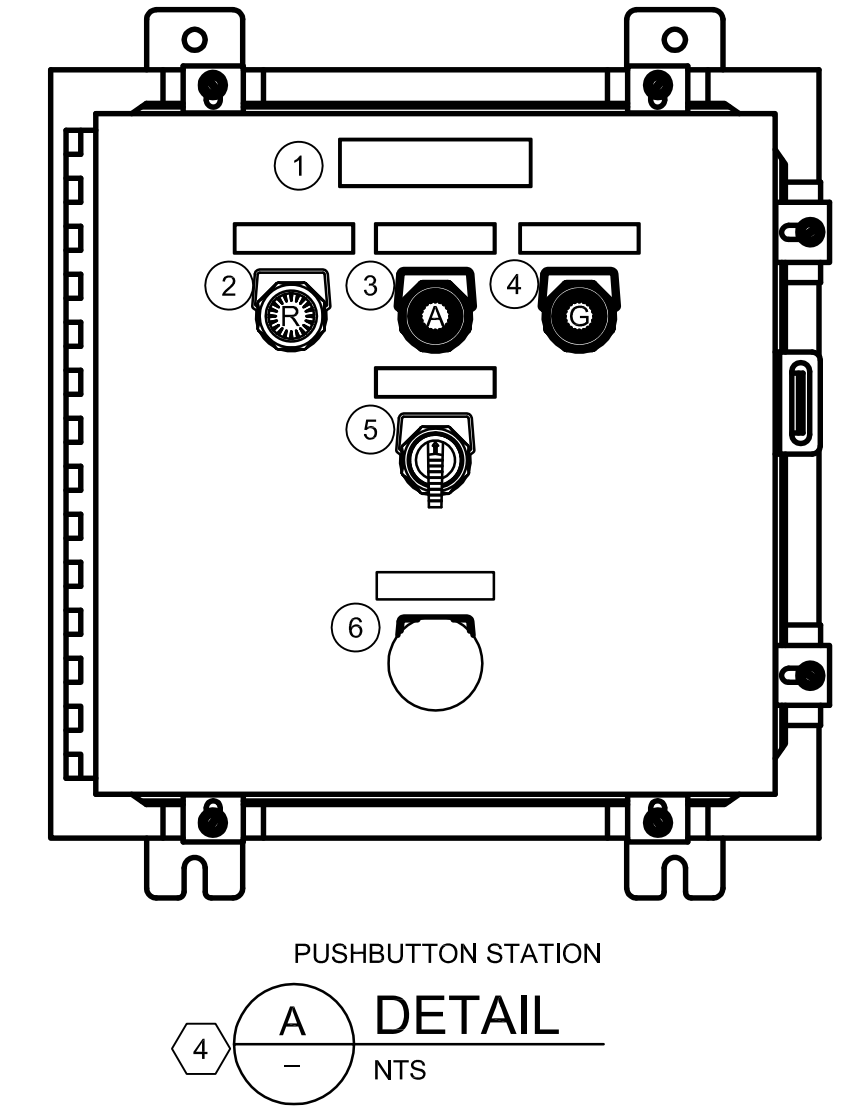
7/25/2017 4:04:28 PM - Z:1943_SAWS 2015 ELECTRICAL ENGINEERING DESIGN SERVICES CONTRACT - PRT ENGINEERING'S DRAWINGS/ELECTRICAL/WORKING/1943_E-001.DWG - MARK CHAMBERLIN



MV-MCC ONE-LINE DIAGRAM



MV-MCC ELEVATION
SCALE: NTS"



