



SILVER MOUNTAIN PUMP STATION IMPROVEMENTS PROJECT

Solicitation Number: CO-00405

Job No.: 19-6008

ADDENDUM 4

February 24, 2021

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

- 1. Question: On the control enclosures, there is no size listed. Please advise if you have that information and if so, we will need the room measurements. They are not on any documents.**

Response: Per Section 16010-3.01.A.3, "Dimensions shown on the Drawings related to equipment are based on one typical manufacturer's equipment. Coordinate the dimensions of the equipment furnished with the space available." The enclosures shown on Sheet E7, E16, and E17 include minimum cabinet dimensions. Refer to Changes to the Plans Item 1, this addendum.

CHANGES TO THE SPECIFICATIONS

1. Specification Section 11210-1.03.C.1
REVISE and REPLACE "Certified copies of all witnessed tests on the pumps" with the following:
a. "Certified copies of all non-witnessed factory tests on the pumps."

CHANGES TO THE PLANS

1. Sheet E7- Electrical Service Rack Layout- REMOVE and REPLACE Sheet E7 in its entirety.
2. Sheet E16- Miscellaneous Details #3 - REMOVE and REPLACE Sheet E16 in its entirety.
3. Sheet E17- Booster Pump Station Rack & Pump Control Panel Details - REMOVE and REPLACE Sheet E17 in its entirety.

CLARIFICATIONS

None.

