



SECTION G

CONTRACT DRAWINGS

PRADO EAST WELL PROJECT

FOR

SAN BERNARDINO COUNTY
CHINO, CALIFORNIA

PROJECT NO.: 30.30.0168

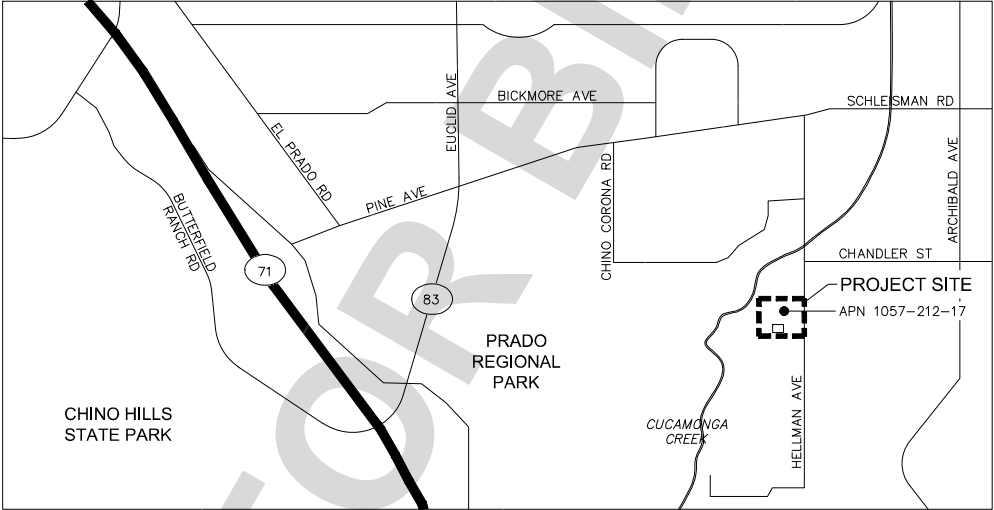


SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
SPECIAL DISTRICTS

CHINO, CA
PRADO EAST WELLS
APN: 1057-212-17

QUANTITIES TABLE				
NO.	BID ITEM	QUANTITY	UNIT	CONSTRUCTION NOTE
2	CLEAR AND GRUB AND APPLY WEED KILLER	1	LS	3
3	FURNISH AND INSTALL POLYETHYLENE TANK (18,800 GALLONS)	1	EA	4 7
4	FURNISH AND INSTALL SIMPLEX BOOSTER PUMP PACKAGE SYSTEM WITH BLADDER TANK	1	LS	5
5	FURNISH AND INSTALL SUBMERSIBLE WELL PUMP (75 GPM, 307 TDH) AND STAINLESS STEEL COLUMN PIPING	1	LS	6
6	CONSTRUCT REINFORCED CONCRETE PEDESTAL FOR WELL PUMP	1	LS	8
7	CONSTRUCT REINFORCED CONCRETE PAD FOR BOOSTER PUMP STATION	1	LS	10
8	FURNISH AND INSTALL 4" C900 PVC PIPING	660	LF	11
9	FURNISH AND INSTALL 1" AIR RELEASE VALVE	1	EA	13
10	FURNISH AND INSTALL 4" CHECK VALVE	1	EA	14
11	FURNISH AND INSTALL 4" DISMANTLING JOINT	1	EA	15
12	FURNISH AND INSTALL 4" ELECTROMAGNETIC FLOW METER	1	EA	16
13	FURNISH AND INSTALL 4" GATE VALVE	4	EA	17
14	FURNISH AND INSTALL MISCELLANEOUS PIPING SPOOLS, FITTINGS, AND THRUST BLOCKS	1	LS	9 12 18 19 20 21 22 23 24 25 26
15	ELECTRICAL SERVICE	1	LS	1 - 18

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	MECHANICAL SITE PLAN
3	DETAILS
4	DETAILS
5	PIPING PLAN
6	ELECTRICAL GENERAL NOTES AND LEGEND
7	ELECTRICAL SITE PLAN
8	ELECTRICAL DETAILS



PROJECT VICINITY MAP
NOT TO SCALE

DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES, AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS (SD) IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH SD PROCEDURES, APPLICABLE POLICES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD, I AGREE TO INDEMNIFY AND HOLD SD, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD. I HAVE READ AND INFORMED THE PROJECT APPLICANT/DEVELOPER THAT APPROVAL OF THESE PLANS DO NOT RELIEVE THEM FROM THE REQUIREMENTS OF THE DESIGN CONDITIONS.

BY: *Sam McWhorter* 61788 09/09/2024
NAME RCE NO. DATE

NOTIFICATIONS

AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY:
1. UNDERGROUND SERVICE ALERT (USA); 811
2. ALL OTHER AFFECTED AGENCIES THAT ARE NOT MEMBERS OF USA ALERT

TIME LIMITATION

THE TIME LIMIT ON DRAWING(S) APPROVAL SHALL BE TWELVE (12) MONTHS FROM THE DATE ON THE APPROVAL. IF CONSTRUCTION HAS NOT COMMENCED WITHIN STATED TIME, SD REQUIRES DRAWING(S) TO BE REVIEWED BY THE DEVELOPER/DESIGN ENGINEER AND RESUBMITTED TO SD FOR POSSIBLE CHANGES IN SPECIFICATIONS AND STANDARDS.

GENERAL WATER NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE ITSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIG ALERT REQUESTS AND EXPLORATORY EFFORTS NECESSARY TO VERIFY ANY UNDERGROUND OBSTRUCTIONS. THE CONTRACTOR WILL BE UNILATERALLY RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES THAT ARE SHOWN OR NOT SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO PIPE INCURRED WHILE BACK FILLING AND COMPACTING.
- THE CONTRACTOR SHALL NOTIFY ALL SERVING UTILITY COMPANIES 48 HOURS PRIOR TO BEGINNING ANY DITCH EXCAVATION WHEN WORK IS TO BE PERFORMED NEAR THEIR FACILITIES BY CALLING 811.
- WATER MAIN SHALL HAVE 3' OF COVER FROM TOP OF PIPE TO GRADE.
- HYDRO TEST AT 200 PSI MINIMUM FOR A 2 HOUR DURATION AT LOWEST POINT IN THE WATER LINE.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE UNDERSIGNED ENGINEER AND THE COUNTY OF SAN BERNARDINO SPECIAL DISTRICTS.
- THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- THESE PLANS WERE DESIGNED FOR THE IN-SERVICE CONDITIONS ONLY. THE METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE PIPELINE AND ASSOCIATED APPURTENANCES AT ALL STAGES OF CONSTRUCTION.
- DRAWINGS DO NOT INDICATE TEMPORARY REQUIREMENTS. NEED FOR TEMPORARY SHORING AND BRACING, TEMPORARY DEWATERING, TEMPORARY BYPASSING OR OTHER TEMPORARY MEASURES MAY BE INDICATED ON DRAWINGS AT SELECTED AREAS AS SUGGESTIONS FOR THE CONTRACTOR'S CONVENIENCE. THE DRAWINGS DO NOT IDENTIFY ALL AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM TEMPORARY MEASURES INDICATED ON THE DRAWINGS, IDENTIFY OTHER AREAS OR CONDITIONS REQUIRING TEMPORARY MEASURES, DETERMINE MOST EFFICIENT TEMPORARY SYSTEMS, AND DESIGN AND CONSTRUCT REQUIRED TEMPORARY SYSTEMS. ALL TEMPORARY SYSTEMS SHALL BE DESIGNED BY A CA LICENSED ENGINEER AND SUBMITTED TO THE DISTRICT ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

PRIVATE ENGINEER'S NOTE TO CONTRACTOR

- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN ON THESE DRAWINGS AND TO VERIFY ALL DIMENSIONS, PIPE SIZES, PIPE MATERIALS, FLANGE SIZES, AND BOLT CONFIGURATIONS PRIOR TO ORDERING PARTS AND BEGINNING WORK. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE DRAWINGS.
- CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD SAN BERNARDINO COUNTY, CSA 82 (DISTRICT), THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