NO.	NAMEPLATE SCHEDULE
1	400HP WELL PUMP
2	WP ON
3	LOCKED OUT
4	WP OFF
5	START/STOP
6	E-STOP

LEGEND

- 38 - BEARING TEMPERATURE DEVICE
- 46 - PHASE BALANCE CURRENT RELAY
- 47 - PHASE SEQUENCE VOLTAGE RELAY
- 48 - INCOMPLETE SEQUENCE RELAY
- 49 - WINDING TEMPERATURE DEVICE
- 51 - TIME OVERCURRENT RELAY
- 51G/51N - GROUND TIME OVERCURRENT RELAY
- 59 - OVERVOLTAGE
- 86 - LOCK-OUT RELAY
- (AM) - AMMETER
- CPT - CONTROL POWER TRANSFORMER
- CT - CURRENT TRANSFORMER
- E/S - EMERGENCY SHUTDOWN
- FLA - FULL LOAD AMPS
- FU - FUSE
- IC - ISOLATION CONTACTOR
- IS - INCOMPLETE SEQUENCE
- ISW - ISOLATION SWITCH
- KI - KEYED INTERLOCK
- LSG - LONG TIME, SHORT TIME, GROUND FAULT
- M - MOTOR
- MCC - MOTOR CONTROL CENTER
- MCP - MOTOR CIRCUIT PROTECTION
- MPR - MOTOR PROTECTION RELAY
- MTR - MULTIFUNCTION METERING
- OL - OVERLOAD RELAY
- PFCC - POWER FACTOR CORRECTION CAPACITOR
- RTD - RESISTANCE TEMPERATURE DETECTOR
- SPD - SURGE PROTECTION DEVICE
- VM - VOLTMETER
- VT - VOLTAGE TRANSFORMER

NOTES:

1. PF CAPACITOR TO BE SIZED BY MOTOR MANUFACTURER.
2. REFER TO SPECIFICATIONS FOR RELAY AND METER DETAILS.
3. EXISTING WIRE TO BE REMOVED AND REPLACED BY SAWS.
4. PUSHBUTTON STATION PROVIDED BY MCC VENDOR.
5. MCC SHALL NOT EXCEED OVERALL DIMENSIONS.