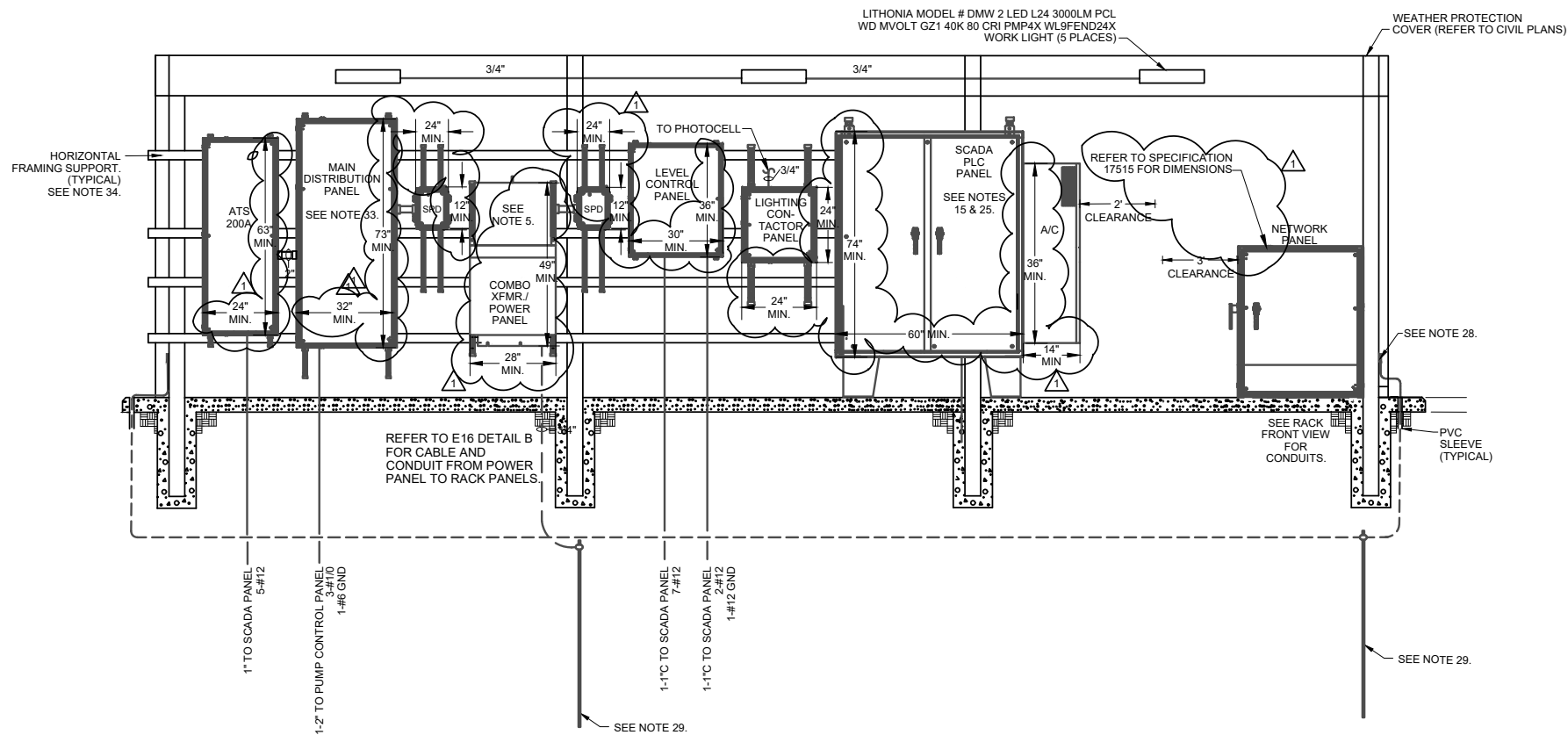
END OF ADDENDUM

This Addendum is four (4) pages in its entirety.

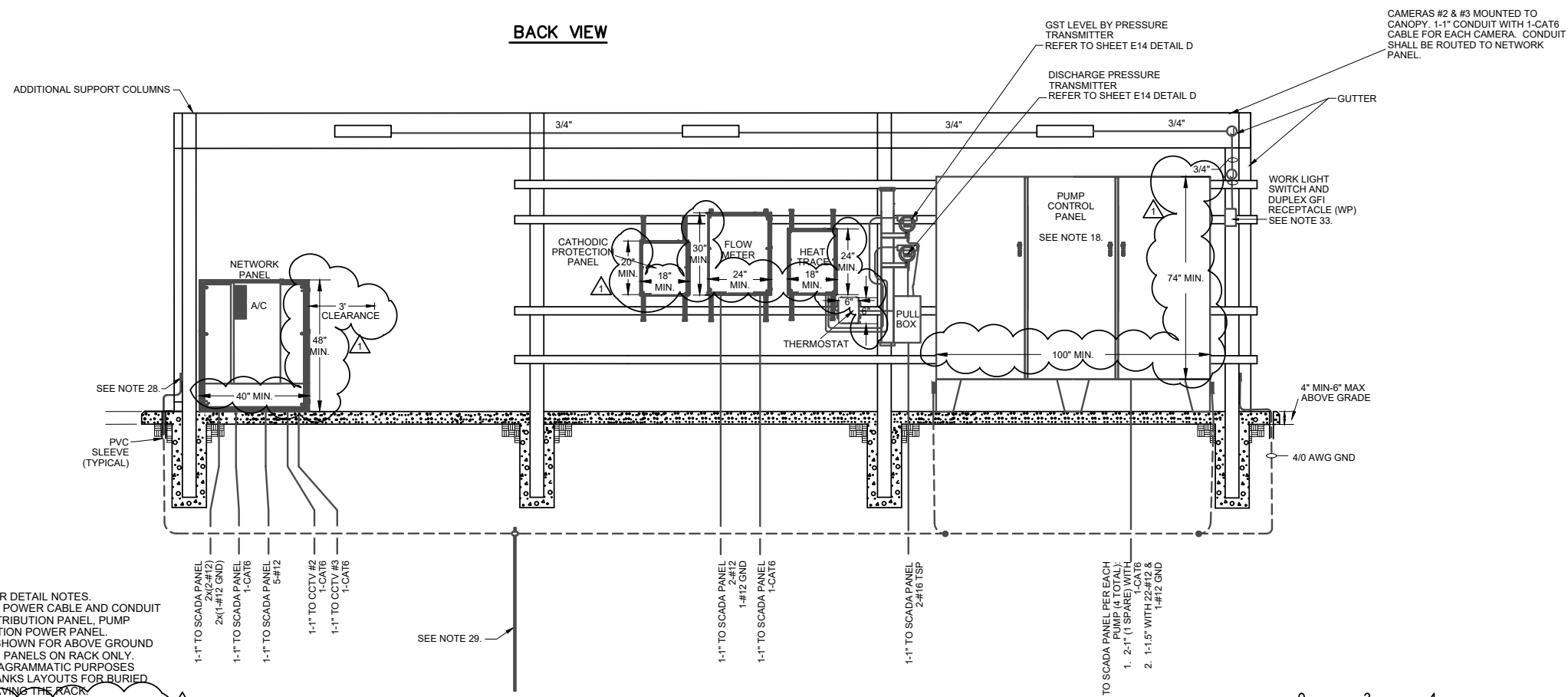
Kendall NeSmith, P.E.

