

# GARBERVILLE SANITARY DISTRICT

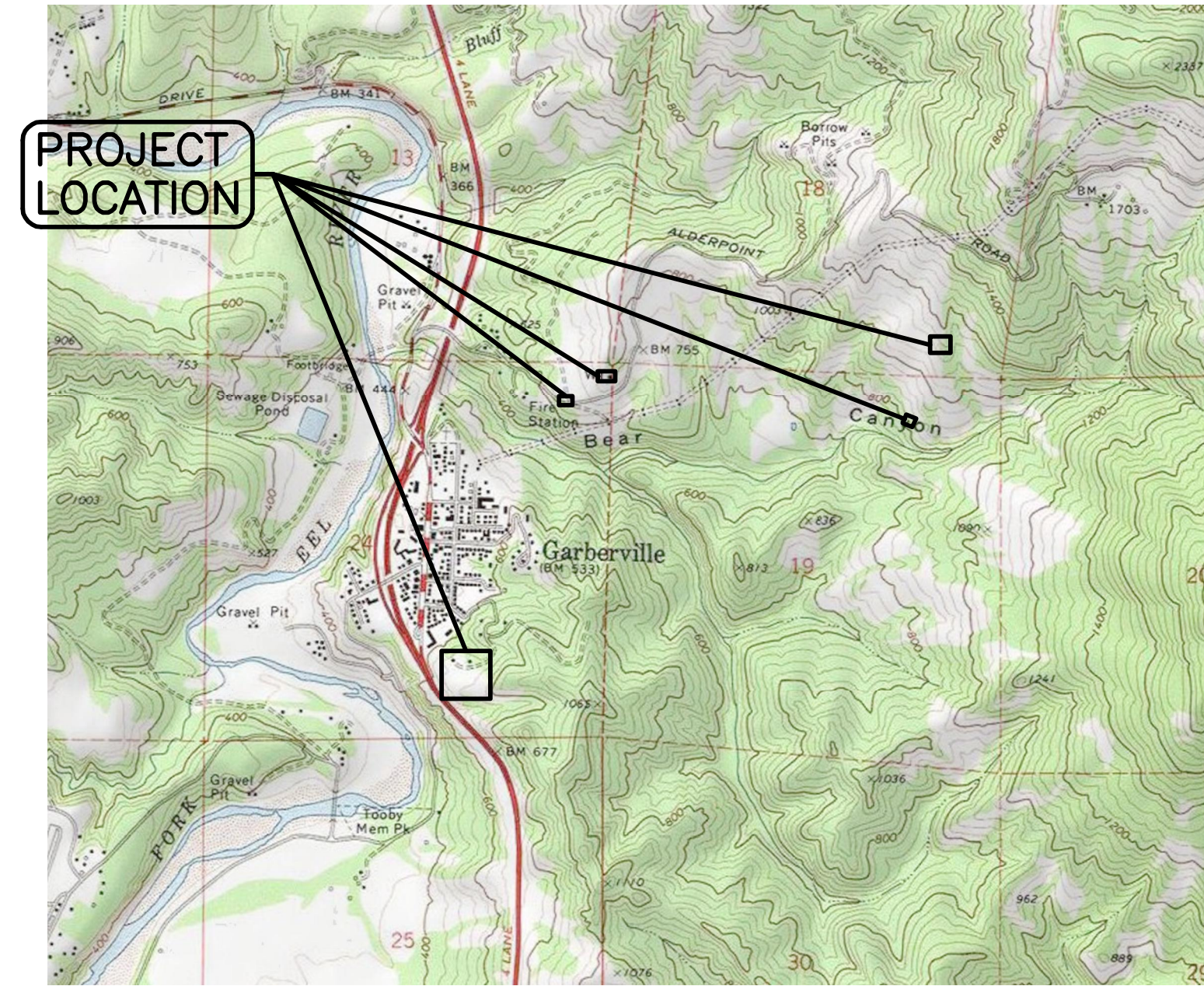
