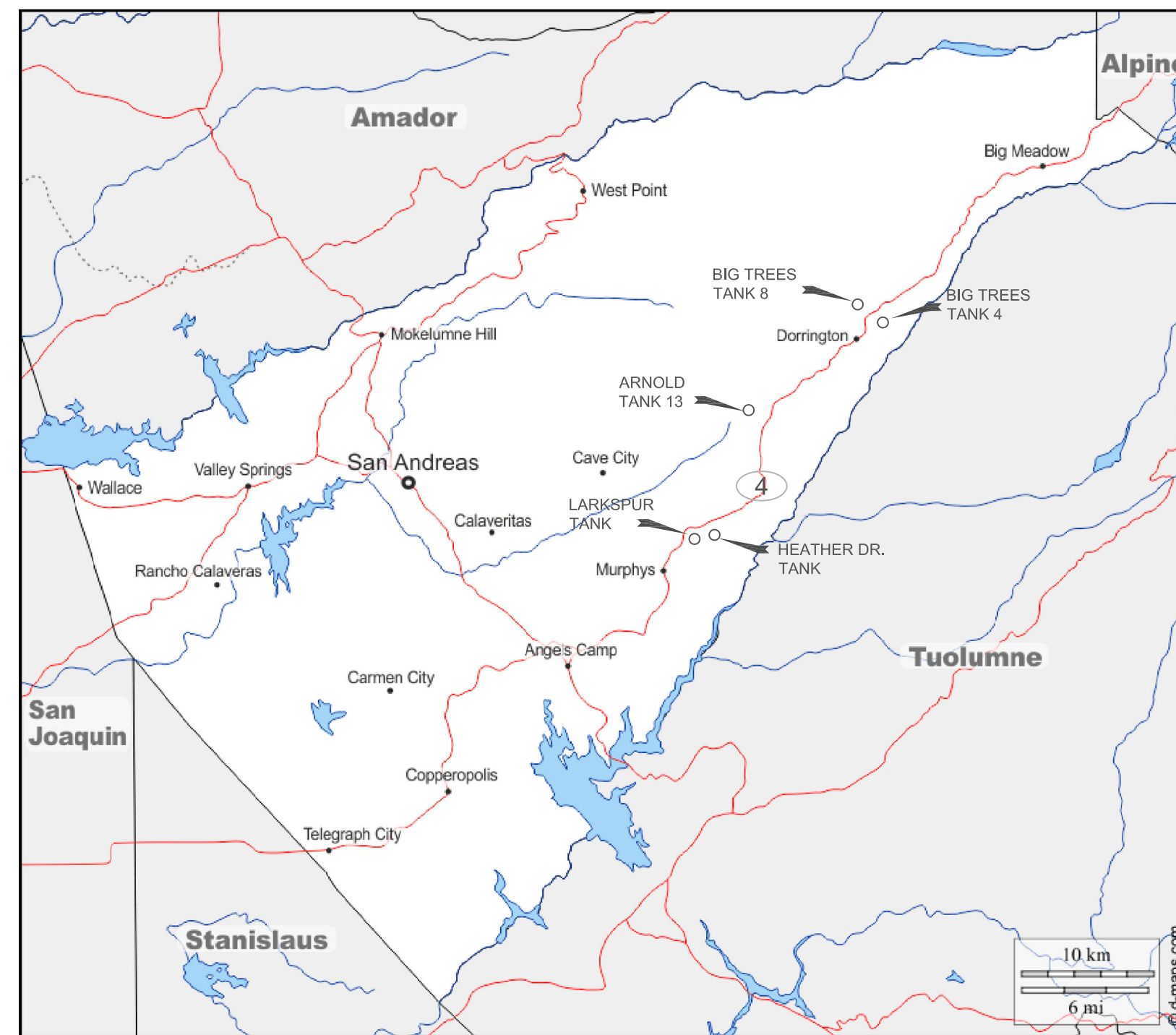


# CALAVERAS COUNTY WATER DISTRICT

## EBBETTS PASS REDWOOD WATER STORAGE TANKS WILDFIRE HAZARD MITIGATION PROJECT JUNE 2021 CIP NO. 11095

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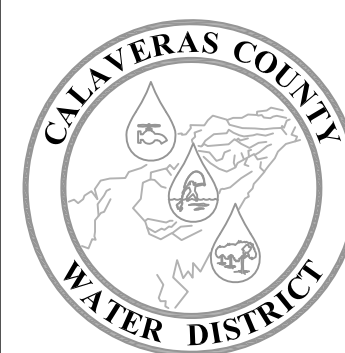


LOCATION MAP  
NOT TO SCALE



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 CHECKED BY:  
 DATE: 6/2/2021  
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**CALAVERAS COUNTY  
WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

TITLE SHEET  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
G1
DRAWING NUMBER
1 OF 34
SHEET NUMBER

**GENERAL NOTES:**

- ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PLANS, NOTES, DETAILS, AND PROVISIONS AS SPECIFIED HEREON AND IN ACCORDANCE WITH THE PROJECT MANUAL AND TECHNICAL SPECIFICATIONS. ALL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS OF ALL AGENCIES HAVING JURISDICTION OVER THE WORK SHALL BE DONE TO THE SATISFACTION OF ALL OF THE INVOLVED AGENCIES.
- ALL WATER WORK WILL BE DONE UNDER THE INSPECTION OF CALAVERAS COUNTY WATER DISTRICT (CCWD).
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND FACILITIES AFFECTED BY THE WORK AND SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) 48 HOURS PRIOR TO ANY EXCAVATION WORK FOR IDENTIFICATION AND LOCATION OF UNDERGROUND UTILITIES. (PHONE: 1-800-227-2600)
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAND DIGGING AND VERIFYING THE LOCATION AND DEPTH OF ALL EXISTING FACILITIES PRIOR TO ANY EXCAVATION.
- WHERE DEPTH OF EXCAVATIONS INTO WHICH WORKERS DESCEND IS 5 FEET OR DEEPER, THE CONTRACTOR IS REQUIRED TO PROVIDE SHEETING, SHORING & BRACING AND OBTAIN AN EXCAVATION PERMIT FROM THE NEAREST CAL/OSHA OFFICE & PROVIDE COPY TO CCWD PRIOR TO CONSTRUCTION.
- AT AREAS ABOVE 2,500 FEET ELEVATION, ALL CASTING AND CONCRETE COLLARS IN THE ROADWAY SHALL BE DEPRESSED 1/4 INCH FOR SNOWPLOWING.
- CONNECTIONS TO EXISTING WATER FACILITIES SHALL HAVE PRIOR APPROVAL BEFORE PROCEEDING AND BE DONE IN ACCORDANCE WITH CCWD TIE-IN PROCEDURES, PLANS, AND SPECIFICATIONS.
- THE CONTRACTOR SHALL HAVE A COPY OF CCWD APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS ON SITE. SPECIFICATIONS, SPECIFIC NOTES, AND DETAIL DRAWINGS THEREON WHICH SHALL TAKE PRECEDENCE OVER GENERAL DRAWINGS AND PLANS UNLESS OTHERWISE DIRECTED BY THE DISTRICT ENGINEER. ANY DEVIATION FROM APPROVED PLANS DURING CONSTRUCTION WILL REQUIRE PRIOR WRITTEN NOTICE TO CCWD, OTHER APPROPRIATE PUBLIC AGENCIES, AND SHALL REQUIRE APPROVAL BY CCWD.
- ONLY CCWD PERSONNEL SHALL OPERATE EXISTING FACILITIES.
- THE HIGHEST REQUIRED FIRE FLOW IS 1,000 GPM AT 20 PSIG RESIDUAL.
- WATERLINES SHALL BE DISINFECTED, TESTED, AND INSTALLED IN ACCORDANCE WITH CCWD AND AWWA STANDARDS.
- CCWD STANDARD PLANS (INCLUDED IN APPENDIX) ARE TO BE USED
  - STANDARD PLAN G12A - PADDLE MARKERS (ALL VALVES)
  - STANDARD PLAN G5 - TRENCH SECTION (BURIED PIPE INSTALLATIONS)
  - STANDARD PLAN W01 - CONCRETE THRUST BLOCKS (ALL THRUST BLOCKS)
  - STANDARD PLAN W03 - GATE VALVES (ALL GATE VALVES)
  - STANDARD PLAN W12 - JUMPER PIPE (FLUSHING/TESTING)
  - STANDARD PLAN G13 - POLYETHYLENE WRAP (BURIED PIPE/VALVES)

**ABBREVIATIONS**

AB	AGGREGATE BASE	PSF	POUNDS PER SQUARE FOOT
ARV	AIR RELEASE VALVE	PSI	POUNDS PER SQUARE INCH
ACP	ASBESTOS CONCRETE PIPE	PVC	POLYVINYL CHLORIDE
AC	ASPHALT CONCRETE	PRV	PRESSURE REDUCING VALVE
BFD	BACK FLOW DEVICE	RCP	REINFORCED CONCRETE PIPE
BV	BALL VALVE	REINF	REINFORCEMENT
BOV	BLOW OFF VALVE	REQ'D	REQUIRED
BFV	BUTTERFLY VALVE	ROW	RIGHT-OF-WAY
CO	CLEANOUT	SS	SANITARY SEWER
CLR	CLEARANCE	SCH	SCHEDULE
CONC	CONCRETE	SQ	SQUARE
CONT	CONTINUOUS	SF	SQUARE FEET
DIA/Ø	DIAMETER	SST	STAINLESS STEEL
DBL	DOUBLE	SD	STORM DRAIN
DDCV	DOUBLE DETECTOR CHECK VALVE	SRV	SURGE RELIEF VALVE
DWY	DRIVEWAY	TEMP	TEMPORARY
DIP	DUCTILE IRON PIPE	THK	THICK
EW	EACH WAY	TYP	TYPICAL
EA	EACH	UNO	UNLESS NOTED OTHERWISE
ESMT	EASEMENT	V	VOLTS
E	EASTING	WL	WATER LEVEL
EOP	EDGE OF PAVEMENT	WM	WATER METER
EL/ELEV	ELEVATION	WSE	WATER SURFACE ELEVATION
(E)	EXISTING	WSP	WELDED STEEL PIPE
FT	FEET	WWM	WELDED WIRE MESH
FF	FINISH FLOOR	W/	WITH
FG	FINISHED GRADE		
FH	FIRE HYDRANT		
FL	FLANGED/FLOWLINE		
FM	FORCE MAIN		
FPVC	FUSIBLE POLYVINYL CHLORIDE		
GAL	GALLONS		
GPM	GALLONS PER MINUTE		
GSP	GALVANIZED STEEL PIPE		
GV	GATE VALVE		
GA	GAUGE		
GR	GRATE		
HDPE	HIGH-DENSITY POLYETHYLENE		
HP	HORSEPOWER		
IE	INVERT ELEVATION		
INV	INVERT		
IPT	IRON PIPE THREAD		
IRRIG	IRRIGATION		
LF	LINEAR FEET		
MH	MANHOLE		
MAX	MAXIMUM		
MJ	MECHANICAL JOINT		
MIN	MINIMUM		
M	MOTOR		
(N)	NEW		
NPW	NON-POTABLE WATER		
NTS	NOT TO SCALE		
N	NORTHING		
OC	ON CENTER		
OD	OUTSIDE DIAMETER		
PVMT	PAVEMENT		
PE	PLAIN END		
PCC	PORTLAND CEMENT CONCRETE		

**LEGEND**

PROPOSED		EXISTING
	STORM DRAIN & SIZE	
	SANITARY SEWER & SIZE	
	FORCE MAIN & SIZE	
	WATER MAIN & SIZE	
	MANHOLE	
	DRAIN INLET	
	FIRE HYDRANT	
	GATE VALVE	
	AIR RELEASE VALVE	
	BLOW-OFF VALVE	
	BORE PIT LOCATION	N/A
	WATER SERVICE/METER	
	PROPERTY LINE	
	RIGHT OF WAY	
	CENTERLINE	
	CURB & GUTTER	
	FENCE	
	PROP GROUND ELEVATION	
	FINISH GRADE ELEVATION	
	FLOWLINE ELEVATION	
	SHEET DRAINAGE FLOW	
	SLOPE (CUT or FILL)	N/A
	INDEX CONTOUR LINE	
	INTERMEDIATE CONTOUR LINE	
	NATURAL GROUND ELEVATION	
	FLOW ARROW	
	TREE	
	SECTION DETAIL LOCATOR	N/A
	DETAIL LOCATOR	N/A

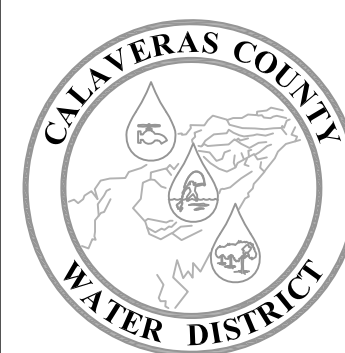
**PROJECT NOTES:**

- FOR SOIL BORING LOGS, ESTIMATED DEPTH TO ROCK, GROUNDWATER, AND TRENCHING RECOMMENDATION SEE THE "GEOTECHNICAL INVESTIGATION REPORT", PREPARED BY CONDOR EARTH TECHNOLOGIES, INC. 21663 BRIAN LANE, SONORA, CA 95370 - PH. (209) 532-0361.
- THERE IS NO TRACER WIRE BURIED WITH THE WATER PIPE. THE PIPE AS SHOWN ON THE PLANS IS BASED ON LOCATED BY CALAVERAS COUNTY WATER DISTRICT, AND MAY NOT REFLECT THE EXACT LOCATION OF THE EXISTING PIPE, ANGLE POINTS AND MISCELLANEOUS APPURTENANCES.
- INDIVIDUAL SERVICE INTERRUPTIONS SHALL BE SCHEDULED DURING TIMES CONVENIENT FOR THE CUSTOMER. THE CUSTOMER SHALL BE NOTIFIED 7 DAYS PRIOR TO THE SCHEDULED SHUT DOWN BY MAIL AND FLYER OR DOOR TAGS. AN INDIVIDUAL SERVICE SHUTDOWN SHALL NOT BE LONGER THAN 8 HOURS IN DURATION. A NETWORK PIPELINE CONNECTION SHUTDOWN SHALL NOT BE LONGER THAN 8 HOURS IN DURATION.



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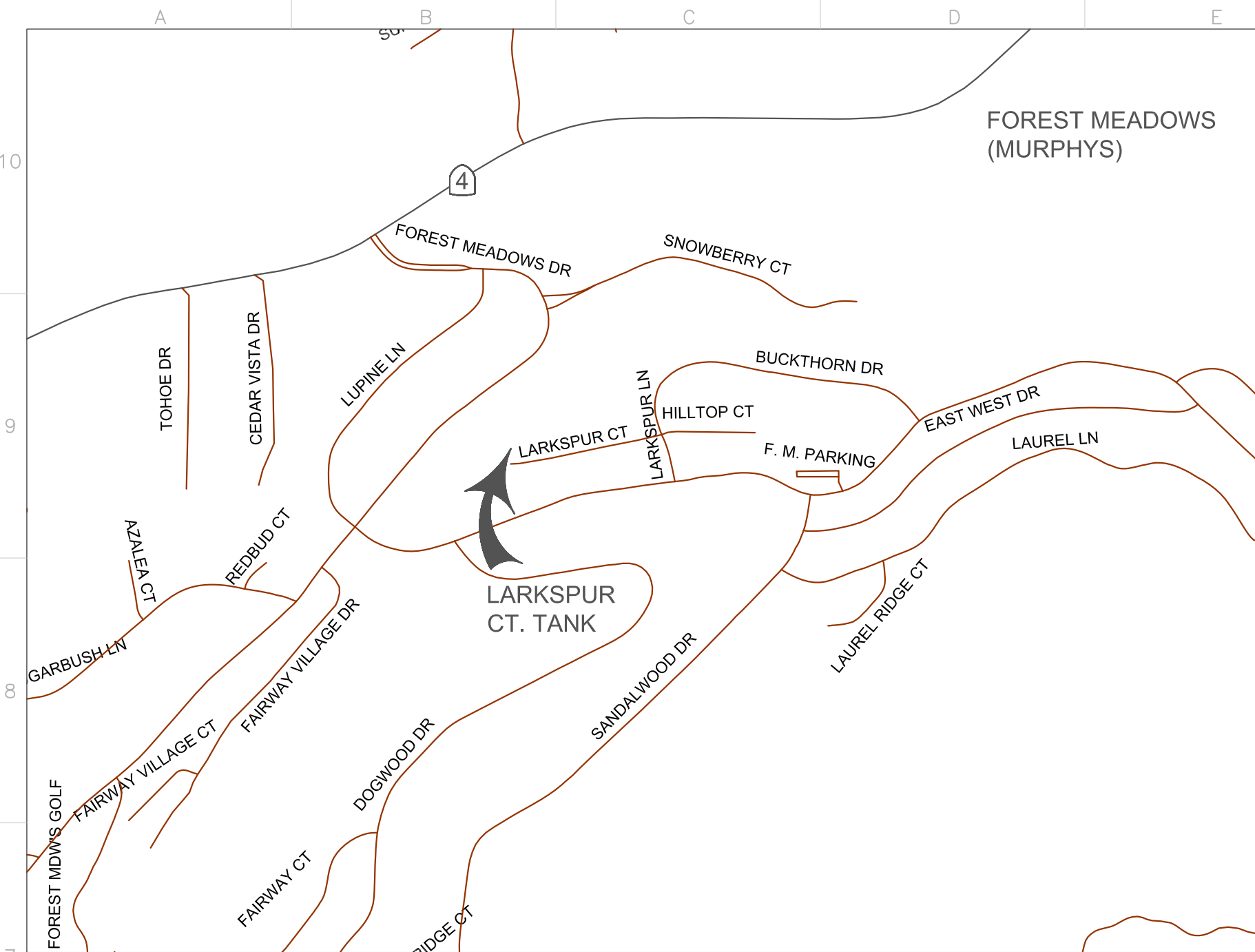
**CALAVERAS COUNTY WATER DISTRICT**

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SAN ANDREAS, CALIFORNIA 95249  
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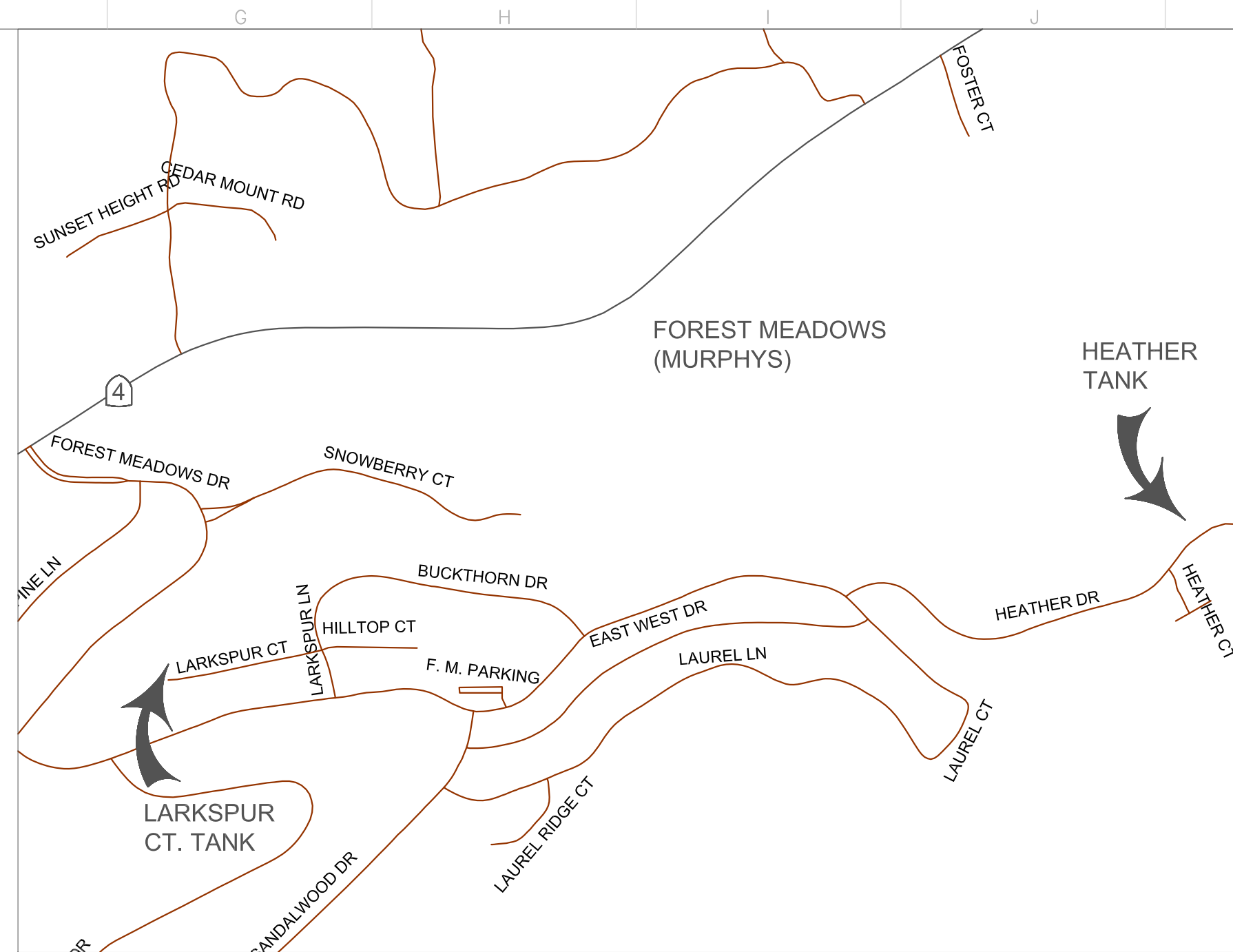
**CIVIL GENERAL NOTES**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

11095
PROJECT NUMBER
G2
DRAWING NUMBER
2 OF 34
SHEET NUMBER

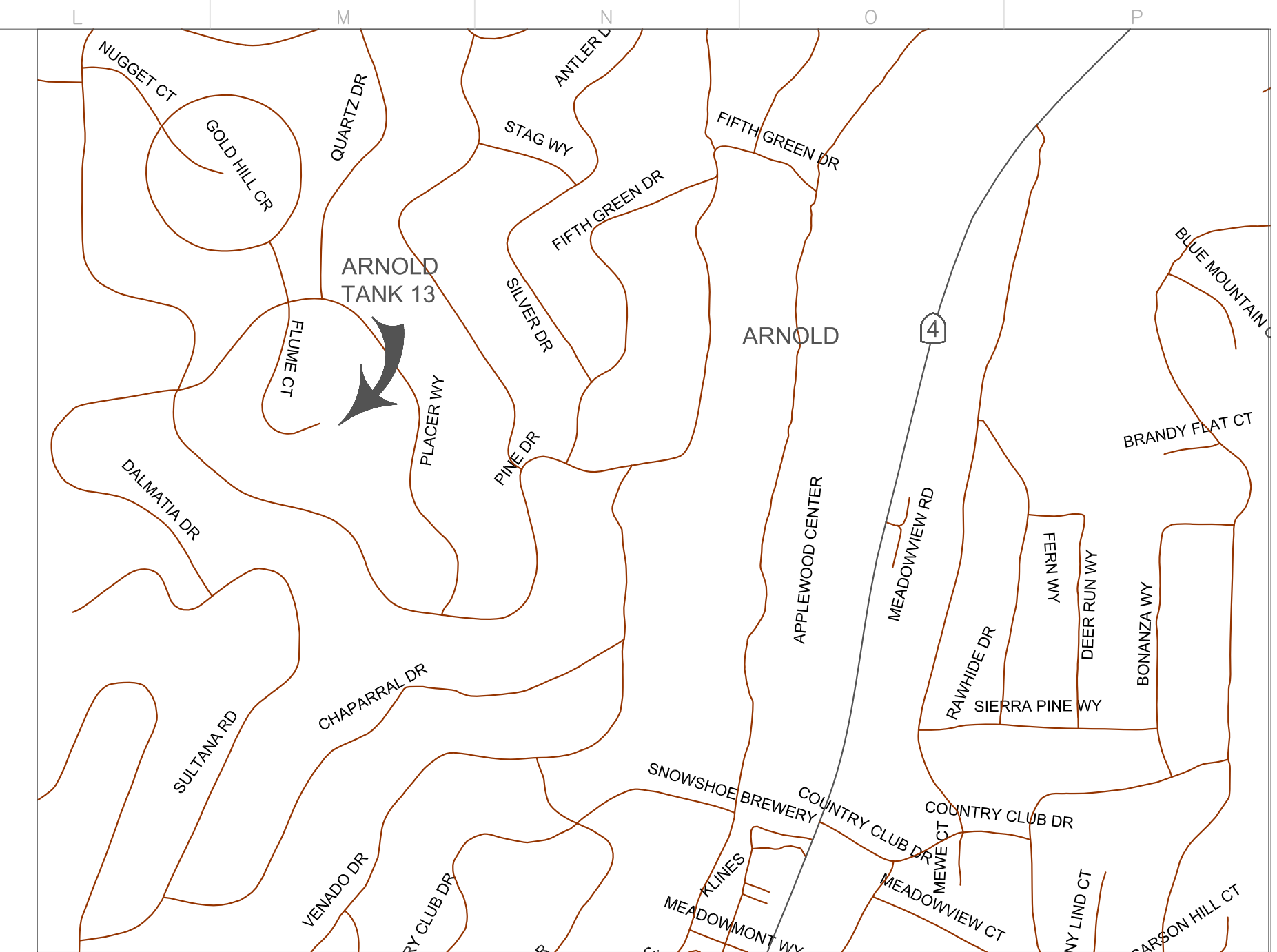




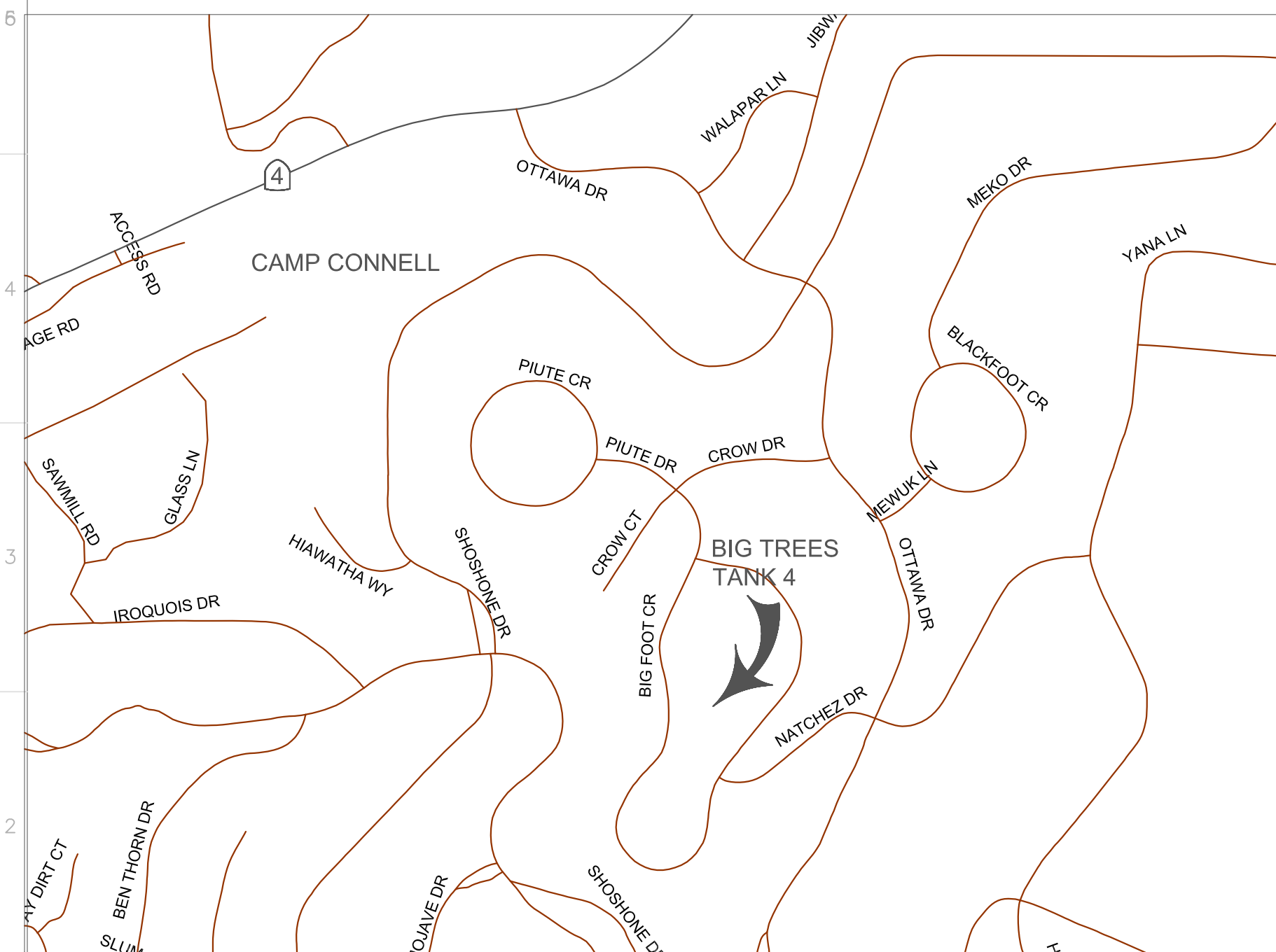
LARKSPUR CT TANK SITE



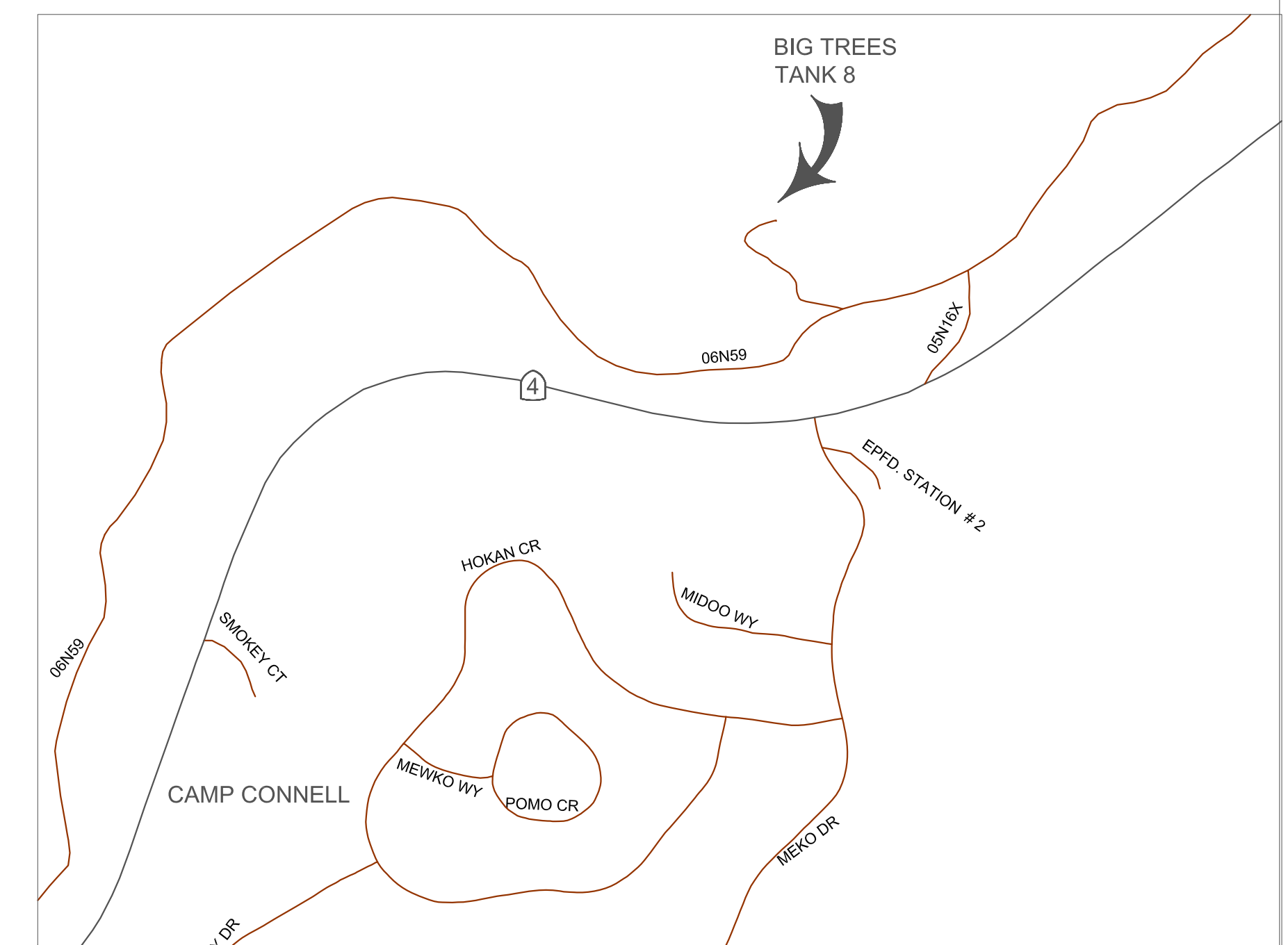
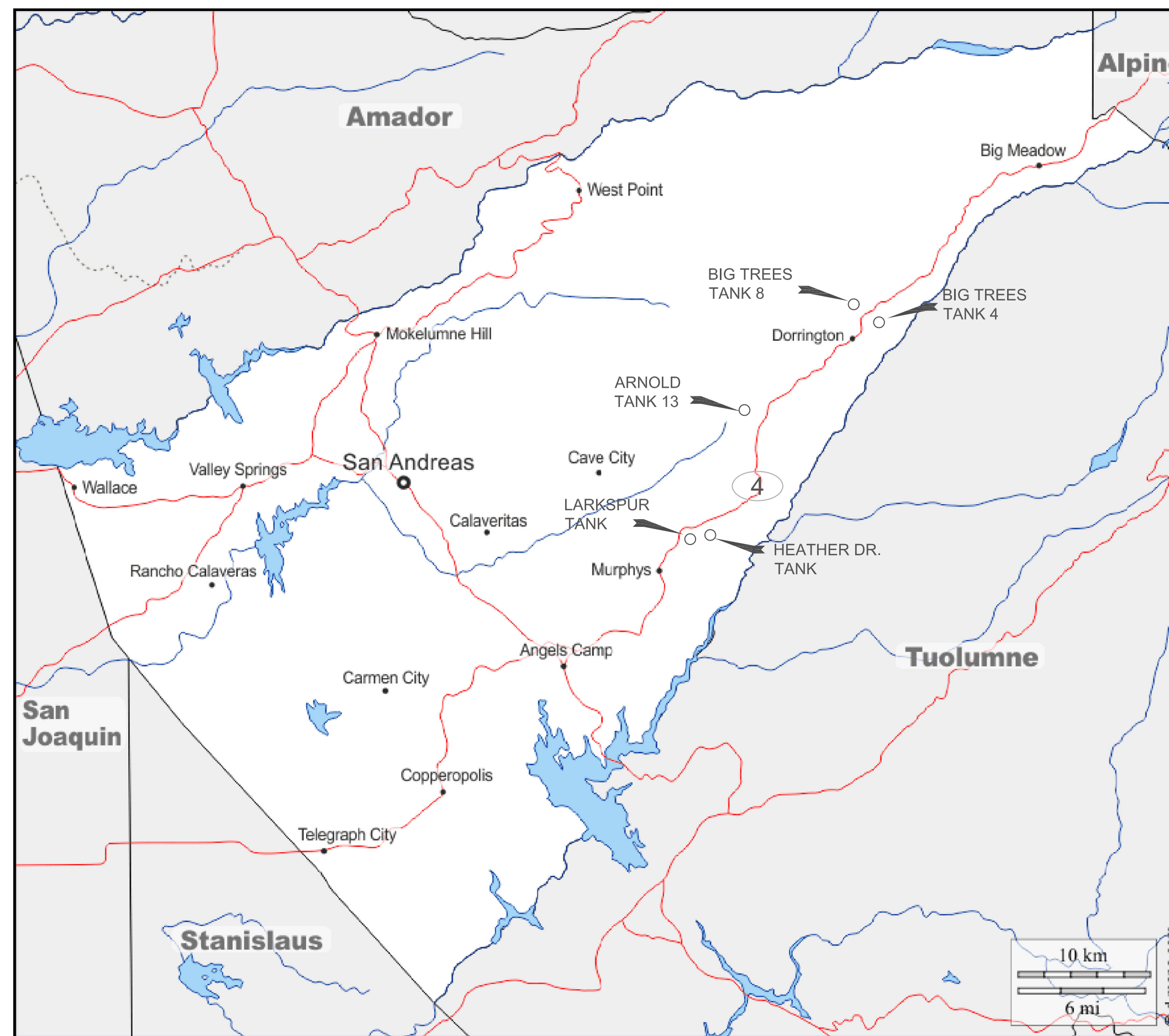
HEATHER DR. TANK SITE