ABBREVIATIONS

CLR	CLEARANCE		AIR RELEASE VALVE
DI	DUCTILE IRON		CHECK VALVE
DIP	DUCTILE IRON PIPE		GATE VALVE
EG	EXISTING GRADE		DISMANTLING JOINT
ELEV	ELEVATION		FLOW METER
FG	FINISHED GRADE		90-DEGREE ELBOW
FLG	FLANGE		PROPOSED WATER
FM	FLOW METER		PROPOSED ELECTRICAL
GPM	GALLONS PER MINUTE		FLOW DIRECTION
HWL	HIGH WATER LEVEL		CLEAR, GRUB, WEED KILLER SPRAY
LWL	LOW WATER LEVEL		CONCRETE
LWLA	LOW WATER LEVEL ALARM		NATIVE SOILS
MAX	MAXIMUM		CRUSHED ROCK
MIN	MINIMUM		WATER SURFACE ELEVATION
MJ	MECHANICAL JOINT		
OC	ON CENTER		
O.D.	OUTSIDE DIAMETER		
PSI	POUNDS PER SQUARE INCH		
PVC	POLYVINYL CHLORIDE		
SCH	SCHEDULE		
SQ. FT.	SQUARE FEET		
SS	STAINLESS STEEL		
STD	STANDARD		
TDH	TOTAL DYNAMIC HEAD		
TYP	TYPICAL		

LEGEND



Kimley»Horn

PREPARED UNDER THE SUPERVISION OF:
Sam McWhorter 09/09/2024
SAM L. MCWHORTER R.C.E. No. 61788 DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

WATER / SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS		
David Doublet ASSISTANT DIRECTOR		
APPROVALS	PROJECT MANAGER	INITIAL DATE
	Deanna Lestina	
	PM, DIVISION MANAGER	Noel Mondragon

WATER / SEWER IMPROVEMENT PLANS		DWG NO.
APN. NO. 1057-212-17 PRADO EAST WELLS		FILE NO.
COVER SHEET		SHEET 1 OF 8

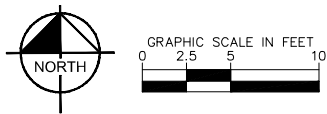
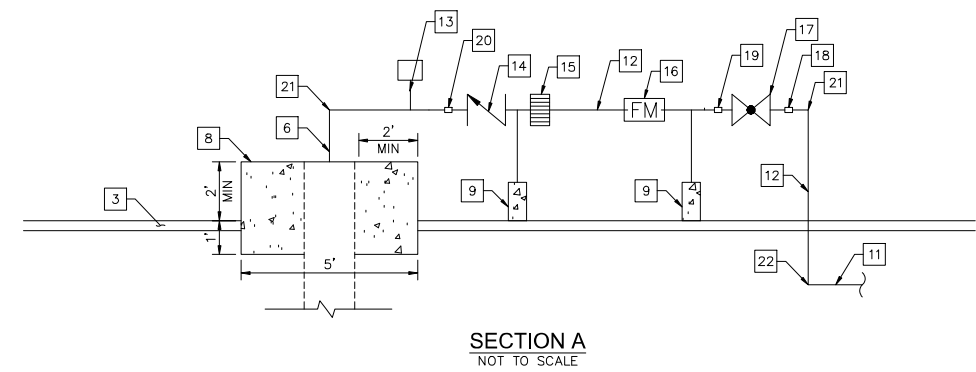


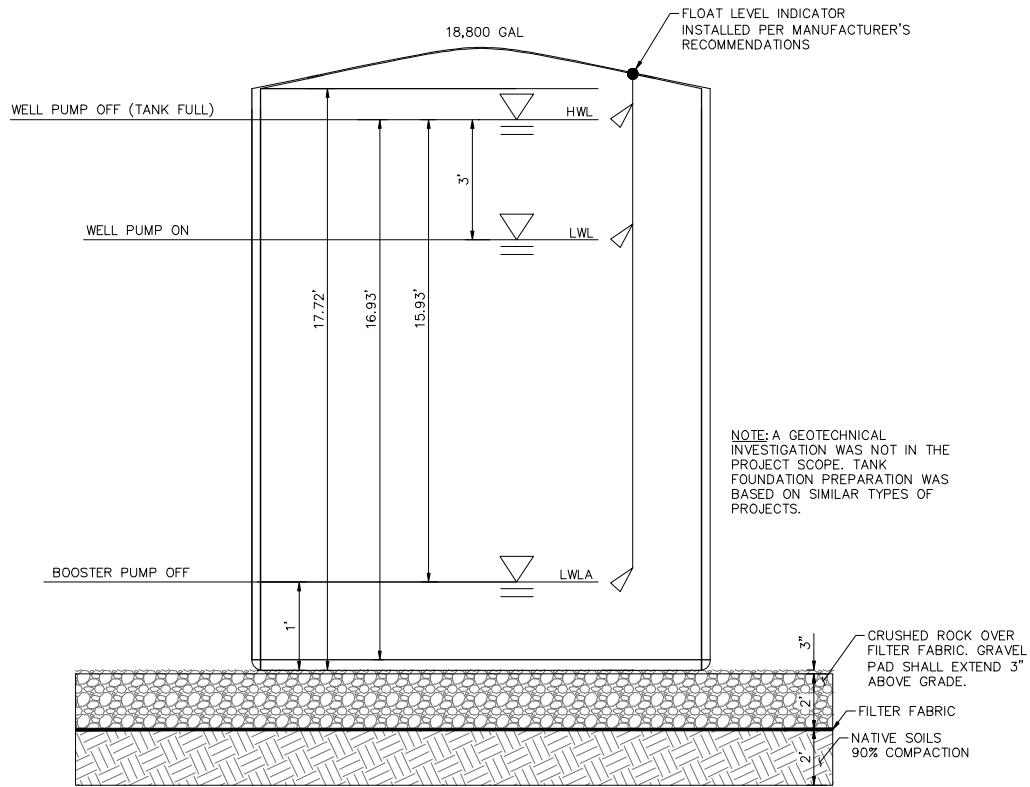
GENERAL NOTES

1. ALL ABOVE GROUND PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED. UNDERGROUND PIPING SHALL HAVE THRUST BLOCKS AS SHOWN ON PLANS.
2. CONTRACTOR SHALL COORDINATE WITH THE COUNTY FOR REMOVAL AND DISPOSAL OF ALL EXISTING CONCRETE STRUCTURES AND ANY OTHER MISCELLANEOUS DEBRIS ON THE PROJECT SITE.
3. ALL BELOW GROUND PIPING SHALL HAVE 3 FEET OF COVER. BACKFILL SHALL CONSIST OF 3 INCHES OF SAND FOR PIPE BEDDING AND NATIVE BACKFILL SHALL BE USED (90% COMPACTION).
4. SITE PLAN AND SECTION SHOWN ARE SCHEMATIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL SPOOL LENGTHS AND FITTINGS PRIOR TO BEGINNING WORK.
5. BOOSTER PUMP PACKAGE SYSTEM (SINGLE PUMP AND BLADDER TANK) WAS DESIGNED FOR AN ASSUMED IRRIGATION DEMAND OF 100 GPM AT 80 PSI.
6. CONTRACTOR SHALL CONSTRUCT WELL HEADER TO ENSURE SUFFICIENT UPSTREAM AND DOWNSTREAM STRAIGHT PIPE RUN REQUIREMENTS PER ELECTROMAGNETIC FLOW METER MANUFACTURER SPECIFICATIONS.
7. NO GEOTECHNICAL WORK WAS PART OF THE PROJECT SCOPE THEREFORE, NO PROJECT-SPECIFIC GEOTECHNICAL INVESTIGATION WAS PERFORMED FOR THIS PROJECT.
8. CONTRACTOR SHALL EXTEND EXISTING WELL APPURTENANCES TO TOP OF PROPOSED CONCRETE WELL PEDESTAL.