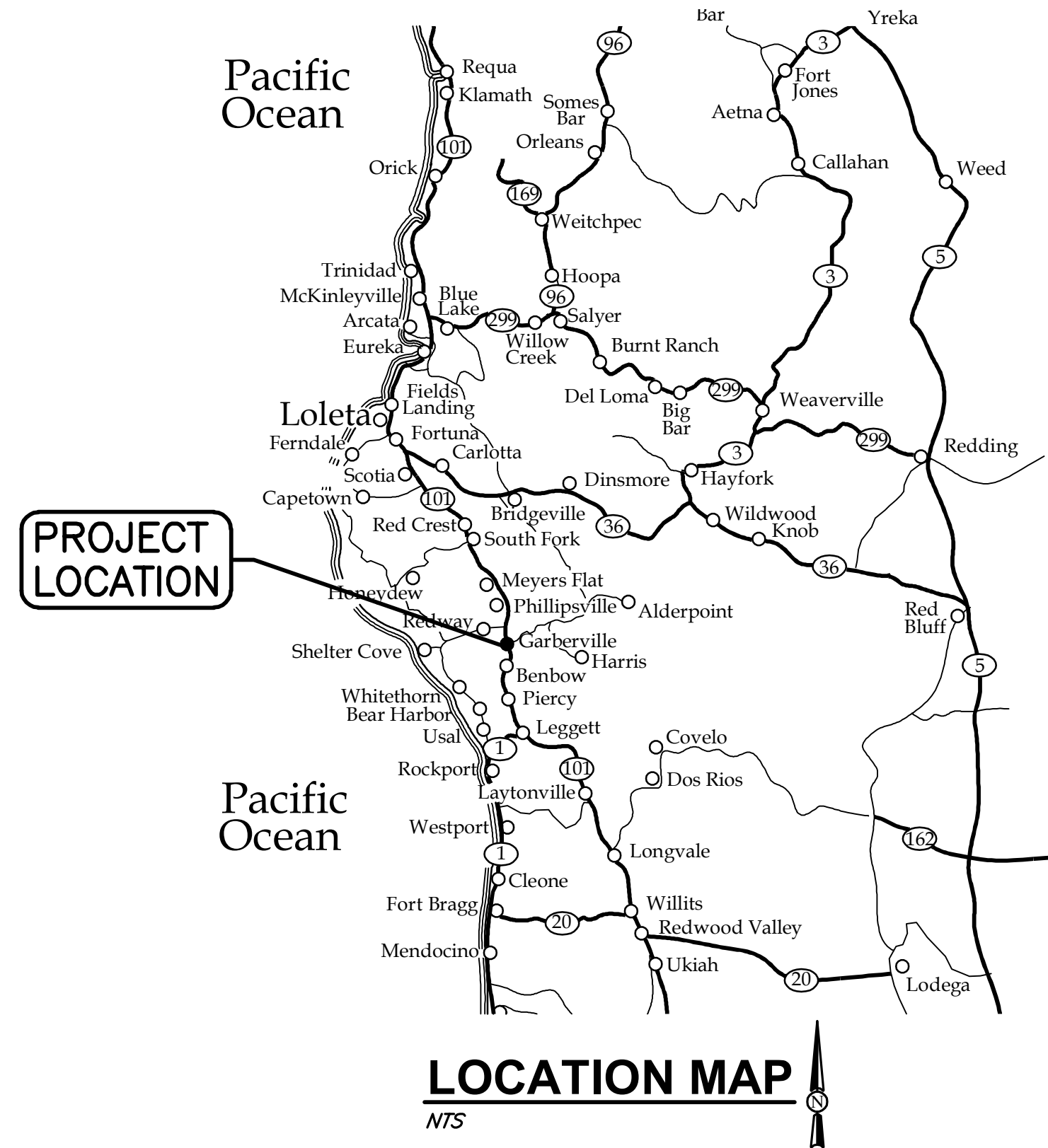
## ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT PROJECT