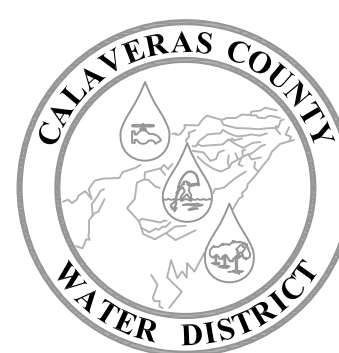
ARNOLD TANK 13. TANK SITE  
FLUME COURT



BIG TREES TANK 4 SITE



BIG TREES TANK 8 SITE



**CALAVERAS COUNTY  
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TANK SITE VICINITY MAPS

**EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT**



11095

PROJECT NUMBER

G3

DRAWING NUMBER

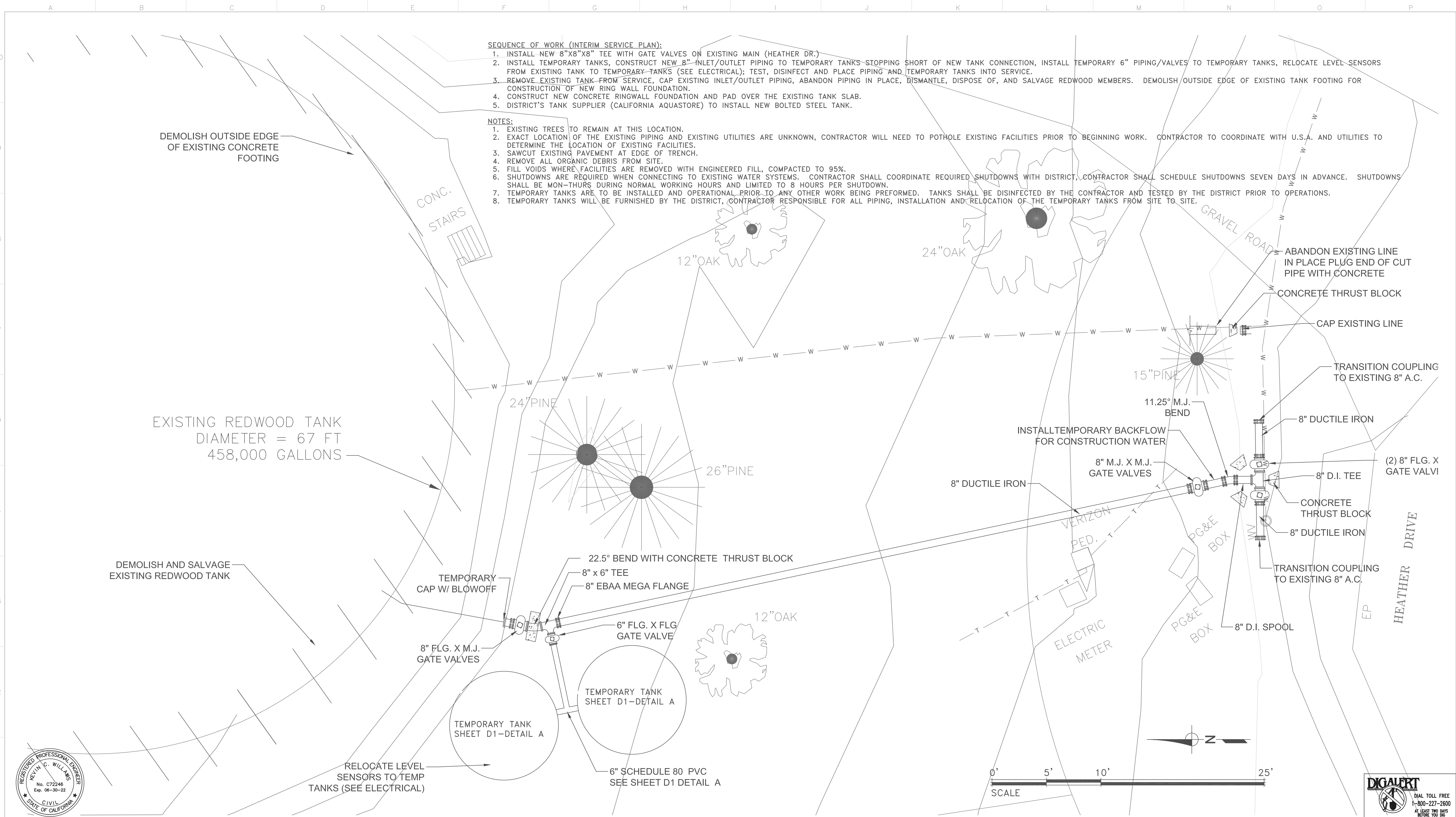
3 OF 34

SHEET NUMBER

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**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. INSTALL NEW 8"X8" TEE WITH GATE VALVES ON EXISTING MAIN (HEATHER DR.)
2. INSTALL TEMPORARY TANKS, CONSTRUCT NEW 8" INLET/OUTLET PIPING TO TEMPORARY TANKS STOPPING SHORT OF NEW TANK CONNECTION, INSTALL TEMPORARY 6" PIPING/VALVES TO TEMPORARY TANKS, RELOCATE LEVEL SENSORS FROM EXISTING TANK TO TEMPORARY TANKS (SEE ELECTRICAL); TEST, DISINFECT AND PLACE PIPING AND TEMPORARY TANKS INTO SERVICE.
3. REMOVE EXISTING TANK FROM SERVICE, CAP EXISTING INLET/OUTLET PIPING, ABANDON PIPING IN PLACE, DISMANTLE, DISPOSE OF, AND SALVAGE REDWOOD MEMBERS. DEMOLISH OUTSIDE EDGE OF EXISTING TANK FOOTING FOR CONSTRUCTION OF NEW RING WALL FOUNDATION.
4. CONSTRUCT NEW CONCRETE RINGWALL FOUNDATION AND PAD OVER THE EXISTING TANK SLAB.
5. DISTRICT'S TANK SUPPLIER (CALIFORNIA AQUASTORE) TO INSTALL NEW BOLTED STEEL TANK.

**NOTES:**

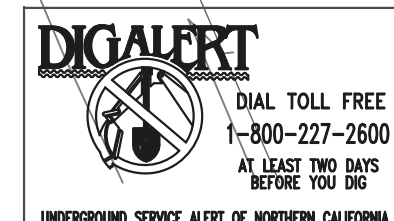
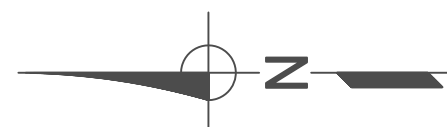
1. EXISTING TREES TO REMAIN AT THIS LOCATION.
2. EXACT LOCATION OF THE EXISTING PIPING AND EXISTING UTILITIES ARE UNKNOWN, CONTRACTOR WILL NEED TO POT HOLE EXISTING FACILITIES PRIOR TO BEGINNING WORK. CONTRACTOR TO COORDINATE WITH U.S.A. AND UTILITIES TO DETERMINE THE LOCATION OF EXISTING FACILITIES.
3. SAWCUT EXISTING PAVEMENT AT EDGE OF TRENCH.
4. REMOVE ALL ORGANIC DEBRIS FROM SITE.
5. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
6. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT. CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
7. TEMPORARY TANKS ARE TO BE INSTALLED AND OPERATIONAL PRIOR TO ANY OTHER WORK BEING PERFORMED. TANKS SHALL BE DISINFECTED BY THE CONTRACTOR AND TESTED BY THE DISTRICT PRIOR TO OPERATIONS.
8. TEMPORARY TANKS WILL BE FURNISHED BY THE DISTRICT, CONTRACTOR RESPONSIBLE FOR ALL PIPING, INSTALLATION AND RELOCATION OF THE TEMPORARY TANKS FROM SITE TO SITE.

DEMOLISH OUTSIDE EDGE OF EXISTING CONCRETE FOOTING

EXISTING REDWOOD TANK  
DIAMETER = 67 FT  
458,000 GALLONS

DEMOLISH AND SALVAGE EXISTING REDWOOD TANK

RELOCATE LEVEL SENSORS TO TEMP TANKS (SEE ELECTRICAL)



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**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

HEATHER DR. TANK DEMOLITION AND INTERIM SERVICE PLAN

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
C1
DRAWING NUMBER
4 OF 34
SHEET NUMBER

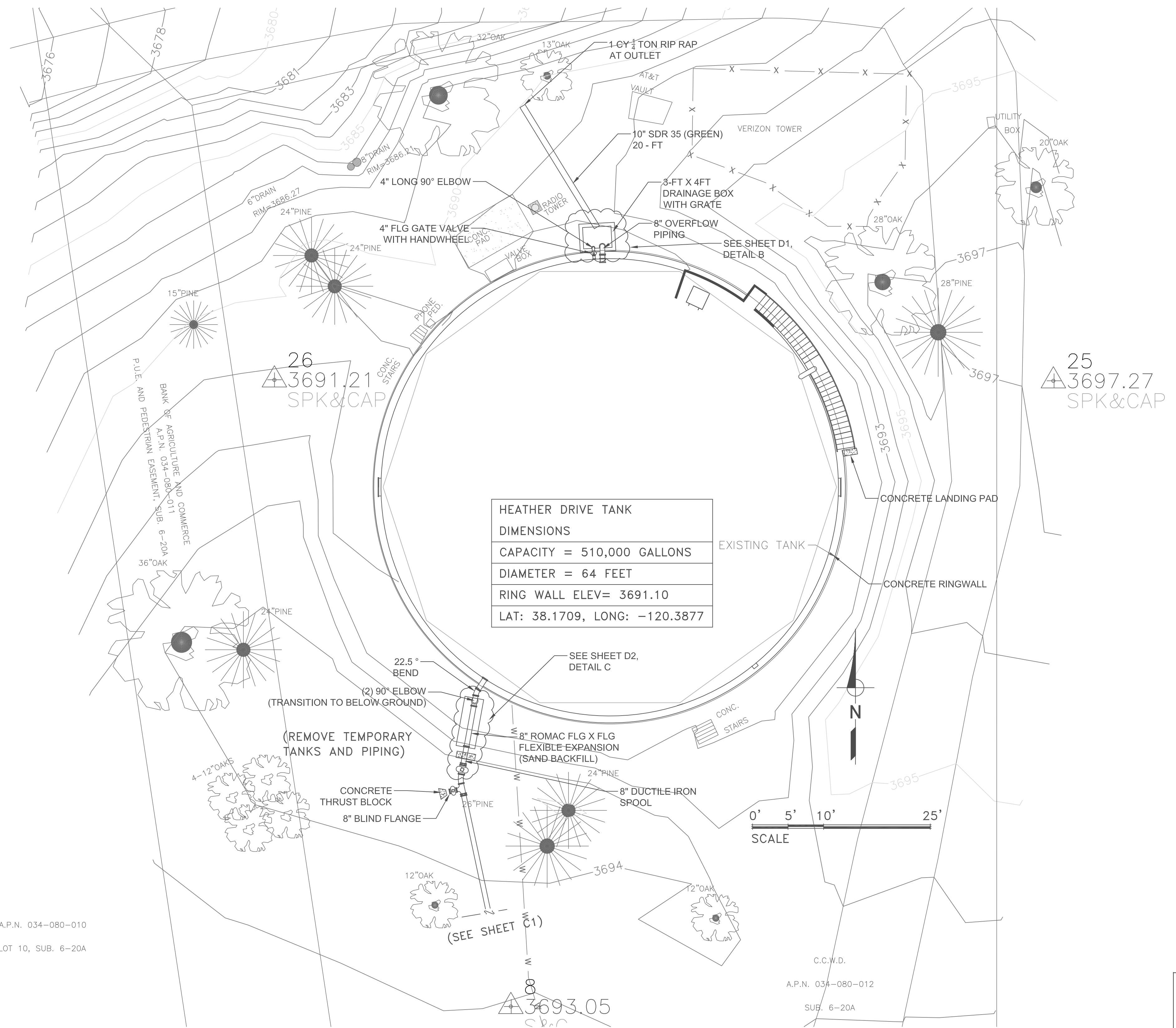


**SEQUENCE OF WORK:**

1. INSTALL PRECAST DRAINAGE BOX, 8" OVERFLOW PIPING, 4" DRAIN PIPING, SDR35 DRAIN PIPE AND RIP RAP.
2. INSTALL TEMPORARY 2" BACKFLOW FOR CONSTRUCTION WATER.
3. INSTALL NEW INLET/OUTLET PIPING TO TANK, INSTALL LEVEL SENSORS (SEE ELECTRICAL).
4. FLUSH TEST AND DISINFECT NEW WATER LINES AND TANK. DISINFECTION OF NEW TANK TO BE DONE CONCURRENTLY WITH WATERLINE DISINFECTION. CONTRACTOR WILL NEED TO COORDINATE WORK WITH TANK SUPPLIER (CALIFORNIA AQUASTORE).
5. PLACE NEW TANK INTO SERVICE.
6. REMOVE TEMPORARY PIPING AND TEMPORARY WATER STORAGE TANKS.
7. ABANDON EXISTING FACILITIES IN PLACE. PLACE CONCRETE PLUG IN THE END OF EXISTING LINES NO LONGER IN SERVICE.
8. RESTORE SITE AND ASPHALT PAVEMENT.

**NOTES:**

1. WORK IS WITHIN FOREST MEADOWS HOA, CONTRACTOR REQUIRED TO CHECK IN AND PROVIDE IDENTIFICATION AT GUARD GATE UPON REQUEST OF THE ATTENDENT. WORK AT THIS SITE ONLY ALLOWED MON-FRI 7:30AM - 5:30PM.
2. ALL TRENCHES IN PAVED ROADWAY TO BE SAWCUT AT EDGE OF EXCAVATION. MINIMUM OF 10-FT WIDE TRAVEL LANE PROVIDED ON ALL ROADWAYS DURING THE DURATION OF CONSTRUCTION
3. REMOVE ALL DEBRIS FROM SITE.
4. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
5. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.

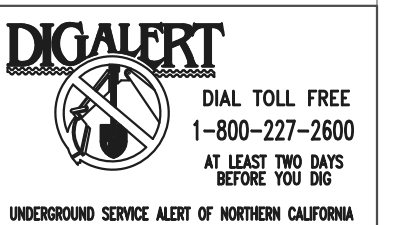


HEATHER DRIVE TANK
DIMENSIONS
CAPACITY = 510,000 GALLONS
DIAMETER = 64 FEET
RING WALL ELEV= 3691.10
LAT: 38.1709, LONG: -120.3877

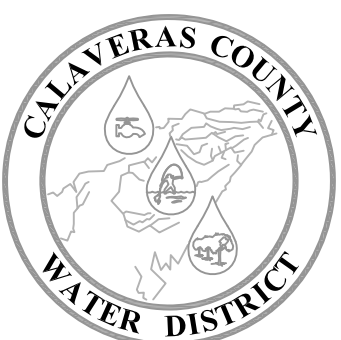


A.P.N. 034-080-010  
LOT 10, SUB. 6-20A

C.C.W.D.  
A.P.N. 034-080-012  
SUB. 6-20A



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**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
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**HEATHER DR. TANK RENOVATION PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

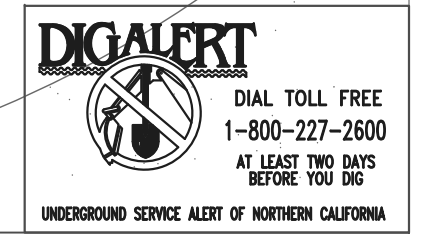
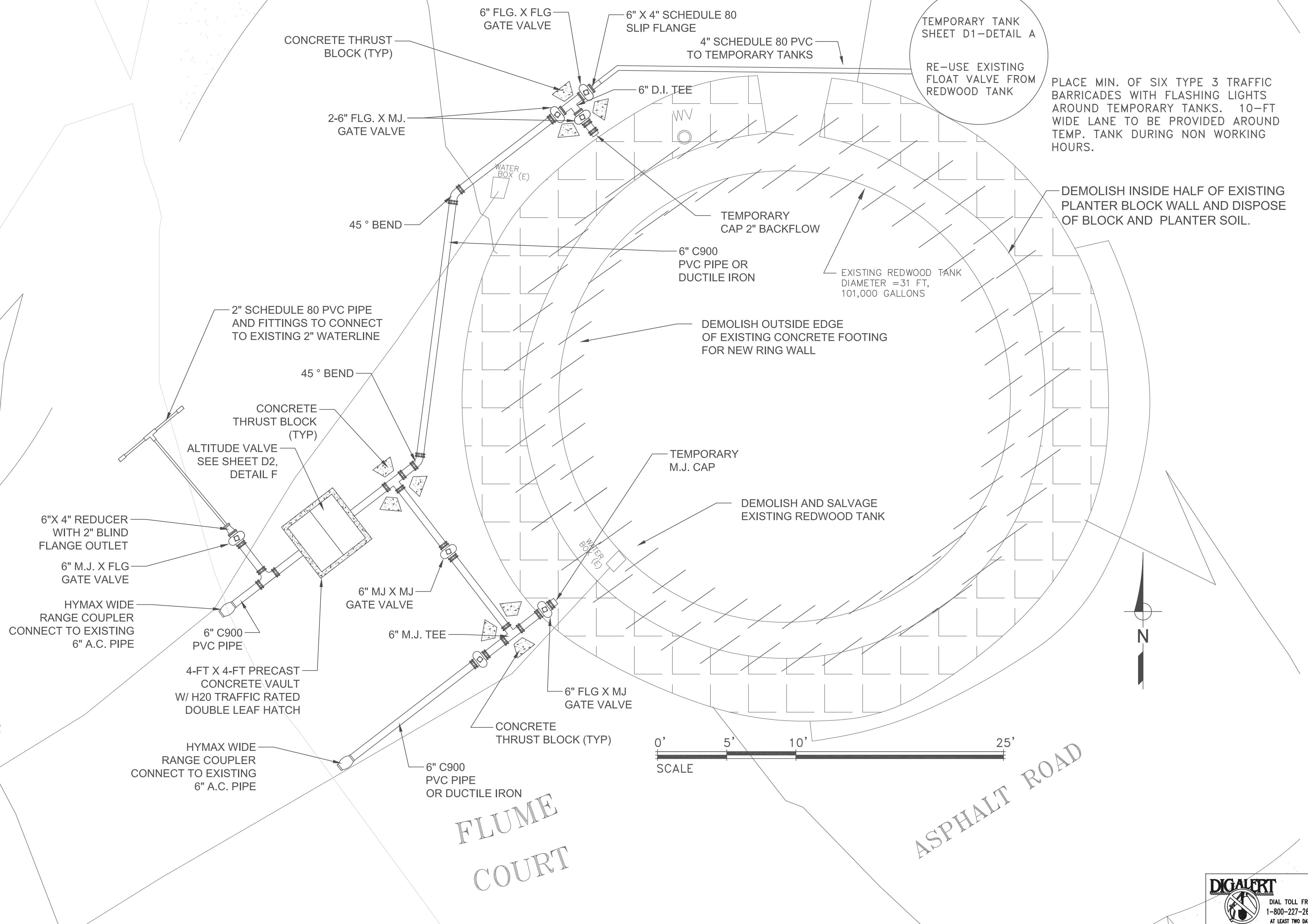
11095
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**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

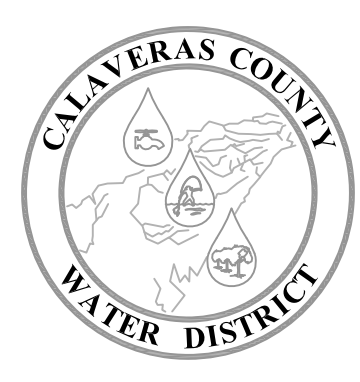
1. INSTALL TEMPORARY TANKS, CONSTRUCT NEW 6" INLET/OUTLET PIPING TO TEMPORARY TANKS STOPPING SHORT OF NEW TANK CONNECTION AND EXISTING PIPING, INSTALL TEMPORARY PIPING/VALVES TO TEMPORARY TANKS, INSTALL 2" BACKFLOW FOR CONSTRUCTION WATER, INSTALL VAULT AND ALTITUDE VALVE;
2. TEST, DISINFECT, AND PLACE PIPING AND TEMPORARY TANKS INTO SERVICE.
3. CONNECT NEW 2" WATER SERVICE LINE TO EXISTING LINE IN FLUME COURT.
4. REMOVE EXISTING TANK FROM SERVICE, CAP EXISTING INLET/OUTLET PIPING, ABANDON PIPING IN PLACE, DISMANTLE, DISPOSE OF, AND SALVAGE REDWOOD MEMBERS.
5. DEMOLISH INSIDE HALF OF BLOCK PLANTER, REMOVE EARTH FROM PLANTER, AND DEMOLISH OUTSIDE EDGE OF EXISTING TANK FOOTING FOR CONSTRUCTION OF NEW RING WALL FOUNDATION.
6. CONSTRUCT NEW CONCRETE RINGWALL FOUNDATION AND CONSTRUCT ROCK PAD OVER THE EXISTING TANK SLAB.
7. DISTRICT'S TANK SUPPLIER (CALIFORNIA AQUASTORE) TO INSTALL NEW BOLTED STEEL TANK AND STAIRCASE.

**NOTES:**

1. ALL TRENCHES IN PAVED ROADWAY TO BE SAWCUT AT EDGE OF EXCAVATION. MINIMUM OF 10-FT WIDE TRAVEL LANE TO BE PROVIDED DURING DURATION OF CONSTRUCTION.
2. TRAFFIC CONTROL PLANS TO BE SUBMITTED TO CALAVERAS COUNTY PUBLIC WORKS FOR APPROVAL ALONG WITH ENCROACHMENT PERMIT APPLICATION.
3. CONTRACTOR TO MAINTAIN ACCESS TO DRIVEWAYS FOR RESIDENCE ON FLUME COURT, TYPE 3 TRAFFIC BARRICADES TO BE PLACED AROUND TEMPORARY TANKS.
4. EXACT LOCATION OF THE EXISTING PIPING AND EXISTING UTILITIES ARE UNKNOWN, CONTRACTOR WILL NEED TO POTHOLE EXISTING FACILITIES PRIOR TO BEGINNING WORK. CONTRACTOR TO COORDINATE WITH U.S.A. AND UTILITIES TO DETERMINE THE LOCATION OF EXISTING FACILITIES.
5. SAWCUT EXISTING PAVEMENT AT EDGE OF TRENCHES, TRENCHES TO BE RESTORED TO CALAVERAS COUNTY PUBLIC WORKS PAVEMENT RESTORATION REQUIREMENTS.
6. REMOVE ALL ORGANIC DEBRIS FROM SITE.
7. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
8. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
9. TEMPORARY TANKS ARE TO BE INSTALLED AND OPERATIONAL PRIOR TO ANY OTHER WORK BEING PERFORMED. TANKS SHALL BE DISINFECTED BY THE CONTRACTOR AND TESTED BY THE DISTRICT PRIOR TO OPERATIONS.
10. TEMPORARY TANKS WILL BE FURNISHED BY THE DISTRICT, CONTRACTOR RESPONSIBLE FOR ALL PIPING, INSTALLATION AND RELOCATION OF THE TEMPORARY TANKS FROM SITE TO SITE.



DESIGNED BY:	REVISION:	DESCRIPTION:	DATE:	BY:
K. WILLIAMS				
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**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
POST OFFICE BOX 846  
SAN ANDREAS, CALIFORNIA 95249  
PHONE: (209) 754-3543

ARNOLD 13 TANK DEMOLITION AND INTERIM SERVICE PLAN  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
C3
DRAWING NUMBER
6 OF 34
SHEET NUMBER

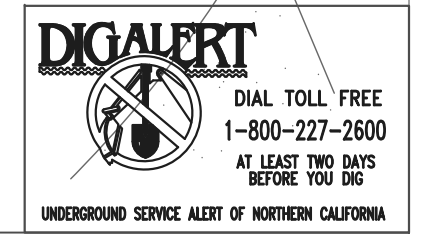
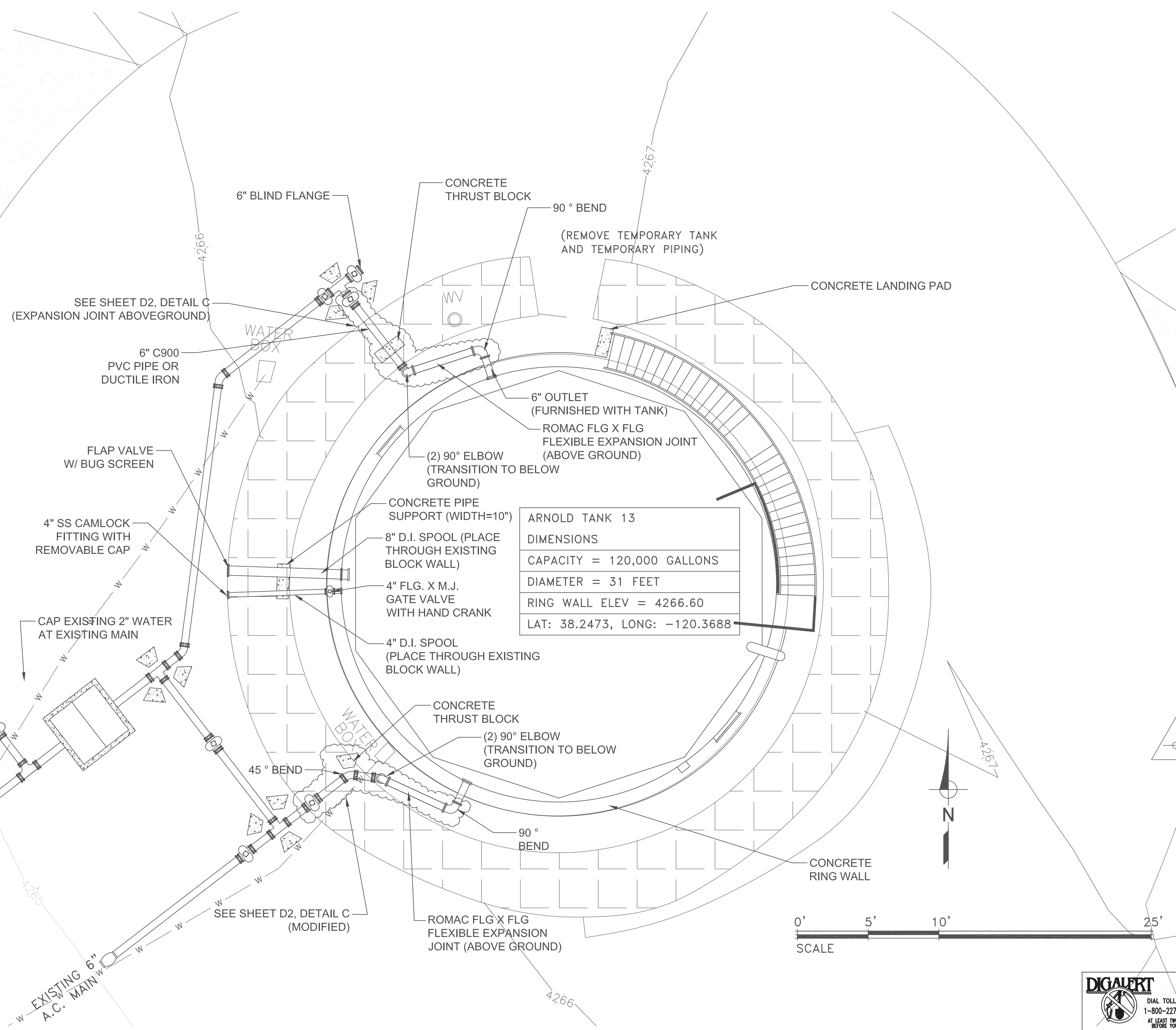


**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

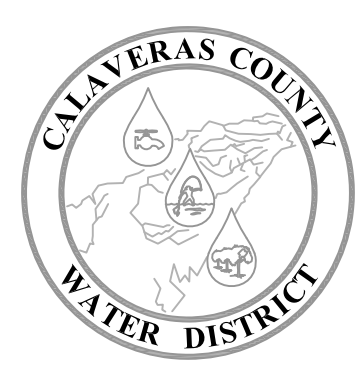
1. INSTALL 8" OVERFLOW PIPING AND 4" DRAIN PIPING THROUGH EXISTING CONCRETE BLOCK WALL.
2. INSTALL TEMPORARY 2" BACKFLOW FOR CONSTRUCTION WATER.
3. INSTALL NEW INLET AND OUTLET PIPING TO TANK. FLUSH TEST AND DISINFECT NEW WATER LINES AND TANK. DISINFECTION OF NEW TANK TO BE DONE CONCURRENTLY WITH WATERLINE DISINFECTION. CONTRACTOR WILL NEED TO COORDINATE WORK WITH TANK SUPPLIER (CALIFORNIA AQUASTORE).
4. PLACE NEW TANK INTO SERVICE.
5. ABANDON EXISTING FACILITIES IN PLACE. PLACE CONCRETE PLUG IN THE END OF EXISTING LINES NO LONGER IN SERVICE.
6. REMOVE EXISTING TEMPORARY PIPING AND TEMPORARY TANKS.
7. COMPLETE ASPHALT PAVEMENT AND SITE RESTORATION.

**NOTES:**

1. ALL TRENCHES IN PAVED ROADWAY TO BE SAWCUT AT EDGE OF EXCAVATION. MINIMUM OF 10-FT WIDE TRAVEL LANE TO BE PROVIDED DURING DURATION OF CONSTRUCTION.
2. TRAFFIC CONTROL PLANS TO BE SUBMITTED TO CALAVERAS COUNTY PUBLIC WORKS FOR APPROVAL ALONG WITH ENCROACHMENT PERMIT APPLICATION.
3. CONTRACTOR TO MAINTAIN ACCESS TO DRIVEWAYS FOR RESIDENCE ON FLUME COURT, TYPE 3 TRAFFIC BARRICADES TO BE PLACED AROUND TEMPORARY TANKS.
4. SAWCUT EXISTING PAVEMENT AT EDGE OF TRENCHES, TRENCHES TO BE RESTORED TO CALAVERAS COUNTY PUBLIC WORKS PAVEMENT RESTORATION REQUIREMENTS.
5. REMOVE ALL DEBRIS FROM SITE.
6. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
7. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.