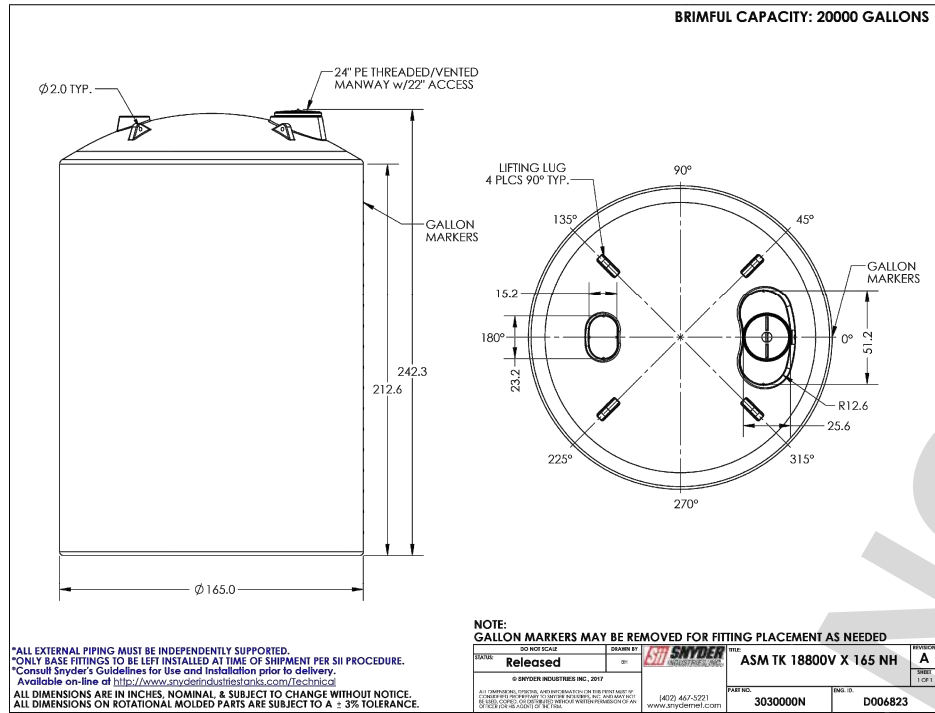
CONSTRUCTION NOTES

1. PROTECT IN PLACE.
2. INSTALL ELECTRICAL EQUIPMENT (OUTDOOR-RATED). SEE ELECTRICAL PLANS ON SHEETS 6 - 8.
3. CLEAR AND GRUB AND USE WEED KILLER SPRAY.
4. INSTALL 18,800 GAL POLYETHYLENE TANK (SNYDER OR APPROVED EQUAL). TANK DIAMETER = 13.75'. TANK HEIGHT = 20.2'. SEE DETAIL A ON SHEET 3.
5. INSTALL BOOSTER PUMP PACKAGE SYSTEM WITH BLADDER TANK (GRUNDFOS OR APPROVED EQUAL). SEE DETAIL B ON SHEET 3.
6. INSTALL SUBMERSIBLE WELL PUMP (GRUNDFOS OR APPROVED EQUAL). SEE DETAIL C ON SHEET 4.
7. OVEREXCAVATE 4 FEET BELOW GRADE AND RECOMPACT NATIVE SOILS TO 90% COMPACTION WITH 24 INCHES OF CRUSHED ROCK OVER FILTER FABRIC. GRAVEL PAD SHALL EXTEND 3 INCHES ABOVE GRADE. SEE DETAIL A ON SHEET 3.
8. CONSTRUCT REINFORCED CONCRETE CAST-IN-PLACE MONOLITHIC PUMP PEDESTAL FOR WELL PUMP. 5' X 5' X 3' THICK WITH #4s 12" O.C. EACH WAY, TOP AND BOTTOM. SEE SECTION A ON THIS SHEET.
9. INSTALL PIPE SUPPORT. SEE DETAIL E ON SHEET 4.
10. CONSTRUCT REINFORCED CAST-IN-PLACE CONCRETE PAD FOR BOOSTER PUMP STATION. SEE DETAIL D ON SHEET 4.
11. INSTALL 4" C900 DR-18 PVC PIPING.
12. INSTALL 4" DI PIPING.
13. INSTALL 1" AIR RELEASE VALVE.
14. INSTALL 4" CHECK VALVE.
15. INSTALL 4" DISMANTLING JOINT.
16. INSTALL 4" ELECTROMAGNETIC FLOW METER.
17. INSTALL 4" GATE VALVE.
18. INSTALL FLUSHING PORT.
19. INSTALL SAMPLING PORT.
20. INSTALL PRESSURE GAUGE.
21. INSTALL 4" DI 90-DEGREE BEND (FLG).
22. INSTALL 4" DI 90-DEGREE BEND (MJ) WITH THRUST BLOCK (BEARING AREA = 24 SQ. FT.).
23. INSTALL 4" DI 22.5-DEGREE BEND (MJ) WITH THRUST BLOCK (BEARING AREA = 6 SQ. FT.).
26. INSTALL 4" DI 45-DEGREE BEND (MJ) WITH THRUST BLOCK (BEARING AREA = 12 SQ. FT.).





TANK OPERATIONAL DIAGRAM AND FOUNDATION



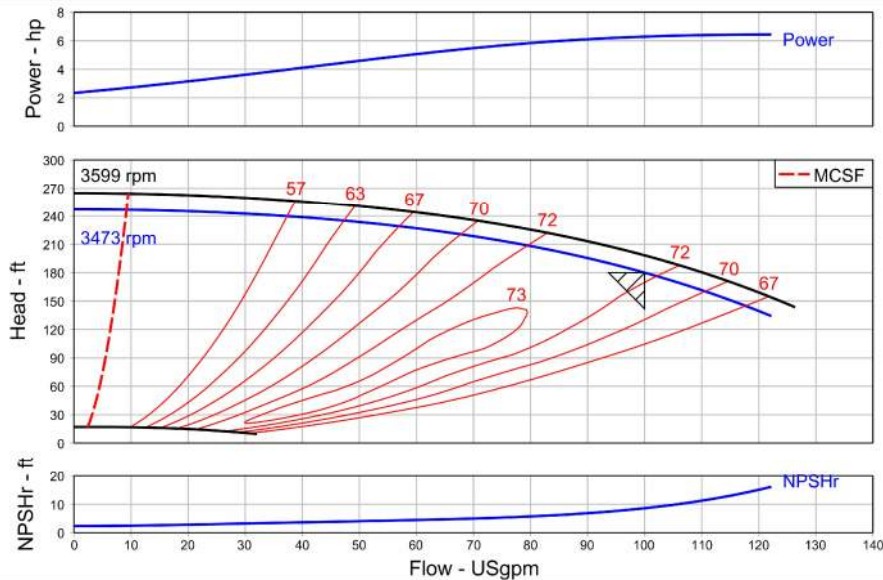
TANK CUTSHEETS

A TANK DETAILS
NOT TO SCALE



Grundfos Quotation System 24.1.1

Pump Performance Datasheet			
Customer		Quote Number / ID	
Customer ref. / PO		Model	
Tag Number		Stages	
Service		Based on curve number	
Quantity		Basic model number	
		Date last saved	
Operating Conditions		Liquid	
Flow, rated		Liquid type	
Differential head / pressure, rated (requested)		Additional liquid description	
Differential head / pressure, rated (actual)		Temperature, max	
Suction pressure, rated / max		Fluid density, rated / max	
NPSH available, rated		Viscosity, rated	
Site Supply Frequency		Vapor pressure, rated	
Performance		Material	
Speed, rated		Material selected	
Speed, maximum		Pressure Data	
Speed, minimum		Maximum working pressure	
Impeller diameter, rated		Maximum allowable working pressure	
Efficiency		Maximum allowable suction pressure	
NPSH required / margin required		Hydrostatic test pressure	
Ns (imp. eye flow) / Nss (imp. eye flow)		Driver & Power Data (@Max density)	
MCSF		Motor sizing specification	
Head maximum, rated speed		Margin over specification	
Head rise to shutoff		Service factor	
Flow, best eff. point		Power, hydraulic	
Flow ratio, rated / BEP		Rated power (based on duty point)	
Speed ratio (rated / max)		Max power (non-overloading)	
Head ratio (rated speed / max speed)		Motor rating	
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]			
Selection status			
Energy Indexes			
PEI (VL)			
ER (VL)			



MuniQuip, LLC · 2024 Opportunity Drive · Suite 130 · Roseville, CA 95678
phone: 916-693-2011 · fax: 916-787-5642 · <http://www.muniquipllc.com/>

B BOOSTER PUMPS SYSTEM CURVE
NOT TO SCALE



Kimley»Horn

401 B STREET
SUITE 600
SAN DIEGO, CA 92101
TEL: (619) 234-9411

PREPARED UNDER THE SUPERVISION OF:

Sam L. McWhorter
SAM L. MCWHORTER

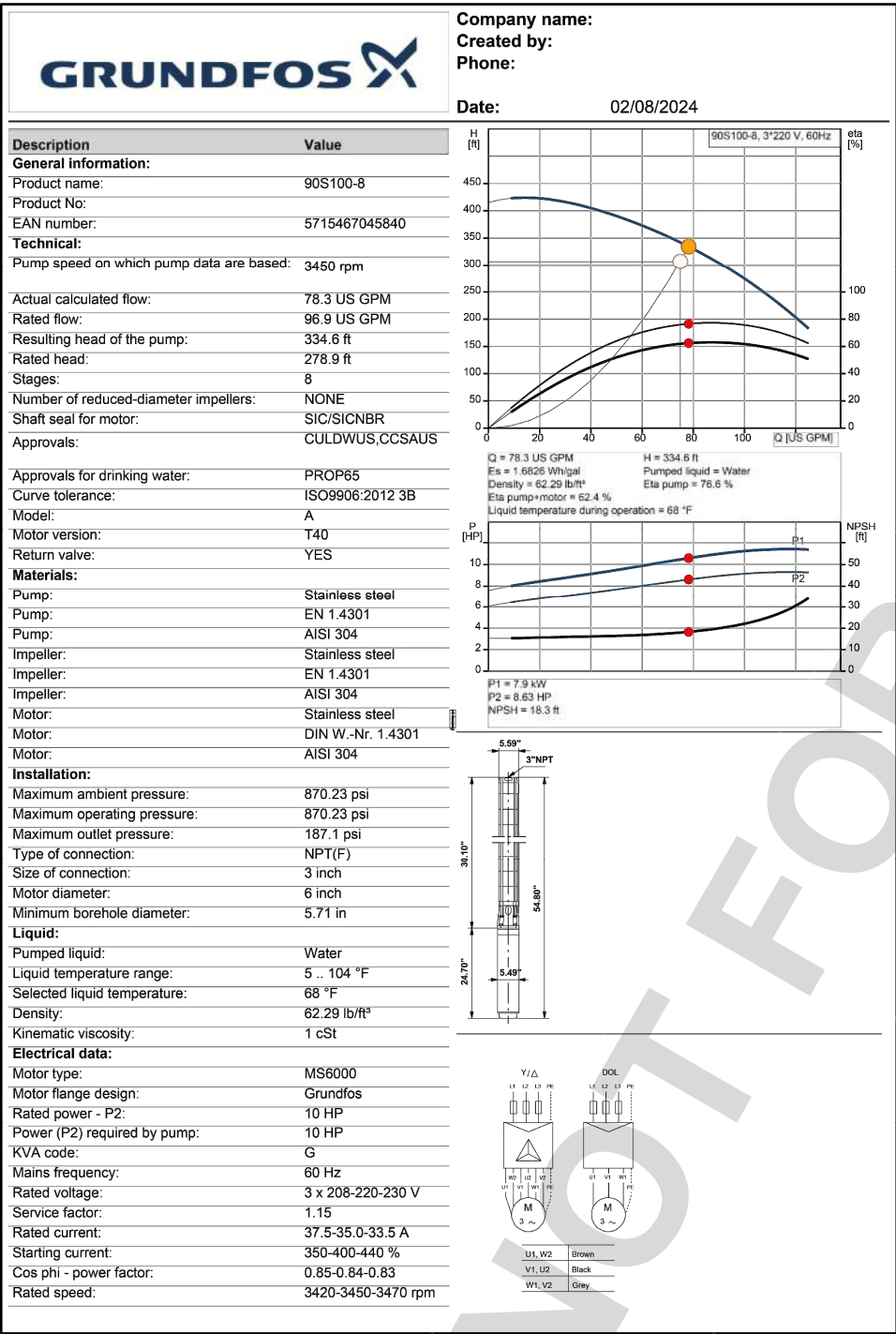
R.C.E. No. 61788

09/09/2024
DATE

REVISIONS				
MARK	DATE	INITIAL	DESCRIPTION	APPR. DATE

WATER / SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David Doublet		Digitally signed by David Doublet Date: 2024.09.15 17:15:55 -07'00'	
ASSISTANT DIRECTOR		INITIAL	DATE
APPROVALS	PROJECT MANAGER	Deanna Lestina	
	PM, DIVISION MANAGER	Noel Mondragon	

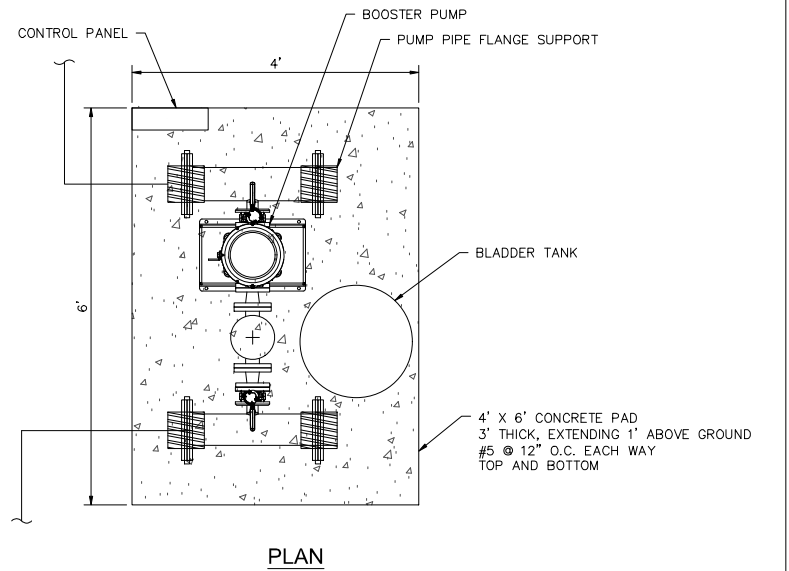
WATER / SEWER IMPROVEMENT PLANS		DWG NO.
APN. NO. 1057-212-17 PRADO EAST WELLS		FILE NO.
DETAILS		SHEET 3 OF 8



Printed from Grundfos Product Centre [2024.30.001]

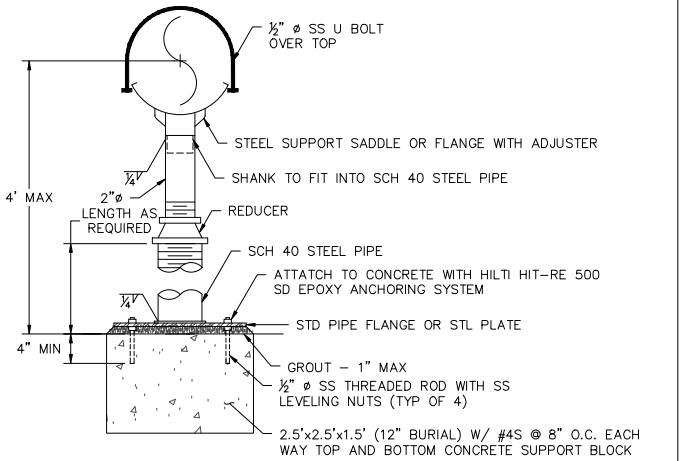
4

C SUBMERSIBLE WELL PUMP SYSTEM CURVE
NOT TO SCALE



NOTE: CONTRACTOR TO VERIFY DIMENSIONS AND ADJUST AS NEEDED
BASED ON SELECTED BOOSTER PUMP SKID CONFIGURATION

D DUPLEX BOOSTER PUMP STATION CONCRETE PAD
NOT TO SCALE



E PIPE SUPPORT
NOT TO SCALE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

WATER / SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David Doublet		Digitally signed by David Doublet Date: 2024.09.16 10:22:56 -07'00'	
ASSISTANT DIRECTOR		INITIAL	DATE
APPROVALS	PROJECT MANAGER	Deanna Lestina	
	PM, DIVISION MANAGER	Noel Mondragon	

WATER / SEWER IMPROVEMENT PLANS	
APN. NO. 1057-212-17 PRADO EAST WELLS	
DETAILS	

DWG NO.
FILE NO.
SHEET 4 OF 8

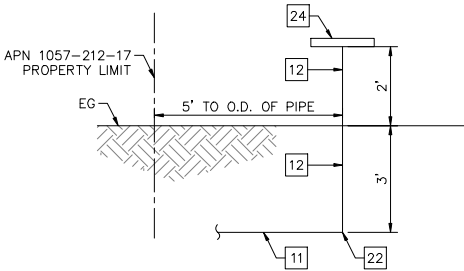


CONSTRUCTION NOTES

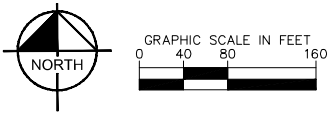
- 11 INSTALL 4" C900 DR-18 PVC PIPING.
- 12 INSTALL 4" DI PIPING.
- 22 INSTALL 4" DI 90-DEGREE BEND (MJ) WITH THRUST BLOCK (BEARING AREA = 24 SQ. FT.).
- 24 INSTALL 4" DI BLIND FLANGE 2' ABOVE EG.
- 25 INSTALL SCE SERVICE CONNECTION AND METER ON HELLMAN AVE (PUBLIC RIGHT-OF-WAY). CONTRACTOR SHALL COORDINATE WITH SCE AS NEEDED. SEE ELECTRICAL PLANS ON SHEETS 6 - 8.