Kimley-Horn and Associates, Inc





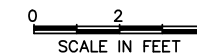
BACK VIEW



FRONT VIEW

ELECTRICAL SERVICE RACK LAYOUT

SCALE: AS SHOWN



NOTES:

- REFER TO SHEET E6A FOR DETAIL NOTES.
- REFER TO SHEET E6 FOR POWER CABLE AND CONDUIT BETWEEN ATS, MAIN DISTRIBUTION PANEL, PUMP CONTROL AND COMBINATION POWER PANEL. CABLE AND CONDUIT IS SHOWN FOR ABOVE GROUND CONNECTIONS BETWEEN PANELS ON RACK ONLY. CONDUIT SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO DUCTBANKS LAYOUTS FOR BURIED CABLE AND CONDUIT LEAVING THE RACK.
- REFER TO SHEET E6 FOR POWER CABLE AND CONDUIT BETWEEN ATS, MAIN DISTRIBUTION PANEL, PUMP CONTROL AND COMBINATION POWER PANEL. CABLE AND CONDUIT IS SHOWN FOR ABOVE GROUND CONNECTIONS BETWEEN PANELS ON RACK ONLY. CONDUIT SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. REFER TO DUCTBANKS LAYOUTS FOR BURIED CABLE AND CONDUIT LEAVING THE RACK.
- REFER TO SPECIFICATIONS FOR ENCLOSURE DETAILS. MANUFACTURER STANDARD SIZE. DIMENSION SHOWN IS FOR SCHNEIDER ELECTRIC MINI POWER ZONE
-

JOB NO.
19-6008

2/24/2021

STEVEN MUSER
103871
LICENSED PROFESSIONAL ENGINEER

No.	Description	Dn.	Approved	Date
1	ADDENDUM 4	BD	SM	2/24/2021

INFORMATION

GRUBB ENGINEERING, INC.
ELECTRICAL POWER SYSTEMS
DESIGN AND TESTING

2727 N. St. Mary's St.
San Antonio, TX 78212
Tel No. 210-658-7250
Fax No. 210-658-9805

DATE: JANUARY 2021
Drawn by: SG
Designed by: BD, CG
Checked by: SM
Scale: SHOWN ON SHEET