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**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

**ARNOLD 13 TANK RENOVATION PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

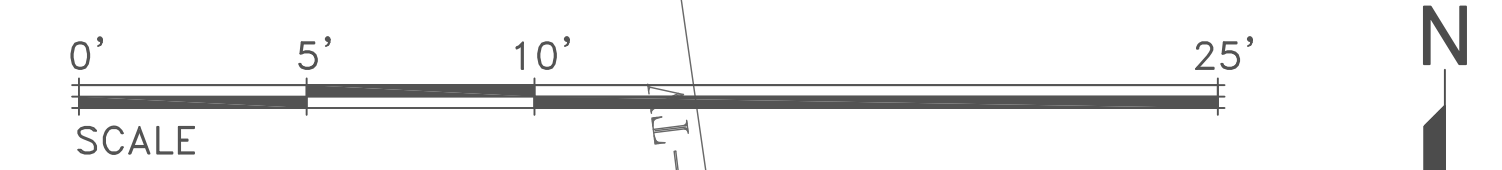
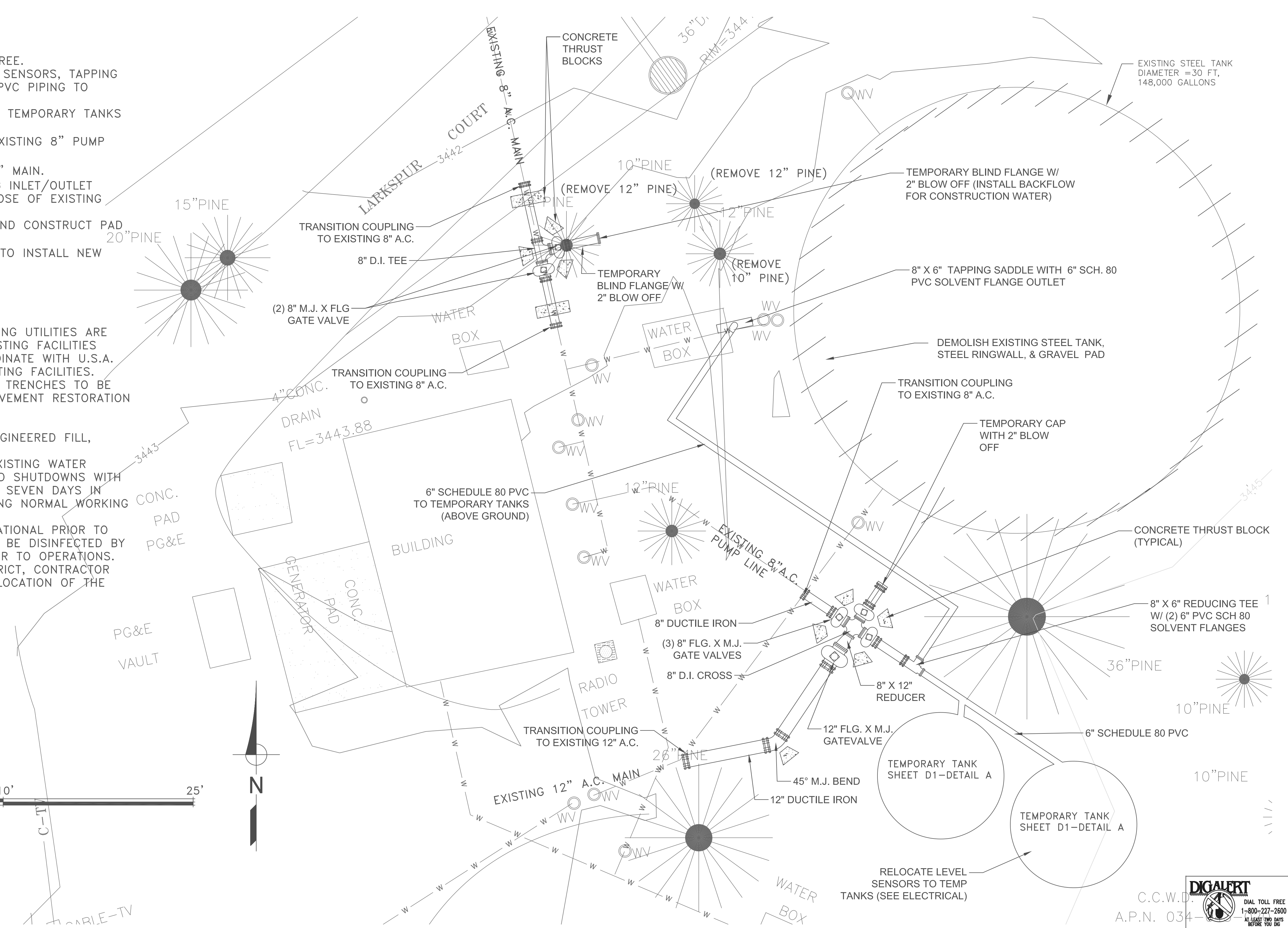
11095
PROJECT NUMBER
C4
DRAWING NUMBER
7 OF 34
SHEET NUMBER

**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. REMOVE TWO-12" PINE TREES AND ONE-10" PINE TREE.
2. INSTALL TEMPORARY TANKS, TEMPORARY TANK LEVEL SENSORS, TAPPING SADDLE ON EXISTING INLET PIPING AND TEMPORARY PVC PIPING TO TEMPORARY TANKS.
3. TEST, DISINFECT, AND PLACE TEMPORARY PIPING AND TEMPORARY TANKS INTO SERVICE.
4. INSTALL NEW 8" CROSS VALVES AND CONNECT TO EXISTING 8" PUMP LINE, 12" MAIN AND TEMPORARY TANKS.
5. INSTALL NEW 8" D.I. TEE AND VALVE TO EXISTING 8" MAIN.
6. REMOVE EXISTING TANK FROM SERVICE, CAP EXISTING INLET/OUTLET PIPING, ABANDON PIPING IN PLACE, DISMANTLE, DISPOSE OF EXISTING STEEL TANK AND STEEL RINGWALL.
7. CONSTRUCT NEW CONCRETE RINGWALL FOUNDATION AND CONSTRUCT PAD FOR TANK.
8. DISTRICT'S TANK SUPPLIER (CALIFORNIA AQUASTORE) TO INSTALL NEW BOLTED STEEL TANK AND STAIRCASE.

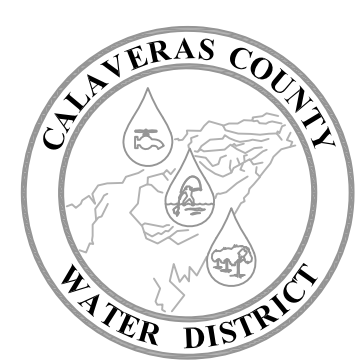
**NOTES:**

1. EXACT LOCATION OF THE EXISTING PIPING AND EXISTING UTILITIES ARE UNKNOWN, CONTRACTOR WILL NEED TO POTHOLE EXISTING FACILITIES PRIOR TO BEGINNING WORK. CONTRACTOR TO COORDINATE WITH U.S.A. AND UTILITIES TO DETERMINE THE LOCATION OF EXISTING FACILITIES.
2. SAWCUT EXISTING PAVEMENT AT EDGE OF TRENCHES, TRENCHES TO BE RESTORED TO CALAVERAS COUNTY PUBLIC WORKS PAVEMENT RESTORATION REQUIREMENTS.
3. REMOVE ALL ORGANIC DEBRIS FROM SITE.
4. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
5. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
6. TEMPORARY TANKS ARE TO BE INSTALLED AND OPERATIONAL PRIOR TO ANY OTHER WORK BEING PERFORMED. TANKS SHALL BE DISINFECTED BY THE CONTRACTOR AND TESTED BY THE DISTRICT PRIOR TO OPERATIONS.
7. TEMPORARY TANKS WILL BE FURNISHED BY THE DISTRICT, CONTRACTOR RESPONSIBLE FOR ALL PIPING, INSTALLATION AND RELOCATION OF THE TEMPORARY TANKS FROM SITE TO SITE.



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 DRAFTED BY: K. WILLIAMS  
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REVISION:	DESCRIPTION:	DATE:	BY:



**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

**LARKSPUR TANK DEMOLITION AND INTERIM SERVICE PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

C.C.W.D. A.P.N. 034-034-000-000  
 DIGAERT  
 DIAL TOLL FREE 1-800-227-2600  
 AT LEAST TWO DAYS BEFORE YOU DIG  
 UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

11095
PROJECT NUMBER
C5
DRAWING NUMBER
8 OF 34
SHEET NUMBER



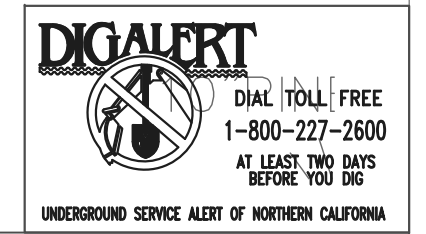
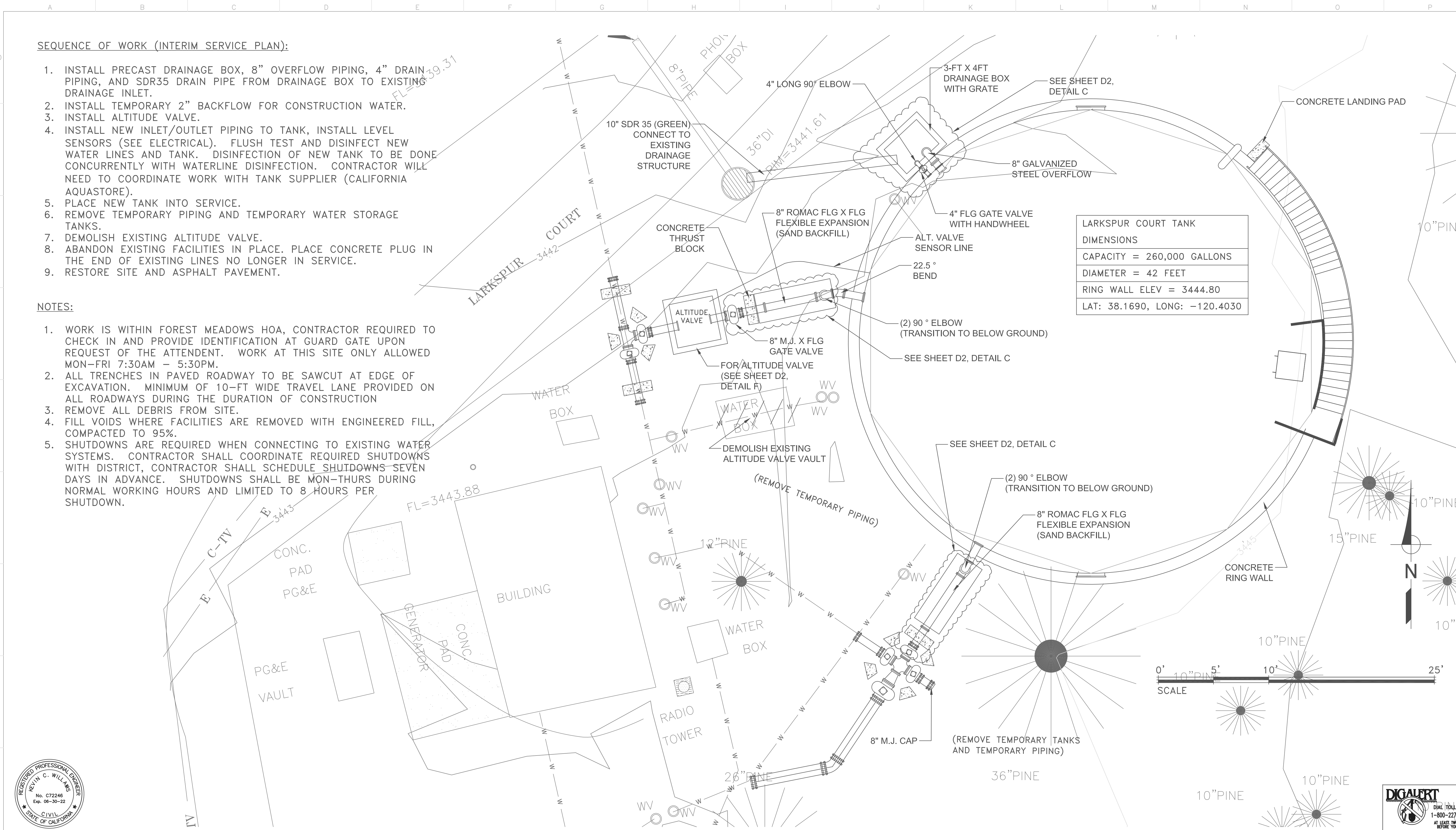
**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. INSTALL PRECAST DRAINAGE BOX, 8" OVERFLOW PIPING, 4" DRAIN PIPING, AND SDR35 DRAIN PIPE FROM DRAINAGE BOX TO EXISTING DRAINAGE INLET.
2. INSTALL TEMPORARY 2" BACKFLOW FOR CONSTRUCTION WATER.
3. INSTALL ALTITUDE VALVE.
4. INSTALL NEW INLET/OUTLET PIPING TO TANK, INSTALL LEVEL SENSORS (SEE ELECTRICAL). FLUSH TEST AND DISINFECT NEW WATER LINES AND TANK. DISINFECTION OF NEW TANK TO BE DONE CONCURRENTLY WITH WATERLINE DISINFECTION. CONTRACTOR WILL NEED TO COORDINATE WORK WITH TANK SUPPLIER (CALIFORNIA AQUASTORE).
5. PLACE NEW TANK INTO SERVICE.
6. REMOVE TEMPORARY PIPING AND TEMPORARY WATER STORAGE TANKS.
7. DEMOLISH EXISTING ALTITUDE VALVE.
8. ABANDON EXISTING FACILITIES IN PLACE. PLACE CONCRETE PLUG IN THE END OF EXISTING LINES NO LONGER IN SERVICE.
9. RESTORE SITE AND ASPHALT PAVEMENT.

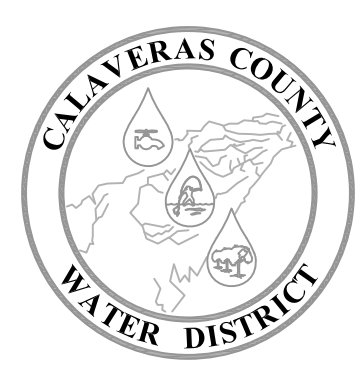
**NOTES:**

1. WORK IS WITHIN FOREST MEADOWS HOA, CONTRACTOR REQUIRED TO CHECK IN AND PROVIDE IDENTIFICATION AT GUARD GATE UPON REQUEST OF THE ATTENDANT. WORK AT THIS SITE ONLY ALLOWED MON-FRI 7:30AM - 5:30PM.
2. ALL TRENCHES IN PAVED ROADWAY TO BE SAWCUT AT EDGE OF EXCAVATION. MINIMUM OF 10-FT WIDE TRAVEL LANE PROVIDED ON ALL ROADWAYS DURING THE DURATION OF CONSTRUCTION
3. REMOVE ALL DEBRIS FROM SITE.
4. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
5. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.

LARKSPUR COURT TANK	
DIMENSIONS	
CAPACITY =	260,000 GALLONS
DIAMETER =	42 FEET
RING WALL ELEV =	3444.80
LAT: 38.1690, LONG: -120.4030	



DESIGNED BY: K. WILLIAMS	REVISION:	DESCRIPTION:	DATE:	BY:
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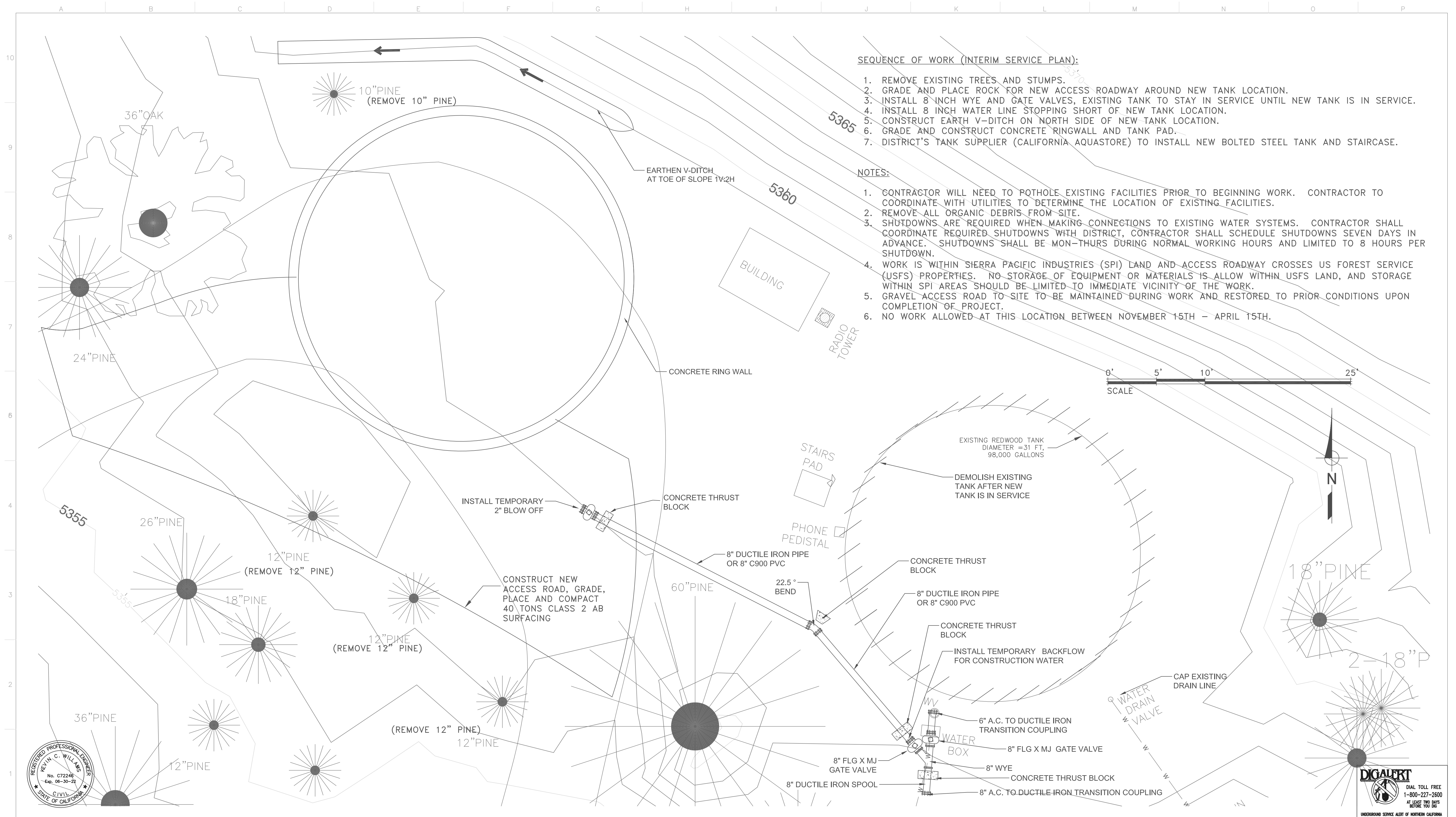


**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
POST OFFICE BOX 846  
SAN ANDREAS, CALIFORNIA 95249  
PHONE: (209) 754-3543

**LARKSPUR LANE TANK RENOVATION PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

11095
PROJECT NUMBER
C6
DRAWING NUMBER
9 OF 34
SHEET NUMBER

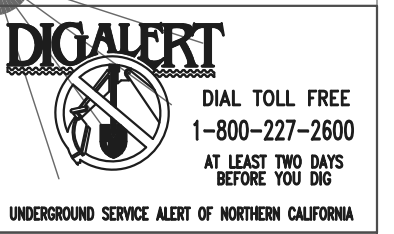


**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

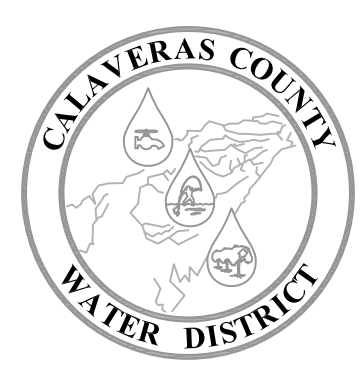
1. REMOVE EXISTING TREES AND STUMPS.
2. GRADE AND PLACE ROCK FOR NEW ACCESS ROADWAY AROUND NEW TANK LOCATION.
3. INSTALL 8 INCH WYE AND GATE VALVES, EXISTING TANK TO STAY IN SERVICE UNTIL NEW TANK IS IN SERVICE.
4. INSTALL 8 INCH WATER LINE STOPPING SHORT OF NEW TANK LOCATION.
5. CONSTRUCT EARTH V-DITCH ON NORTH SIDE OF NEW TANK LOCATION.
6. GRADE AND CONSTRUCT CONCRETE RINGWALL AND TANK PAD.
7. DISTRICT'S TANK SUPPLIER (CALIFORNIA AQUASTORE) TO INSTALL NEW BOLTED STEEL TANK AND STAIRCASE.

**NOTES:**

1. CONTRACTOR WILL NEED TO POTHOLE EXISTING FACILITIES PRIOR TO BEGINNING WORK. CONTRACTOR TO COORDINATE WITH UTILITIES TO DETERMINE THE LOCATION OF EXISTING FACILITIES.
2. REMOVE ALL ORGANIC DEBRIS FROM SITE.
3. SHUTDOWNS ARE REQUIRED WHEN MAKING CONNECTIONS TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
4. WORK IS WITHIN SIERRA PACIFIC INDUSTRIES (SPI) LAND AND ACCESS ROADWAY CROSSES US FOREST SERVICE (USFS) PROPERTIES. NO STORAGE OF EQUIPMENT OR MATERIALS IS ALLOW WITHIN USFS LAND, AND STORAGE WITHIN SPI AREAS SHOULD BE LIMITED TO IMMEDIATE VICINITY OF THE WORK.
5. GRAVEL ACCESS ROAD TO SITE TO BE MAINTAINED DURING WORK AND RESTORED TO PRIOR CONDITIONS UPON COMPLETION OF PROJECT.
6. NO WORK ALLOWED AT THIS LOCATION BETWEEN NOVEMBER 15TH - APRIL 15TH.



DESIGNED BY: K. WILLIAMS	REVISION:	DESCRIPTION:	DATE:	BY:
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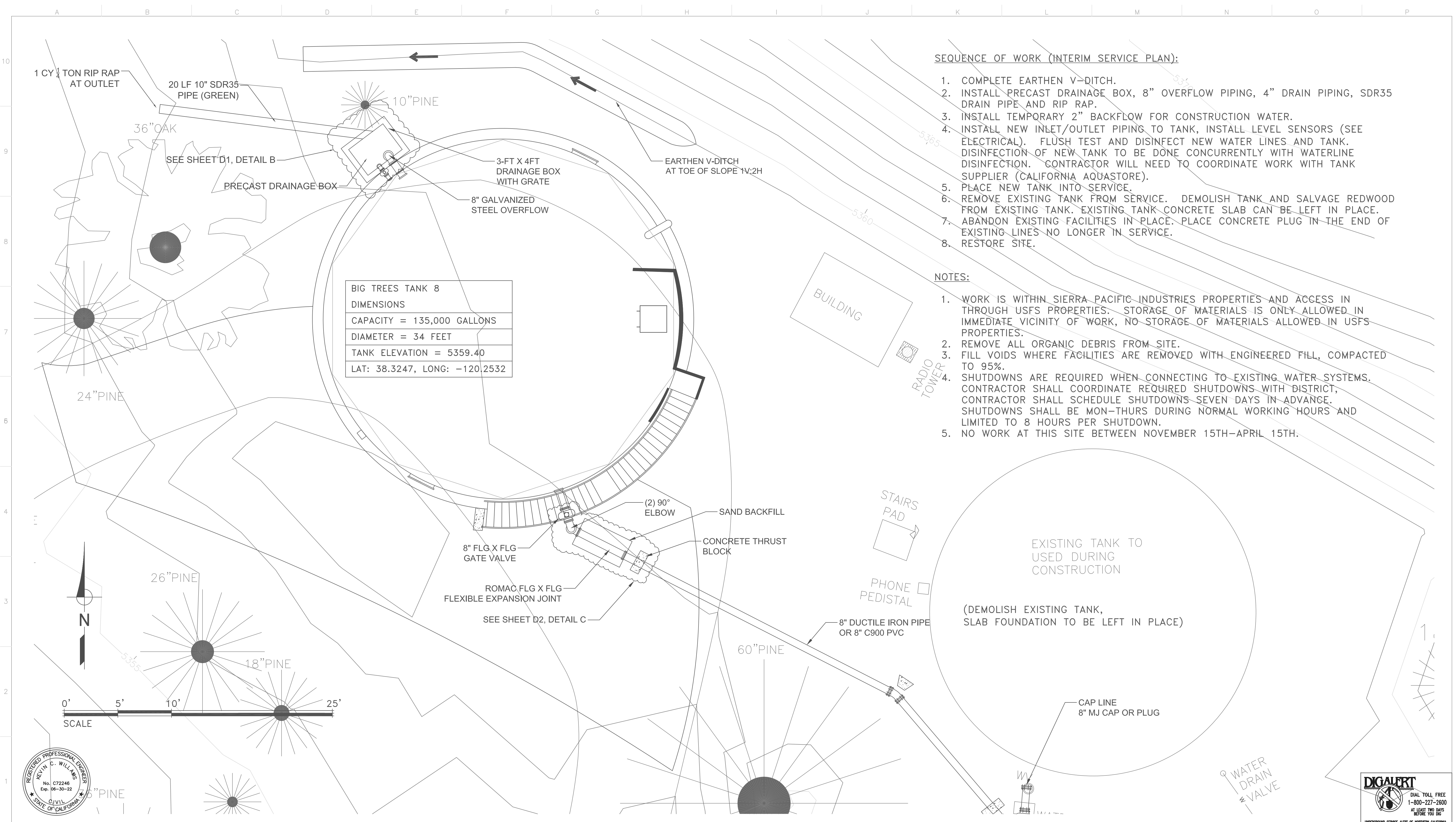
**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

**BIG TREES 8 DEMOLITION AND INTERIM SERVICE PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

11095
PROJECT NUMBER
C7
DRAWING NUMBER
10 OF 34
SHEET NUMBER





**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. COMPLETE EARTHEN V-DITCH.
2. INSTALL PRECAST DRAINAGE BOX, 8" OVERFLOW PIPING, 4" DRAIN PIPING, SDR35 DRAIN PIPE AND RIP RAP.
3. INSTALL TEMPORARY 2" BACKFLOW FOR CONSTRUCTION WATER.
4. INSTALL NEW INLET/OUTLET PIPING TO TANK, INSTALL LEVEL SENSORS (SEE ELECTRICAL). FLUSH TEST AND DISINFECT NEW WATER LINES AND TANK. DISINFECTION OF NEW TANK TO BE DONE CONCURRENTLY WITH WATERLINE DISINFECTION. CONTRACTOR WILL NEED TO COORDINATE WORK WITH TANK SUPPLIER (CALIFORNIA AQUASTORE).
5. PLACE NEW TANK INTO SERVICE.
6. REMOVE EXISTING TANK FROM SERVICE. DEMOLISH TANK AND SALVAGE REDWOOD FROM EXISTING TANK. EXISTING TANK CONCRETE SLAB CAN BE LEFT IN PLACE.
7. ABANDON EXISTING FACILITIES IN PLACE. PLACE CONCRETE PLUG IN THE END OF EXISTING LINES NO LONGER IN SERVICE.
8. RESTORE SITE.

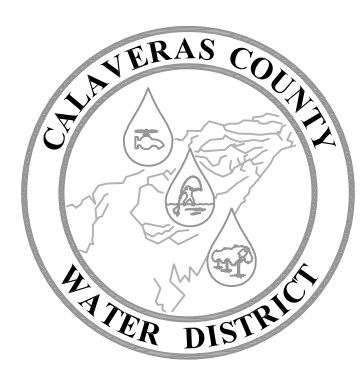
**NOTES:**

1. WORK IS WITHIN SIERRA PACIFIC INDUSTRIES PROPERTIES AND ACCESS IN THROUGH USFS PROPERTIES. STORAGE OF MATERIALS IS ONLY ALLOWED IN IMMEDIATE VICINITY OF WORK, NO STORAGE OF MATERIALS ALLOWED IN USFS PROPERTIES.
2. REMOVE ALL ORGANIC DEBRIS FROM SITE.
3. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
4. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
5. NO WORK AT THIS SITE BETWEEN NOVEMBER 15TH-APRIL 15TH.

<b>BIG TREES TANK 8</b>
DIMENSIONS
CAPACITY = 135,000 GALLONS
DIAMETER = 34 FEET
TANK ELEVATION = 5359.40
LAT: 38.3247, LONG: -120.2532



DESIGNED BY: K. WILLIAMS	REVISION:	DESCRIPTION:	DATE:	BY:
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**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

**BIG TREE TANK 8 RENOVATION PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

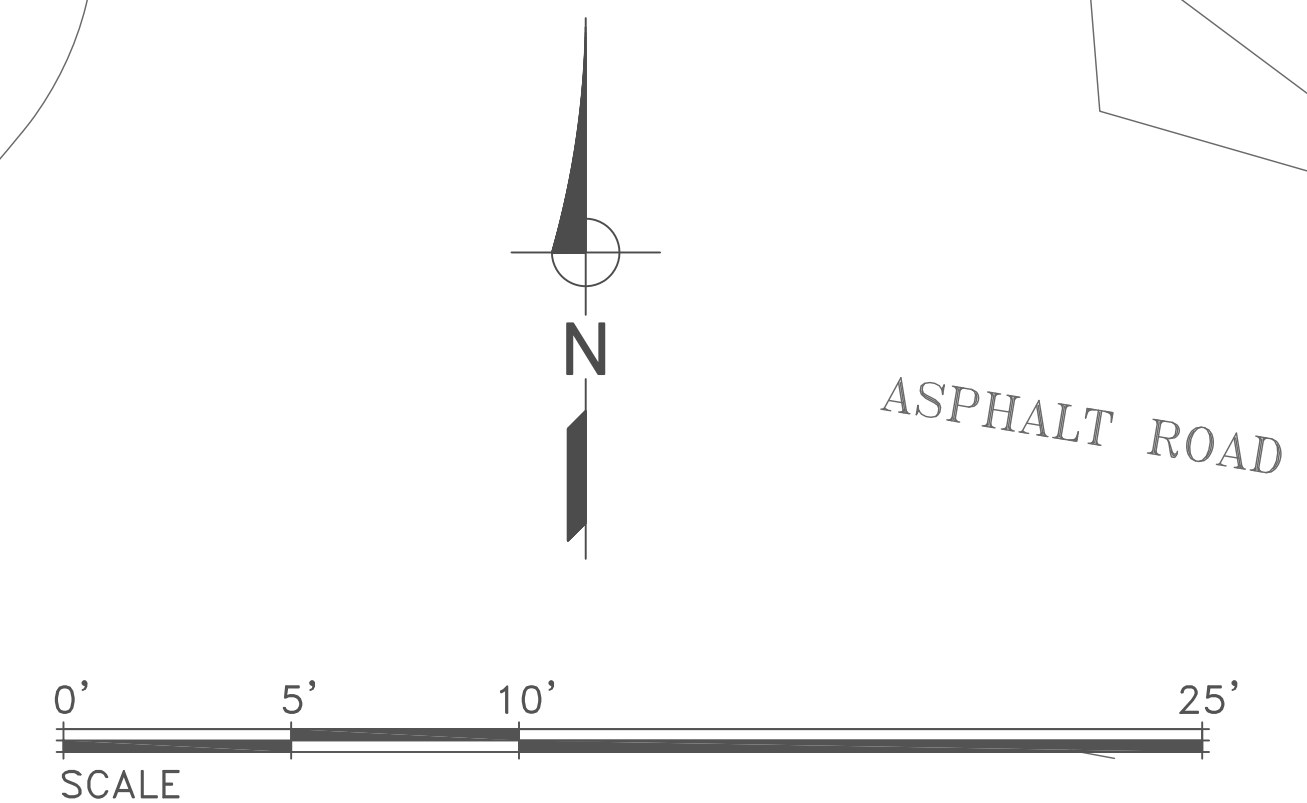
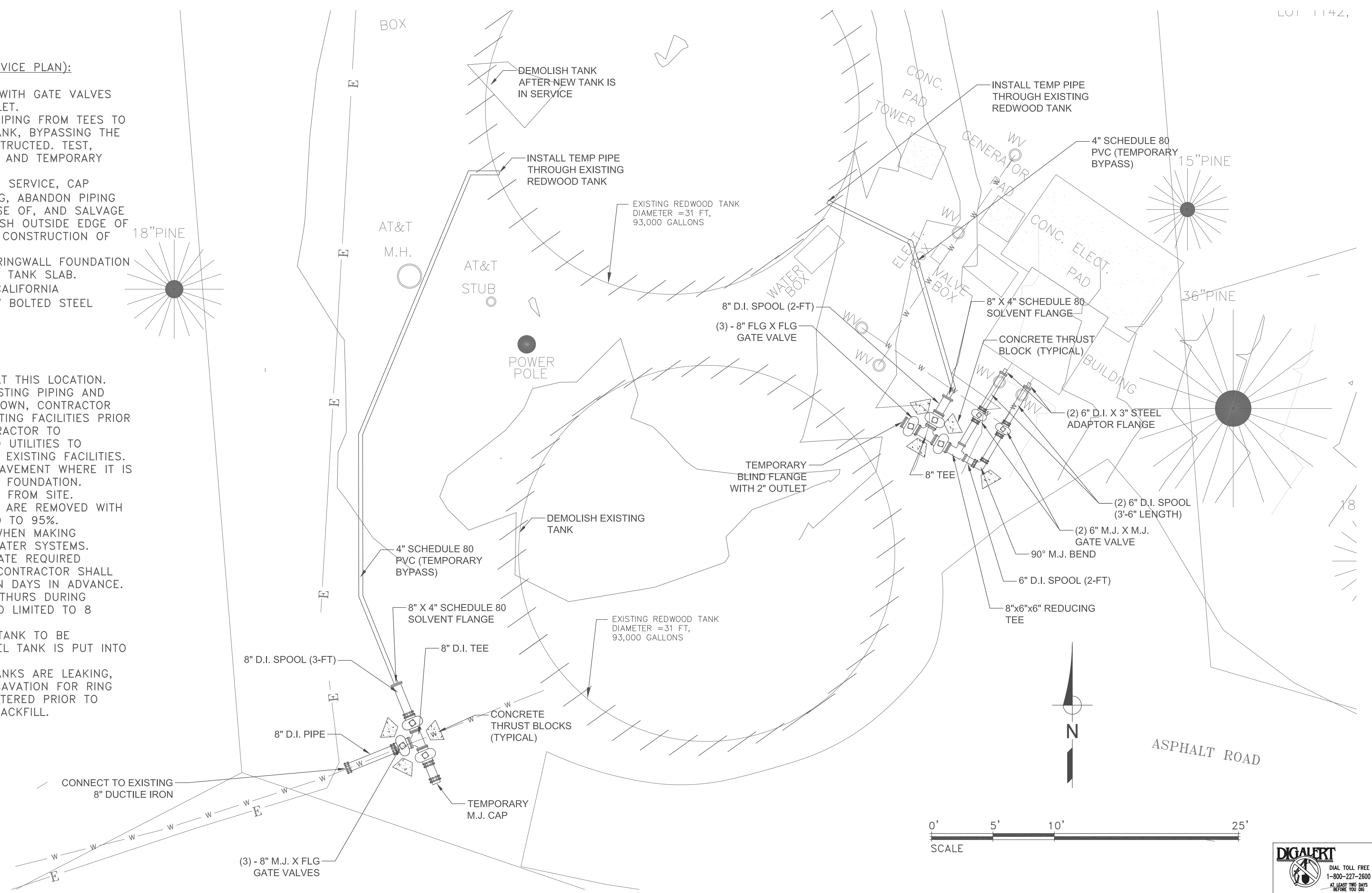
11095
PROJECT NUMBER
C8
DRAWING NUMBER
11 OF 34
SHEET NUMBER

**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. INSTALL NEW 8"X8"X8" TEE WITH GATE VALVES ON EXISTING INLET AND OUTLET.
2. INSTALL TEMPORARY WATER PIPING FROM TEES TO EXISTING REDWOOD WATER TANK, BYPASSING THE TANK THAT IS BEING RECONSTRUCTED. TEST, DISINFECT AND PLACE PIPING AND TEMPORARY PIPING INTO SERVICE.
3. REMOVE EXISTING TANK FROM SERVICE, CAP EXISTING INLET/OUTLET PIPING, ABANDON PIPING IN PLACE, DISMANTLE, DISPOSE OF, AND SALVAGE REDWOOD MEMBERS. DEMOLISH OUTSIDE EDGE OF EXISTING TANK FOOTING FOR CONSTRUCTION OF NEW RING WALL FOUNDATION.
4. CONSTRUCT NEW CONCRETE RINGWALL FOUNDATION AND PAD OVER THE EXISTING TANK SLAB.
5. DISTRICT'S TANK SUPPLIER (CALIFORNIA AQUASTORE) TO INSTALL NEW BOLTED STEEL TANK.