GENERAL NOTES

1. ALL ABOVE GROUND PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED. UNDERGROUND PIPING SHALL HAVE THRUST BLOCKS AS SHOWN ON PLANS.
2. BELOW GROUND PIPING SHALL HAVE 3 FEET OF COVER. BACKFILL SHALL CONSIST OF 3 INCHES OF SAND FOR PIPE BEDDING AND NATIVE BACKFILL SHALL BE USED (90% COMPACTION).
3. SITE PLAN AND SECTION SHOWN ARE SCHEMATIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL SPOOL LENGTHS AND FIT UPS PRIOR TO BEGINNING WORK.
4. NO GEOTECHNICAL WORK WAS PART OF THE PROJECT SCOPE. THEREFORE, NO PROJECT-SPECIFIC GEOTECHNICAL INVESTIGATION WAS PERFORMED FOR THIS PROJECT.
5. SURVEY WAS NOT PART OF THE PROJECT SCOPE. APN 1057-212-17 LIMITS WERE ESTIMATED BASED ON AVAILABLE LOT INFORMATION PROVIDED BY THE COUNTY THEREFORE, LOT LIMITS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EASEMENT AND PROPERTY LIMITS PRIOR TO BEGINNING WORK. STUB OUT SHALL BE AT OR WITHIN EASEMENT LIMITS.



APN 1057-212-17 STUB OUT SECTION A DETAIL



UNDERGROUND SERVICE ALERT

Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG



Kimley»Horn

401 B STREET
SUITE 600
SAN DIEGO, CA 92101
TEL: (619) 234-9411

PREPARED UNDER THE SUPERVISION OF:

Sam McWhorter
SAM L. MCWHORTER

R.C.E. No. 61788

09/09/2024
DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

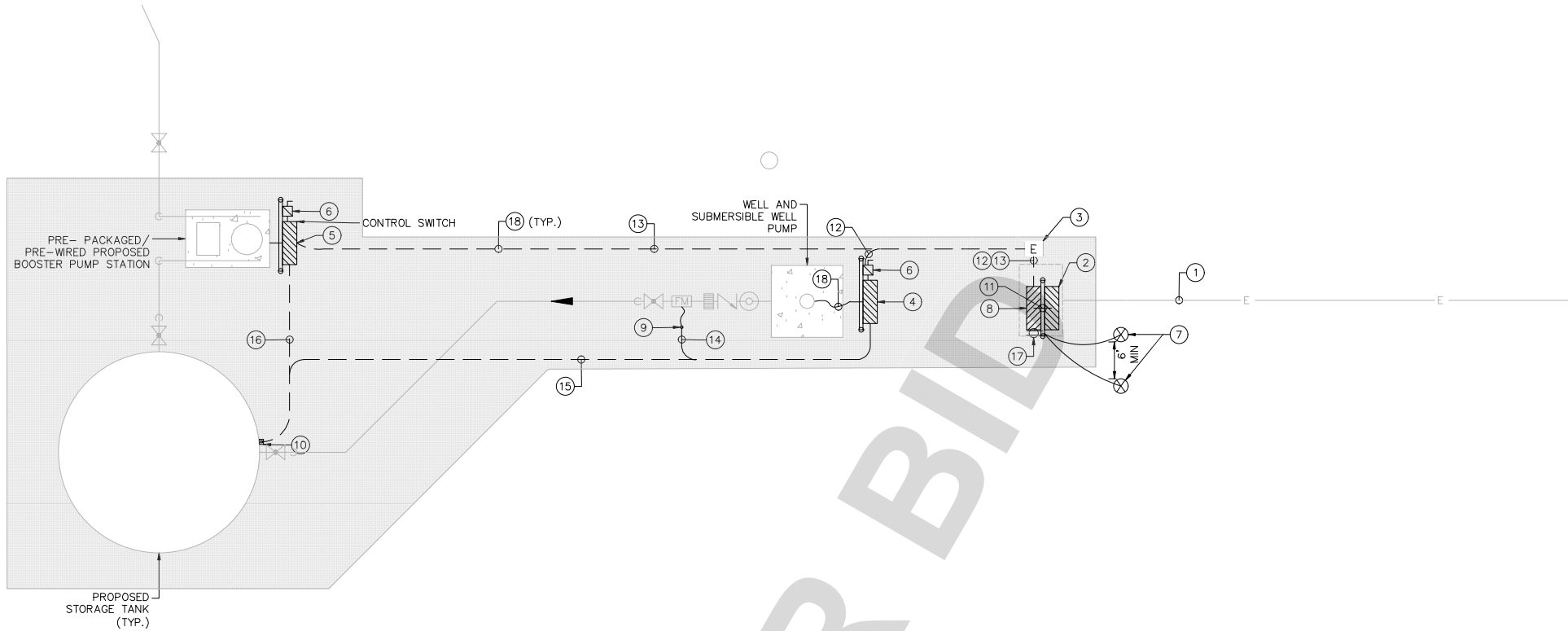
WATER / SEWER PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David Doublet ASSISTANT DIRECTOR		INITIAL	DATE
APPROVALS	PROJECT MANAGER	Deanna Lestina	09/09/2024
	PM, DIVISION MANAGER	Noel Mondragon	09/09/2024