GARBERVILLE, CALIFORNIA

PREPARED BY:



SEPTEMBER 2023



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\* NOT INCLUDED IN 60% SUBMITTAL

**60% DESIGN**

SAVED: 9/29/2023 4:35 PM NEWELL, PLOTTED: 9/29/2023 4:37 PM NEWELL, CHRIS  
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GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**COVER**

SHEET  
**G1.0**  
 SEQ  
 DATE 09/2023  
 PROJ. NO.  
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## ABBREVIATIONS

A	AGGR	AGGREGATE
	APPROX	APPROXIMATELY
	⊙	AT
B	BLDG	BUILDING
C		
	CAV	COMBINATION AIR VALVE
	CLR	CLEAR
	CLRL	CENTERLINE
	CO	CLEANOUT
	CONC	CONCRETE
	CONT	CONTINUOUS OR CONTINUED
	CTR	CENTER
D		
	DI	DEGREE (ANGLE)
	DI	DROP INLET OR DUCTILE IRON
	DIA	DIAMETER
	DIM	DIMENSION
	DET	DETAIL
	DWG	DRAWING
E		
	(E)	EXISTING
	EG	EXISTING GRADE/GROUND
	EL	ELBOW
	ELEC	ELECTRIC OR ELECTRICAL
	ELEV	ELEVATION
	EQ	EQUAL
	EW	EACH WAY
	EXST	EXISTING
F		
	FDN	FOUNDATION
	FG	FINISHED GRADE
	FH	FIRE HYDRANT
	FL	FLOW LINE
	FLR	FLOOR
	FT	FOOT OR FEET
G		
	GA	GAGE
	GAL	GALLON
	GPM	GALLONS PER MINUTE
	GRD	GRADE OR GROUND
	GV	GATE VALVE
H		
	HDPE	HIGH DENSITY POLYETHYLENE
	HOR	HORIZONTAL
	HT	HEIGHT
I		
	ID	INSIDE DIAMETER
	INV	INVERT
L		
	LB	POUND
	LF	LINEAR FEET
	LT	LEFT
M		
	MATL	MATERIAL
	MAX	MAXIMUM
	MECH	MECHANICAL
	MFR	MANUFACTURER
	MIN	MINIMUM OR MINUTE
	MJ	MECHANICAL JOINT
N		
	(N)	NEW
	NO	NUMBER OR NORMALLY OPEN
	NTS	NOT TO SCALE
	#	NUMBER
O		
	OC	ON CENTER
	OD	OUTSIDE DIAMETER
	OH	OVERHEAD
P		
	PERF	PERFORATED
	PRV	PRESSURE RELIEF VALVE
	PSI	POUNDS PER SQUARE INCH
	PVC	POLYVINYL CHLORIDE PLASTIC
Q		
	QTY	QUANTITY
R		
	R	RADIUS
	RC	RELATIVE COMPACTION
	RD	ROAD
	RFCA	RESTRAINED FLANGE COUPLING ADAPTER
	RSP	ROCK SLOPE PROTECTION
	RT	RIGHT OR RING TIGHT
	R/W	RIGHT OF WAY
S		
	SL	SLOPE
	SCHED	SCHEDULE
	SD	STORM DRAIN
	SF	SQUARE FOOT/FEET
	SHT	SHEET
	SIM	SIMILAR
	STA	STATION
T		
	TDH	TOTAL DYNAMIC HEAD
	TYP	TYPICAL
U		
	UTIL	UTILITY
V		
	VAR	VARIES
	VERT	VERTICAL
	VG	VALLEY GUTTER
W		
	w	WATER OR WIDE FLANGE
	w/	WITH

## UTILITIES LEGEND

### PROPOSED

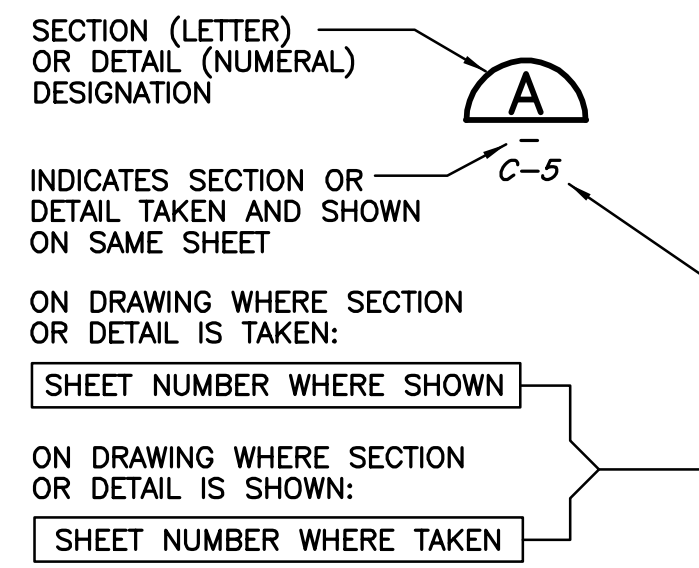
⊘	GATE VALVE
∇	CHECK VALVE
▬	DROP INLET
—SD—	STORM DRAIN LINE
—W—	WATER LINE

## TOPOGRAPHIC LEGEND

### PROPOSED

47.55	FINISH GRADE ELEVATION
	TOP OF CUT
	TOP OF FILL
200	CONTOUR LINE
XXXX	FENCE

## DETAIL AND SECTION DESIGNATION



## CURVE DATA

R	(RADIUS)
L	(LENGTH)
Δ	(DELTA)
T	(TANGENT)

## NOTES

- CONTACT THE ENGINEER FOR SYMBOLS NOT LISTED.
- THIS IS A STANDARD SHEET, THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET WHICH DO NOT APPEAR ON THE PLANS.
- SITE AND UTILITY SYMBOLS SHOWN ON THIS SHEET ARE NOT INTENDED TO REPRESENT THE PHYSICAL SCALE OR SHAPE OF ANY ITEMS. WHERE LARGE-SCALE PLANS ARE PRESENTED, THE SYMBOLS SHOWN HEREON MAY BE REPLACED BY DETAILS MORE SUITED TO THE DRAWING SCALE.