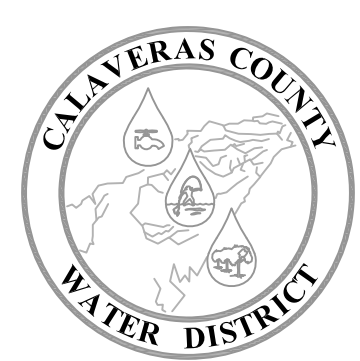
**NOTES:**

1. EXISTING TREES TO REMAIN AT THIS LOCATION.
2. EXACT LOCATION OF THE EXISTING PIPING AND EXISTING UTILITIES ARE UNKNOWN, CONTRACTOR WILL NEED TO POTHOLE EXISTING FACILITIES PRIOR TO BEGINNING WORK. CONTRACTOR TO COORDINATE WITH U.S.A. AND UTILITIES TO DETERMINE THE LOCATION OF EXISTING FACILITIES.
3. SAWCUT EXISTING ASPHALT PAVEMENT WHERE IT IS IN CONFLICT WITH NEW TANK FOUNDATION.
4. REMOVE ALL ORGANIC DEBRIS FROM SITE.
5. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
6. SHUTDOWNS ARE REQUIRED WHEN MAKING CONNECTIONS TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
7. SECOND EXISTING REDWOOD TANK TO BE DEMOLISHED AFTER NEW STEEL TANK IS PUT INTO SERVICE.
8. EXISTING REDWOOD WATER TANKS ARE LEAKING, GROUND IS SATURATED. EXCAVATION FOR RING WALL FOOTING TO BE DE-WATERED PRIOR TO CONCRETE PLACEMENT AND BACKFILL.



DESIGNED BY:	K. WILLIAMS
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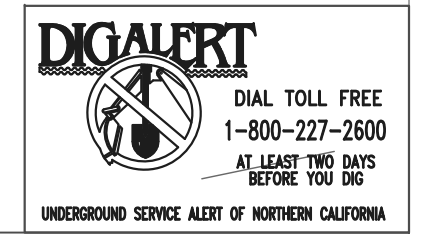
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**CALAVERAS COUNTY WATER DISTRICT**

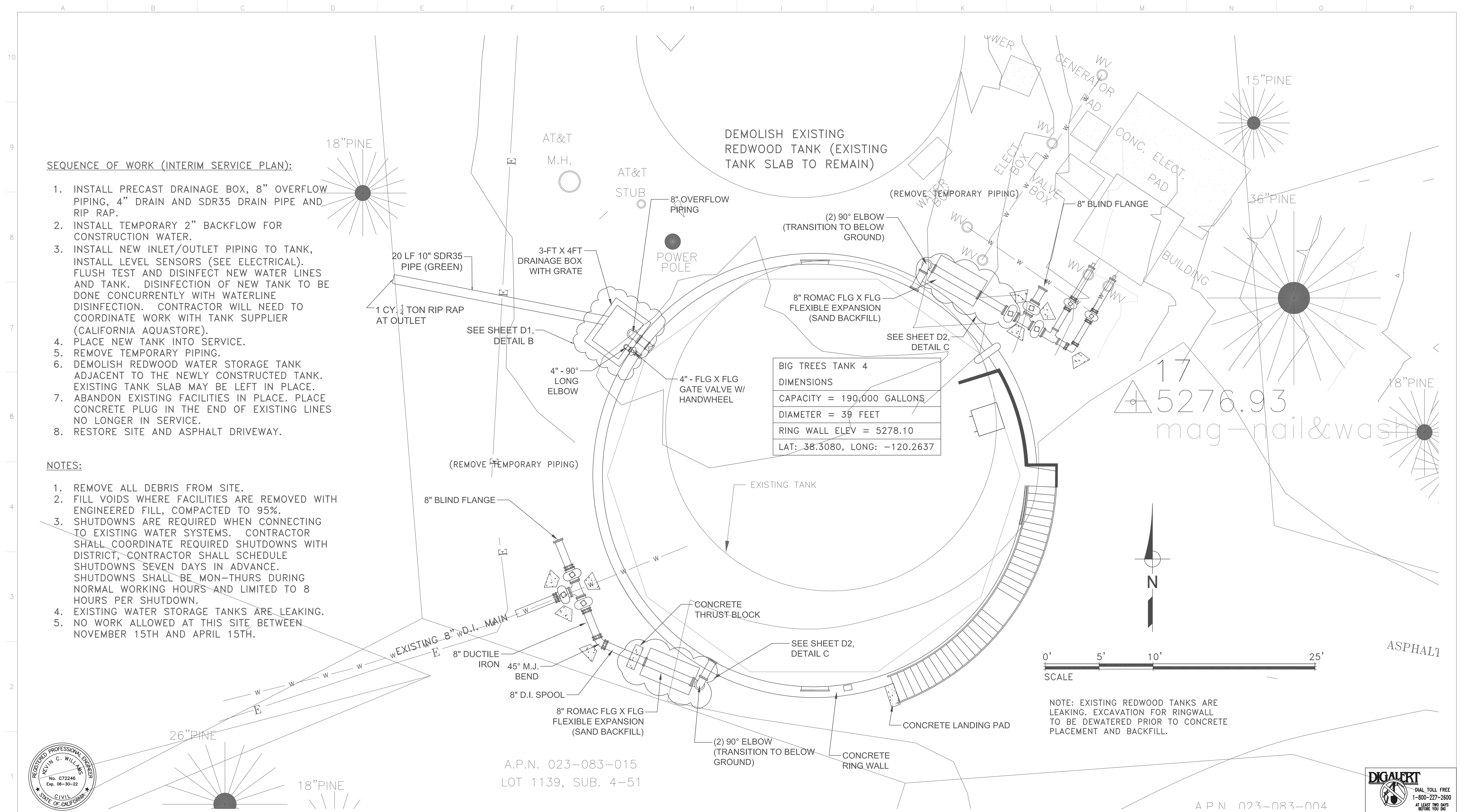
120 TOMA COURT  
 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

BIG TREES 4 TANK DEMOLITION AND INTERIM SERVICE PLAN  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT



11095
PROJECT NUMBER
C9
DRAWING NUMBER
12 OF 34
SHEET NUMBER





**SEQUENCE OF WORK (INTERIM SERVICE PLAN):**

1. INSTALL PRECAST DRAINAGE BOX, 8" OVERFLOW PIPING, 4" DRAIN AND SDR35 DRAIN PIPE AND RIP RAP.
2. INSTALL TEMPORARY 2" BACKFLOW FOR CONSTRUCTION WATER.
3. INSTALL NEW INLET/OUTLET PIPING TO TANK, INSTALL LEVEL SENSORS (SEE ELECTRICAL). FLUSH TEST AND DISINFECT NEW WATER LINES AND TANK. DISINFECTION OF NEW TANK TO BE DONE CONCURRENTLY WITH WATERLINE DISINFECTION. CONTRACTOR WILL NEED TO COORDINATE WORK WITH TANK SUPPLIER (CALIFORNIA AQUASTORE).
4. PLACE NEW TANK INTO SERVICE.
5. REMOVE TEMPORARY PIPING.
6. DEMOLISH REDWOOD WATER STORAGE TANK ADJACENT TO THE NEWLY CONSTRUCTED TANK. EXISTING TANK SLAB MAY BE LEFT IN PLACE.
7. ABANDON EXISTING FACILITIES IN PLACE. PLACE CONCRETE PLUG IN THE END OF EXISTING LINES NO LONGER IN SERVICE.
8. RESTORE SITE AND ASPHALT DRIVEWAY.

**NOTES:**

1. REMOVE ALL DEBRIS FROM SITE.
2. FILL VOIDS WHERE FACILITIES ARE REMOVED WITH ENGINEERED FILL, COMPACTED TO 95%.
3. SHUTDOWNS ARE REQUIRED WHEN CONNECTING TO EXISTING WATER SYSTEMS. CONTRACTOR SHALL COORDINATE REQUIRED SHUTDOWNS WITH DISTRICT, CONTRACTOR SHALL SCHEDULE SHUTDOWNS SEVEN DAYS IN ADVANCE. SHUTDOWNS SHALL BE MON-THURS DURING NORMAL WORKING HOURS AND LIMITED TO 8 HOURS PER SHUTDOWN.
4. EXISTING WATER STORAGE TANKS ARE LEAKING.
5. NO WORK ALLOWED AT THIS SITE BETWEEN NOVEMBER 15TH AND APRIL 15TH.

<b>BIG TREES TANK 4</b>
DIMENSIONS
CAPACITY = 190,000 GALLONS
DIAMETER = 39 FEET
RING WALL ELEV = 5278.10
LAT: 38.3080, LONG: -120.2637



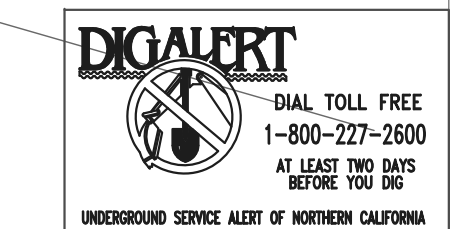
**CALAVERAS COUNTY WATER DISTRICT**

120 TOMA COURT  
 POST OFFICE BOX 846  
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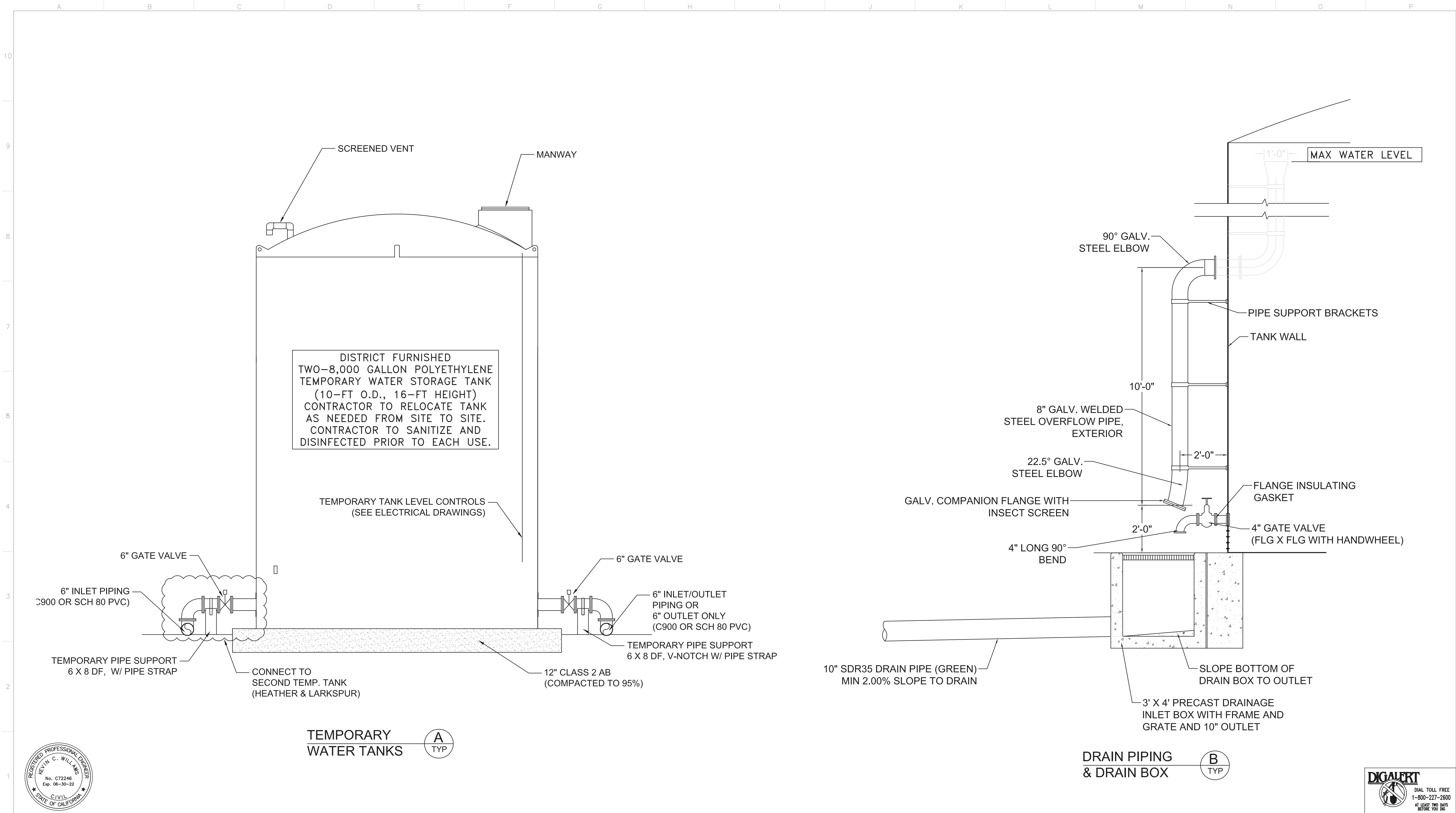
**BIG TREE TANK 4 RENOVATION PLAN**  
**EBBETTS PASS REDWOOD WATER STORAGE TANKS**  
**WILDFIRE HAZARD MITIGATION PROJECT**

DESIGNED BY:	K. WILLIAMS
DRAFTED BY:	K. WILLIAMS
CHECKED BY:	
DATE:	2/22/2021
SCALE:	NO SCALE
BAR LENGTH ONE INCH ON SCALED DRAWING	

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11095
PROJECT NUMBER
C10
DRAWING NUMBER
13 OF 34
SHEET NUMBER



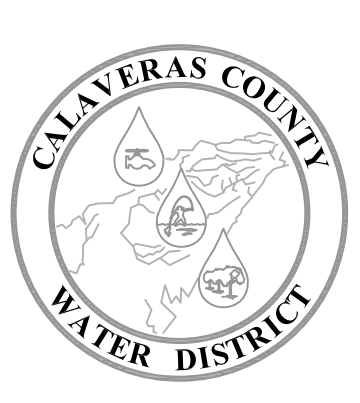
DISTRICT FURNISHED  
TWO-8,000 GALLON POLYETHYLENE  
TEMPORARY WATER STORAGE TANK  
(10-FT O.D., 16-FT HEIGHT)  
CONTRACTOR TO RELOCATE TANK  
AS NEEDED FROM SITE TO SITE.  
CONTRACTOR TO SANITIZE AND  
DISINFECTED PRIOR TO EACH USE.

TEMPORARY WATER TANKS (A) TYP

DRAIN PIPING & DRAIN BOX (B) TYP



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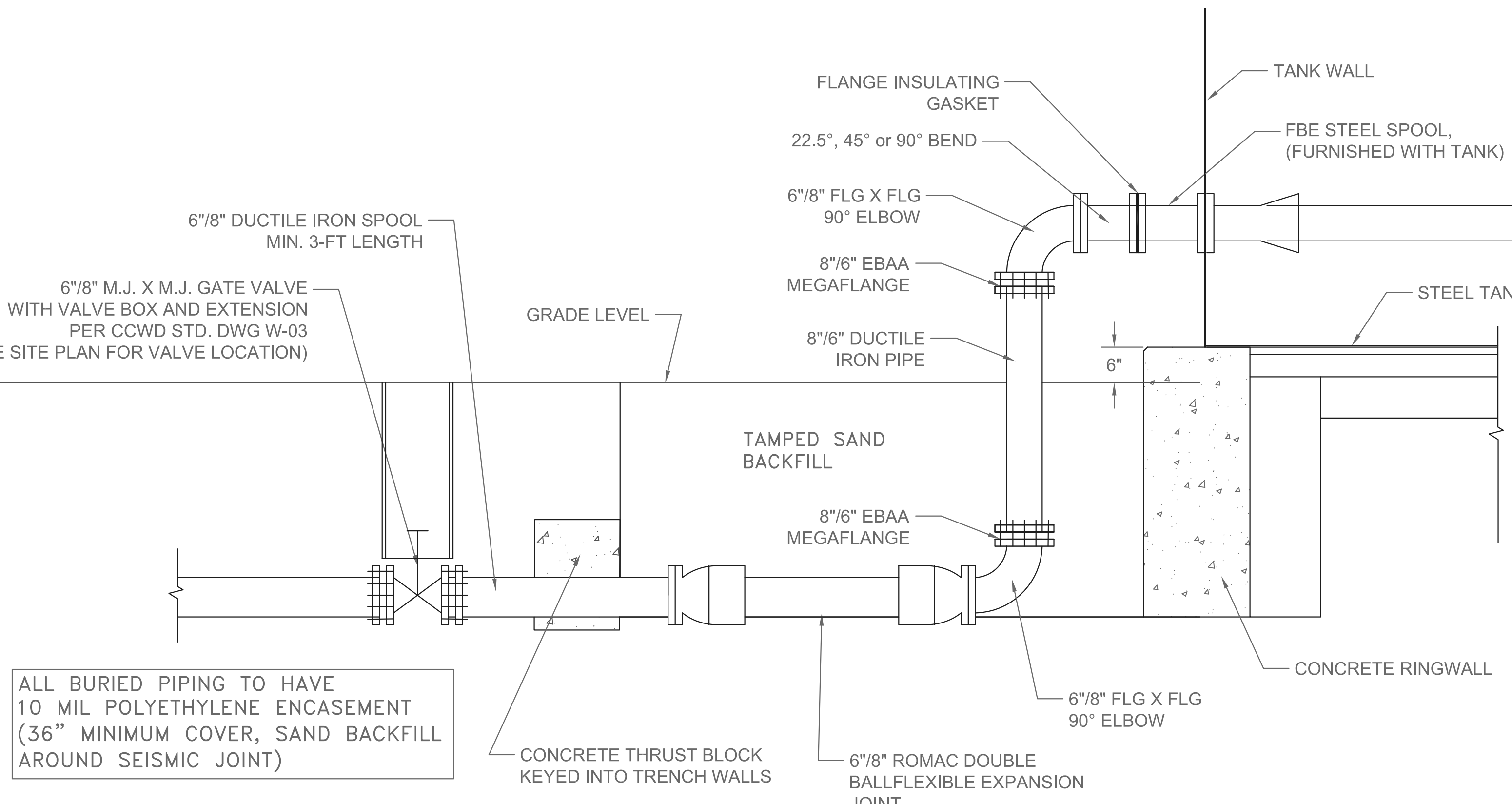


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TYPICAL DETAILS 1  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
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14 OF 34
SHEET NUMBER

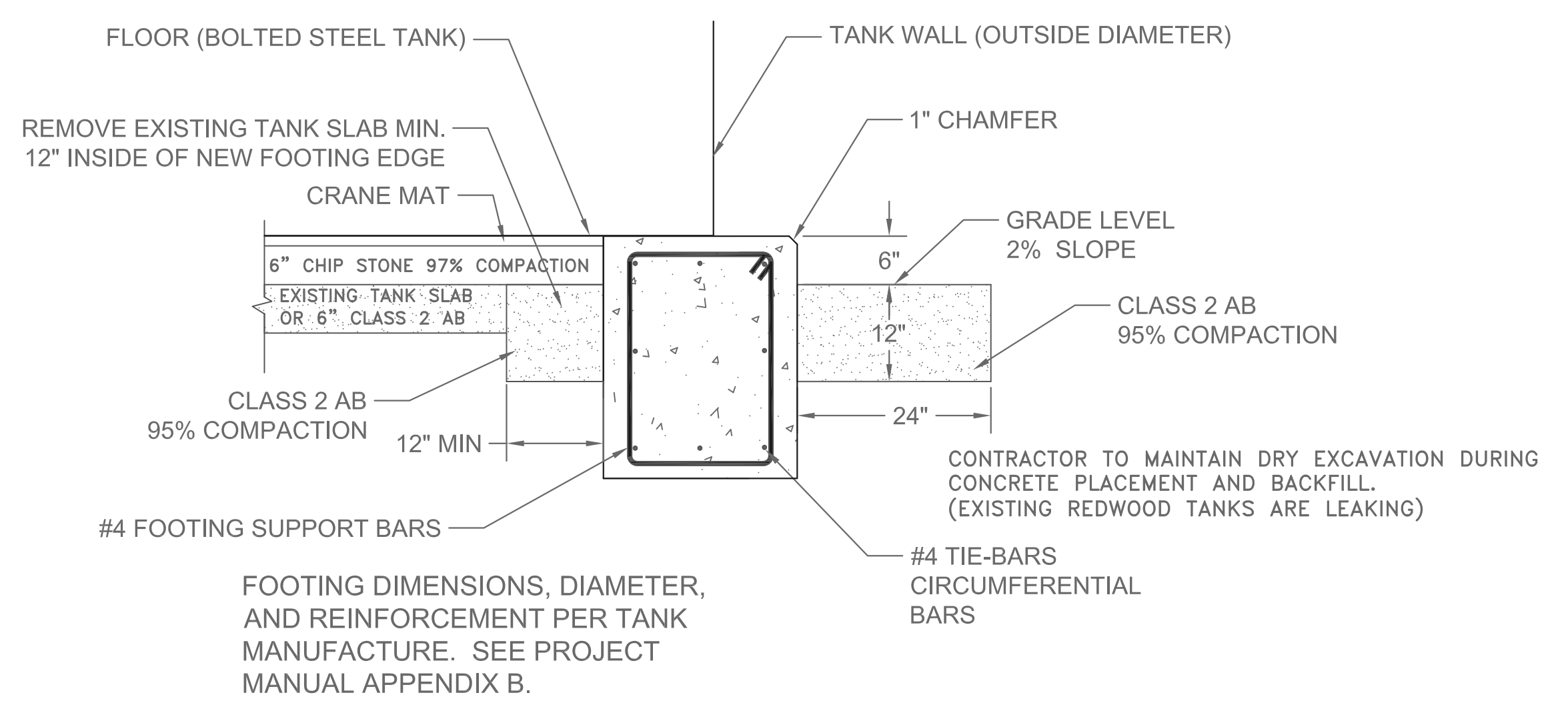




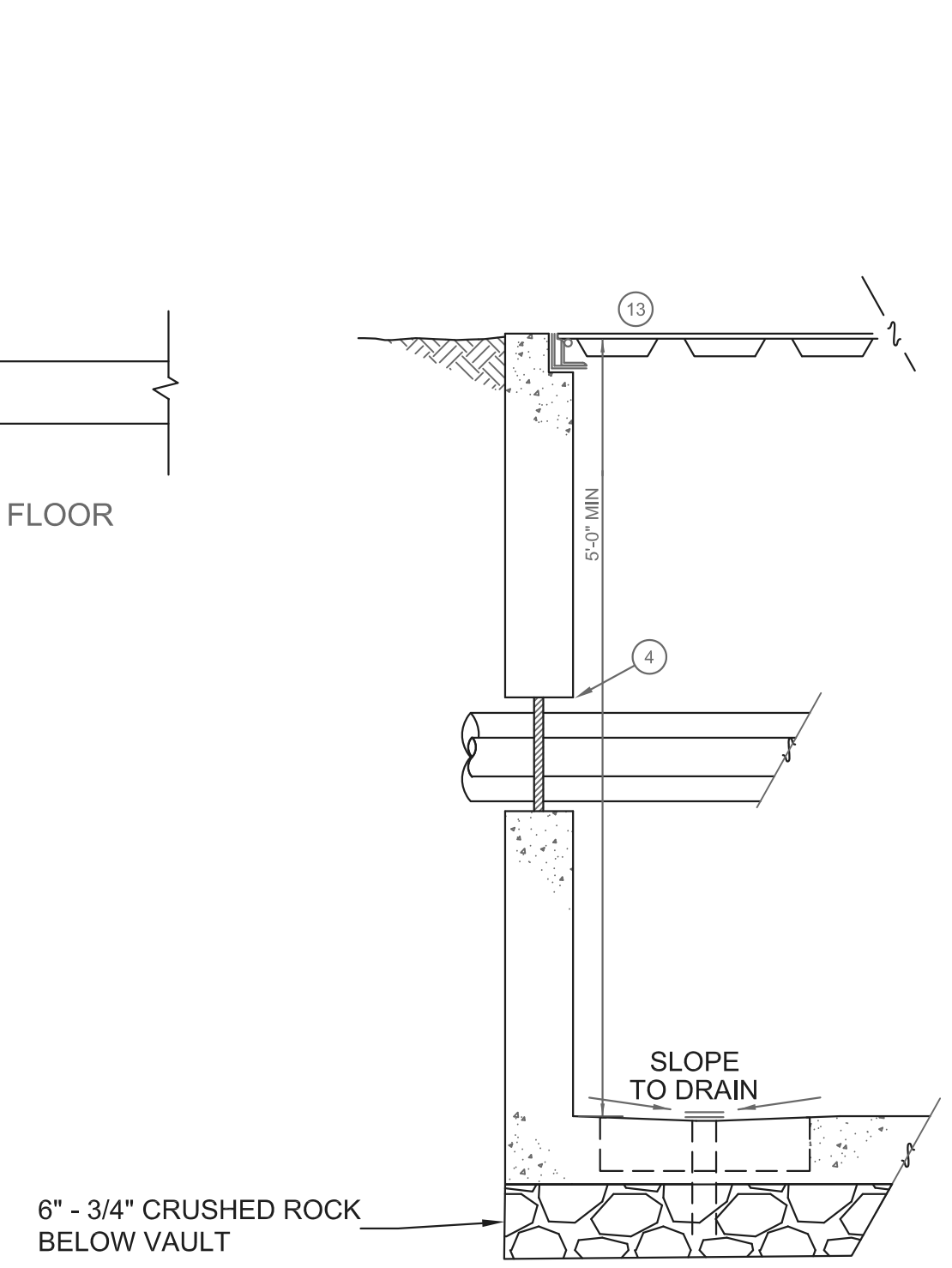
ALL BURIED PIPING TO HAVE 10 MIL POLYETHYLENE ENCASEMENT (36" MINIMUM COVER, SAND BACKFILL AROUND SEISMIC JOINT)

**INLET & OUTLET SECTION** C TYP

NOTE: AT ARNOLD TANK 13 FLEXIBLE EXPANSION JOINT TO BE PLACED ABOVE GROUND



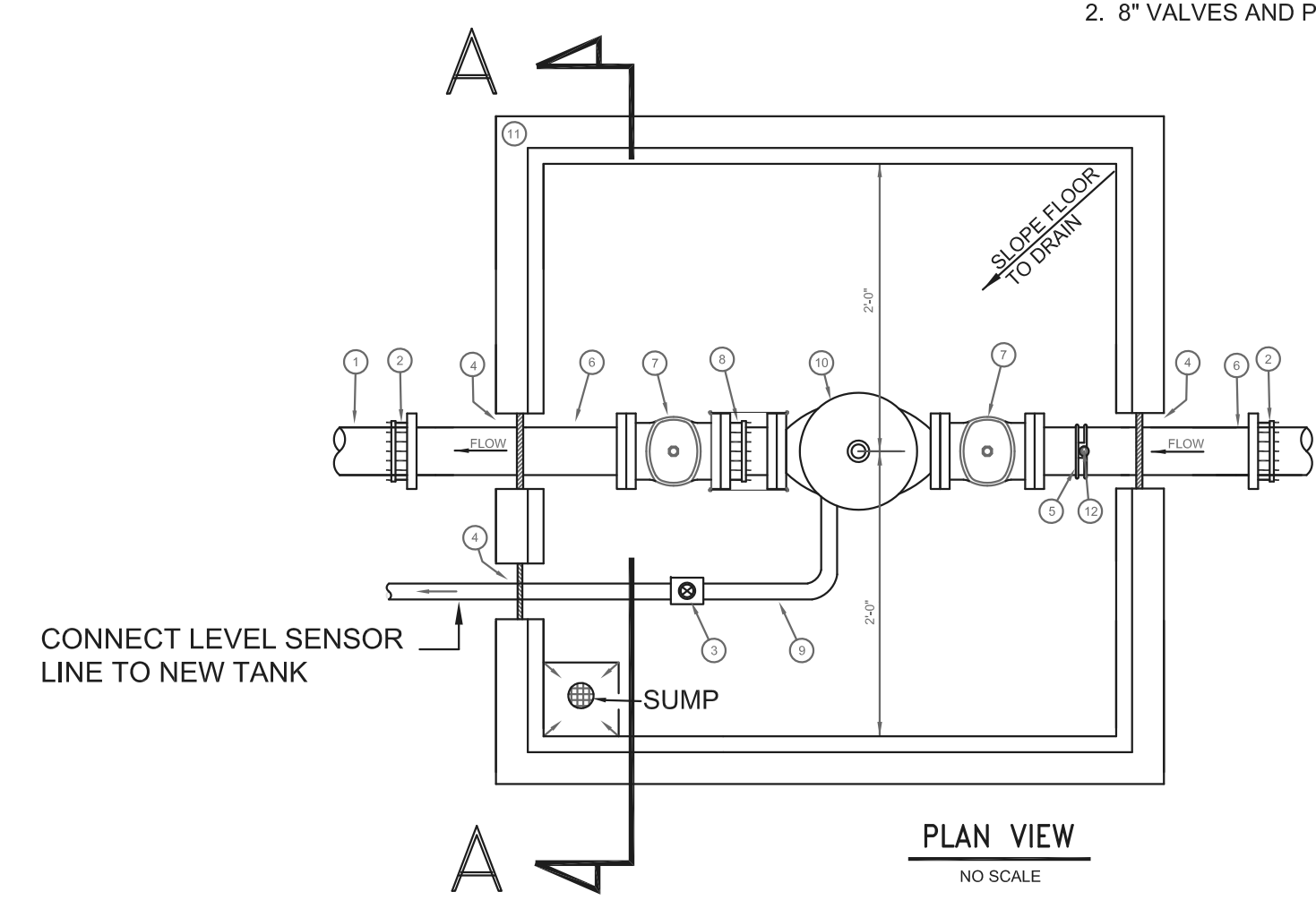
**FOOTING DETAIL** D TYP



**SECTION A-A**

ITEM	DESCRIPTION
1	DIP WATER MAIN
2	MECHANICAL RESTRAINT GLAND
3	1" BALL VALVE (AWWA C800, NSF 61 & 372, 300 PSI)
4	CORE DRILL OR FORMED HOLES; FILL ANNULAR VOID WITH NON-SHRINK CONSTRUCTION GROUT, SAKRETE, SIKAGROUT, FIVE STAR, OR EQUAL
5	SADDLE, CORP STOP, PRESSURE GAGE ASSEMBLY
6	6"/8" D.I.P. SPOOL, FLANGE X PLAIN END
7	6"/8" AWWA C515 GATE VALVE, FL X FL, AWWA NUT OPERATORS
8	6"/8" ROMAC DJ400 DISMANTLING JOINT
9	1" TYPE L COPPER TUBING - ALTITUDE VALVE SENSOR LINE (CONNECT SENSOR LINE TO TANK WITH MINIMUM OF 2% SLOPE)
10	CLA-VAL MODEL 610-09 COMBINATION ALTITUDE AND BACK PRESSURE VALVE
11	PRECAST CONCRETE VAULT, MINIMUM 4'-0" I.D. X 4'-0" I.D., SEE SPECIFICATIONS
12	BOURDON TUBE PRES. GAGES (WIKA TYPE 213.53DW, LIQUID FILLED)
13	MIN 48" X 48" DOUBLE LEAF HATCH, 1/4" STEEL Z-BAR FRAME, 1/4" STEEL DIAMOND PLATE, STAINLESS STEEL HARDWARE AND SAFETY ARMS, TORSION ASSIST, FOUR 1/2" SECURITY BOLTS, H20 TRAFFIC RATED

NOTES:  
1. 6" VALVES AND PIPING TO BE USED AT ARNOLD 13 TANK LOCATION  
2. 8" VALVES AND PIPING TO BE USED AT LARKSPUR TANK LOCATION