WATER / SEWER IMPROVEMENT PLANS		DWG NO.
APN. NO. 1057-212-17 PRADO EAST WELLS		FILE NO.
PIPING PLAN		SHEET 5 OF 8

SINGLE LINE DIAGRAMS	CONTROL WIRING DIAGRAMS	PLANS
<p> AMMETER VOLTMETER METER KILOWATT HOUR METER AMMETER SWITCH VOLTMETER SWITCH GROUND FAULT PROTECTION CURRENT TRANSFORMER POTENTIAL TRANSFORMER POWER TRANSFORMER SEE NOTE 1. CONTROL TRANSFORMER SEE NOTE 2. DRAW OUT TYPE EQUIPMENT DRAW OUT TYPE HIGH VOLTAGE MOTOR STARTER PLUG-IN TYPE EQUIPMENT CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE INDICATED DISCONNECT SWITCH, 3 POLE UNLESS OTHERWISE INDICATED OIL FUSE CUTOUPS FUSE SEE NOTE 3. TRANSFER SWITCH, AUTOMATIC MAGNETIC MOTOR STARTER. "1" INDICATES SIZE 1. RV INDICATES REDUCED VOLTAGE. 2S INDICATES 2 SPEED. R INDICATES REVERSING. MAGNETIC CONTACTOR CONDUIT NUMBER 12. SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES. GROUND KIRK KEY INTERLOCKING OF EQUIPMENT EQUIPMENT FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER SECTION OF THE CONTRACT. PHASE FAILURE RELAY SURGE ARRESTER EXISTING MOTOR (HP SHOWN) # in a circle"/> NEW MOTOR (ESTIMATED HP SHOWN) # in a circle"/> FUTURE MOTOR (ESTIMATED HP SHOWN) MANHOLE EYS SEAL </p>	<p> NORMALLY OPEN NORMALLY CLOSED DEVICE CONTACT LIMIT SWITCH LIMIT SWITCH HELD CLOSED LIMIT SWITCH HELD OPEN PRESSURE OR VACUUM SWITCH LIQUID LEVEL SWITCH TEMPERATURE ACTUATED SWITCH FLOW SWITCH (AIR, WATER, ETC.) PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT. PUSH BUTTON SINGLE CIRCUIT LOCK-OUT(LOCATED AT MOTOR UNLESS OTHERWISE NOTED) TIMED CONTACT- CONTACT ACTION RELAY ON ENERGIZATION. TIMED CONTACT- CONTACT ACTION RELAY ON DE-ENERGIZATION. ON-OFF SWITCH. EMERGENCY STOP PUSH BUTTON (MAINTAINED CONTACT) STOP -START PUSH-BUTTON STATION (MAINTAINED CONTACTS). HAND-OFF-AUTO SELECTOR SWITCH SEE NOTE 3. (THREE POSITION). TWO POSITION SELECTOR SWITCH SEE NOTE 3. PILOT LIGHT, Y=YELLOW, R=RED, A=AMBER, SEE NOTE 3. B=BLUE, W=WHITE, G=GREEN. BELL HORN OR SIREN CONTROL RELAY STARTER COIL. TIME DELAY RELAY. (0-30 SECONDS UNLESS OTHERWISE NOTED). MOTOR STARTER OVERLOAD RELAY CONTACTS CONTROL TRANSFORMER. SEE NOTES 2 MANUAL MOTOR STARTER SOLENOID OPERATED CONTROL VALVE 120 VOLT, 1 PHASE, MOTOR (UNLESS OTHERWISE NOTED) RUNNING TIME METER. (ELAPSED TIME METER) SPACE HEATERS. (LOCATED AT MOTOR UNLESS OTHERWISE NOTED). TERMINALS IN MOTOR CONTROL CENTER/MCP CONTACT OR DEVICE REMOTE FROM MOTOR CONTROL CENTER/MCP TERMINALS IN MOTOR CONTROL CENTER/MCP CONTACT IN MOTOR CONTROL CENTER FOR CONNECTION TO REMOTE DEVICE/MCP DEVICE SIGNAL OUTPUT DEVICE SIGNAL INPUT </p>	<p> CONDUIT RUN CONCEALED UNDER SLAB OR BELOW GRADE. (CONCEALED IN SLAB WHERE SO NOTED OR WHERE ALLOWED PER SPECIFICATIONS). CONDUIT RUN EXPOSED UNLESS OTHERWISE NOTED EXISTING CONDUIT RUN GROUND WIRE CONDUIT UP (OUT TOP OF EQUIPMENT) CONDUIT DOWN (OUT BOTTOM OF EQUIPMENT) CONDUIT STUBBED OUT AND CAPPED LIGHTING FIXTURE MOUNTED ON POLE OR POST OR ABOVE PLATFORM CEILING MOUNTED LIGHTING FIXTURE BRACKET MOUNTED LIGHTING FIXTURE FLOODLIGHT FLUORESCENT LIGHTING FIXTURE POLE MOUNTED LIGHT FIXTURE EXIT LIGHT RECESSED INCANDESCENT OR MERCURY VAPOR LIGHTING FIXTURE LIGHTING FIXTURES CONNECTED TO EMERGENCY CIRCUITS LIGHTING FIXTURE TYPE A, 100 WATTS, WITH 1 LAMP. SEE LIGHTING FIXTURE SCHEDULE SINGLE POLE, SINGLE THROW TOGGLE SWITCH DOUBLE POLE, SINGLE THROW TOGGLE SWITCH THREE-WAY TOGGLE SWITCH FOUR-WAY TOGGLE SWITCH MANUAL MOTOR STARTER OUTLETS SHOWN WITH SUBSCRIPT "a" ADJACENT TO THEM SHALL BE CONTROLLED BY S a DUPLEX CONVENIENCE RECEPTACLE AT +12" OR AS NOTED SINGLE CONVENIENCE RECEPTACLE AT +12" OR AS NOTED SPECIAL PURPOSE RECEPTACLE AT +12" OR AS NOTED, RATING AS INDICATED JUNCTION BOX, SIZE AS REQUIRED BY CODE THERMOSTAT OUTLET AT +54" CLOCK OUTLET AT +7"-6" OR AS NOTED TELEPHONE OUTLET AT +12" OR AS NOTED TELEPHONE FLOOR OUTLET HORN CONTROL DEVICE P = PRESSURE SWITCH ZS = LIMIT SWITCH L = LEVEL SWITCH V = CONTROL VALVE CONTROL STATION: PUSH-BUTTON STATION OR SELECTOR SWITCH. SEE CONTROL WIRING DIAGRAMS FOR REQUIREMENTS. EXISTING MOTOR NEW MOTOR FUTURE MOTOR GROUND WELL GROUND ROD DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM FOR SIZE. LIGHTING PANEL. SURFACE MOUNTED. SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTROL CENTER EQUIPMENT BY OTHERS CONDUIT NUMBER 12. SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES. INDICATES HEIGHT FROM FINISHED FLOOR OR GRADE TO CENTERLINE OF DEVICE. INDICATES TO REFER TO NOTE (1) ON DRAWING WEATHERPROOF. PROVIDE GASKETS AS REQUIRED CONDUIT ONLY INSTRUMENTATION DEVICE. SEE PROCESS AND INSTRUMENTATION DRAWINGS FOR DESCRIPTIONS. EXISTING PULL BOX PULL BOX (SIZE AS REQUIRED) OUTPUT TERMINAL INPUT TERMINAL </p>
<p> NOTES: (ELECTRICAL SYMBOLS) 1. POWER TRANSFORMERS SHALL BE DRY TYPE 480-208Y/120 VOLTS, 3 PHASE 4 WIRE UNLESS OTHERWISE INDICATED. 2. CONTROL TRANSFORMER SHALL BE DRY TYPE 480-120 VOLTS 1 PHASE UNLESS OTHERWISE INDICATED. SEE CONTROL WIRING DIAGRAMS FOR USE OF 120 VOLT CONTROL CIRCUITS CONTROL TRANSFORMERS SHALL BE SIZED TO HANDLE THE LOADS OF ALL RELAYS, PILOT LIGHTS, ETC. CONNECTED THERE TO PLUS 50 VA EXTRA CAPACITY. 3. LOCATED IN OR ON MOTOR CONTROL CENTER UNLESS OTHERWISE INDICATED. </p>		

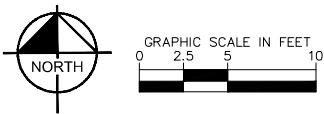
AMP AMPERE	GND GROUND	N.C. NORMALLY CLOSED
AL ALUMINUM	HP HORSEPOWER	NEC NATIONAL ELECTRICAL CODE
ATS AUTOMATIC TRANSFER SWITCH	HPS HIGH PRESSURE SODIUM	N.O. NORMALLY OPEN
AWG AMERICAN WIRE GAUGE	HZ HERTZ (CYCLES PER SECOND)	NO. NUMBER
BRK BREAKER	IC INTERRUPTING CAPACITY	PLC PROGRAMMABLE LOGIC CONTROLLER
CAT CATALOG	KV KILOVOLTS	PNL PANEL
CIRC. MIL CIRCULAR MILS (AWG)	LCL LONG CONTINUOUS LOAD	PR PAIR
C.O. CONDUIT ONLY	LTG LIGHTING	PVC POLYVINYL CHLORIDE
CKT CIRCUIT	MAX MAXIMUM	REC RECEPTACLE
CP CONTROL PANEL	MCC MOTOR CONTROL CENTER	RGS RIGID GALVANIZED STEEL
DIA DIAMETER	MCP MAIN CONTROL PANEL	SCE SOUTHERN CALIFORNIA EDISON
DWG DRAWING	MCM THOUSAND CIRCULAR MIL (AWG)	SCHED SCHEDULE
EA EACH	MFR MANUFACTURER	SES SERVICE ENTRANCE SECTION
ELECT ELECTRICAL	MIN MINIMUM	SPECS SPECIFICATIONS
ELEV ELEVATION	MIS MISCELLANEOUS	SSS SOLID STATE STARTER
EXIST EXISTING	MPZ MINI POWER ZONE	TEL TELEPHONE
FLA FULL LOAD AMPS	MTG MOUNTING	TDR TIME DELAY RELAY
FUT FUTURE		TTB TELEPHONE TERMINAL BACKBOARD
GFCI GROUND FAULT CIRCUIT INTERRUPTER		TYP TYPICAL
		UCP UNIT CONTROL PANEL
		V VOLTS
		WP WEATHERPROOF
		XFMR TRANSFORMER

- THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
4. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
5. 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.
6. CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #10 AWG WITH #10 GND.
7. UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
8. OUTDOOR CONDUITS EXPOSED TO BE PVC COATED RIGID WITH PLUGS FOR WELLS, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. PVC COATED RIGID CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL PVC COATED RIGID CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
9. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
10. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.
11. ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
12. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.