## GENERAL NOTES:

- ALL WORK SHALL CONFORM TO CURRENT CALIFORNIA BUILDING CODE.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDED SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL SECURE NECESSARY PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR SHALL PERFORM TRENCH WORK IN CONFORMANCE WITH CAL/OSHA REQUIREMENTS.
- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, GENERAL CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. ALL WORK AND EQUIPMENT SHALL COMPLY WITH CAL/OSHA REQUIREMENTS. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL INDEPENDENTLY REVIEW GROUND TOPOGRAPHY AND TREE CONDITIONS THROUGHOUT THE SITE, AND ASSUME THE RISK OF COMPLETING THE WORK SET OUT ON THESE PLANS, REGARDLESS OF ROCK, WATER TABLE OR OTHER CONDITIONS WHICH MAY BE ENCOUNTERED IN THE COURSE OF THE WORK.
- ANY DISCREPANCY DISCOVERED BY THE CONTRACTOR IN THESE PLANS, OR ANY FIELD CONDITIONS DISCOVERED BY THE CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK SHOWN HEREIN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ENGINEER IMMEDIATELY UPON DISCOVERY. SAID NOTIFICATION SHALL BE IN WRITING.
- ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED TESTED AND APPROVED PRIOR TO PAVING.
- THE CONTRACTOR SHALL NOT BEGIN EXCAVATING UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) TWO WORKING DAYS BEFORE DIGGING AT (800) 227-2600 FOR LOCATES.
- GRADING AND CONSTRUCTION CONTRACTORS SHALL STOP WORK AND NOTIFY THE OWNER AND THE ENGINEER IF CULTURAL RESOURCES ARE DISCOVERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE THE INSPECTOR 48 HOURS ADVANCE NOTICE OF ANY CONSTRUCTION OR REQUIRED TESTING.
- SHOULD THE CONTRACTOR OR ANY OF HIS AGENTS OR EMPLOYEES ENCOUNTER OR DISCOVER MATERIALS WHICH APPEAR TO BE HAZARDOUS DURING THE PERFORMANCE OF THE WORK, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY AND SUSPEND WORK IN THE AFFECTED AREA UNTIL THE ENGINEER HAS INSPECTED THE LOCATION AND MATERIALS IN QUESTION. SHOULD IT BE NECESSARY TO UNDERTAKE REMEDIATION, THE ENGINEER WILL GIVE WRITTEN NOTICE TO SUSPEND WORK IN THE AFFECTED AREA UNTIL THE PROPER COURSE OF ACTION HAS BEEN DETERMINED. OPERATIONS IN THE AFFECTED AREA SHALL BE RESUMED ONLY UPON WRITTEN NOTICE BY THE ENGINEER.
- ALL SITE GRADING WILL BE INSPECTED BY THE ENGINEER. COMPACTION TESTING WILL BE CONDUCTED AFTER SUFFICIENT DENSITIES HAVE BEEN ACHIEVED IN THE CONTRACTOR'S OPINION. THE CONTRACTOR SHALL MAKE ALL REQUESTS FOR MATERIALS TESTING AT LEAST 48 HOURS IN ADVANCE. ANY SOILS THAT FAIL TO MEET THE REQUIRED COMPACTION LEVELS SHALL BE REMOVED, AND RECOMPACTED. ALL COSTS ASSOCIATED WITH ACHIEVING COMPACTION STANDARDS SHALL BE INCLUDED IN THE CONTRACTOR'S ORIGINAL BID.
- THE TOPSOIL SHALL BE REMOVED FROM CUT AND FILL AREAS AND SHALL NOT BE USED FOR ENGINEERED FILL. TOPSOIL SHALL BE STOCKPILED SEPARATELY AND REPLACED OVER AREAS OF EXPOSED SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES.
- NO CHANGES OR MODIFICATIONS SHALL BE MADE TO THESE PLANS WITHOUT WRITTEN APPROVAL BY THE ENGINEER.