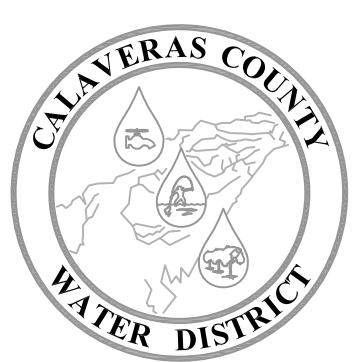


**ALTITUDE VALVE** F TYP



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TYPICAL DETAILS 2  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
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MISCELLANEOUS ELECTRICAL & INSTRUMENTATION ABBREVIATIONS					
&	AND	HTR	HEATER	PRR	POWER RELAY
@	AT	HZ	HERTZ (CYCLES PER SECOND)	PS	PRESSURE SWITCH, POWER SUPPLY
A	AMBER, AMPERES	HZD	HAVARDOUS AREA, EXPLOSION PROOF	PT	POTENTIAL TRANSFORMER
AC	ALTERNATING CURRENT	I	INTERLOCK	PTT	PUSH TO TEST
AFF	ABOVE FINISHED FLOOR	I/O	INPUT/OUTPUT	PV	PROCESS VARIABLE
AI	ANALOG INPUT	ICR	INSTRUMENTATION CONTROL RELAY	PVC	POLY VINYL CHLORIDE
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL	INCAN	INCANDESCENT	PWM	PULSE WIDTH MODULATION
ALT	ALTERNATOR	INST	INSTANTANEOUS	PWR	POWER
AM	AMMETER	ISC	SHORT CKT INTERRUPTING CURRENT (SYMM)	R	RED
ATS	AUTOMATIC TRANSFER SWITCH	ISR	INTRINSICALLY SAFE RELAY	RCT	REPEAT CYCLE TIMER
AO	ANALOG OUTPUT	J	JUNCTION BOX	REF	REFERENCE
AWG	AMERICAN WIRE GUAGE	K	KILO, PREFIX	RIO	REMOTE I/O
B	BLUE	L	LINE	RTD	RESISTANCE TEMPERATURE DETECTOR
BC	BARE COPPER	LA	LIGHTNING ARRESTOR	RTM	RUN TIME METER
BFC	BELOW FINISHED CEILING	LC	LIGHTING CONTACTOR	RTU	REMOTE TELEMETRY UNIT
BOD	BIOCHEMICAL OXYGEN DEMAND	LCD	LIQUID CRYSTAL DISPLAY	RVNR	REDUCED VOLTAGE NON-REVERSING
BLK	BLANK	LED	LIGHT EMITTING DIODE	(R)	REWIRE, RELOCATE, REVISE, REUSE, REPLACE
BKR	BREAKER	LEL	LOWER EXPLOSIVE LIMIT	SC	SHORTING CONTACTOR
C	CONDUIT	LG	LIGHT	SCH	SCHEDULE
CAP	CAPACITOR	LO	LOW	SEC	SECONDARY
CB	CIRCUIT BREAKER	LOR	LOCAL-OFF-REMOTE	SECS	SECONDS
CBL	CABLE	LOS	LOCK-OUT STOP SWITCH	SEL	SELECTOR
CH	CHANNEL	LP	LIGHTING PANELBOARD	SFA	SERVICE FACTOR AMPS
CKT	CIRCUIT	LPU	LINE PROTECTION UNIT	SP	SETPOINT
COAX	COAXIAL CABLE	LR	LATCHING RELAY	SPD	SURGE PROTECTIVE DEVICE
COMM	COMMUNICATION PORT	LS	LEVEL SWITCH	SPEC	SPECIFICATION
CP	CONTROL PANEL	M	MOTOR CONTACTOR	SS	STAINLESS STEEL
CPT	CONTROL POWER TRANSFORMER	MAX	MAXIMUM	SSS	SOLID STATE SOFT STARTER
CR	CONTROL RELAY	MCC	MOTOR CONTROL CENTER	STT	START
CT	CURRENT TRANSFORMER	MCM	THOUSAND CIRCULAR MILS	STP	STOP
CTQ	CONSTANT TORQUE	MCP	MOTOR CIRCUIT PROTECTOR	SV	SOLENOID VALVE
CU	COPPER	MH	MANHOLE	SW	SWITCH
DC	DIRECT CURRENT	MHD	METAL HALIDE	SWBD	SWITCHBOARD
DET	DETAIL	MIN	MINIMUM	SWGR	SWITCHGEAR
DI	DIGITAL INPUT	MINS	MINUTES	SYMM	SYMMETRICAL
DIA	DIAGRAM	MISC	MISCELLANEOUS	T	TRIP
DISC	DISCONNECT	MNFR	MANUFACTURER	TB	TERMINAL BLOCK
DIV	DIVISION	MODEM	MODULATOR/DEMOMULATOR	TC	TIME CLOCK
DO	DIGITAL OUTPUT	MOV	MOTOR OPERATED VALVE	TDOD	TIME DELAY ON DE-ENERGIZATION
DPDT	DOUBLE POLE DOUBLE THROW	MPS	MOTOR PROTECTION SYSTEM	TDOE	TIME DELAY ON ENERGIZATION
DWG	DRAWING	MS	MOISTURE SENSOR/SWITCH	TEL	TELEMETRY
ELEV	ELEVATION	MTR	MOTOR	TELECO	TELEPHONE COMPANY
EMT	ELECTRICAL METALLIC TUBING	MTS	MANUAL TRANSFER SWITCH	TEMP	TEMPERATURE
ETM	ELAPSED TIME METER	MUX	MULTIPLEXER	TM	THERMAL MAGNETIC
(E)	EXISTING	MV	MEDIUM VOLTAGE	TOC	TOTAL ORGANIC CARBON
F	FRAME	N	NEUTRAL	TR	TIME DELAY RELAY
FC	FAIL CLOSED	NC	NORMALLY CLOSED	TRIAD	TWISTED & SHIELDED 3 CONDUCTOR
FCS	FIELD CONTROL STATION	NEC	NATIONAL ELECTRICAL CODE	TS	TEMPERATURE SWITCH
FLA	FULL LOAD AMPS	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	TSPR	TWISTED & SHIELDED PAIR
FLP	FAIL LAST POSITION	NIC	NOT IN CONTRACT	TYP	TYPICAL
FO	FAIL OPEN	NO	NORMALLY OPEN	UG	UNDERGROUND
FLEX	FLEXIBLE, METAL LIQUID TIGHT CONDUIT	NP	NAMEPLATE	UL	UNDERWRITERS LABORATORIES
FS	FLOW SWITCH OR FULL SPEED	NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED
FV, FVNR	FULL VOLTAGE NON-REVERSING	(N)	NEW	UPS	UNINTERRUPTIBLE POWER SUPPLIES
FVR	FULL VOLTAGE REVERSING	OC	ON CENTER	V	VOLTAGE
FWD	FORWARD	OI	OPERATOR INTERFACE	VA	VOLT AMPS
(F)	FUTURE	OL	OVERLOAD	VAR	VOLT AMP REACTIVE
G	GREEN	ORP	OXIDATION REDUCTION POTENTIAL	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	P	PHASE, POLE	VLV	VALVE
GEN	GENERATOR	PB	PULL BOX	VM	VOLTMETER
GFI	GROUND FAULT CIRCUIT INTERRUPTER	PC	PERSONAL COMPUTER	VTQ	VARIABLE TORQUE
GND	GROUND	PE	PHOTOCELL	W	WHITE, WATTS
GRS	GALVANIZED RIGID STEEL CONDUIT	PF	POWER FAIL	WHM	WATT-HOUR METER
GRS-PVC	PVC COATED GRS CONDUIT	PFR	POWER (PHASE) FAIL RELAY	WM	WATTMETER
HC	PUSHBUTTON	PH	HYDROGEN ION CONCENTRATION	WPP	WATERPROOF, WEATHER PROOF
HI	HIGH	PLC	PROGRAMMABLE LOGIC CONTROLLER	WS	TORQUE SWITCH
HID	HIGH INTENSITY DISCHARGE	PM	POWER MONITOR	XFMR	TRANSFORMER
HIM	HUMAN INTERFACE MODULE	PMP	PUMP	XS	MISCELLANEOUS SWITCH
HOA	HAND-OFF-AUTO	PNL	PANEL	Y	YELLOW
HOR	HAND-OFF-REMOTE	PR	PAIR, TWISTED & SHIELDED CABLE	Z	IMPEDANCE
HP	HORSEPOWER	PRESS	PRESSURE	ZS	LIMIT SWITCH
HPS	HIGH PRESSURE SODIUM	PRI	PRIMARY		
HS	HAND SWITCH	PROVIDE	FURNISH, INSTALL & CONNECT		

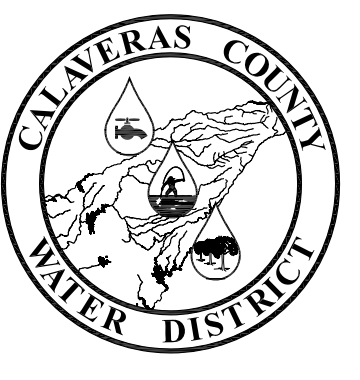
SWITCHES - PROCESS		DEVICES - RELAY		COMPONENTS		WIRING - CONNECTIONS	
	FLOW SWITCH - CLOSSES UPON INCREASING FLOW		CONTROL RELAY CR1 WITH NORMALLY OPEN CONTACT ON LINE 28 & NORMALLY CLOSED CONTACT ON LINE 111		RESISTOR		PANEL OR EQUIPMENT WIRING
	FLOW SWITCH - OPENS UPON INCREASING FLOW		TIME DELAY RELAY TR2 - ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN		CAPACITOR, FIXED		FIELD WIRING
	LEVEL SWITCH - CLOSSES UPON INCREASING LEVEL		TIME DELAY ON ENERGIZATION / TIME DELAY ON DE-ENERGIZATION		CAPACITOR, ADJUSTABLE		CONDUCTORS - NOT CONNECTED
	LEVEL SWITCH - OPENS UPON INCREASING LEVEL		CONTACTOR OR STARTER M1		DIODE		CONDUCTORS - CONNECTED
	PRESSURE SWITCH - CLOSSES UPON INCREASING PRESSURE (INCREASING VACUUM)		SOLENOID		DIODE, ZENER		GROUND
	PRESSURE SWITCH - OPENS UPON INCREASING PRESSURE (INCREASING VACUUM)		NORMALLY OPEN, RELAY CONTACT - ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105		VARIATOR TRANSIENT VOLTAGE SUPPRESSOR		CHASSIS OR FRAME GROUND
	TEMPERATURE SWITCH - CLOSSES UPON INCREASING TEMPERATURE		NORMALLY CLOSED, RELAY CONTACT ACTUATED BY RELAY CR1		VOLTAGE SURGE SUPPRESSOR, AC		INCOMING LINE
	TEMPERATURE SWITCH - OPENS UPON INCREASING TEMPERATURE		LIMIT SWITCH - CLOSSES AT SET LIMIT		RESISTANCE TEMPERATURE DETECTOR (RTD) / THERMOCOUPLE (T/C)		TERMINAL BLOCKS
	LIMIT SWITCH - OPENS AT SET LIMIT		NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT CLOSSES AFTER TR2 IS ENERGIZED		AUDIBLE ALARM		TERMINALS
	LIMIT SWITCH - OPENS AT SET LIMIT		NORMALLY CLOSED, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS ENERGIZED		BATTERY		SHIELDED CABLE
	PROXIMITY SWITCH - CLOSSES UPON DECREASING DISTANCE		NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS DE-ENERGIZED		HEATER	PLAN - SYMBOLS	
	PROXIMITY SWITCH - OPENS UPON DECREASING DISTANCE		NORMALLY CLOSED, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS DE-ENERGIZED		3 PHASE HEATER		
	TORQUE SWITCH - CLOSSES UPON INCREASING TORQUE		SINGLE PHASE MOTOR		GENERATOR		CONDUIT, EXPOSED / CONDUIT, IN SLAB OR BELOW GRADE / CONDUIT STUBBED OUT & CAPPED
	TORQUE SWITCH - OPENS UPON INCREASING TORQUE		TRANSFORMER		LINE REACTOR		CONDUIT BENDS TOWARD OBSERVER / CONDUIT BENDS AWAY FROM OBSERVER / CONDUIT ENDS
SWITCHES - OPERATOR		DEVICES - FRONT PANEL		DEVICES - PROTECTIVE			CONDUIT CHANGE IN ELEVATION
	TOGGLE OR DISCONNECT SWITCH		INDICATING LIGHT, LETTER "X" INDICATES COLOR: R=RED, G=GREEN, A=AMBER, W=WHITE, Y=YELLOW, B=BLUE		DISCONNECT, 3 POLE		PULL BOX
	PUSHBUTTON - NORMALLY OPEN, MOMENTARY ACTION		INDICATING LIGHT, PUSH TO TEST		CIRCUIT BREAKER, 3 POLE THERMAL MAGNETIC (TM) OR MOTOR CIRCUIT PROTECT (MCP)		DISCONNECT SWITCH
	PUSHBUTTON - NORMALLY CLOSED, MOMENTARY ACTION		AMP METER		THERMAL OVERLOAD CONTACT		FIELD CONTROL STATION WITH JUNCTION BOX
	PUSHBUTTON, MECHANICALLY INTERLOCKED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN, MAINTAINED ACTION		VOLT METER		THERMAL OVERLOAD ELEMENT		FIELD CONTROL STATION WITH #AMP DISCONNECT SWITCH
	SELECTOR SWITCH, 3 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION OF H-HAND, O-OFF, OR A-AUTO		ELAPSED TIME METER		FUSE WITH BLOWN FUSE INDICATING LIGHT		SPECIAL RECEPTACLE
	SELECTOR SWITCH, 2 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION AS SHOWN		RUN TIME METER		TOGGLE SWITCH		JUNCTION BOX
			MULTI-POSITION SWITCH WHERE LETTER "X" IS FUNCTION: A=AMP, V=VOLT		FUSE		THERMOSTAT
			MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER		LOW VOLTAGE DRAWOUT CIRCUIT BREAKER		LIGHTING, FANS, HEATERS
							DUPLEX RECEPTACLE
							TOGGLE SWITCH
							CIRCUIT BREAKER NUMBER
							CIRCUIT BREAKER NUMBER
							CIRCUIT BREAKER NUMBER
							CONDUIT #
							EQUIPMENT NUMBER

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6/3/2021

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Z. VOGLER				
X. LI				
6/3/2021				
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**CALAVERAS COUNTY WATER DISTRICT**

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ELECTRICAL SYMBOLS & ABBREVIATIONS

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E1
DRAWING NUMBER
16 OF 34
SHEET NUMBER



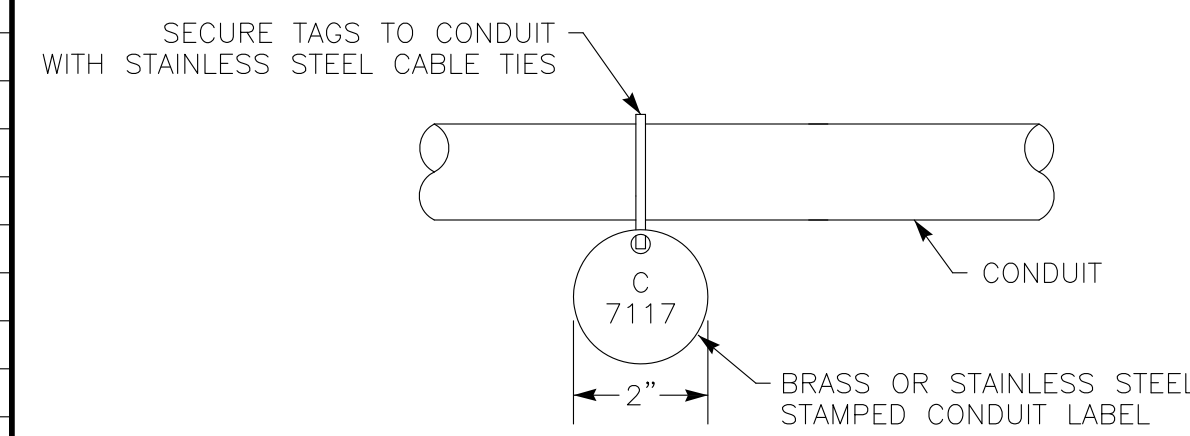
**NOTES:**

- ① CONDUIT SIZE & TYPE; WIRE FILL FOR CONDUITS TO BE DESIGNATED NEXT TO CONDUIT NUMBER ELLIPSE.
- ② THESE ARE THE CONTRACTOR DESIGNATED DRAWING NUMBERS.
- ③ NOT MORE THAN TWO WIRES PER TERMINAL BLOCK.
- ④ ALL TERMINAL BLOCKS TO BE PLACED IN NUMERICAL ORDER.
- ⑤ ALL NEUTRALS SHALL BE WHITE WIRE COLOR.
- ⑥ #12 GND TO DEVICES SHALL BE BONDED TO #12 GND LUG IN FCS JB.

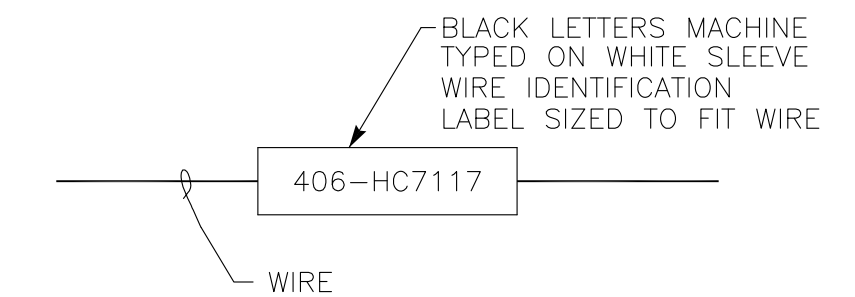
**REFERENCE DOCUMENTS**

DRAWING #	DESCRIPTION	MANUFACTURER
P712	P&ID DIAGRAM	DESIGN
E717	ELECTRICAL SITE PLAN	DESIGN
PAGE 32, 36	CONDUIT AND CABLE SCHEDULE	DESIGN
② 1354-11	LOOP DIAGRAM	CONTRACTOR
② 1354-68	ELEMENTARY DIAGRAM	CONTRACTOR

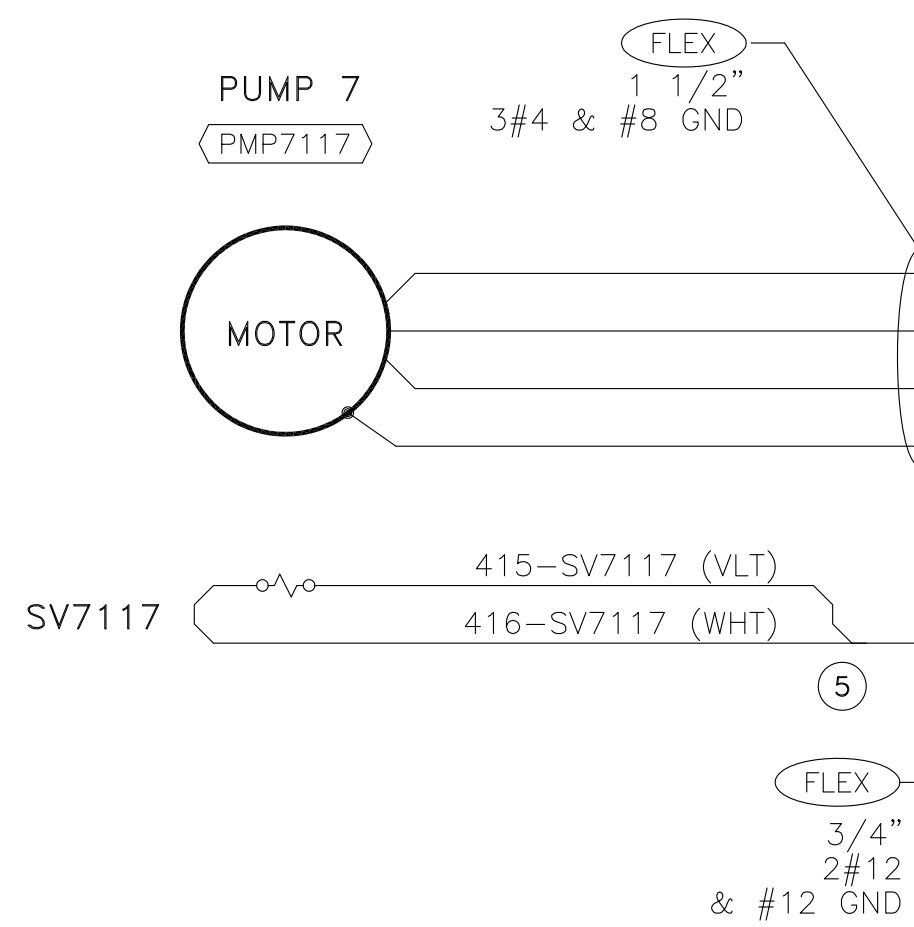
**TYPICAL CONDUIT MARKING SYSTEM**



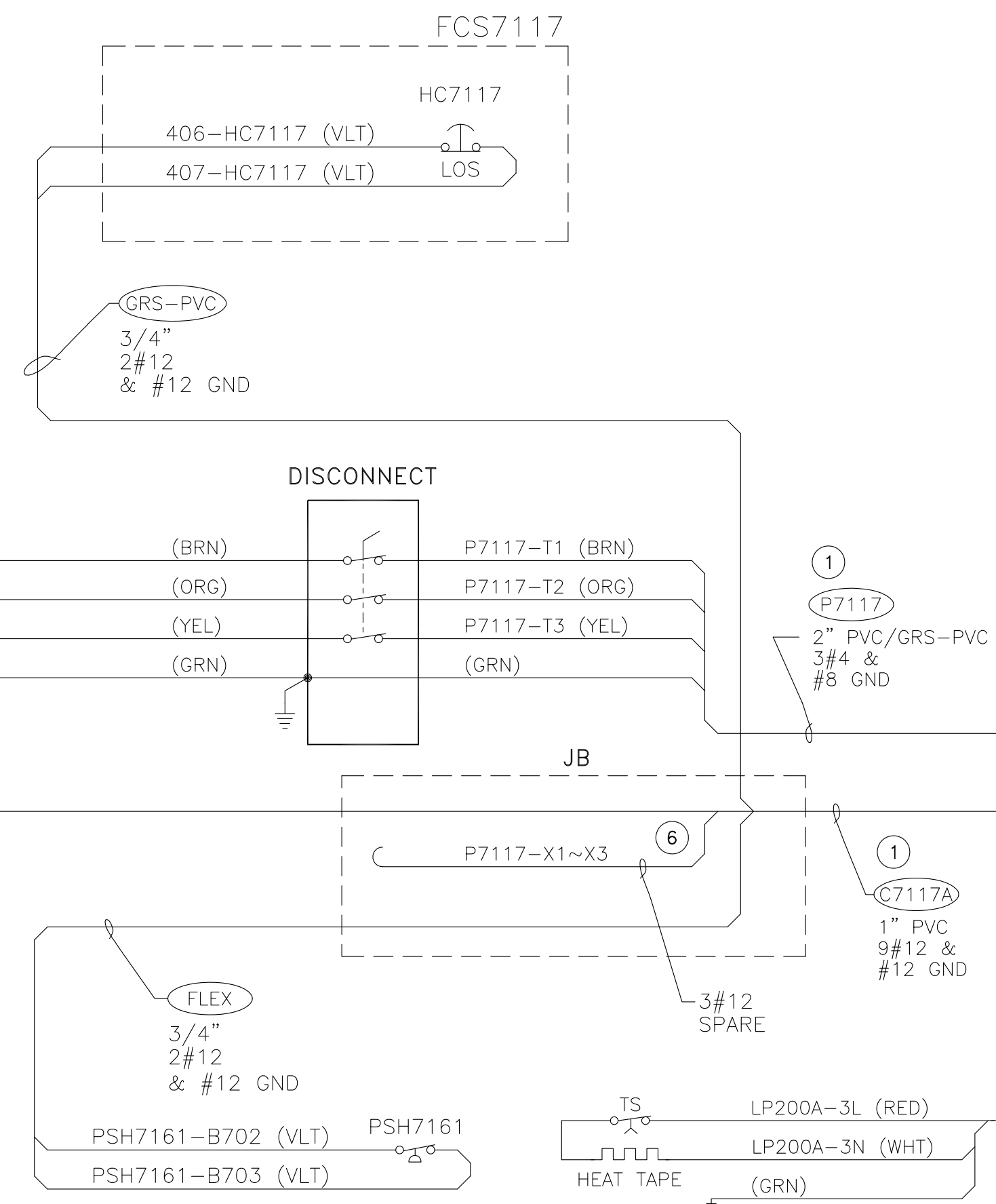
**TYPICAL WIRE LABEL**



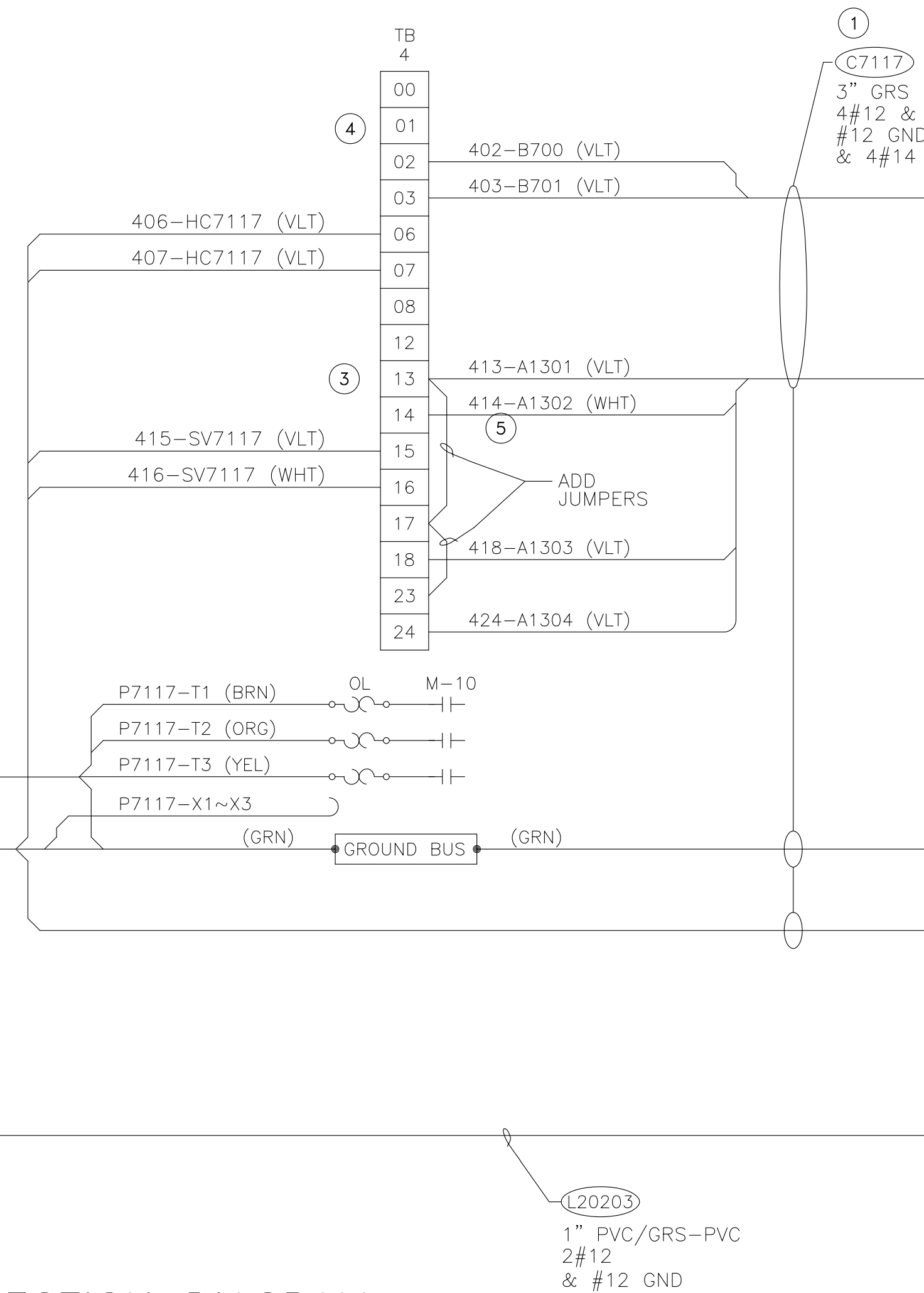
**EQUIPMENT**



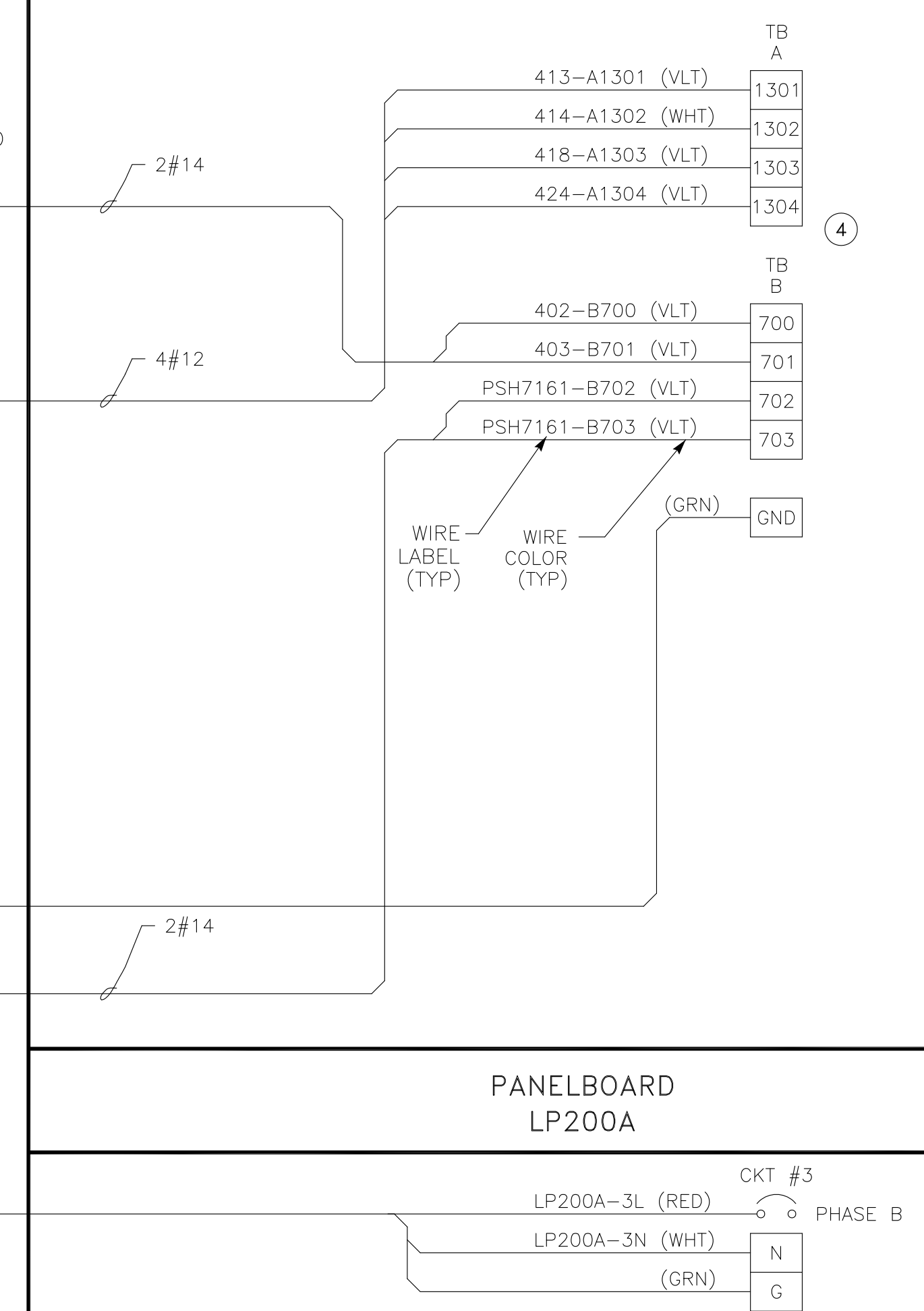
**FIELD**



**MCC-4 SECTION 1 CUBICLE A~E**



**CONTROL PANEL NO.2**

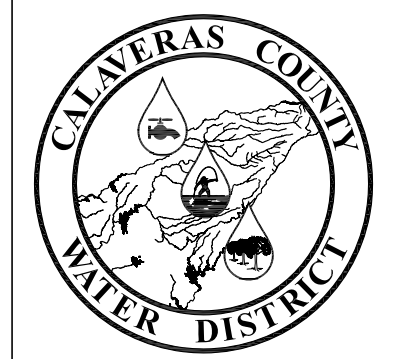


**EXAMPLE INTERCONNECTION DIAGRAM**

(THIS DRAWING ILLUSTRATES THE FORMAT THAT SHALL BE FOLLOWED IN PREPARATION OF ALL INTERCONNECT DWGS)