CONSTRUCTION NOTES

- UTILITY SERVICE FEEDER. SEE UTILITY PLANS FOR MORE INFORMATION.
- PROVIDE AND INSTALL 200 AMP, 120/208V, 3P, 4W, NEMA 3R, 42 KAIC, RACK MOUNTED SERVICE ENTRANCE SECTION. SEE DETAILS A AND B SHEET 8 FOR SINGLE LINE DIAGRAM AND PANEL SCHEDULE. SEE DETAIL D ON SHEET 8 FOR EQUIPMENT RACK DETAIL.
- PROVIDE AND INSTALL ARMOR GUARD SOLUTIONS TAMPER PROOF, LOCKABLE ELECTRICAL PULLBOX. SEE DETAIL C ON SHEET 8 FOR MORE INFORMATION.
- INSTALL PUMP MANUFACTURER SUPPLIED WELL PUMP CONTROL PANEL. EXTEND POWER FEED FROM WELL PUMP CONTROL PANEL DISCONNECT TO WELL PUMP FOR A COMPLETE SYSTEM. CONTRACTOR TO INSTALL MANUFACTURER SUPPLIED CONDUCTORS FOR A COMPLETE SYSTEM.
- INSTALL PUMP MANUFACTURER SUPPLIED BOOSTER STATION CONTROL PANEL. EXTEND POWER FEED FROM BOOSTER STATION PUMP CONTROL PANEL DISCONNECT TO BOOSTER STATION PUMP CONTROL PANEL FOR A COMPLETE SYSTEM. CONTRACTOR TO INSTALL MANUFACTURER SUPPLIED CONDUCTORS FOR A COMPLETE SYSTEM.
- PROVIDE PUMP CONTROL PANEL FUSED DISCONNECT. SEE SINGLE LINE DIAGRAM DETAIL A ON SHEET 8 FOR DISCONNECT INFORMATION AND SIZING.
- PROVIDE AND INSTALL (2) 3/4" X 10' LONG COPPER CLAD STAINLESS STEEL GROUND RODS WITH #6 AWG GREEN INSULATED GROUNDING ELECTRODE CONDUCTOR IN 3/4" CONDUIT. SPACE GROUND RODS MINIMUM 6' APART. SEE DETAIL F ON SHEET 8 FOR GROUND WELL DETAIL.
- PROVIDE AND INSTALL 200 AMP, 120/208V, 3P, 4W, NEMA 3R, 42 KAIC, RACK MOUNTED PANEL 'L-1'.
- EXTEND SCHEDULE 40 PVC CONDUIT BELOW GRADE AND TRANSITION TO LIQUID TIGHT FLEXIBLE METALLIC CONDUIT 18" ABOVE GRADE AND EXTEND TO FLOW METER. STUB UP SHALL OCCUR 6' MAXIMUM FROM FLOW METER.
- EXTEND SCHEDULE 40 PVC CONDUIT BELOW GRADE AND TRANSITION TO GALVANIZED RIGID STEEL 18" ABOVE GRADE. TERMINATE CONDUITS INTO UNISTRUT MOUNTED NEMA 3R JUNCTION BOX. EXTEND (3) SETS OF (2) #16 AWG FLOAT SWITCH CABLES IN 1" GALVANIZED RIGID STEEL CONDUIT FOR WELL PUMP CONTROL TO PROPOSED WELL PUMP FLOAT SWITCHES, AND (1) SET OF (2) #16 AWG FLOAT SWITCH CABLES IN 1" CONDUIT FOR BOOSTER STATION PUMP SHUT OFF TO PROPOSED BOOSTER STATION FLOAT SWITCHES, AND PENETRATE TANK PER MANUFACTURER SPECIFICATIONS. SUPPORT CONDUIT TO TANK PER MANUFACTURER SPECIFICATIONS. SEE SHEET 3 FOR FLOAT SENSOR HEIGHTS. SEE SITE PLAN NOTES FOR CONDUIT AND CONDUIT QUANTITY AND TYPE.
- PROVIDE AND INSTALL (4) #3/0 AWG, TYPE XHHW CONDUCTORS AND (1) #6 AWG GROUND IN (1) 2.5" GALVANIZED RIGID STEEL CONDUIT FROM SERVICE METER AND DISCONNECT TO PANEL 'L-1'.
- PROVIDE AND INSTALL (3) #10 AWG, TYPE XHHW CONDUCTORS AND (1) #10 AWG GROUND IN (1) 2" SCHEDULE 40 PVC CONDUIT FROM PANEL 'L-1' TO WELL PUMP CONTROL PANEL.
- PROVIDE AND INSTALL (3) #8 AWG, TYPE XHHW CONDUCTORS AND (1) #8 AWG GROUND IN (1) 2" SCHEDULE 40 PVC CONDUIT FROM PANEL 'L-1' TO BOOSTER PUMP STATION CONTROL PANEL.
- PROVIDE AND INSTALL (1) FLOW METER MANUFACTURER CABLE IN (1) 1.5" CONDUIT FROM FLOW METER TO WELL PUMP CONTROL PANEL.
- PROVIDE AND INSTALL (6) #16 AWG FLOAT SWITCH CABLES IN (1) 1" CONDUIT.
- PROVIDE AND INSTALL (2) #16 AWG FLOAT SWITCH CABLES IN (1) 1" CONDUIT.
- PROVIDE AND INSTALL (1) 20A, 120V, WEATHERPROOF, WHILE IN USE, LOCKABLE, GFCI DUPLEX RECEPTACLE MOUNTED TO SERVICE ENTRANCE EQUIPMENT RACK. EXTEND (2) #12 AWG CONDUCTORS AND (1) #12 AWG GROUND IN (1) 1" GALVANIZED RIGID STEEL CONDUIT FROM PANEL 'L-1' TO CONVENIENCE RECEPTACLE.
- TRANSITION FROM SCHEDULE 40 PVC CONDUIT UNDERGROUND TO GALVANIZED RIGID STEEL ABOVE GRADE. GALVANIZED RIGID STEEL CONDUITS SHALL BE HALF LAPPED WITH SCOTCH WRAP 50 10-MIL TAPE TO 18" ABOVE GRADE TO PVC CONDUIT TRANSITION BELOW GRADE. SEE DETAIL D ON SHEET 8 FOR TYPICAL TRENCH DETAIL.



UNDERGROUND SERVICE ALERT



Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG



Kimley»Horn

401 B STREET
SUITE 600
SAN DIEGO, CA 92101
TEL: (619) 234-9411

PREPARED UNDER THE SUPERVISION OF:

MICHAEL A. COLOMBO

R.C.E. No. 19280

09/09/2024
DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

WATER / SEWER PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

David Doublet
ASSISTANT DIRECTOR

Digitally signed by David Doublet
Date: 2024.09.10 10:24:58 -07'00'

APPROVALS

	INITIAL	DATE
PROJECT MANAGER	Deanna Lestina	09/09/2024
PM, DIVISION MANAGER	Noel Mondragon	09/09/2024