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SAN ANTONIO WATER SYSTEM
ELECTRICAL ONE-LINE DIAGRAM

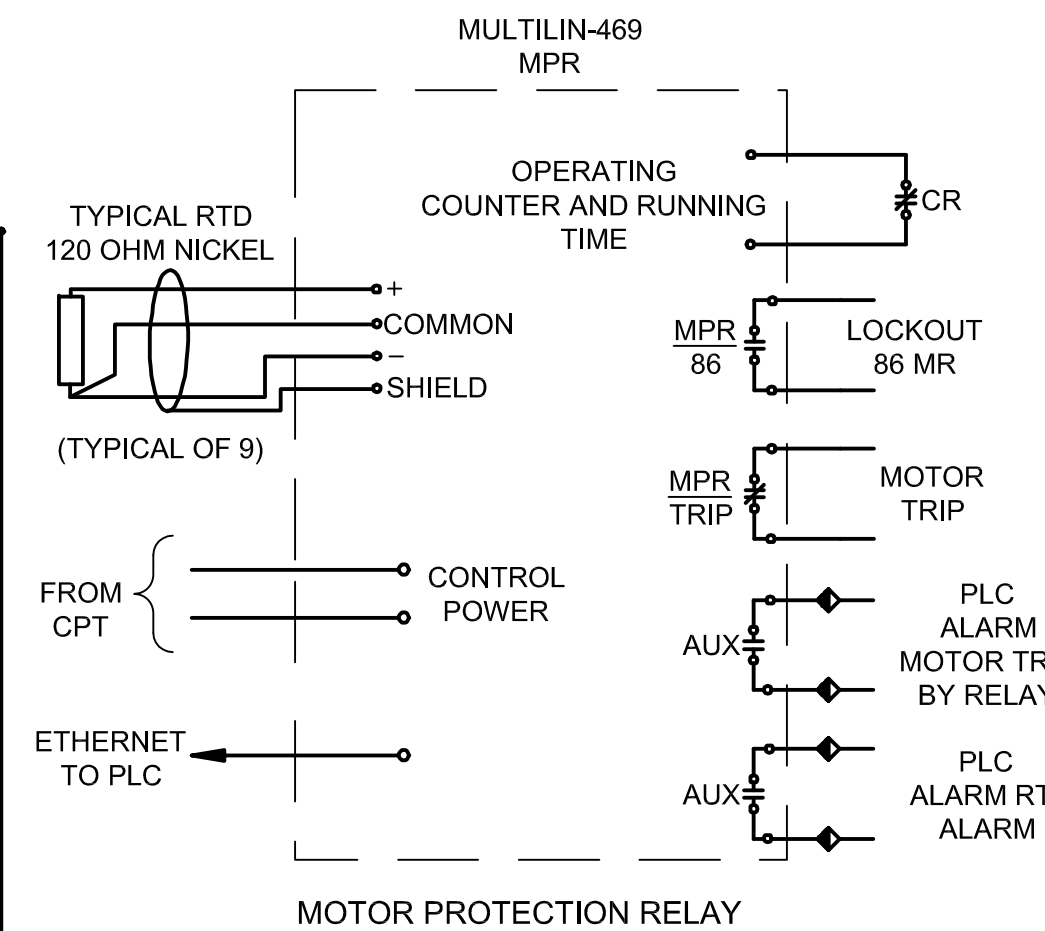
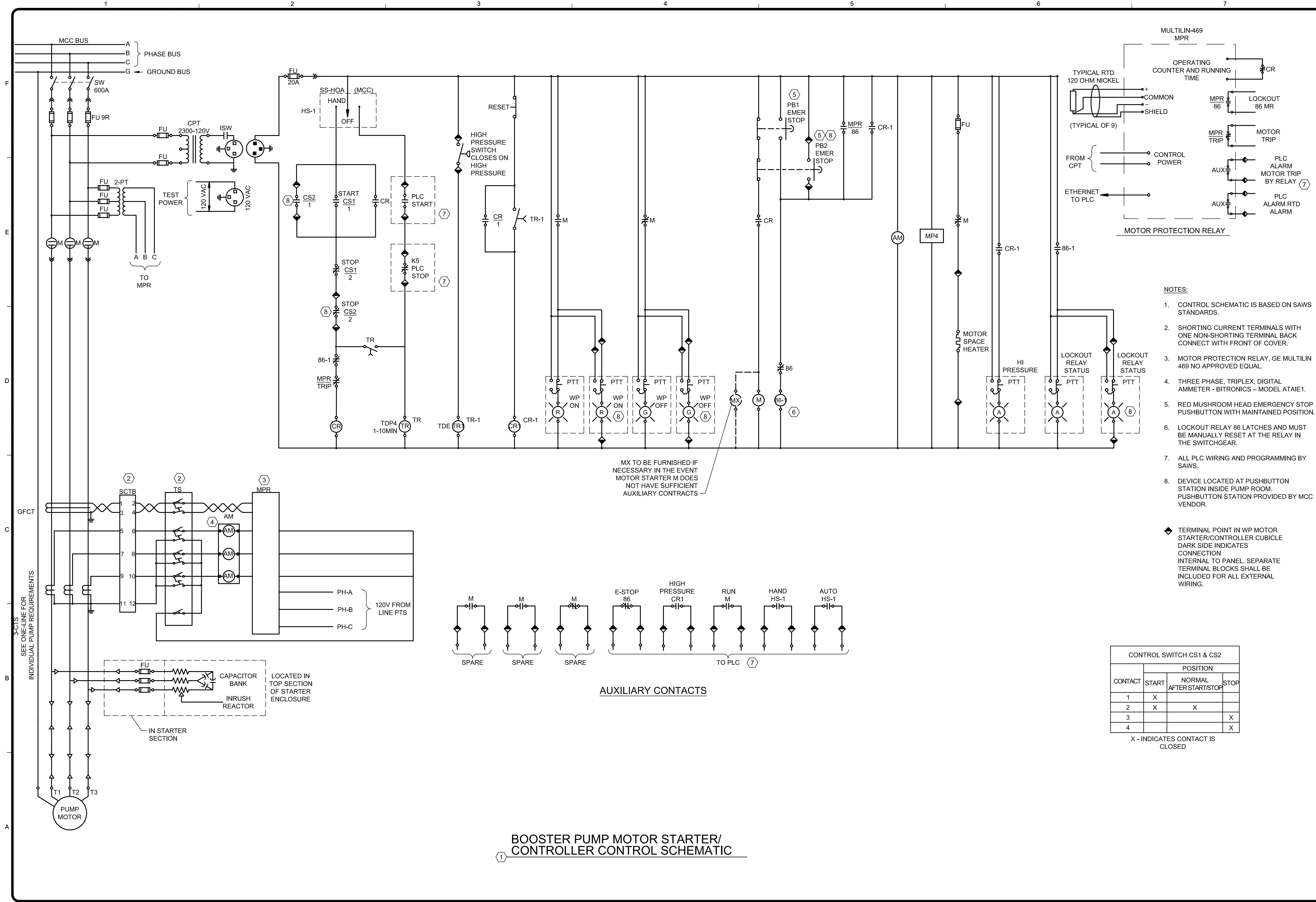
BY	DATE	DESCRIPTION