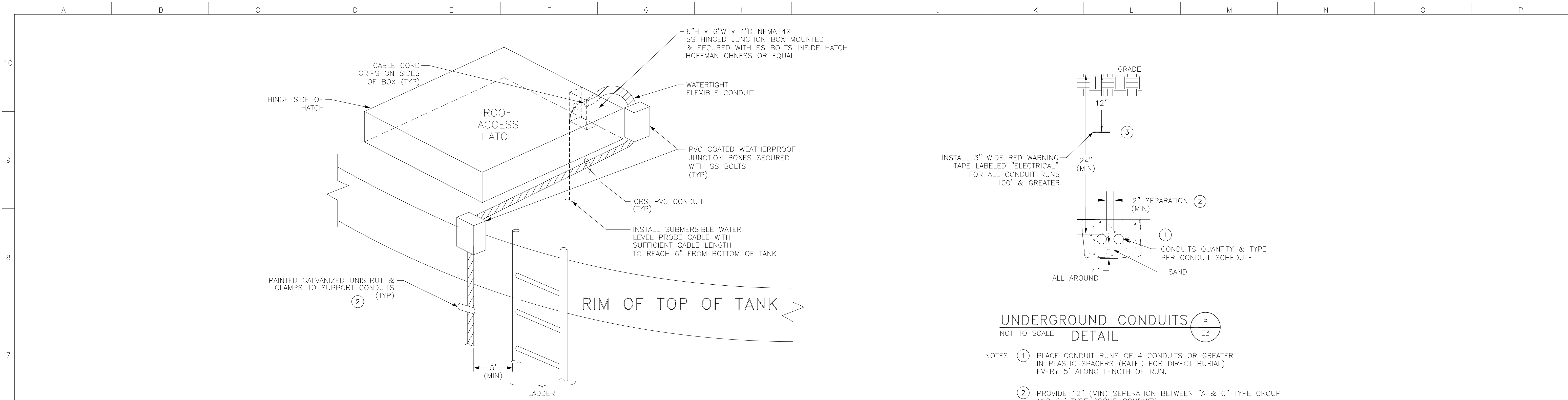
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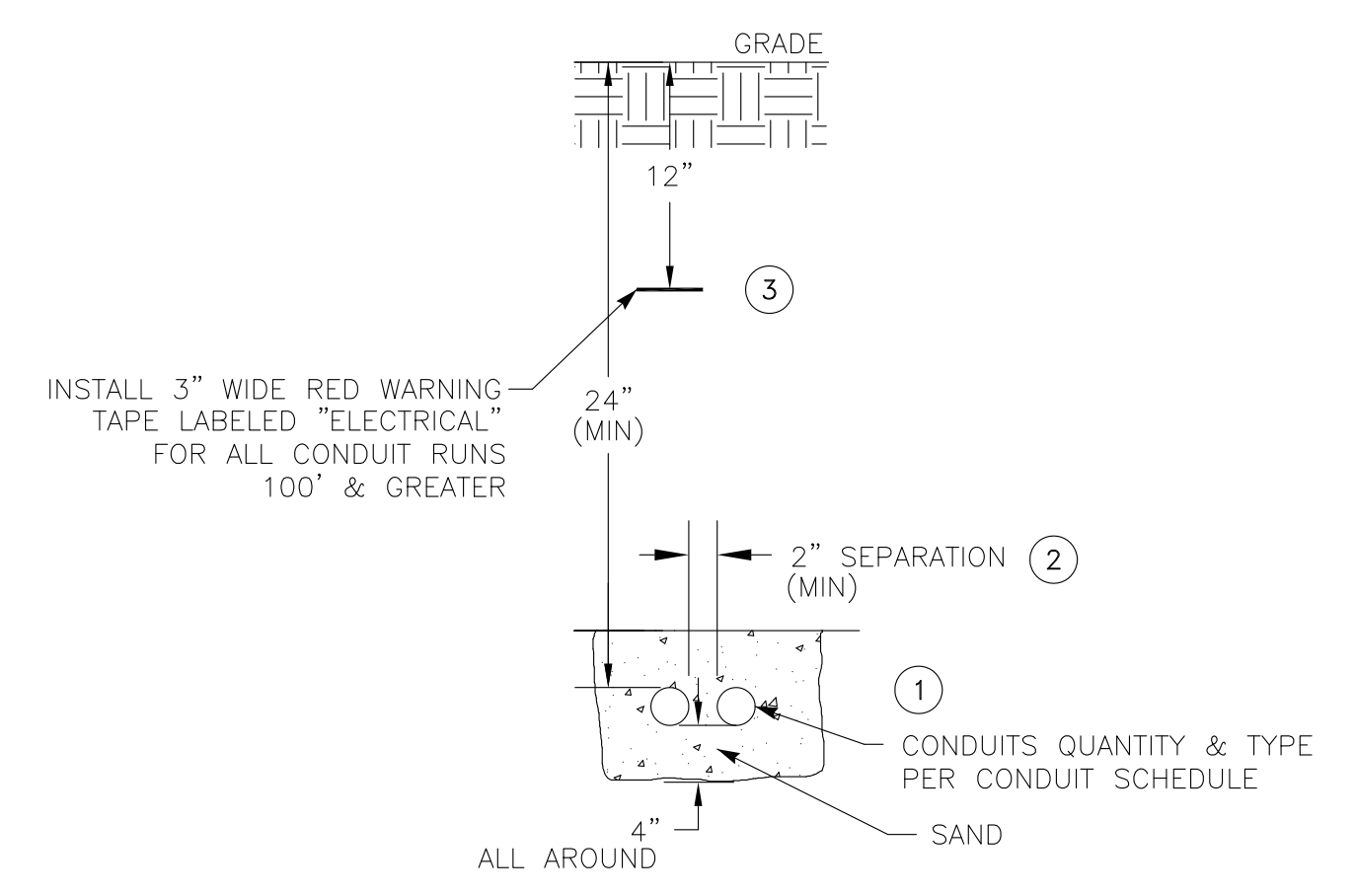
**EXAMPLE INTERCONNECTION DIAGRAM**  
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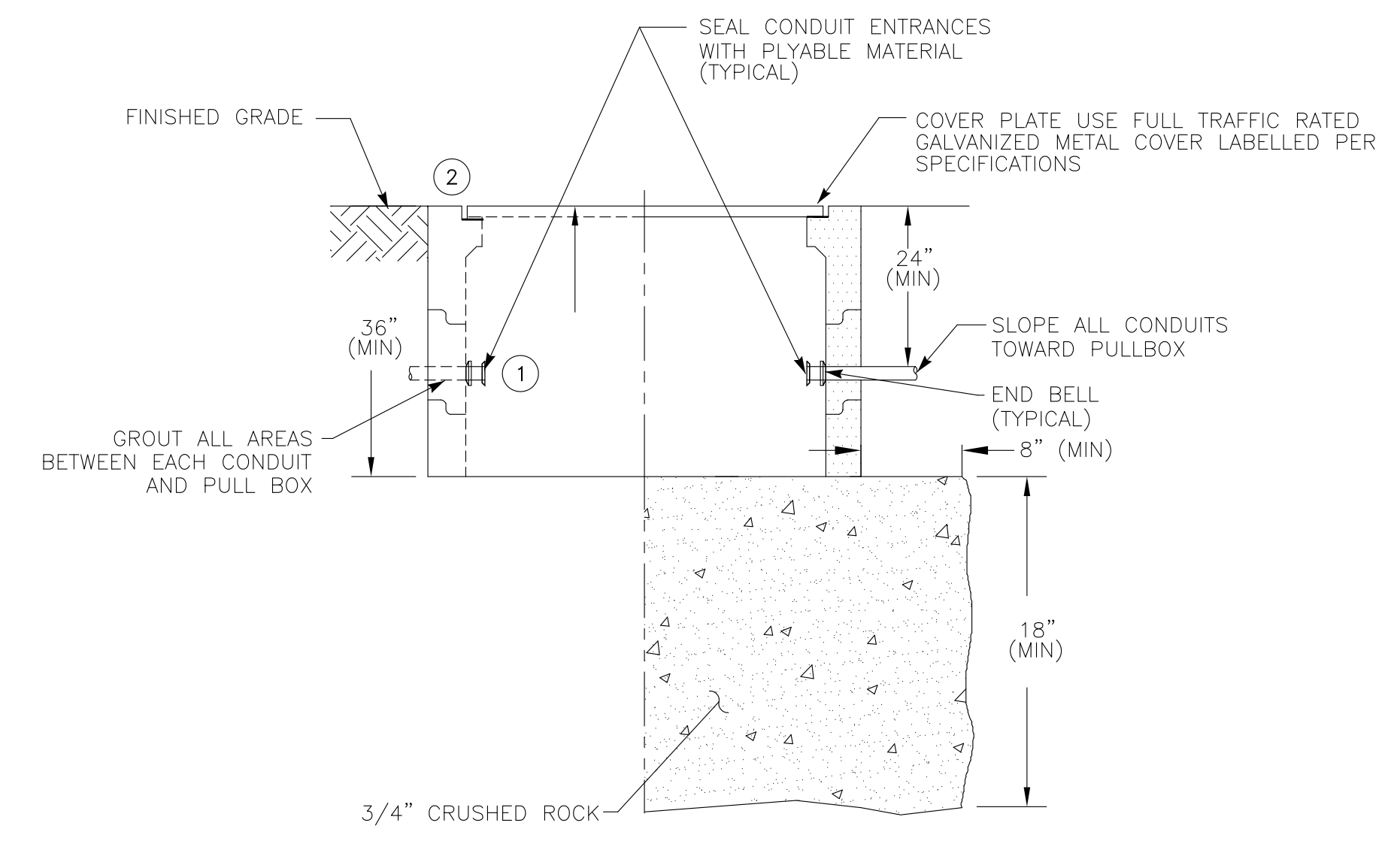
**TANK HATCH** (A) (E3)  
NOT TO SCALE DETAIL

- NOTES: ① THIS DETAIL SHOWS GENERAL INSTALLATION REQUIREMENTS. ADJUST ACCORDINGLY FOR HATCH ARRANGEMENT SHOWN ON CIVIL DWGS.  
② CONDUITS SHALL BE MINIMUM OF 5' AWAY FROM LADDER.



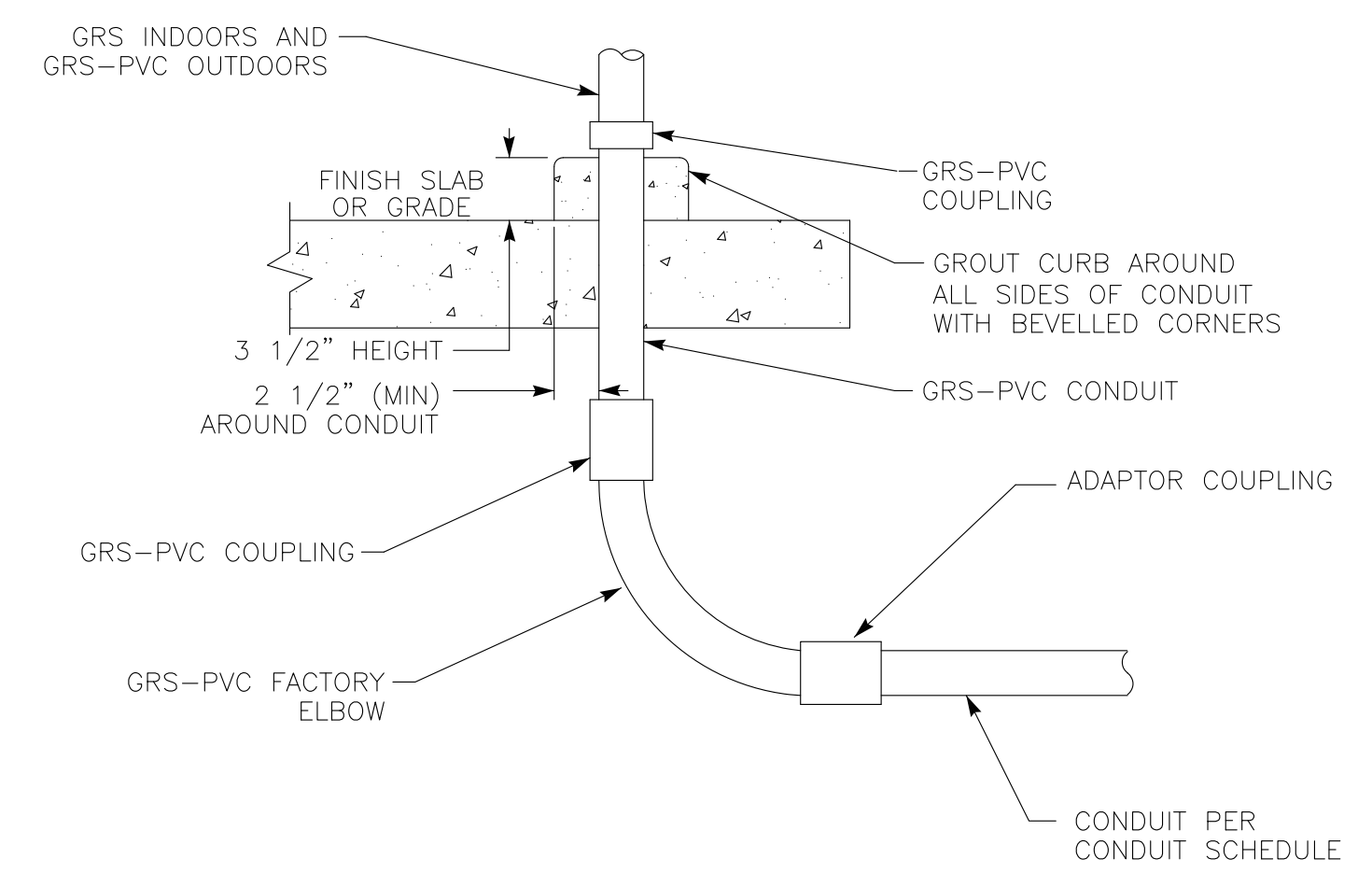
**UNDERGROUND CONDUITS** (B) (E3)  
NOT TO SCALE DETAIL

- NOTES: ① PLACE CONDUIT RUNS OF 4 CONDUITS OR GREATER IN PLASTIC SPACERS (RATED FOR DIRECT BURIAL) EVERY 5' ALONG LENGTH OF RUN.  
② PROVIDE 12" (MIN) SEPARATION BETWEEN "A & C" TYPE GROUP AND "L" TYPE GROUP CONDUITS.  
③ TRENCHING & COMPACTED BACKFILL PER SPECIFICATIONS.



**PULL BOX** (D) (E3)  
NOT TO SCALE DETAIL

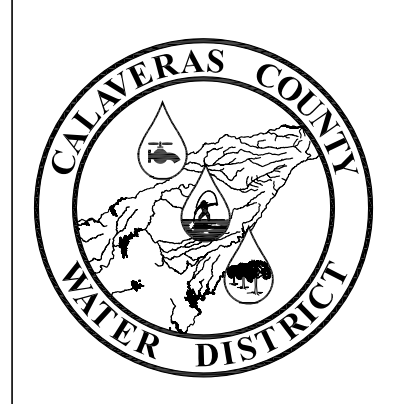
- NOTES: ① FULL TRAFFIC RATED CHRISTY "B" SERIES OR EQUAL, MINIMUM BOX SIZE PER PLANS.  
② ADD EXTENSIONS WHERE NECESSARY TO RAISE COVER TO FINISHED GRADE.



**EXPOSED CONDUIT TRANSITION** (C) (E3)  
NOT TO SCALE DETAIL

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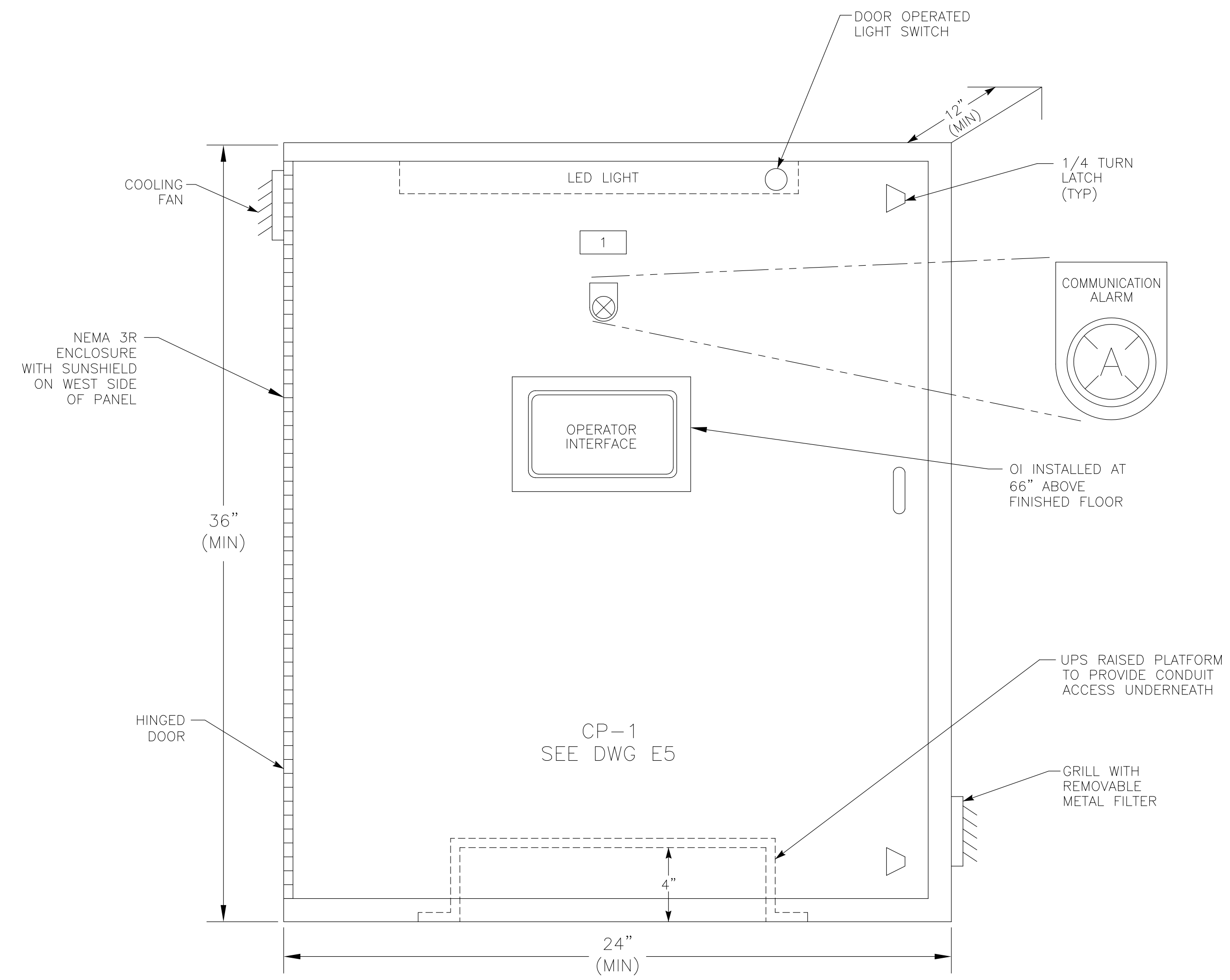
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18 OF 34
SHEET NUMBER

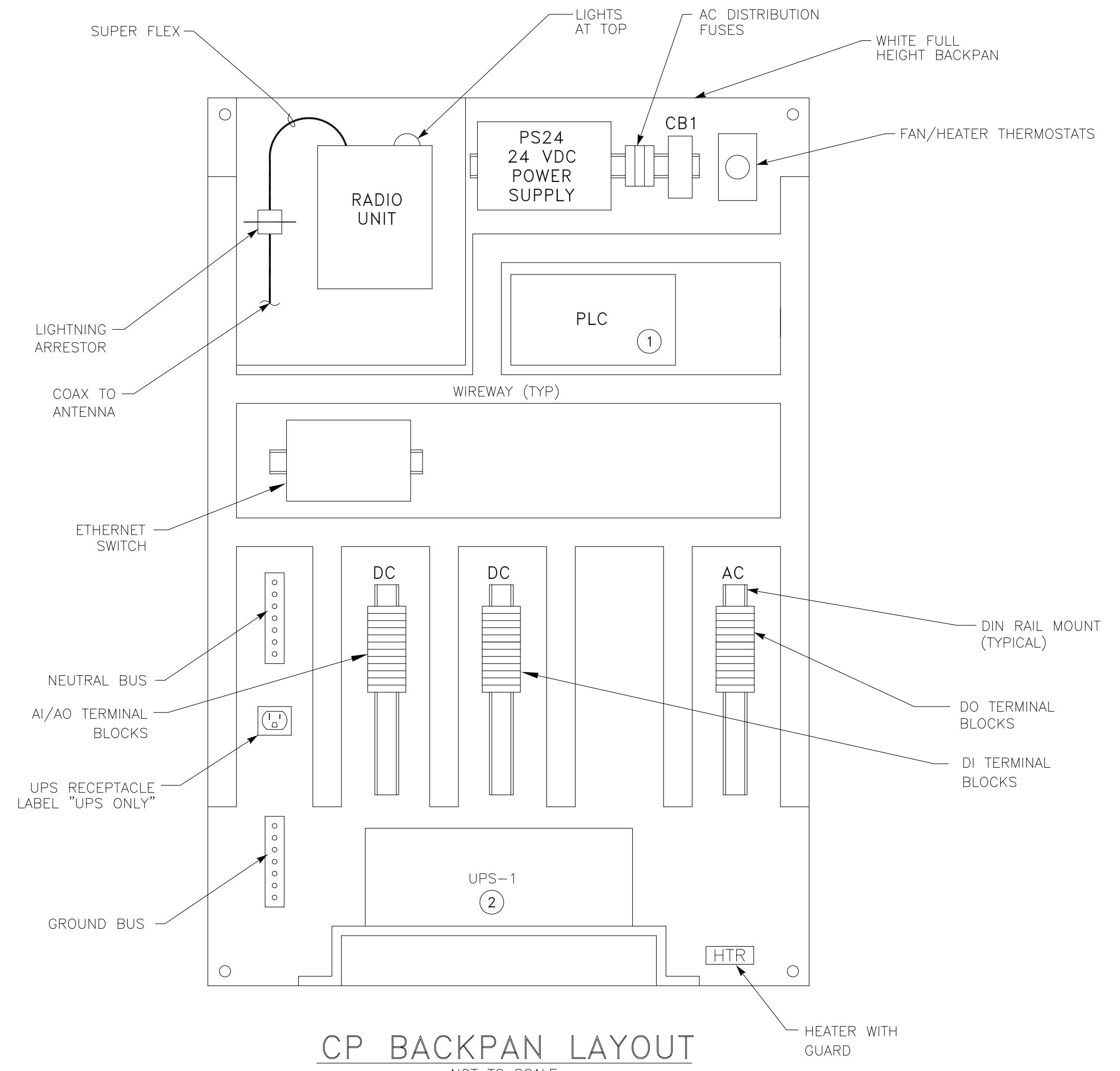




**CP ELEVATION ① ②**  
NOT TO SCALE

- NOTES: ① ITEMS DRAWN IN DASHED LINES ARE TO BE LOCATED BEHIND DEADFRONT DOOR.  
② NEMA 3R PADLOCKABLE OUTER DOOR NOT SHOWN FOR CLARITY.

NAMEPLATE SCHEDULE			
KEY	SITE	ENGRAVING	LETTER SIZE
1	HEATHER TANK	HEATHER TANK RTU	1/2"
1	TANK 8	TANK 8 RTU	1/2"
1	TANK 4/5	TANK 4/5 RTU	1/2"
1	LARKSPUR	LARKSPUR RTU	1/2"



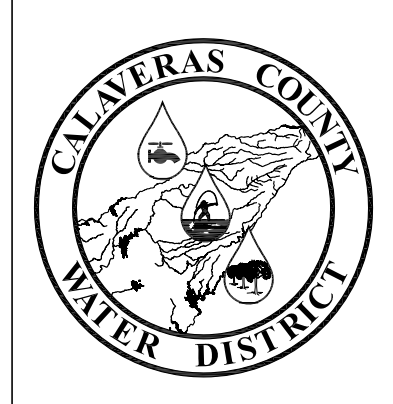
**CP BACKPAN LAYOUT**  
NOT TO SCALE

- NOTES: ① WIRE I/O TO TERMINAL BLOCKS.  
② UPS TO SIT ON RAISED PLATFORM PLACED ON BOTTOM OF ENCLOSURE.

**FABRICATION METHODS**

- NEMA 3R WEATHER-PROOFED FOR OUTSIDE INSTALLATION. NEMA 12 FOR INDOOR INSTALLATIONS.
- ALL OUTER DOORS SEALED WITH PERMANENT TYPE GASKETING.
- EXTERIOR FABRICATED FROM HOT DIPPED GALVANIZED SHEET STEEL.
- 12 GAUGE EXTERIOR AND 14 GAUGE INTERIOR.
- ALL SEAMS CONTINUOUS WELDED.
- OUTER DOORS TO BE PADLOCKABLE WITH HEAVY DUTY 3 POINT LATCHES.
- DOOR HINGES AND PINS SHALL BE 316 STAINLESS STEEL.
- NO SCREWS, RIVETS, OR BOLTS SHALL PROTRUDE EXTERNALLY.
- INTERNAL SCREWS, RIVETS, BOLTS, AND NUTS SHALL BE STAINLESS STEEL.
- AS - BUILT WIRING DIAGRAMS SHALL BE SHIPPED WITH EQUIPMENT.
- EXTERIOR PANEL COLOR: DESERT TAN (SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL).
- INTERIOR DEADFRONT DOOR COLOR: WHITE.
- PHENOLIC SCREW MOUNTED NAMEPLATES SHALL BE PROVIDED FOR ALL DEVICES ON DEADFRONT.
- FABRICATION AND WIRING SHALL CONFORM TO U.L. 508 AND NEMA STANDARDS.
- ALL WIRING SHALL BE PERMANENTLY LABELED WITH WIRE MARKERS ON BOTH ENDS.
- WIRING DIAGRAMS SHALL BE PLACED IN A PLASTIC DRAWING HOLDER PERMANENTLY ATTACHED TO THE INSIDE OF THE FRONT DOOR.

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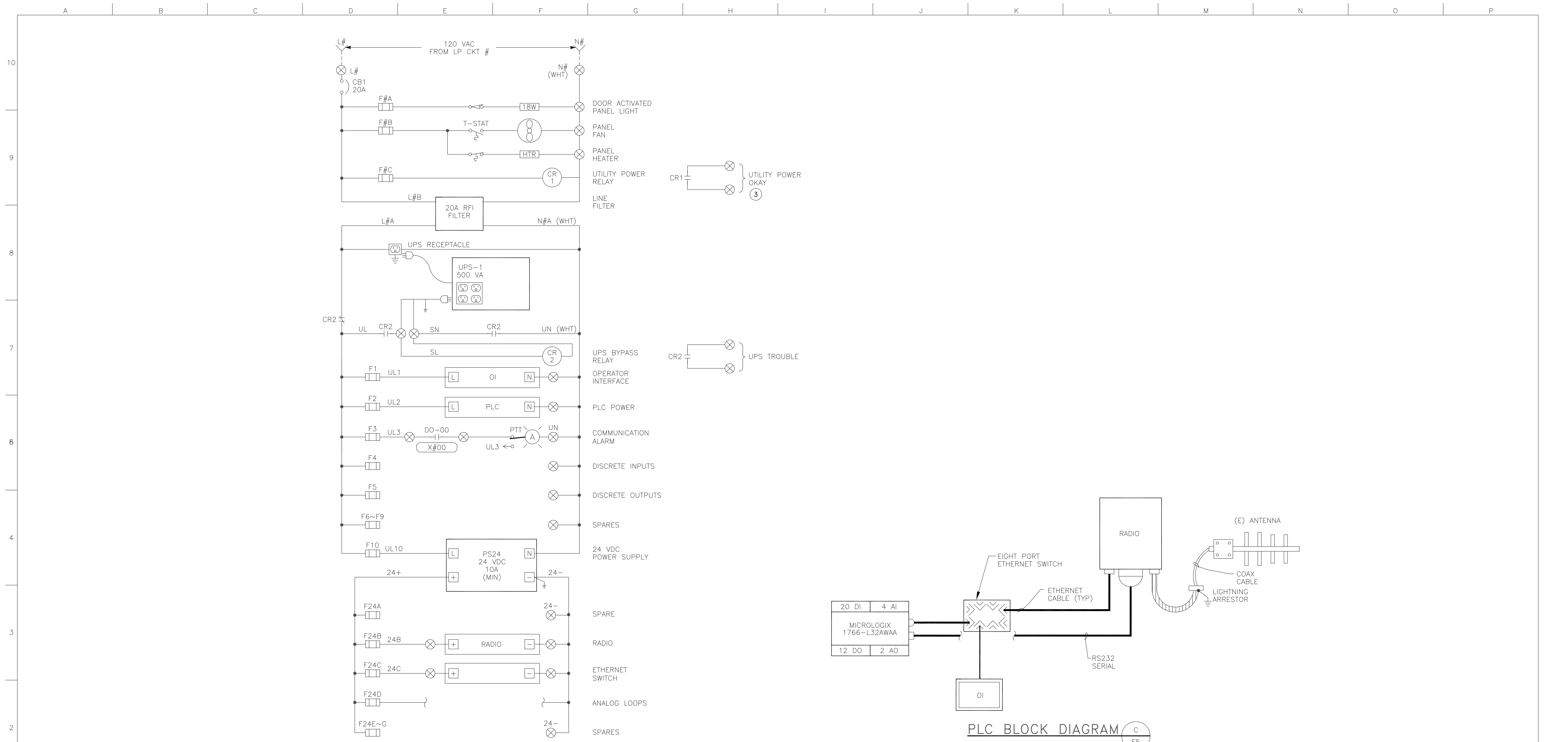
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120 TOMA COURT  
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SAN ANDREAS, CALIFORNIA 95249  
PHONE: (209) 754-3543

**TYPICAL CONTROL PANEL ELEVATION & BACKPAN LAYOUT**  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E4
DRAWING NUMBER
19 OF 34
SHEET NUMBER

REVISION:	DESCRIPTION:	DATE:	BY:

DESIGNED BY: S. KIMIZUKA
DRAFTED BY: Z. VOGLER
CHECKED BY: X. LI
DATE: 6/3/2021
SCALE: NO SCALE
BAR LENGTH ONE INCH ON SCALED DRAWING

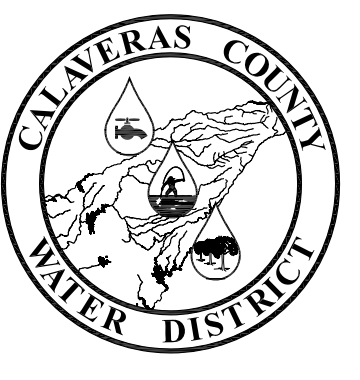


120 VAC POWER DISTRIBUTION DIAGRAM (A/E5) ①

- NOTES:
- ① DISTRIBUTION DIAGRAM REPRESENTATIVE OF MAJOR COMPONENTS ONLY. ADDITIONAL FUSES, CIRCUITS AND COMPONENT CONNECTIONS MAY BE REQUIRED FOR A FUNCTIONAL SYSTEM.
  - ② PROVIDE & INSTALL INTERFACE RELAYS IF REQUIRED.
  - ③ INSTALL AT LOCATIONS WITHOUT ATS.