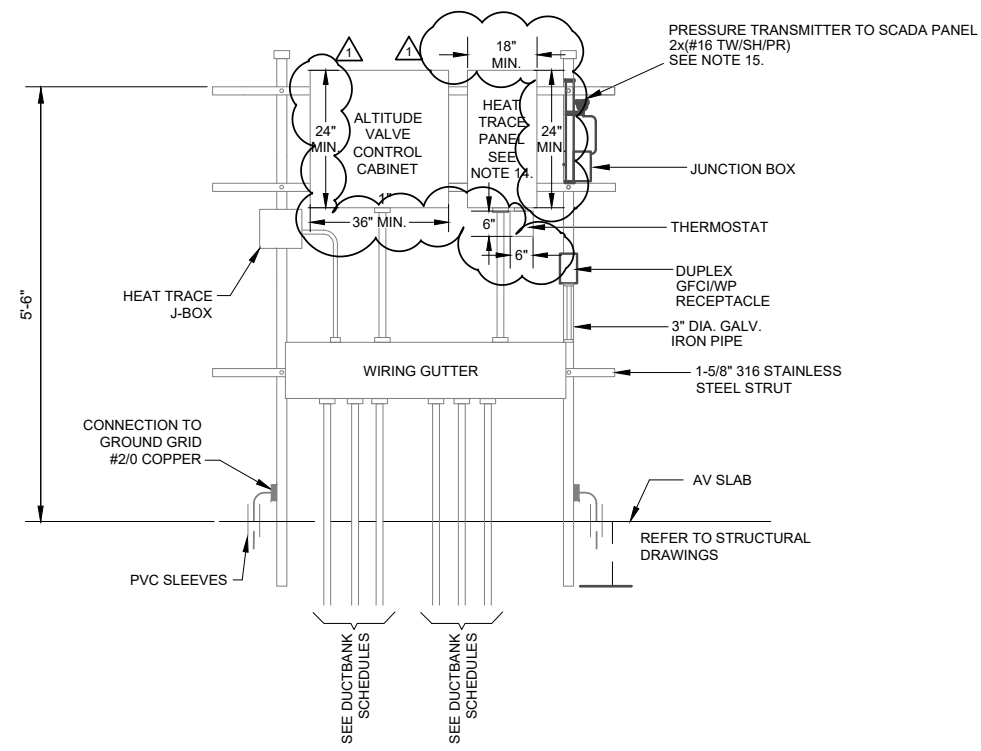
GRUBB ENGINEERING, INC.
ELECTRICAL POWER SYSTEMS
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SAN ANTONIO WATER SYSTEM
SILVER MOUNTAIN PUMP STATION
IMPROVEMENTS PROJECT
ELECTRICAL SERVICE
RACK LAYOUT

DRAWING NO.
E7

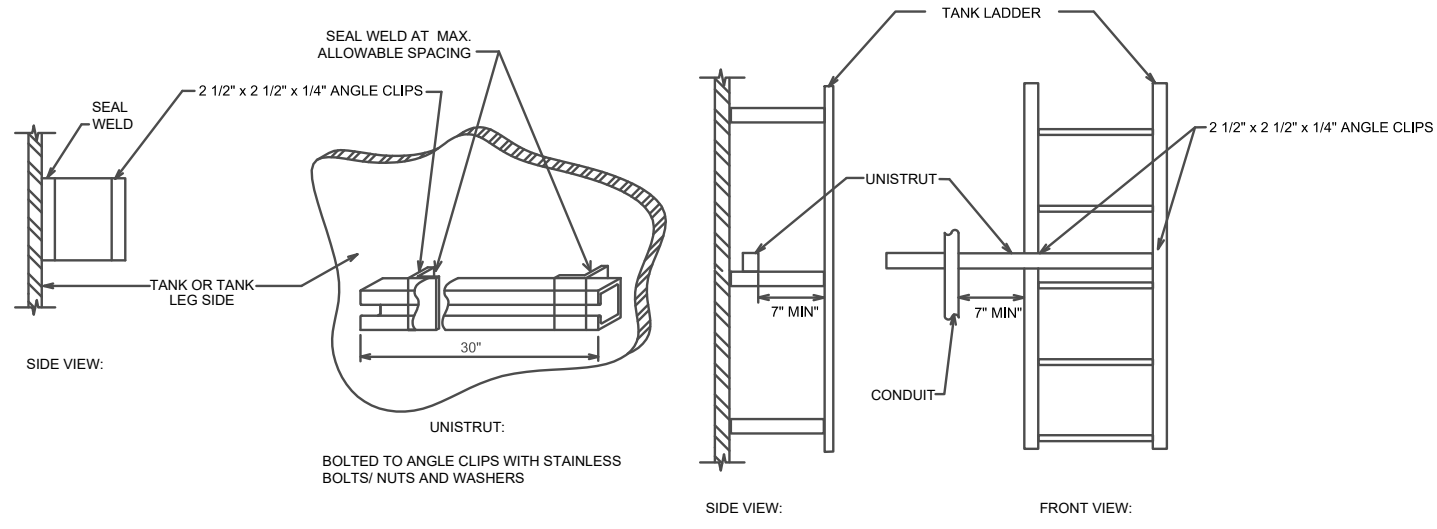


A ALTITUDE VALVE CONTROL RACK
SCALE: N.T.S.