SAN ANTONIO WATER SYSTEM
KLAUS PUMP STATION
ELECTRICAL ONE-LINE DIAGRAM

SAWS Job No.:
Designed By: LP
Drawn By: CTS
Checked By: VKG

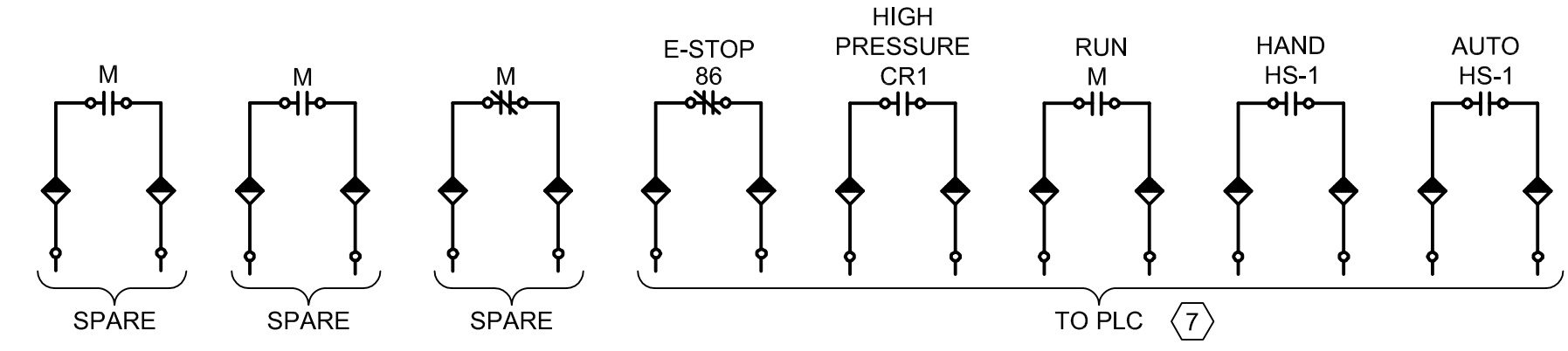
E-001

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- NOTES:**
- CONTROL SCHEMATIC IS BASED ON SAWS STANDARDS.
 - SHORTING CURRENT TERMINALS WITH ONE NON-SHORTING TERMINAL BACK CONNECT WITH FRONT OF COVER.
 - MOTOR PROTECTION RELAY, GE MULTILIN 469 NO APPROVED EQUAL.
 - THREE PHASE, TRIPLEX, DIGITAL AMMETER - BITRONICS - MODEL ATA1E1.
 - RED MUSHROOM HEAD EMERGENCY STOP PUSHBUTTON WITH MAINTAINED POSITION.
 - LOCKOUT RELAY 86 LATCHES AND MUST BE MANUALLY RESET AT THE RELAY IN THE SWITCHGEAR.
 - ALL PLC WIRING AND PROGRAMMING BY SAWS.
 - DEVICE LOCATED AT PUSHBUTTON STATION INSIDE PUMP ROOM. PUSHBUTTON STATION PROVIDED BY MCC VENDOR.
- ◆ TERMINAL POINT IN WP MOTOR STARTER/CONTROLLER CUBICLE DARK SIDE INDICATES CONNECTION INTERNAL TO PANEL. SEPARATE TERMINAL BLOCKS SHALL BE INCLUDED FOR ALL EXTERNAL WIRING.

MX TO BE FURNISHED IF NECESSARY IN THE EVENT MOTOR STARTER M DOES NOT HAVE SUFFICIENT AUXILIARY CONTRACTS



AUXILIARY CONTACTS

CONTACT	POSITION		
	START	NORMAL AFTER START/STOP	STOP
1	X		
2	X	X	
3			X
4			X

X - INDICATES CONTACT IS CLOSED

BOOSTER PUMP MOTOR STARTER/CONTROLLER CONTROL SCHEMATIC

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07/24/2017

SAWS Job No.:

Designed By: LP

Drawn By: CTS

Checked By: VKG

SAN ANTONIO WATER SYSTEM
KLAUS PUMP STATION

ELECTRICAL SCHEMATIC - 1

E-002

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