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	BY
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	DATE
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	CHK	JSO
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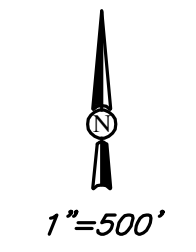
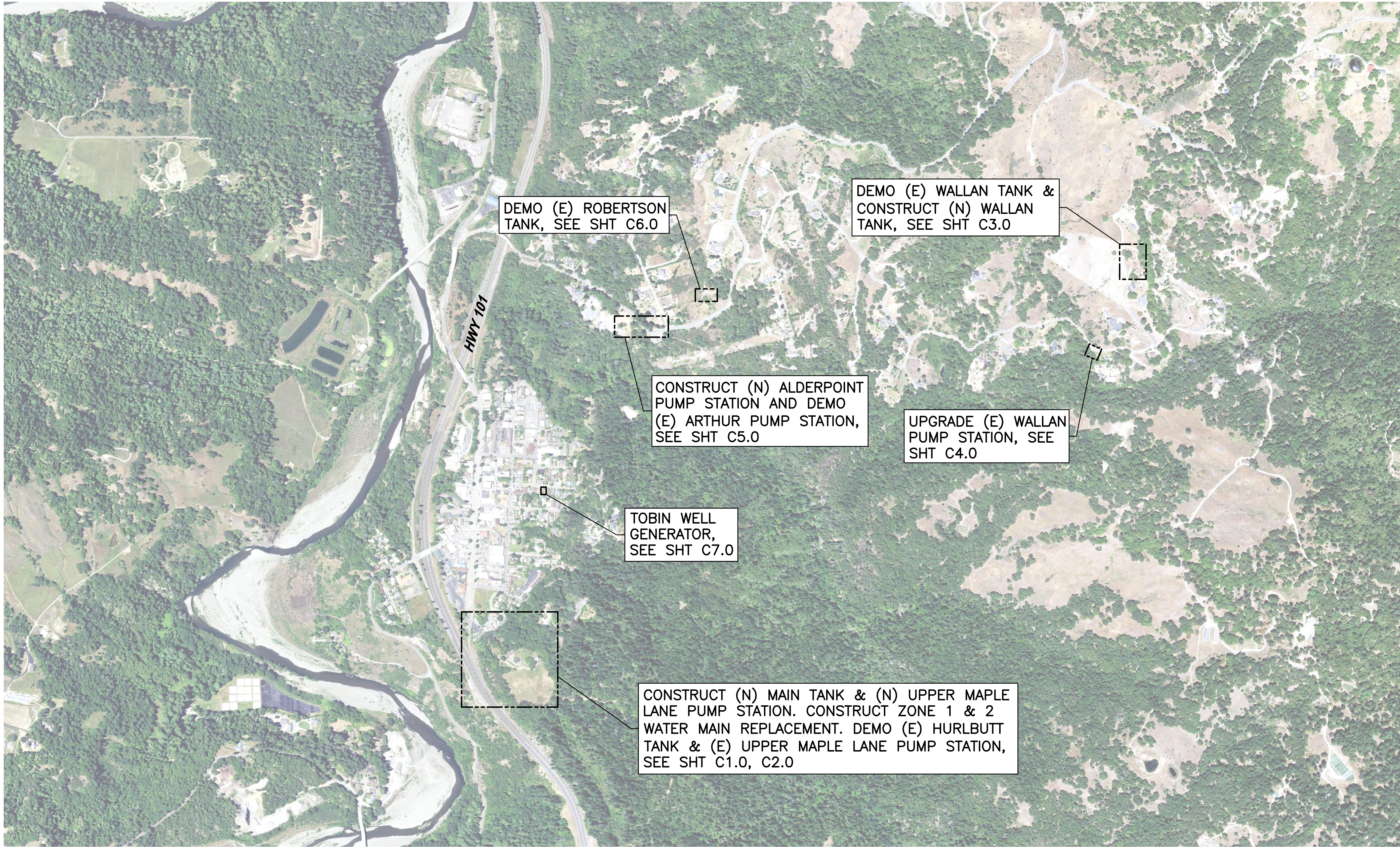
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 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

SHEET	G2.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

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## GENERAL NOTES

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GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

**PROJECT OVERVIEW**

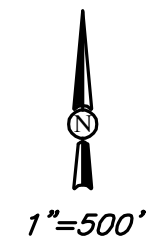
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**G3.0**

SEQ

DATE 09/2023

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DESIGN	BY
DR CDN/JWF	REVISION
CHK JSO	DATE
APVD	NO.
<b>GARBERVILLE SANITARY DISTRICT          ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT          GARBERVILLE, CALIFORNIA</b>	
<b>SITE ACCESS PLAN</b>	
SHEET	G4.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