LABEL	POWER PANEL										LABEL
	CONDUIT WIRE	LOAD	BREAKER SIZE	POLE	CKT.		POLE	BREAKER SIZE	LOAD	CONDUIT WIRE	
GENERATOR BLOCK HEATER	1" C, 2#10 1#12GND	1.0 kW	20	2	1	2	1	20	2 kW	1" C, 2#12 1#12GND	GENERATOR BATTERY CHARGER
LIGHTING CONTACTOR PANEL	1" C, 2#10 1#12GND	1.0 kW	20	1	5	6	1	20	0.6 kW	1" C, 2#12 1#12GND	BPS/AIR COMPRESSOR HEAT TRACE CONTROL PANEL
PUMP CONTROL PANEL HEATER & RECEPTACLE	1" C, 2#10 1#12GND	1.9 kW	20	1	7	8	1	20	1.9 kW	1" C, 2#10 1#12GND	ELECTRICAL RACK RECEPTACLE
PUMP CONTROL PANEL	1" C, 3#12 1#12GND	1.3 kW	20	1	9	10	1	20	1.9 kW	1" C, 2#12 1#12GND	CANOPY LIGHTS
SCADA UPS	1" C, 2#10 1#10GND	2.0 kW	20	1	11	12	1	20	1.9 kW	1" C, 2#12 1#12GND	SCADA PANEL RECEPT. & LTS
NETWORK PANEL	1" C, 3#12 1#12GND	1.3 kW	20	1	13	14	1	20	1.9 kW	1" C, 2#12 1#12GND	SCADA PANEL AIR COND.
SCADA HEATER	1" C, 2#10 1#12GND	0.1 kW	20	1	15	16	1	20	0.6 kW	1" C, 2#12 1#12GND	SCADA PANEL RECEPTACLE
BPS/AIR COMPRESSOR RACK RECEPTACLE	1" C, 2#12 1#12GND	1.9 kW	20	1	17	18	1	20	0.6 kW	1" C, 2#12 1#12GND	ALTITUDE VALVE HEAT TRACE CONTROL PANEL
CATHODIC PROTECTION PANEL	1" C, 2#12 1#12GND	1.3 kW	20	1	19	20	1	20	1.9 kW	1" C, 2#12 1#12GND	GST HEAT TRACE CONTROL PANEL
NETWORK PANEL AIR COND.	1" C, 3#12 1#12GND	1.3 kW	20	1	21	22	1	20	1.9 kW	1" C, 2#12 1#12GND	ALTITUDE VALVE RACK RECEPTACLE
GST LIGHT & RECEPT.	1" C, 2#12 1#12GND	1.3 kW	20	1	23	24	1	20	-	-	ALTITUDE VALVE CONTROL PANEL
SPARE	-	-	20	1	25	26	1	20	-	-	SPARE
SPARE	-	-	20	1	27	-	-	-	-	-	SPARE
		14,400 WATTS	TOTAL: 26,300 WATTS				11,900				

NOTES:
 1. CONTRACTOR TO COORDINATE BREAKER AND CABLE RATING WITH GENERATOR REQUIREMENTS.
 2. EACH CIRCUIT SHALL HAVE SEPARATE HOT, NEUTRAL, GROUND WIRES. DO NOT SHARE NEUTRAL GROUND WIRE FROM OTHER CIRCUITS.

B 120/208V POWER PANEL
SCALE: N.T.S.



C CONDUIT SUPPORT
SCALE: N.T.S. SEE NOTES 19 AND 20.