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Z. VOGLER				
X. LI				
6/3/2021				
NO SCALE				
BAR LENGTH ONE INCH ON SCALED DRAWING				

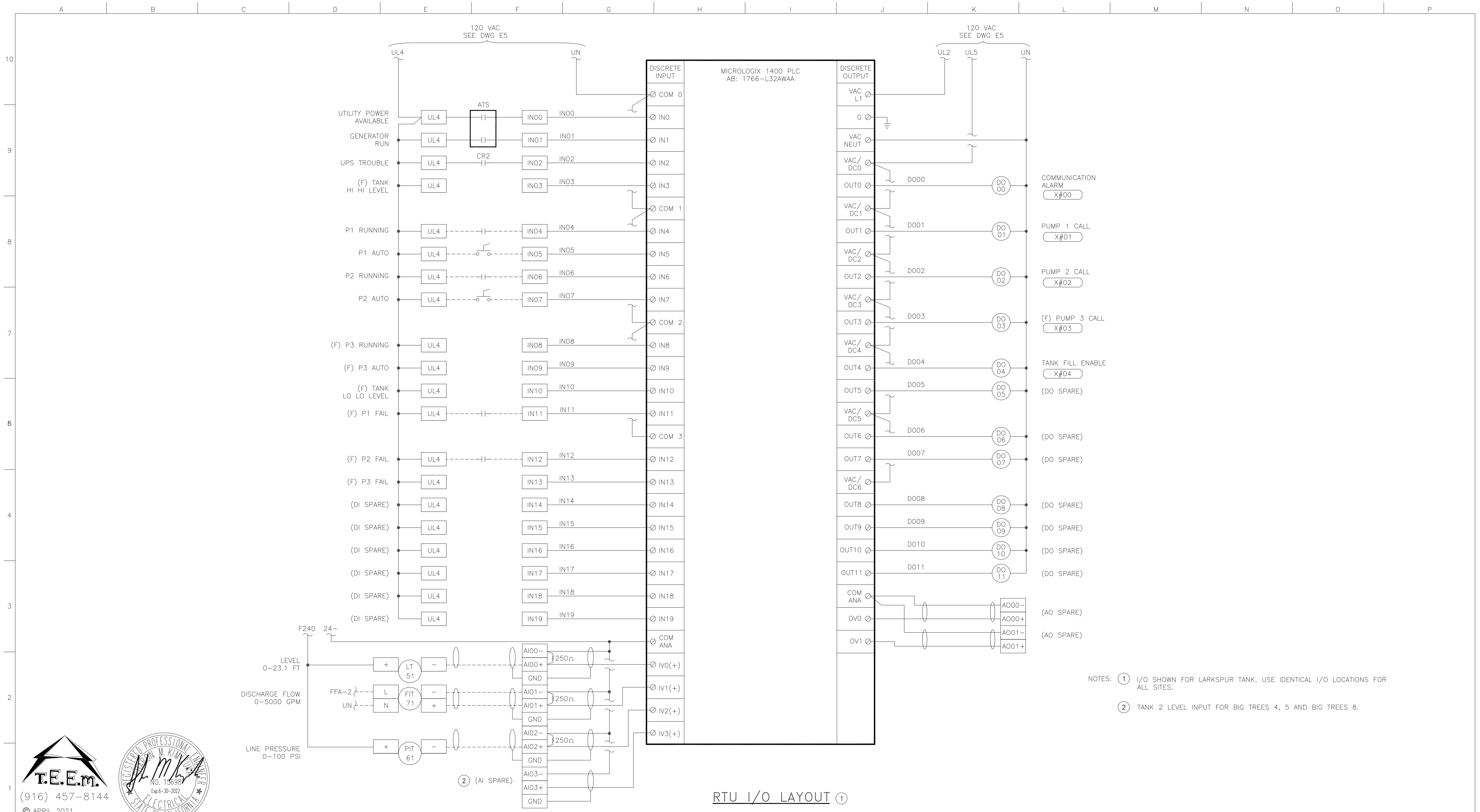


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TYPICAL CONTROL PANEL  
 ELEMENTARY DIAGRAMS  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

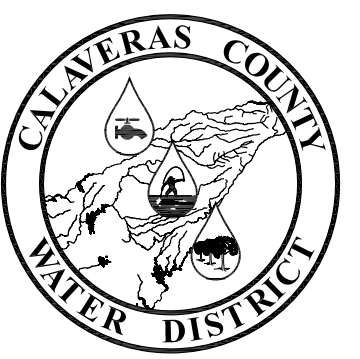
11095
PROJECT NUMBER
E5
DRAWING NUMBER
20 OF 34
SHEET NUMBER





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REVISION:	DESCRIPTION:	DATE:	BY:



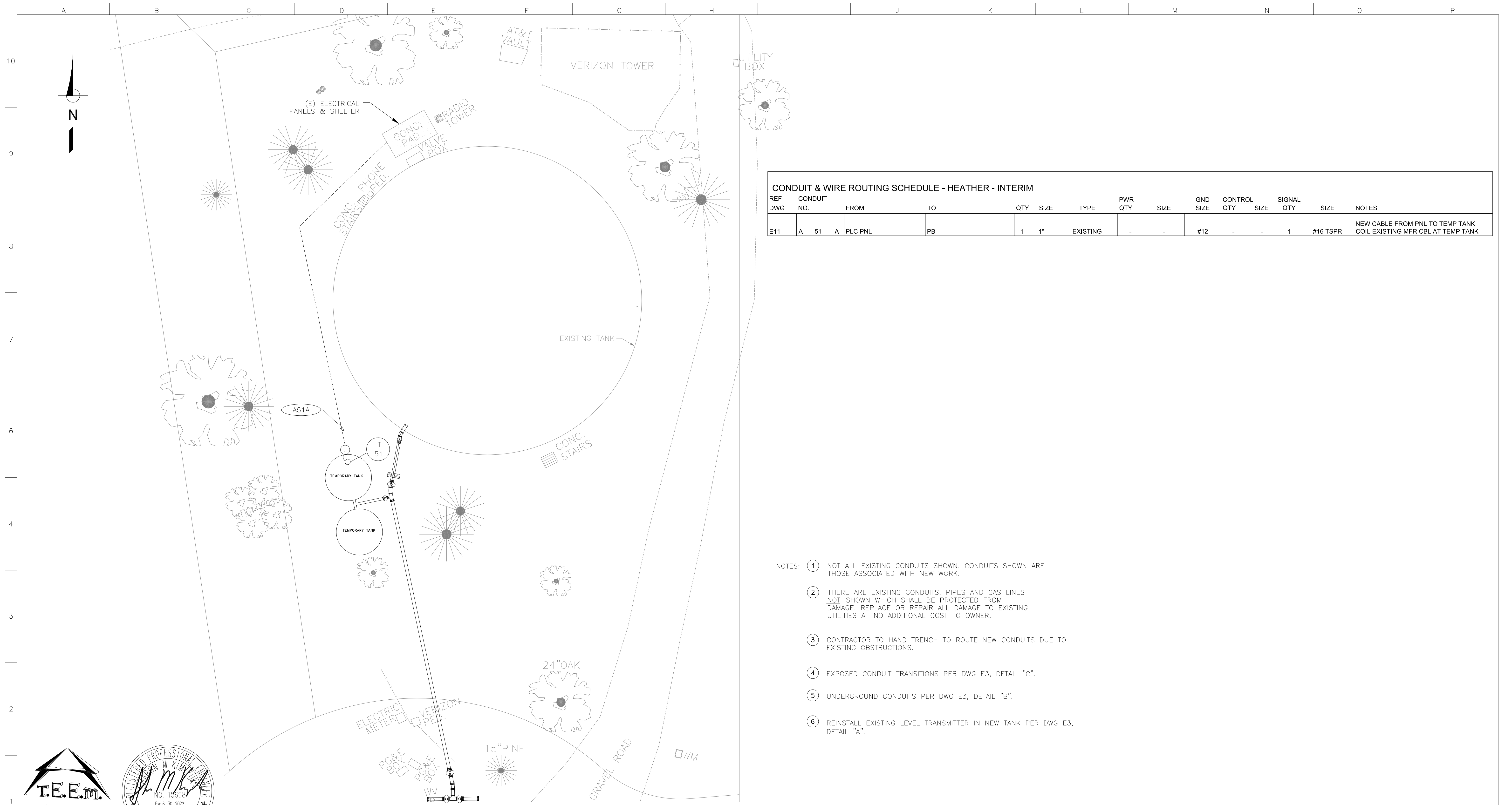
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RTU PANEL STANDARD I/O LAYOUT

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E6
DRAWING NUMBER
21 OF 34
SHEET NUMBER



**CONDUIT & WIRE ROUTING SCHEDULE - HEATHER - INTERIM**

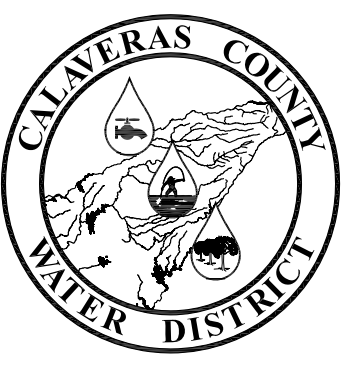
REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E11	A 51 A	PLC PNL	PB	1	1"	EXISTING	-	-	#12	-	-	1	#16 TSPR	NEW CABLE FROM PNL TO TEMP TANK COIL EXISTING MFR CBL AT TEMP TANK

- NOTES:
- 1 NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - 2 THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - 3 CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - 4 EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - 5 UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - 6 REINSTALL EXISTING LEVEL TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A".



HEATHER DR. TANK - INTERIM SITE PLAN ①②③  
 SCALE: 1" = 10'  
 6/3/2021

DESIGNED BY:	REVISION:	DESCRIPTION:	DATE:	BY:
S. KIMIZUKA				
Z. VOGLER				
X. LI				
6/3/2021				
NO SCALE				

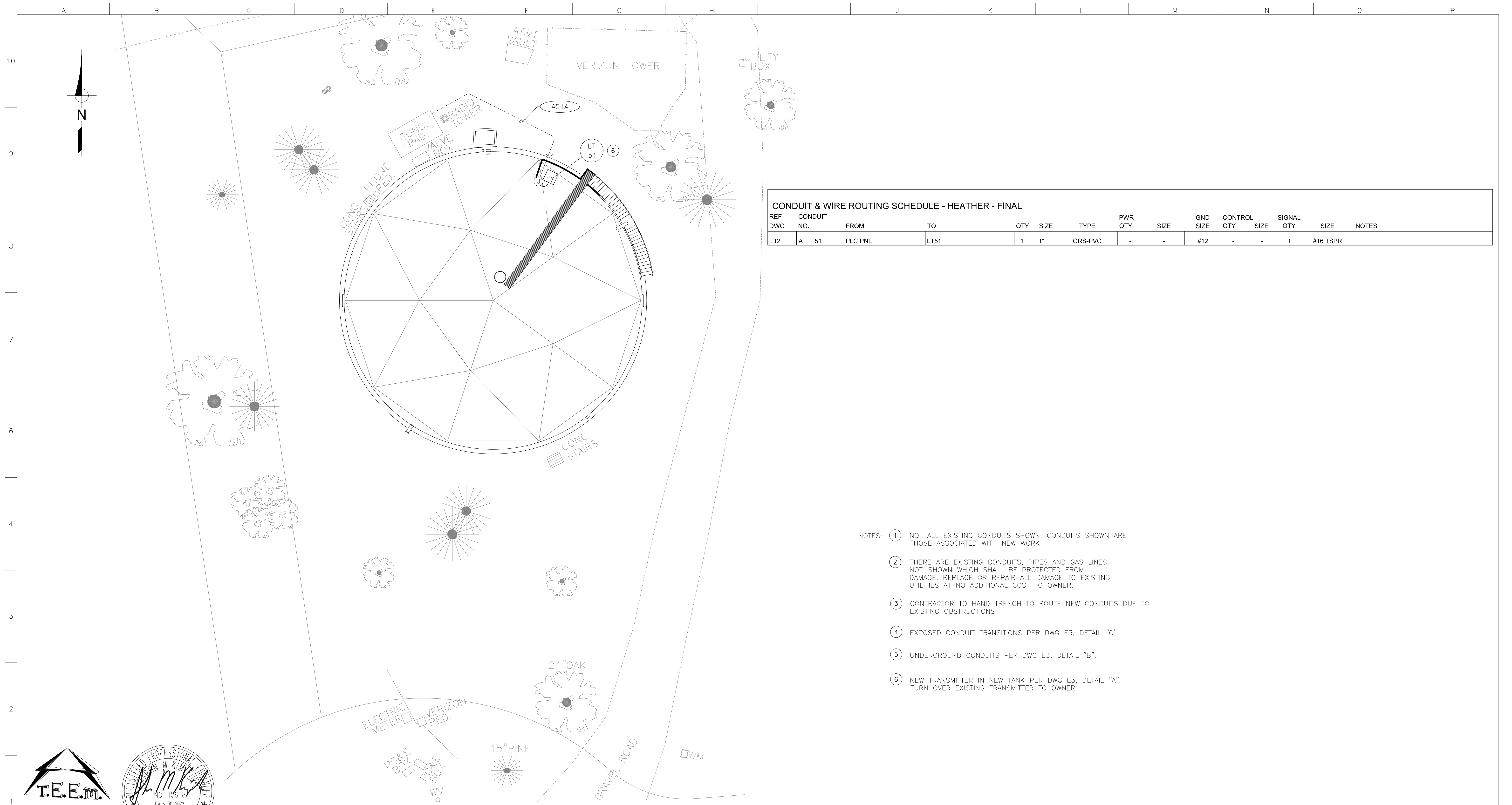


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HEATHER DR. TANK  
 INTERM SITE PLAN  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E11
DRAWING NUMBER
22 OF 34
SHEET NUMBER





**CONDUIT & WIRE ROUTING SCHEDULE - HEATHER - FINAL**

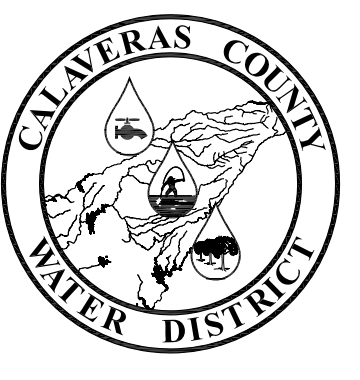
REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E12	A 51	PLC PNL	LT51	1	1"	GRS-PVC	-	-	#12	-	-	1	#16 TSPR	

- NOTES:
- NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - NEW TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A". TURN OVER EXISTING TRANSMITTER TO OWNER.

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**HEATHER DR. TANK - FINAL SITE PLAN** ①②③④⑤  
 6/3/2021 SCALE: 1" = 10'

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Z. VOGLER				
X. LI				
6/3/2021				
NO SCALE				



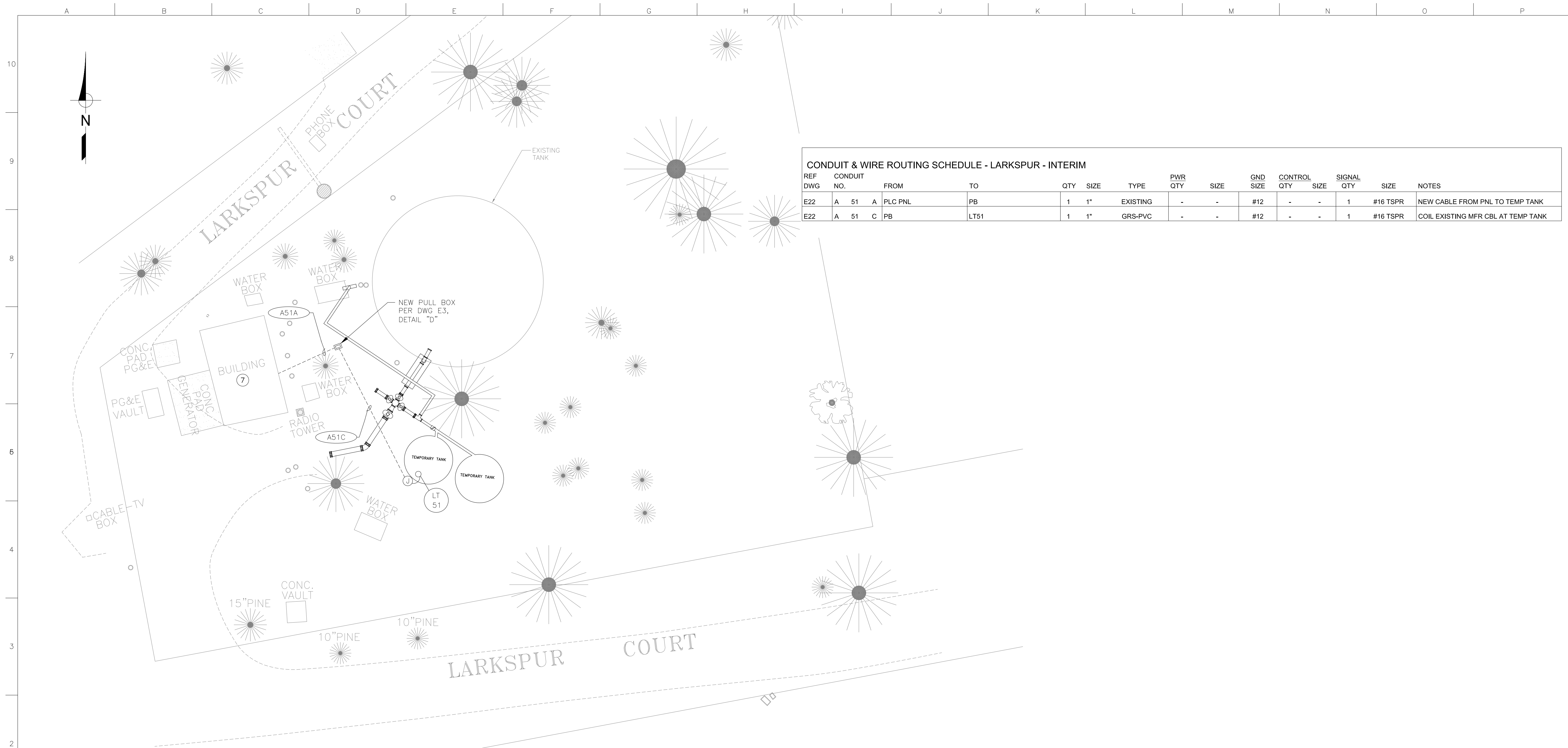
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**HEATHER DR. TANK  
 FINAL SITE PLAN**

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E12
DRAWING NUMBER
23 OF 34
SHEET NUMBER



CONDUIT & WIRE ROUTING SCHEDULE - LARKSPUR - INTERIM														
REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E22	A 51 A	PLC PNL	PB	1	1"	EXISTING	-	-	#12	-	-	1	#16 TSPR	NEW CABLE FROM PNL TO TEMP TANK
E22	A 51 C	PB	LT51	1	1"	GRS-PVC	-	-	#12	-	-	1	#16 TSPR	COIL EXISTING MFR CBL AT TEMP TANK

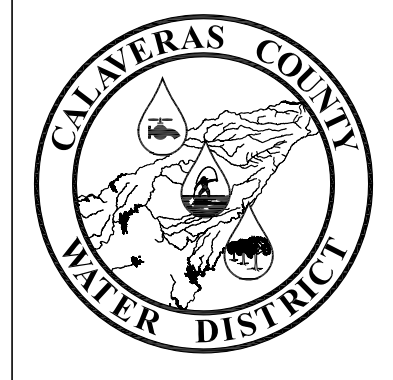
**LARKSPUR COURT TANK - INTERIM SITE PLAN** ①②  
 SCALE: 1" = 10'

- NOTES:
- ① NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - ② THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - ③ CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - ④ EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - ⑤ UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - ⑥ REINSTALL EXISTING LEVEL TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A".
  - ⑦ REPLACE (E) RTU CONTROL PANEL AND RECONNECT (E) WIRES.

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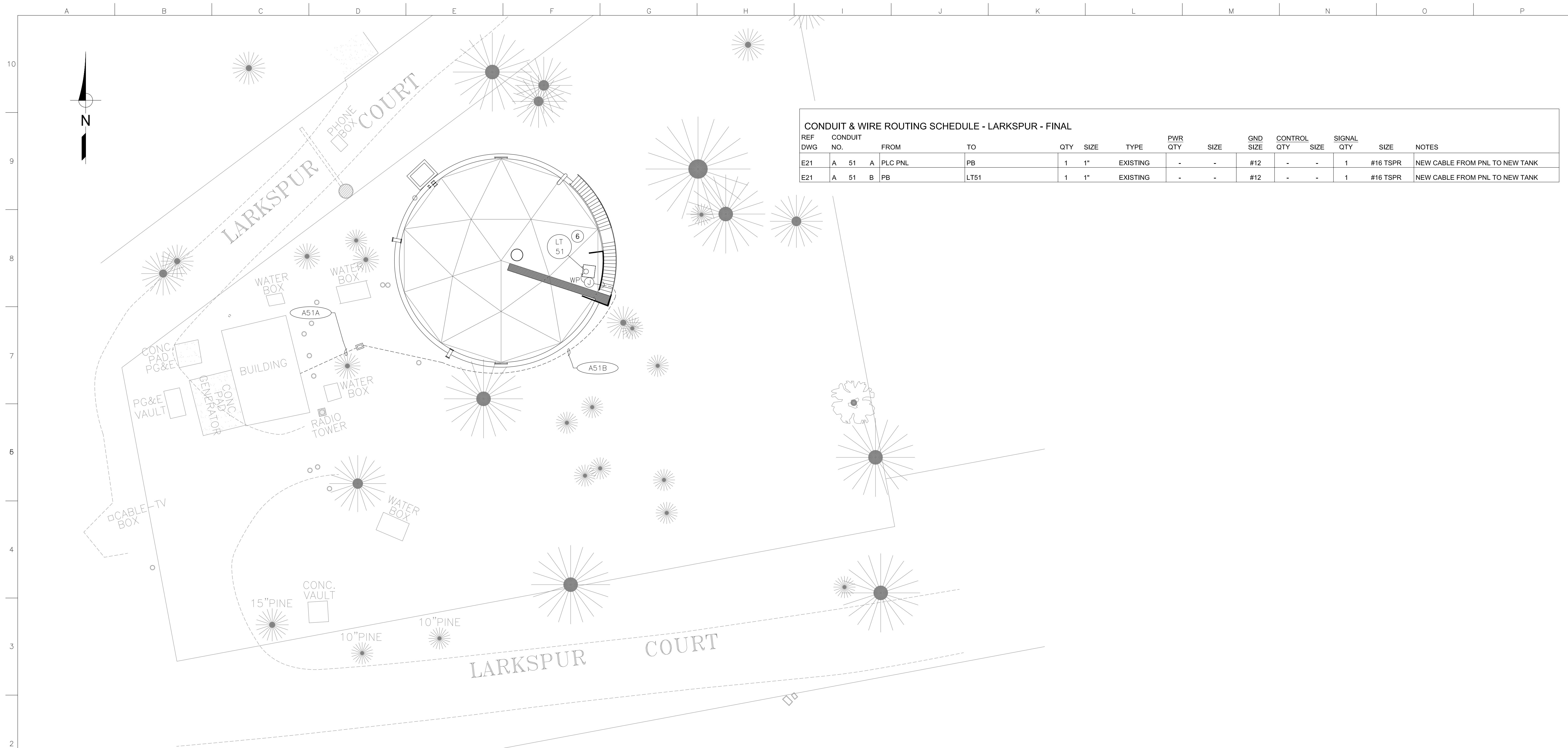
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LARKSPUR COURT TANK  
 INTERM SITE PLAN

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E21
DRAWING NUMBER
24 OF 34
SHEET NUMBER





**CONDUIT & WIRE ROUTING SCHEDULE - LARKSPUR - FINAL**

REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E21	A 51 A	PLC PNL	PB	1	1"	EXISTING	-	-	#12	-	-	1	#16 TSPR	NEW CABLE FROM PNL TO NEW TANK
E21	A 51 B	PB	LT51	1	1"	EXISTING	-	-	#12	-	-	1	#16 TSPR	NEW CABLE FROM PNL TO NEW TANK

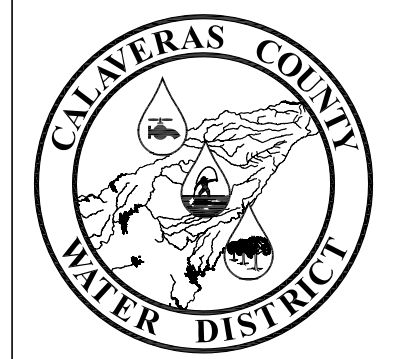
**LARKSPUR COURT TANK – FINAL SITE PLAN ①②**  
 SCALE: 1" = 10'

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- NOTES:
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  - ② THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - ③ CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - ④ EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - ⑤ UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - ⑥ REINSTALL EXISTING TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A".

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CHECKED BY:	X. LI
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BAR LENGTH ONE INCH ON SCALED DRAWING	

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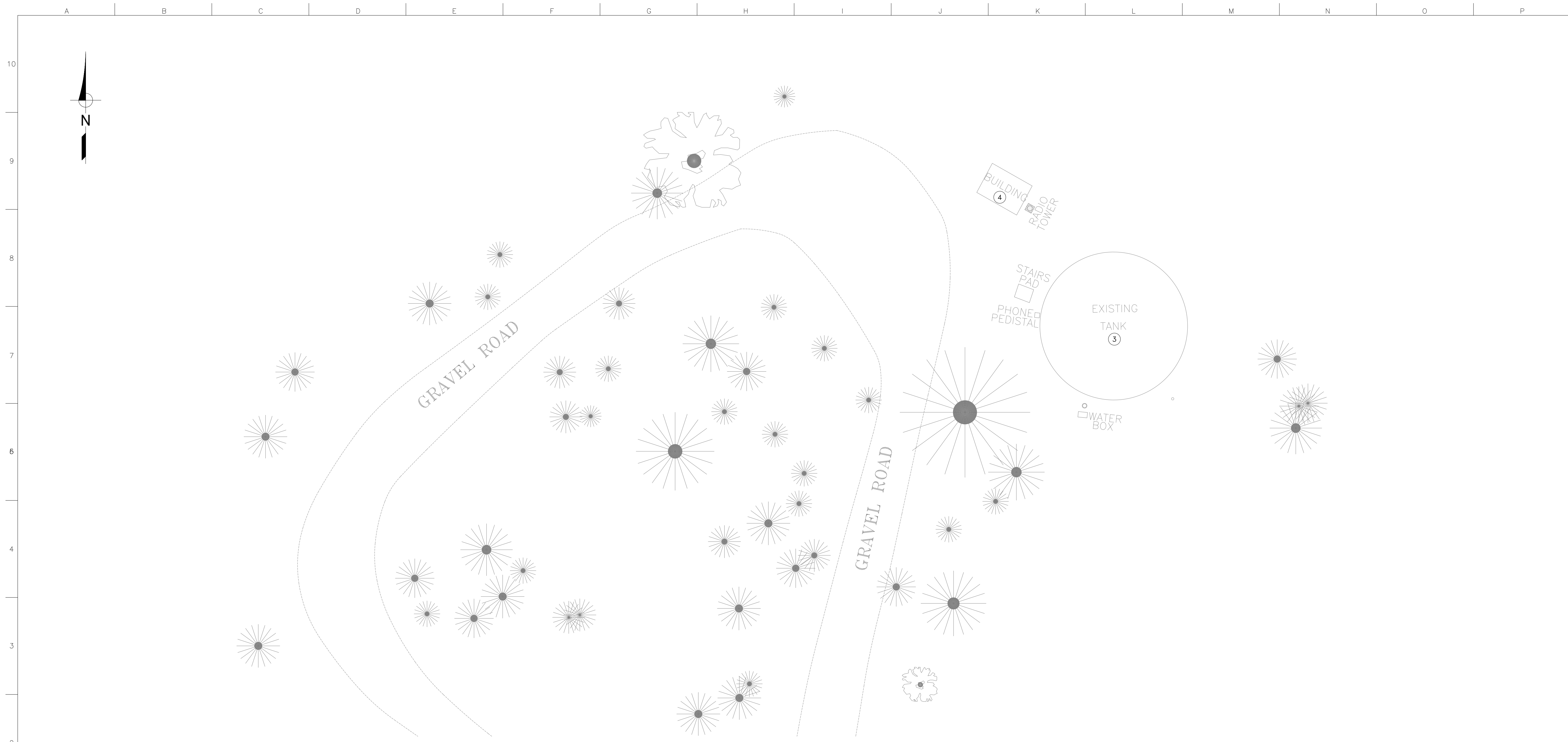
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LARKSPUR COURT TANK  
 FINAL SITE PLAN

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E22
DRAWING NUMBER
25 OF 34
SHEET NUMBER



**BIG TREES 8 TANK – INTERIM SITE PLAN ①②**  
 SCALE: 1" = 10'

- NOTES:
- ① NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - ② THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - ③ USE EXISTING TANK AND LEVEL TRANSMITTER DURING CONSTRUCTION.
  - ④ REPLACE (E) RTU CONTROL PANEL & RECONNECT (E) WIRES.

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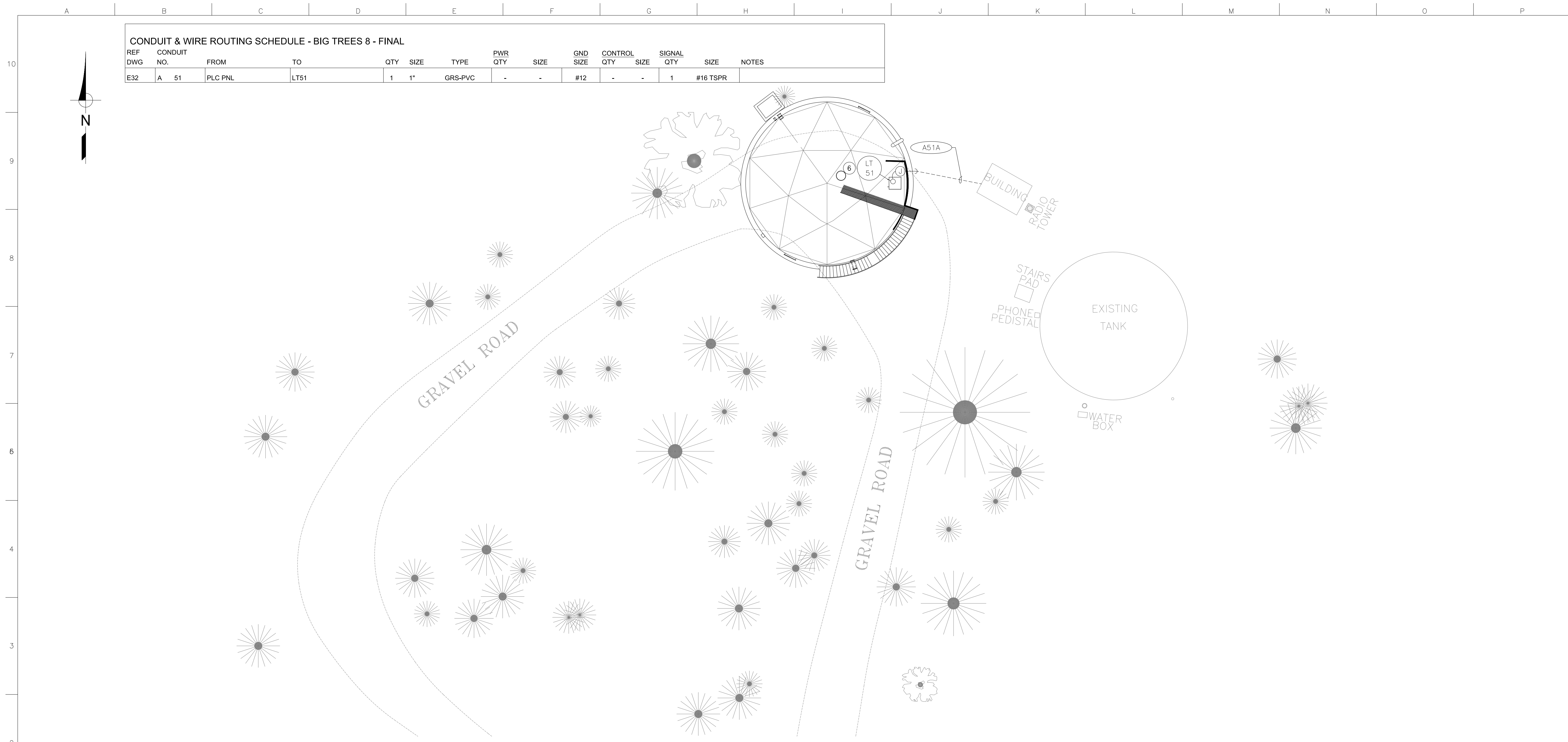
**BIG TREES 8 TANK  
 INTERM SITE PLAN**

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E31
DRAWING NUMBER
26 OF 34
SHEET NUMBER



CONDUIT & WIRE ROUTING SCHEDULE - BIG TREES 8 - FINAL														
REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E32	A 51	PLC PNL	LT51	1	1"	GRS-PVC	-	-	#12	-	-	1	#16 TSPR	

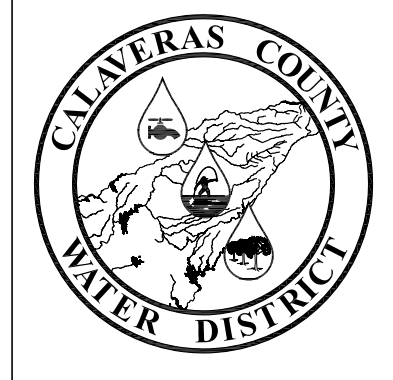


**BIG TREES 8 TANK – FINAL SITE PLAN ①②③④⑤**  
 SCALE: 1" = 10'

- NOTES:
- ① NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - ② THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - ③ CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - ④ EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - ⑤ UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - ⑥ INSTALL NEW TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A".

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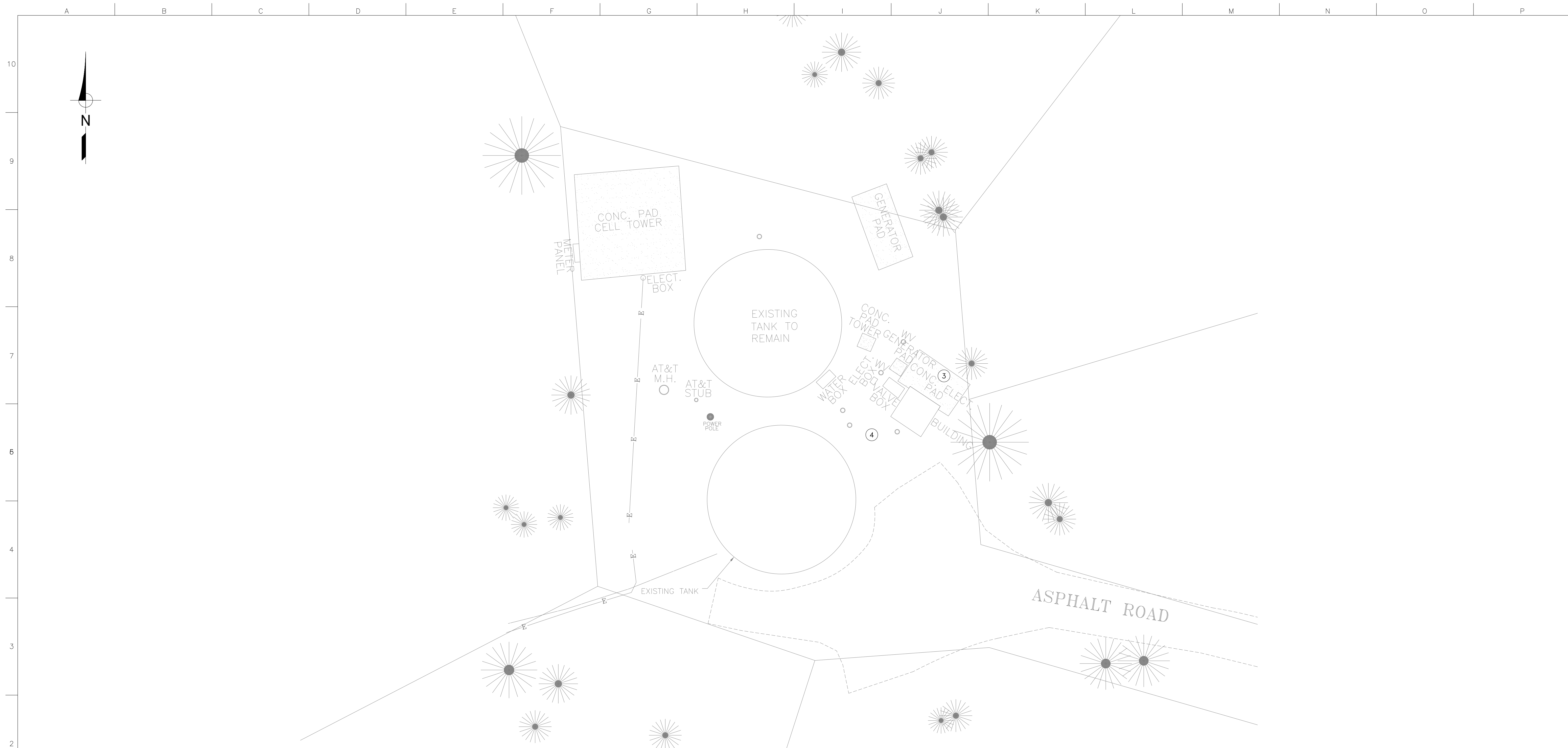
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**BIG TREE 8 TANK FINAL SITE PLAN**  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E32
DRAWING NUMBER
27 OF 34
SHEET NUMBER



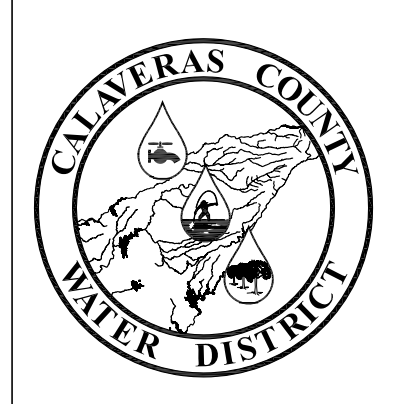
**BIG TREES 4 TANK – INTERIM SITE PLAN ①②**  
 SCALE: 1" = 10'

- NOTES:
- ① NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
  - ② THERE ARE EXISTING CONDUITS, PIPES AND GAS LINES NOT SHOWN WHICH SHALL BE PROTECTED FROM DAMAGE. REPLACE OR REPAIR ALL DAMAGE TO EXISTING UTILITIES AT NO ADDITIONAL COST TO OWNER.
  - ③ REPLACE (E) RTU CONTROL PANEL, RECONNECT (E) WIRES.
  - ④ PROTECT (E) LEVEL TRANSMITTER CONDUIT DURING CONSTRUCTION. TURN OVER (E) TRANSMITTER TO DISTRICT.