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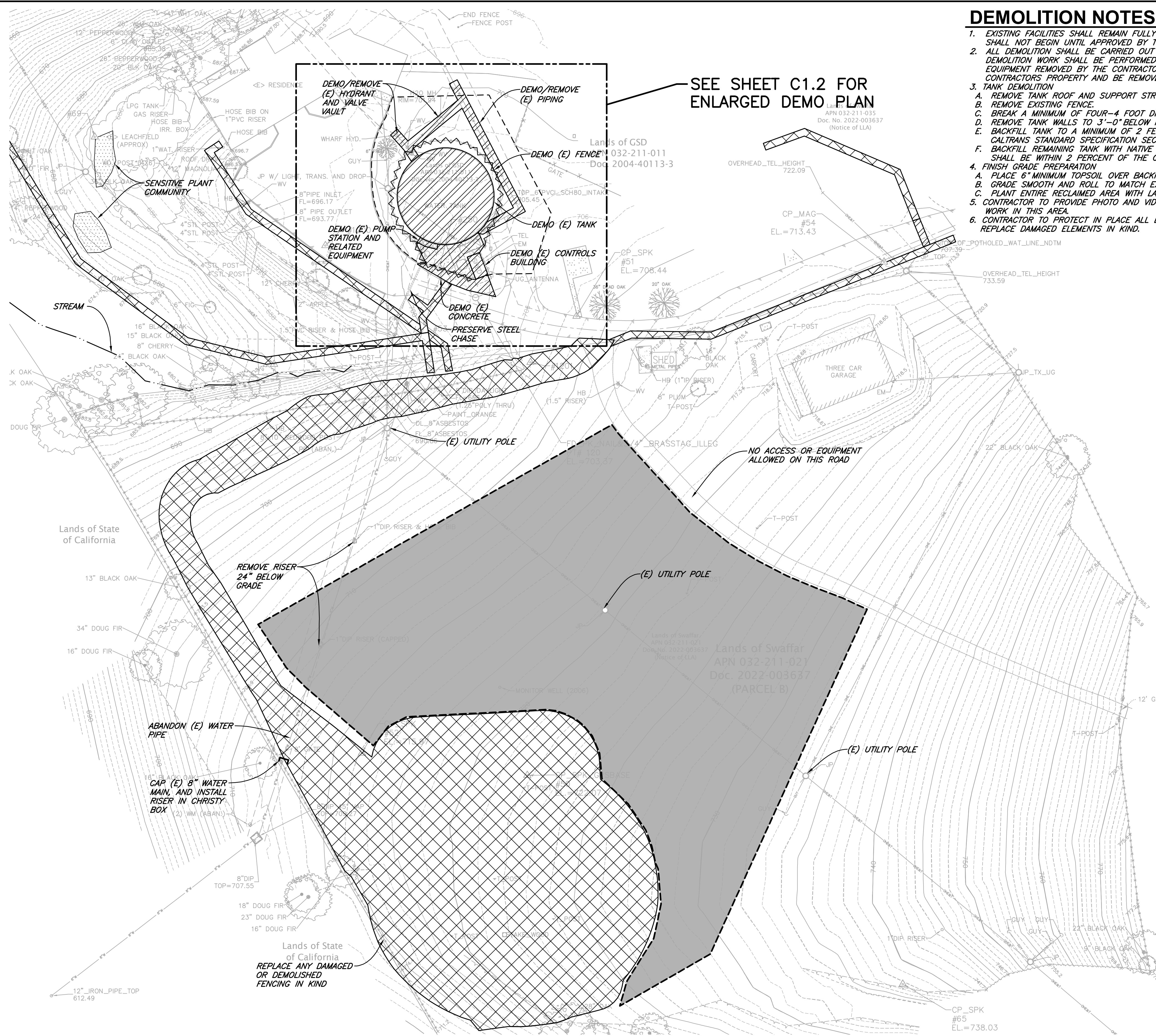
PLAN  
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GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA	
<b>MAIN TANK OVERVIEW</b>	
SHEET	C1.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

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SEE SHEET C1.2 FOR ENLARGED DEMO PLAN

**DEMOLITION NOTES:**

1. EXISTING FACILITIES SHALL REMAIN FULLY OPERATIONAL UNTIL NEW FACILITIES ARE FULLY OPERATIONAL. DEMOLITION OF EXISTING FACILITIES SHALL NOT BEGIN UNTIL APPROVED BY THE OWNER AND THE ENGINEER.
2. ALL DEMOLITION SHALL BE CARRIED OUT IN A MANNER WHICH WILL PREVENT INJURY TO WORKERS AND DAMAGE TO ADJACENT FACILITIES. DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND ORDINANCES. EXISTING MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL NOT BE REUSED IN THE WORK UNLESS OTHERWISE SPECIFIED, AND BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE JOB SITE AND PROPERLY DISPOSED OF, EXCEPT AS NOTED BELOW.
3. TANK DEMOLITION
  - A. REMOVE TANK ROOF AND SUPPORT STRUCTURE.
  - B. REMOVE EXISTING FENCE.
  - C. BREAK A MINIMUM OF FOUR-4 FOOT DIAMETER HOLES THROUGH TANK FLOOR TO PROVIDE DRAINAGE THROUGH TANK.
  - D. REMOVE TANK WALLS TO 3'-0" BELOW FINISHED GRADE. CONCRETE RUBBLE TO BE PAVED EVENLY ACROSS TANK BOTTOM.
  - E. BACKFILL TANK TO A MINIMUM OF 2 FEET OVER TOP OF CONCRETE RUBBLE WITH CLASS 2 PERMEABLE MATERIAL IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATION SECTION 68-1.025.
  - F. BACKFILL REMAINING TANK WITH NATIVE MATERIAL TO 6" BELOW FINISHED GRADE. NATIVE MATERIAL TO BE PLACED IN 8-INCH LIFTS AND SHALL BE WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT. COMPACT NATIVE MATERIAL TO 90% RELATIVE COMPACTION.
4. FINISH GRADE PREPARATION
  - A. PLACE 6" MINIMUM TOPSOIL OVER BACKFILL.
  - B. GRADE SMOOTH AND ROLL TO MATCH EXISTING CONTOURS.
  - C. PLANT ENTIRE RECLAIMED AREA WITH LAWN GRASS AND APPLY FERTILIZER AT MANUFACTURERS RECOMMENDED RATES.
5. CONTRACTOR TO PROVIDE PHOTO AND VIDEO SURVEY OF PROPERTY TO DOCUMENT EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK IN THIS AREA.
6. CONTRACTOR TO PROTECT IN PLACE ALL LANDSCAPING AND ARCHITECTURAL ELEMENTS. IF DAMAGE OCCURS, THE CONTRACTOR IS TO REPLACE DAMAGED ELEMENTS IN KIND.