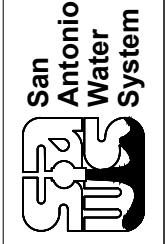
GENERAL NOTES:

- ALL UNDERGROUND ELECTRIC CONDUIT SHALL BE CONCRETE ENCASED WITH STEEL REINFORCEMENT.
- ABOVEGROUND CONDUIT SHALL BE RIGID ALUMINUM STEEL.
- ALL ENCLOSURES AND DISCONNECTS MUST BE PAD-LOCKABLE.
- ALL MOUNTING HARDWARE AND STRUT SHALL BE 316 STAINLESS STEEL.
- RACK STRUTS NEED TO BE 1-1/2" MINIMUM 316 STAINLESS STEEL AND BE MOUNTED ON 4" GALVANIZED STEEL PIPE. PROVIDE APPROPRIATELY SIZED CAPS FOR ALL SUPPORT PIPES.
- THERE SHALL BE 6" MINIMUM SPACING BETWEEN EQUIPMENT MOUNTED ON THE RACK.
- ELECTRICAL RACK SHALL HAVE SUPPORT COLUMNS EVERY FIVE FEET.
- SPARE CONDUITS AS SHOWN ON CABLE AND CONDUIT SCHEDULE SHALL BE CAPPED 6" ABOVE SLAB OR GRADE WITH PULL STRING BELOW RACK.
- ALL RECEPTACLES USED ON PROJECT MUST BE WEATHER PROOF GFCI TYPE.
- SEPARATE ANALOG SIGNAL CABLE BY PERMANENT BARRIER OR LISTED DIVIDER FROM OTHER POWER CIRCUITS AS PER NEC ART. 800.133.
- HEAT TRACE AND INSULATE PRESSURE TRANSMITTER AND PROCESS PIPING. REFER TO CIVIL SHEETS FOR PIPING INSTALLATION AND REQUIREMENTS.
- ALL PANELS AND WIRING GUTTERS TO BE NEMA 4X ALUMINUM UNLESS NOTED OTHERWISE.
- REFER TO STRUCTURAL DRAWINGS FOR THE SLAB.
- CABLE LENGTHS WILL VARY DEPENDING ON PUMP STATION DESIGN.
- ALL INSTRUMENT SIGNAL CABLE (SHIELDED CABLE) SHALL BE CONTINUOUS WITHOUT SPLICES.

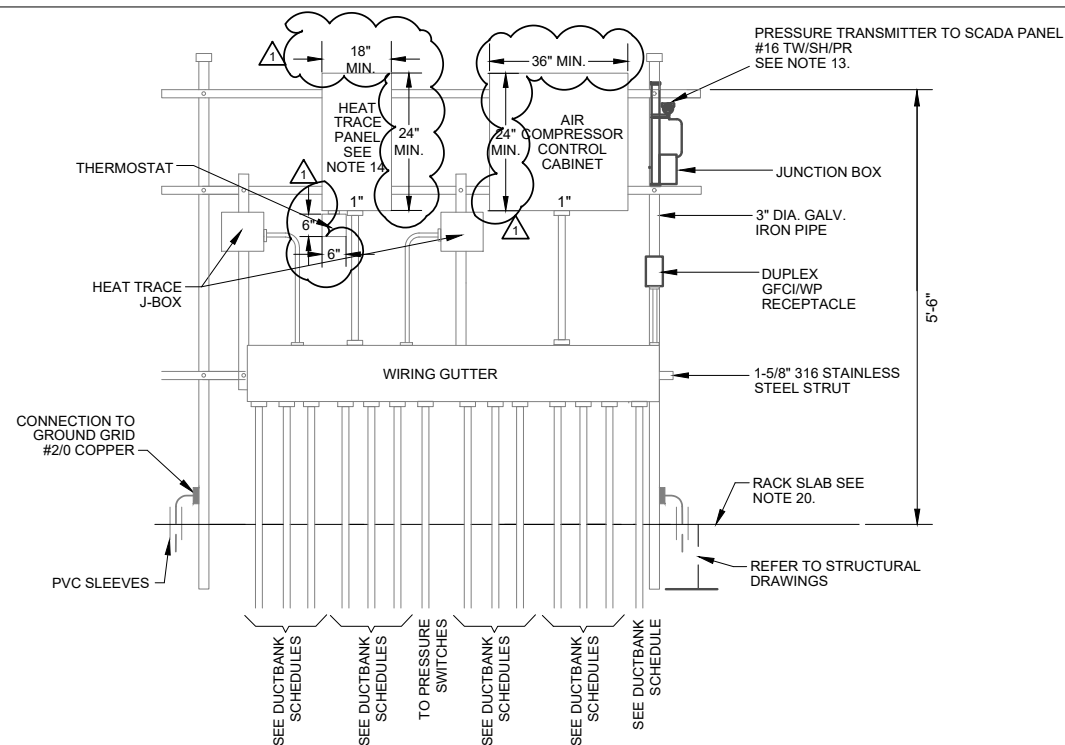
Revisions	No.	Description	Drn.	Date	Approved
	1	ADDENDUM 4	BD	2/24/2021	SM