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Z. VOGLER				
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X. LI				
DATE:				
6/3/2021				
SCALE:				
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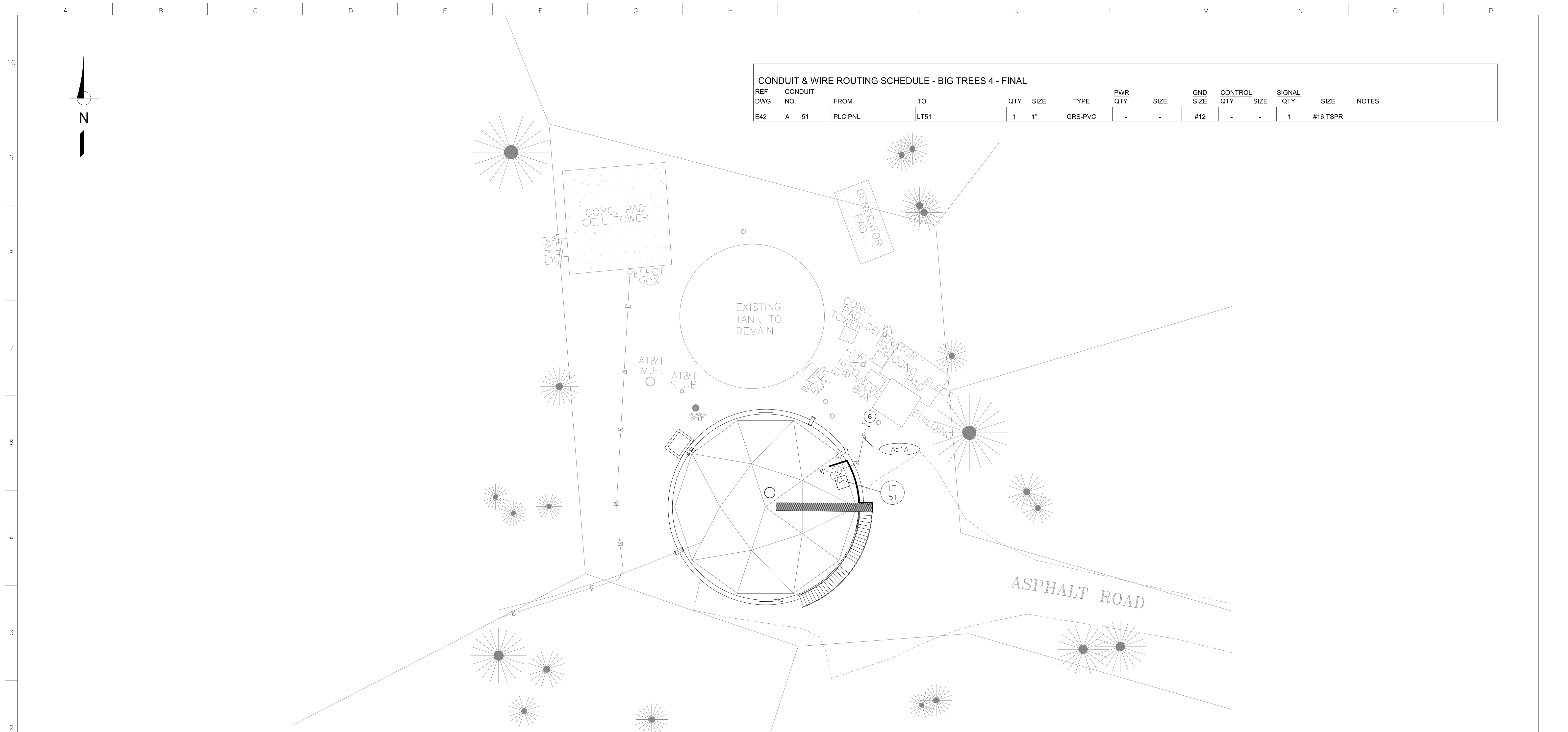
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**BIG TREES 4 TANK  
 INTERM SITE PLAN**

EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E41
DRAWING NUMBER
28 OF 34
SHEET NUMBER



**BIG TREES 4 TANK – FINAL SITE PLAN ①②③④⑤**  
 SCALE: 1" = 10'

- NOTES:
- ① NOT ALL EXISTING CONDUITS SHOWN. CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
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  - ③ CONTRACTOR TO HAND TRENCH TO ROUTE NEW CONDUITS DUE TO EXISTING OBSTRUCTIONS.
  - ④ EXPOSED CONDUIT TRANSITIONS PER DWG E3, DETAIL "C".
  - ⑤ UNDERGROUND CONDUITS PER DWG E3, DETAIL "B".
  - ⑥ INSTALL NEW TRANSMITTER IN NEW TANK PER DWG E3, DETAIL "A".

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X. LI				
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NO SCALE				

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**BIG TREE 4 TANK  
 FINAL SITE PLAN**

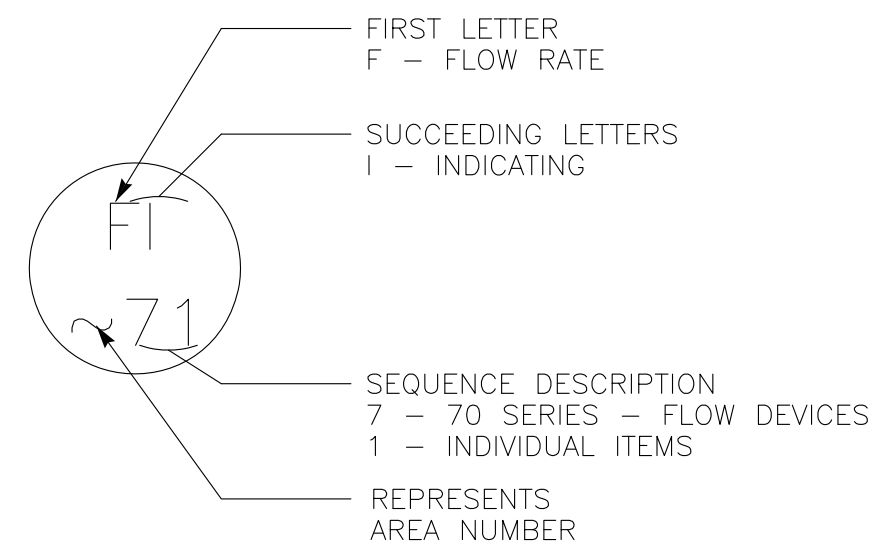
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
E42
DRAWING NUMBER
29 OF 34
SHEET NUMBER

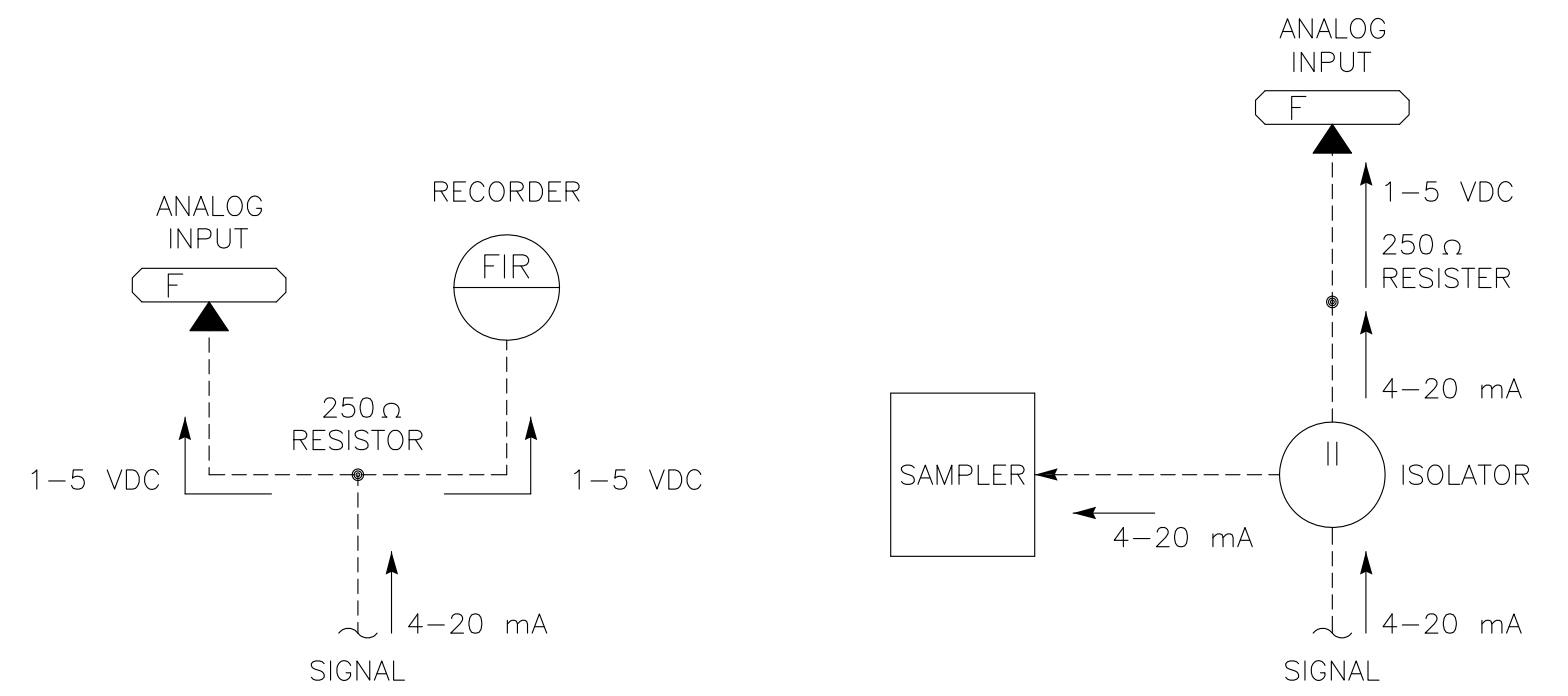


SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
<b>P &amp; I DIAGRAM SYMBOLS</b>		<b>P &amp; I DIAGRAM SYMBOLS</b>	
	FIELD MOUNTED INSTRUMENT		VALVE (GENERAL)
	FACE MOUNTED INSTRUMENT ON LOCAL PANEL, OPERATOR ACCESSIBLE		GATE (GENERAL)
	FACE MOUNTED INSTRUMENT ON FIELD PANEL, OPERATOR ACCESSIBLE		CHECK VALVE (GENERAL)
	INSTRUMENT MOUNTED IN LOCAL PANEL, OPERATOR INACCESSIBLE		PUMP (GENERAL)
	INSTRUMENT MOUNTED IN FIELD PANEL, OPERATOR INACCESSIBLE		BLOWER (GENERAL)
	OPERATION PERFORMED WITH LOGIC OR HARDWIRED DEVICES		VALVE/GATE NUMBER
	DWG # - REFERENCE ELEMENTARY DWG. #		EQUIPMENT NUMBER
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL INDICATION		ELECTRIC SIGNAL
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL ALARM INDICATION		LOGIC OR DATA SIGNAL
	PLC OR COMPUTER PERFORMING INTERNAL OPERATION		PNEUMATIC SIGNAL
	PLC OR COMPUTER PERFORMING INTERNAL ALARM OPERATION		CAPILLARY TUBING (FILLED SYSTEM)
	PROPORTIONAL, INTEGRAL, AND DIFFERENTIAL PARAMETERS		HYDRAULIC SIGNAL
	RATIO AND BIAS PARAMETERS		SONIC OR ELECTROMAGNETIC SIGNAL
	AUDIBLE ALARM (BUZZER OR HORN)		ELECTRIC SUPPLY
	ANNUNCIATOR WINDOW R - ROW # C - COLUMN #		SERVICE AIR
	LAMP INDICATION (STATUS OR ALARM)		INSTRUMENT AIR
	DISCRETE INPUT		DISCONNECT SWITCH
	DISCRETE OUTPUT		
	ANALOG INPUT		
	ANALOG OUTPUT		
	JUMP TAG FROM ONE AREA TO ANOTHER AREA OF DRAWING		
	"o" TAG CONNECT POINT ON EACH DRAWING		
	CONTINUED ON DWG P-X		
	AUTODIALER PRIORITY # PC BASED SOFTWARE		

INSTRUMENT IDENTIFICATION LETTERS				
FIRST - LETTER	SUCCEEDING - LETTER			
MEASURED OF INITIATING VARIABLE	MODIFIER	READOUT PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C CONDUCTIVITY			CONTROLLER	
D DENSITY	DIFFERENTIAL			
E VOLTAGE		SENSOR, PRIMARY ELEMENT		
F FLOW RATE	RATIO (FRACTION)			
G GENERAL		GLASS VIEWING DEVICE		
H HAND				HIGH, OPENED
I CURRENT (ELEC.)		INDICATING, INDICATOR		
J POWER	SCAN			
K TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW, CLOSED
M MOISTURE	MOMENTARY			MIDDLE
N STATUS		STATUS	USER'S CHOICE	USER'S CHOICE
O OPERATOR		ORIFICE, RESTRICTION POINT (TEST) CONNECTION		
P PRESSURE, VACUUM				
Q QUANTITY	INTEGRATE, TOTALIZE			
R RESET		RECORD		
S SPEED, FREQUENCY	SAFETY		SWITCH	
T TEMPERATURE			TRANSMITTER	TEST
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V VIBRATION, MECH. ANALYSIS			VALVE, DAMPER LOUVER	
W WEIGHT, FORCE		WELL		
X SWITCH	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTER, CONVERTOR	
Z DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	



P&ID INSTRUMENT IDENTIFICATION EXAMPLE

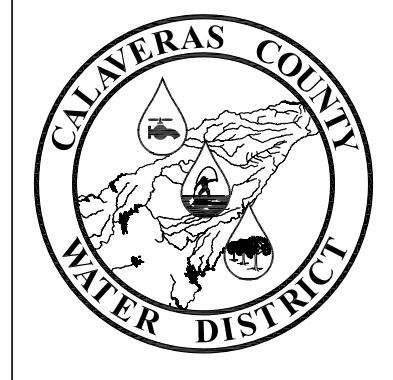


TYPICAL SIGNAL FLOWS

NUMBERING SEQUENCE	
SEQUENCE NUMBER	DESCRIPTION
00	COMMON ALARM
01-09	INDIVIDUAL ITEMS
10	MECHANICAL
20	MECHANICAL
30	MECHANICAL
40	MECHANICAL
50	LEVEL DEVICES
60	PRESSURE DEVICES
70	FLOW DEVICES
80	ANALYTICAL DEVICES
90	SAFETY & SECURITY DEVICES

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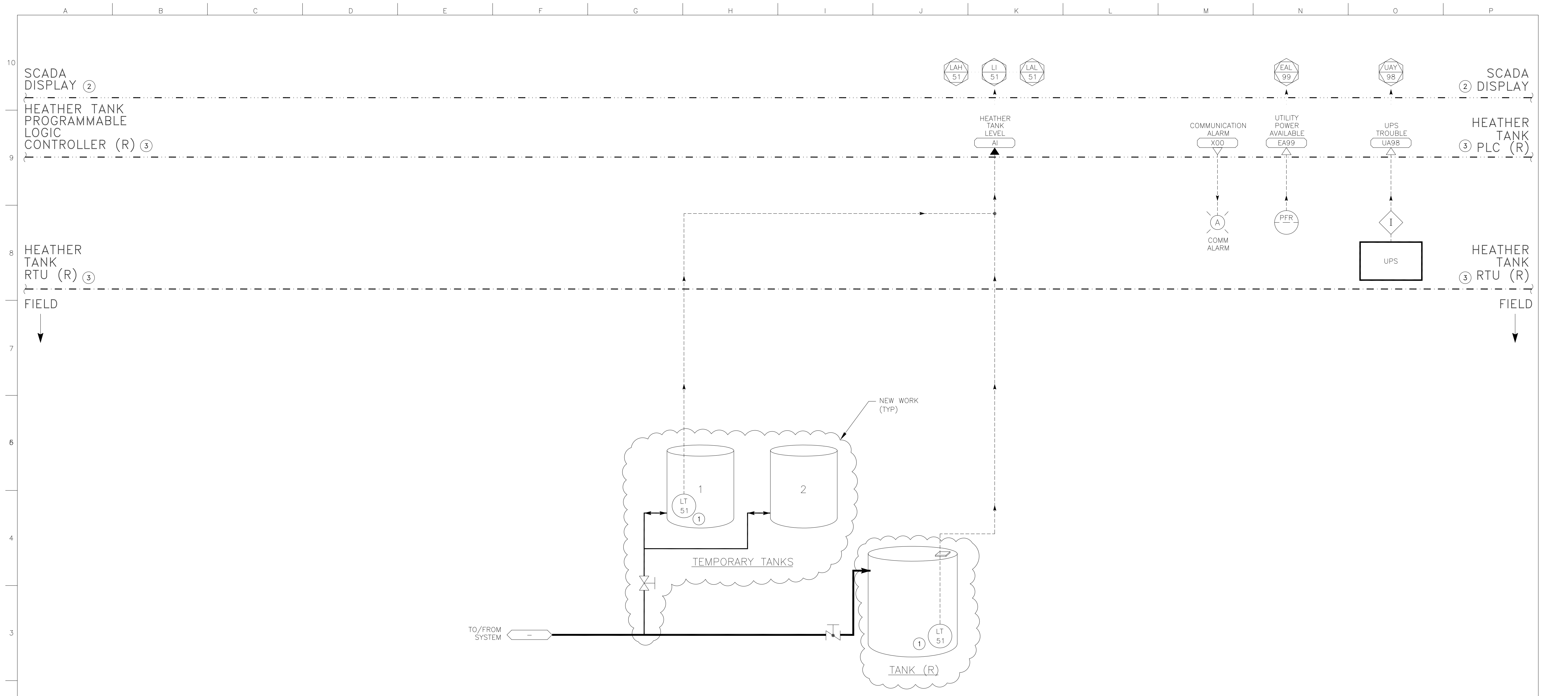
REVISION:	DESCRIPTION:	DATE:	BY:



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 POST OFFICE BOX 846  
 SAN ANDREAS, CALIFORNIA 95249  
 PHONE: (209) 754-3543

11095  
 PROJECT NUMBER  
 11  
 DRAWING NUMBER  
 30 OF 34  
 SHEET NUMBER

INSTRUMENTATION SYMBOLS & ABBREVIATIONS  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT



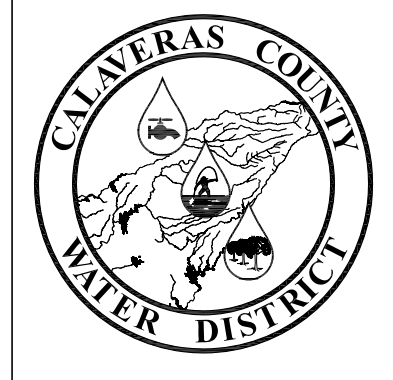
HEATHER TANK

- NOTES:
- ① RELOCATE (E) LEVEL TRANSMITTER TO TEMPORARY TANKS. PROVIDE (N) LEVEL TRANSMITTER IN REPLACED TANK TURN OVER (E) LEVEL TRANSMITTER AFTER ACCEPTANCE.
  - ② SCADA AND PLC PROGRAMMING BY OTHER.
  - ③ REPLACE (E) CONTROL PANEL WITH NEW CONTROL PANEL.

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S. KIMIZUKA				
Z. VOGLER				
X. LI				
6/3/2021				
NO SCALE				
BAR LENGTH ONE INCH ON SCALED DRAWING				

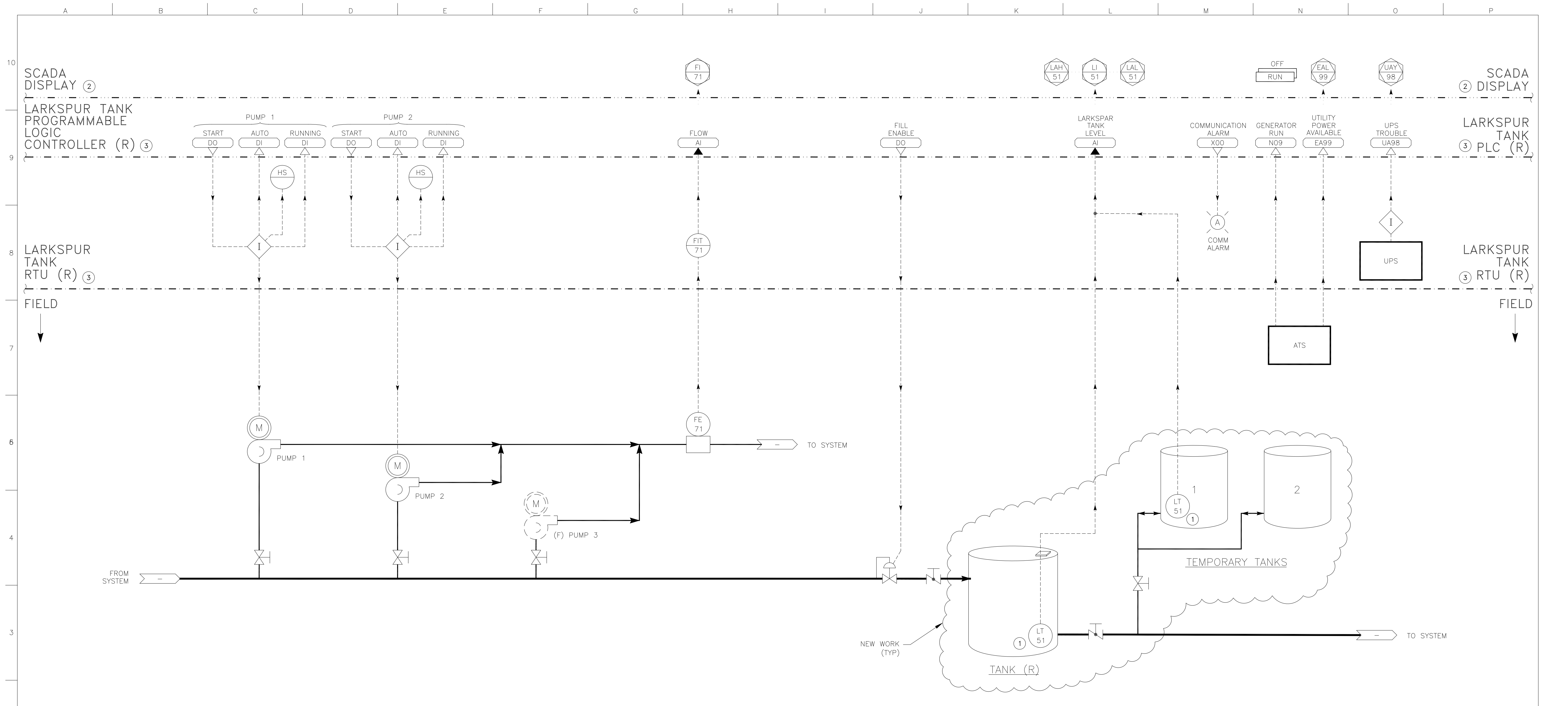


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HEATHER DR TANK P&ID  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
111
DRAWING NUMBER
31 OF 34
SHEET NUMBER

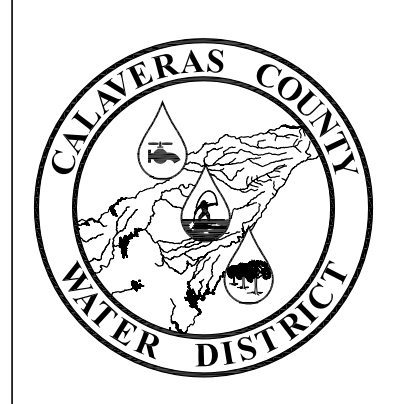


LARKSPUR TANK

- NOTES:
- ① RELOCATE (E) LEVEL TRANSMITTER TO TEMPORARY TANKS. REINSTALL IN REPLACED TANK AFTER ACCEPTANCE.
  - ② SCADA AND PLC PROGRAMMING BY OTHER.
  - ③ REPLACE (E) CONTROL PANEL WITH NEW CONTROL PANEL.

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S. KIMIZUKA				
Z. VOGLER				
X. LI				
6/3/2021				
NO SCALE				
BAR LENGTH ONE INCH ON SCALED DRAWING				

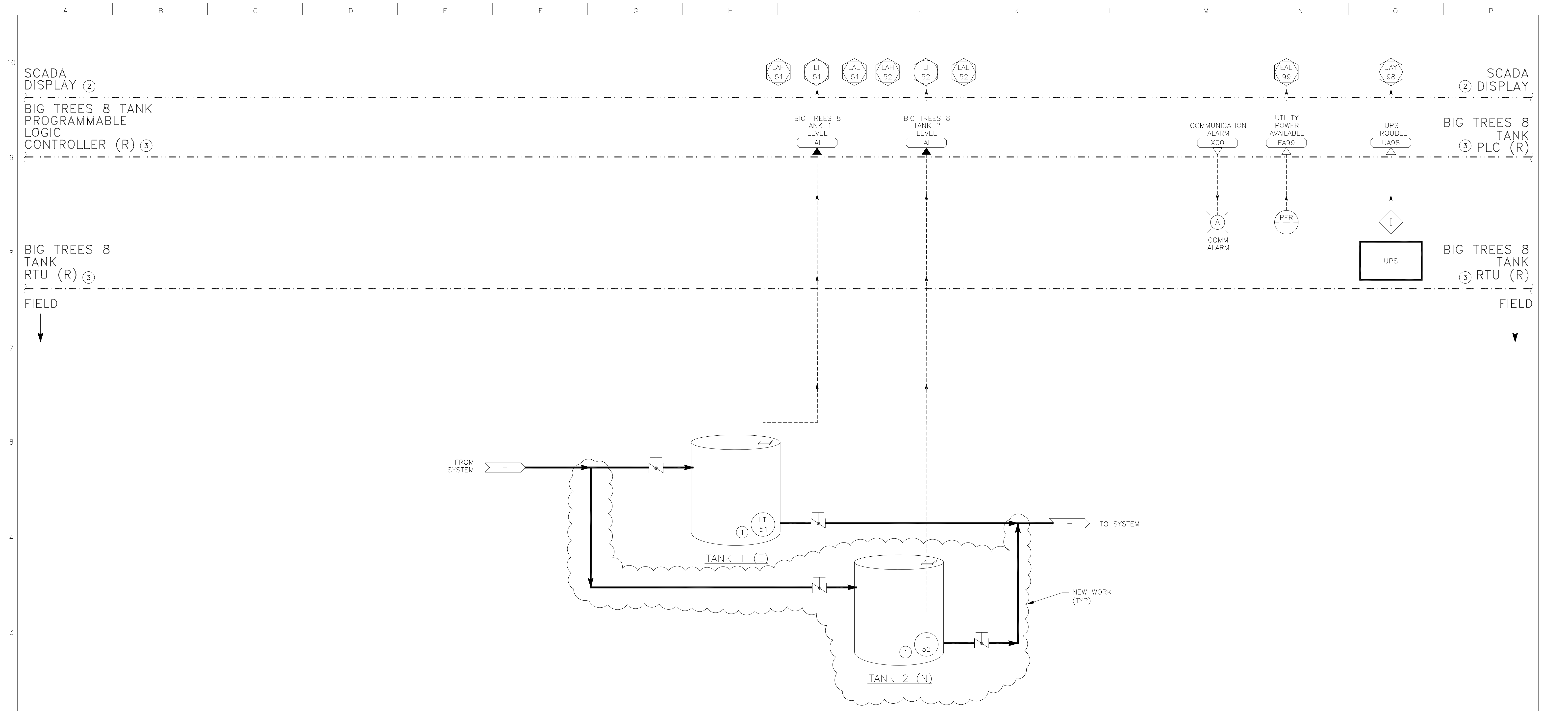


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LARKSPUR CT TANK P&ID  
 EBBETTS PASS REDWOOD WATER STORAGE TANKS  
 WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
121
DRAWING NUMBER
32 OF 34
SHEET NUMBER





BIG TREES 8 TANK

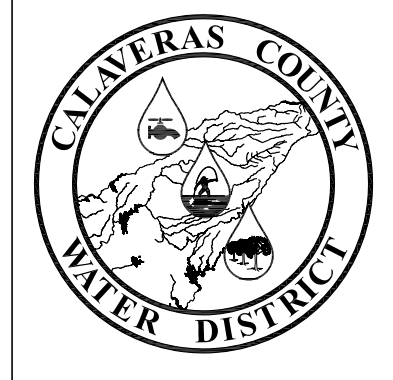
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CHECKED BY:	X. LI
DATE:	6/3/2021
SCALE:	NO SCALE
BAR LENGTH ONE INCH ON SCALED DRAWING	

REVISION:	DESCRIPTION:	DATE:	BY:

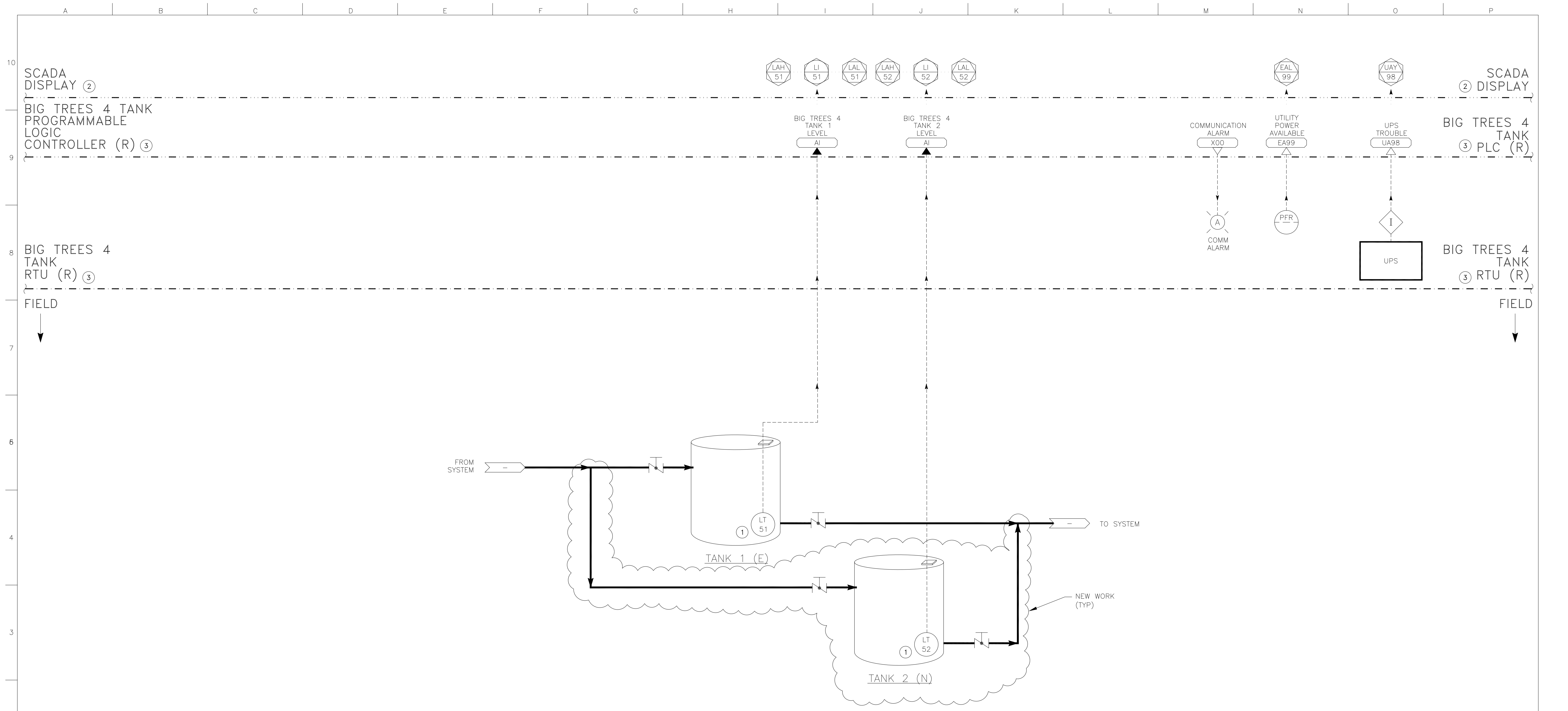


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BIG TREES 8 TANK P&ID  
EBBETTS PASS REDWOOD WATER STORAGE TANKS  
WILDFIRE HAZARD MITIGATION PROJECT

11095
PROJECT NUMBER
131
DRAWING NUMBER
33 OF 34
SHEET NUMBER



BIG TREES 4 TANK

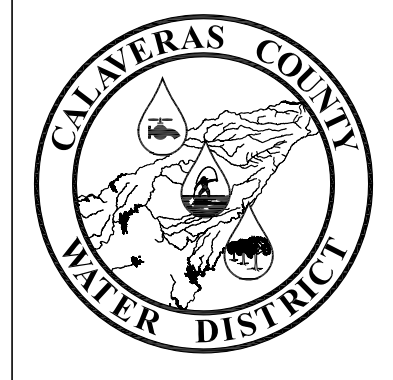
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BIG TREES 4 TANK P&ID  
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PROJECT NUMBER
141
DRAWING NUMBER
34 OF 34
SHEET NUMBER