**LEGEND**

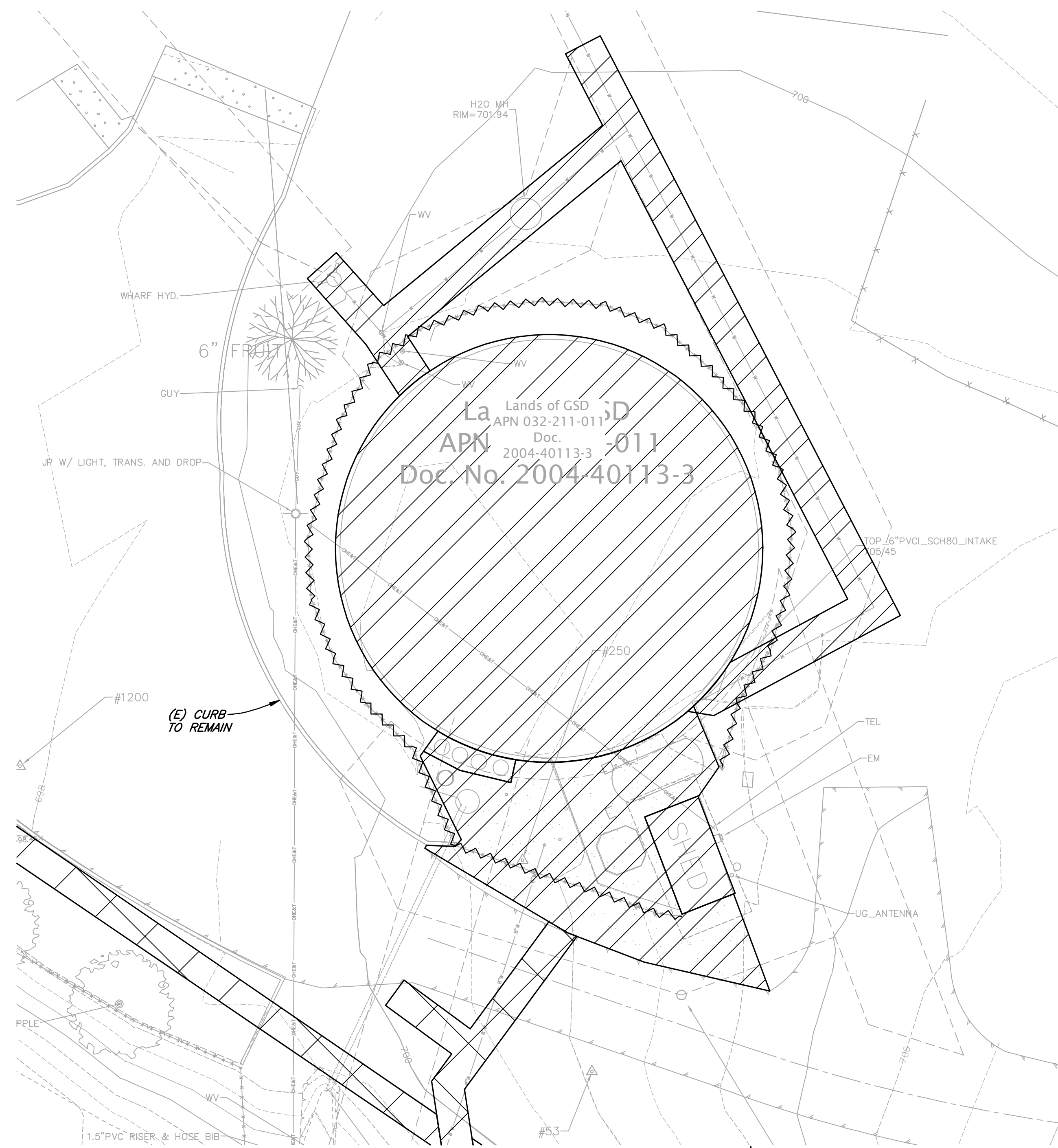
- STAGING & STOCKPILING AREA
- CLEARING AND GRUBBING
- DEMOLITION
- SENSITIVE PLANT COMMUNITY