INFORMATION
 GRUBB ENGINEERING, INC.
 ELECTRICAL POWER SYSTEMS
 DESIGN AND TESTING
 TPBE FIRM REGISTRATION NO. 3904
 2727 N. St. Mary's St.
 San Antonio, TX 78212
 Tel No. 210-658-7250
 Fax No. 210-658-9805

Date: JANUARY 2021
 Drawn by: SG
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SAN ANTONIO WATER SYSTEM
 SILVER MOUNTAIN PUMP STATION
 IMPROVEMENTS PROJECT
 MISCELLANEOUS DETAILS #3

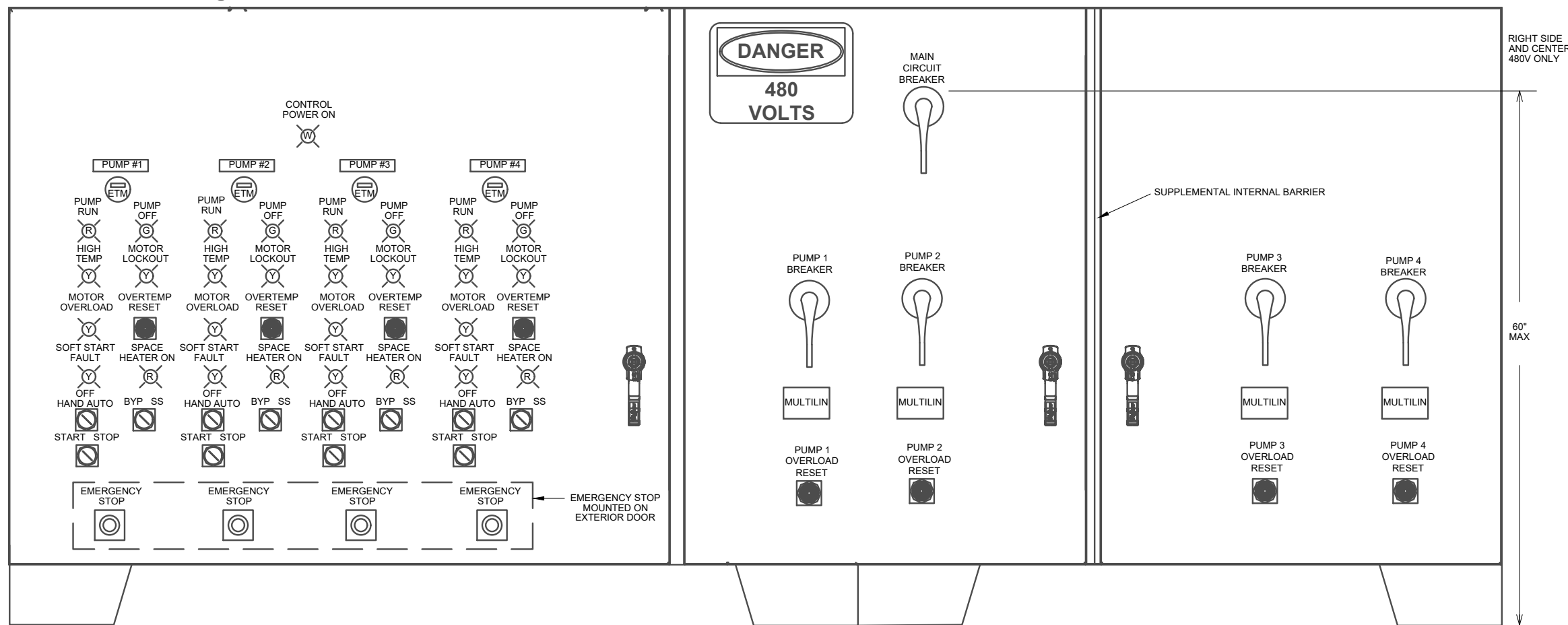


A BPS/AIR COMPRESSOR CONTROL RACK
SCALE: N.T.S.