WATER / SEWER IMPROVEMENT PLANS

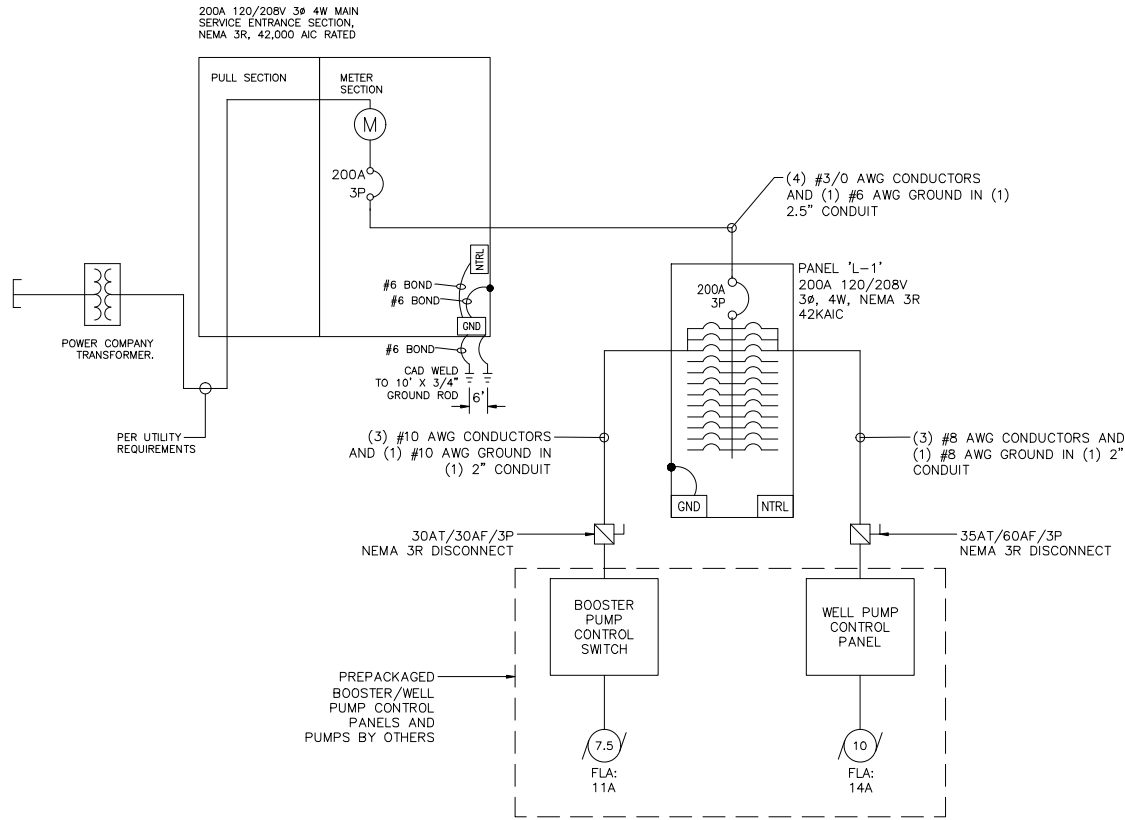
APN. NO. 1057-212-17
PRADO EAST WELLS

ELECTRICAL SITE PLAN

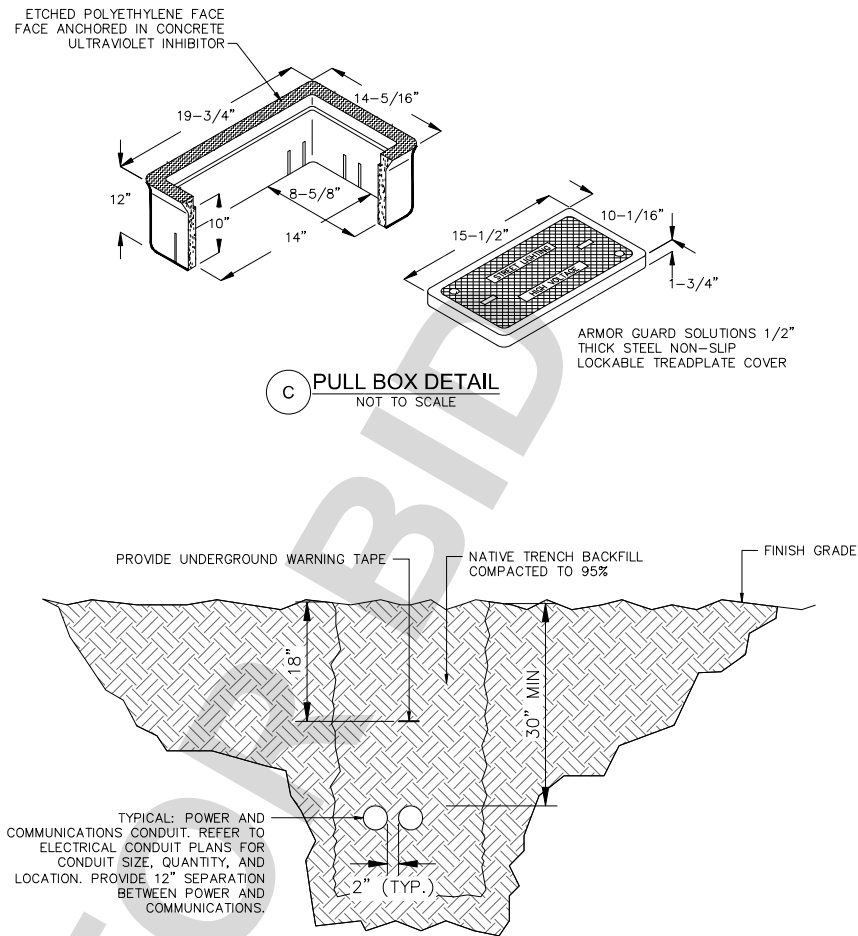
DWG NO.

FILE NO.

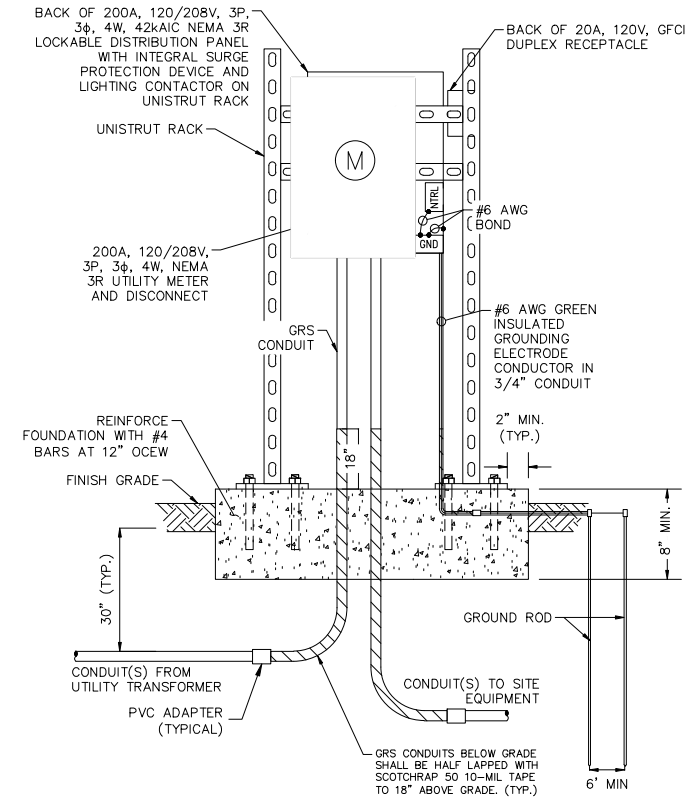
SHEET 7 OF 8



A ELECTRICAL SINGLE LINE DIAGRAM
NOT TO SCALE



E TRENCH DETAIL
NOT TO SCALE



D SERVICE RACK DETAIL
NOT TO SCALE

PANEL NAME: L-1

LOCATION: PRADO WELL

SUPPLY FROM: UTILITY

MOUNTING: SURFACE

ENCLOSURE: NEMA 3R

VOLTS: 120/208V

PHASES: 3

WIRES: 4

AIC RATING: 42K

MAINS TYPE: MCR

MAINS RATING: 200 A

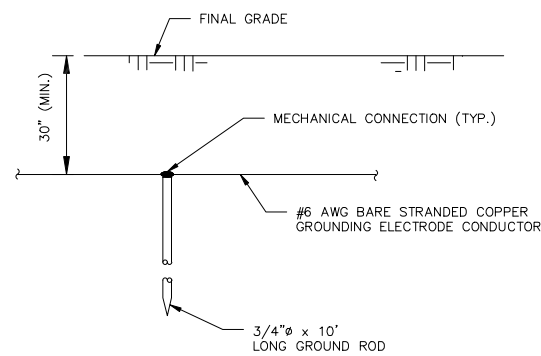
MCB RATING: 200 A

CKT	CIRCUIT DESCRIPTION	LOAD TYPE	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT
1	WELL PUMP CONTROL PANEL	M	30	3	3,100	4,000	3,100	4,000	3	35	BOOSTER PUMP CONTROL PANEL	2
3		M								M		4
5		M								M		6
7	CONVENIENCE RECEPT	R	20	1	180							8
9												10
11												12
13												14
15												16
17												18
19												20
21												22
23												24
TOTAL LOAD:					7,280 VA	7,100 VA	7,100 VA					
TOTAL AMPS:					60.7 A	59.2 A	59.2 A					

LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	EST. DEMAND (VA)	PANEL TOTALS
LARGEST MOTOR LOAD (M)	12000	125.00%	15000	TOTAL CONN. LOAD (VA): 21480
HVAC (H) & ALL OTHER MOTORS (M)	9300	100.00%	9300	TOTAL EST. DEMAND (VA): 24480
RECEPTACLE (R)	180	100.00%	180	TOTAL CONN. (A): 59.6
LIGHTING (L)	0	125.00%	0	TOTAL EST. DEMAND (A): 67.9
EQUIPMENT (E)	0	100.00%	0	
OTHER (O) (SEE NOTES)	0	0.00%	0	

NOTES:

B PANEL 'L-1' SCHEDULE
NOT TO SCALE



F GROUND WELL DETAIL
NOT TO SCALE



Kimley»Horn

PREPARED UNDER THE SUPERVISION OF:

MICHAEL A. COLOMBO

401 B STREET
SUITE 600
SAN DIEGO, CA 92101
TEL: (619) 234-9411

09/09/2024
DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

WATER / SEWER PLANS APPROVED BY:			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David Doublet		Digitally signed by David Doublet	
ASSISTANT DIRECTOR		Date: 2024.09.16 10:25:13 -07'00'	
APPROVALS		INITIAL	DATE
PROJECT MANAGER		Deanna Lestina	
PM, DIVISION MANAGER		Noel Mondragon	

WATER / SEWER IMPROVEMENT PLANS		DWG NO.
APN. NO. 1057-212-17		FILE NO.
PRADO EAST WELLS		
ELECTRICAL DETAILS		SHEET 8 OF 8