GENERAL NOTES:

1. ALL UNDERGROUND ELECTRIC CONDUIT SHALL BE CONCRETE ENCASED WITH STEEL REINFORCEMENT.
2. ABOVEGROUND CONDUIT SHALL BE RIGID ALUMINUM STEEL.
3. ALL ENCLOSURES AND DISCONNECTS MUST BE PAD-LOCKABLE.
4. ALL MOUNTING HARDWARE AND STRUT SHALL BE 316 STAINLESS STEEL.
5. RACK STRUTS NEED TO BE 1-1/2" MINIMUM 316 STAINLESS STEEL AND BE MOUNTED ON 4" GALVANIZED STEEL PIPE. PROVIDE APPROPRIATELY SIZED CAPS FOR ALL SUPPORT PIPES.
6. THERE SHALL BE 6" MINIMUM SPACING BETWEEN EQUIPMENT MOUNTED ON THE RACK.
7. SEE SPECIFICATION 17310 FOR PRODUCT AND EQUIPMENT DETAIL.
8. SPARE CONDUITS AS SHOWN ON CABLE AND CONDUIT SCHEDULE SHALL BE CAPPED 6" ABOVE SLAB OR GRADE WITH PULL STRING BELOW RACK.
9. ALL RECEPTACLES USED ON PROJECT MUST BE WEATHER PROOF GFCI TYPE.
10. SEPARATE ANALOG SIGNAL CABLE BY PERMANENT BARRIER OR LISTED DIVIDER FROM OTHER POWER CIRCUITS AS PER NEC ART. 800.133.
11. HEAT TRACE AND INSULATE PRESSURE TRANSMITTER AND PROCESS PIPING. REFER TO CIVIL SHEETS FOR PIPING INSTALLATION AND REQUIREMENTS.
12. ALL PANELS AND WIRING GUTTERS TO BE NEMA 4X ALUMINUM UNLESS NOTED OTHERWISE.
13. ALL INSTRUMENT SIGNAL CABLES (SHIELDED CABLES) SHALL BE CONTINUOUS WITHOUT SPLICES.
14. CABLE LENGTHS WILL VARY DEPENDING ON PUMP STATION DESIGN.
15. DISTANCE BETWEEN INTERIOR PANEL AND ANY COMPONENT SHALL BE AT LEAST 5".
16. DISTANCE BETWEEN EXTERIOR PANEL AND INTERIOR PANEL SHALL BE AT LEAST 2".
17. CONTRACTOR SHALL VERIFY UPS AND POWER SUPPLY SIZES BASED ON LOAD AND RUN TIME PER SPECIFICATION 16920.
18. THREE DOORS CAN BE PROVIDED IF NECESSARY FOR PANEL SPACE.
19. THE CONTRACTOR SHALL REFER TO THE PLANS AND SPECIFICATIONS FOR MORE DETAILED EQUIPMENT REQUIREMENTS.
20. REFER TO STRUCTURAL DRAWINGS FOR SLAB.

LEFT SIDE
120V ONLY



B INTERIOR SWING PANELS FOR STAND ALONE PUMP CONTROL PANEL
SCALE: N.T.S.

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Drn: BD

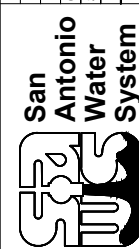
Description: ADDENDUM 4

No. 1

Revisions:

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SAN ANTONIO WATER SYSTEM
SILVER MOUNTAIN PUMP STATION
IMPROVEMENTS PROJECT
BOOSTER PUMP RACK & PUMP
CONTROL PANEL DETAILS

DRAWING NO.

E17