**PLAN**  
1"=30'

**60% DESIGN**


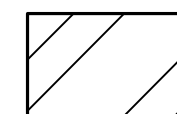
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<b>GARBERVILLE SANITARY DISTRICT          ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT          GARBERVILLE, CALIFORNIA          MAIN TANK SITE PREPERATION AND          DEMOLITON PLAN</b>	
SHEET <b>C1.1</b>	
SEQ	
DATE <b>09/2023</b>	
PROJ. NO. <b>022067</b>	

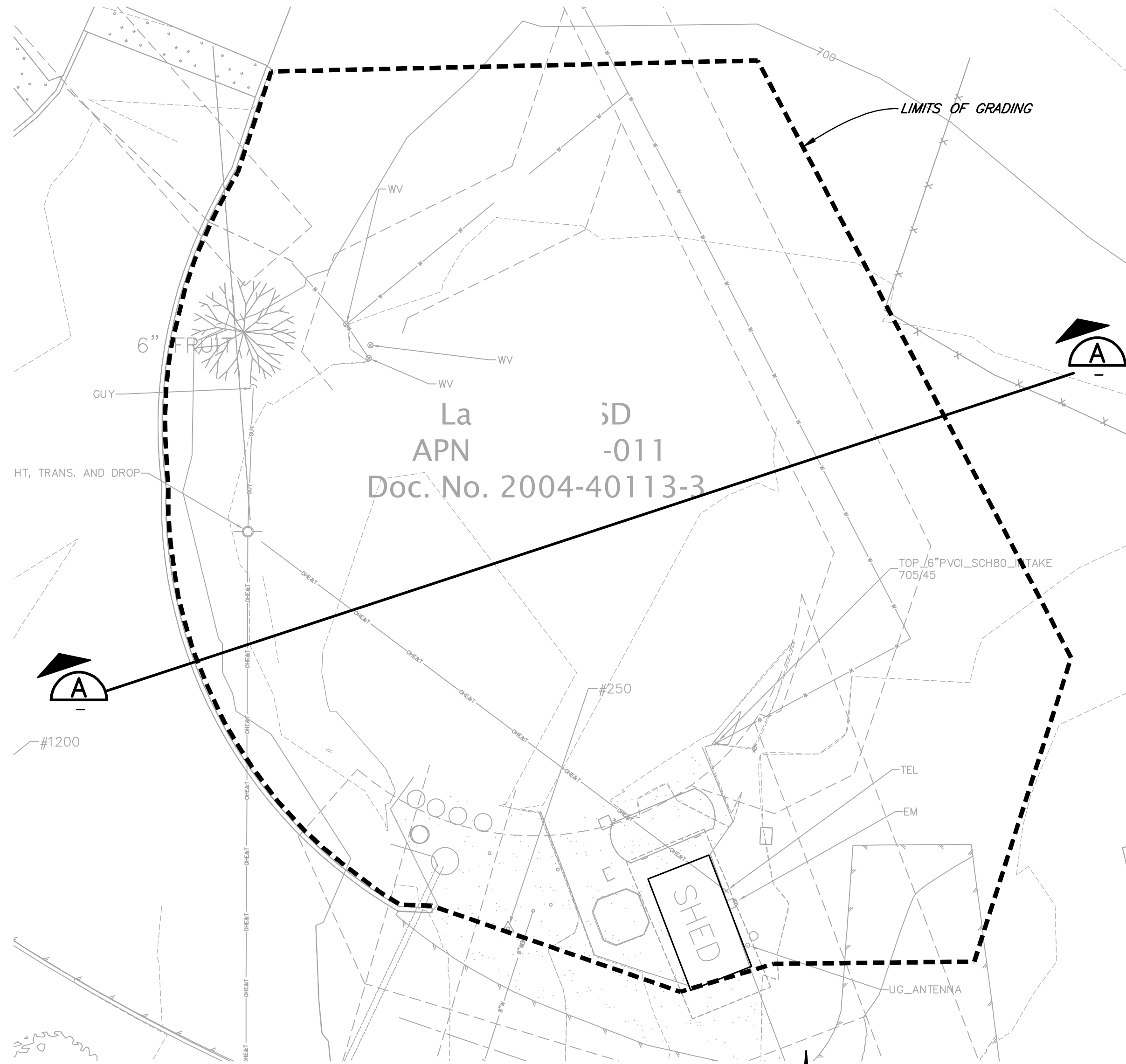
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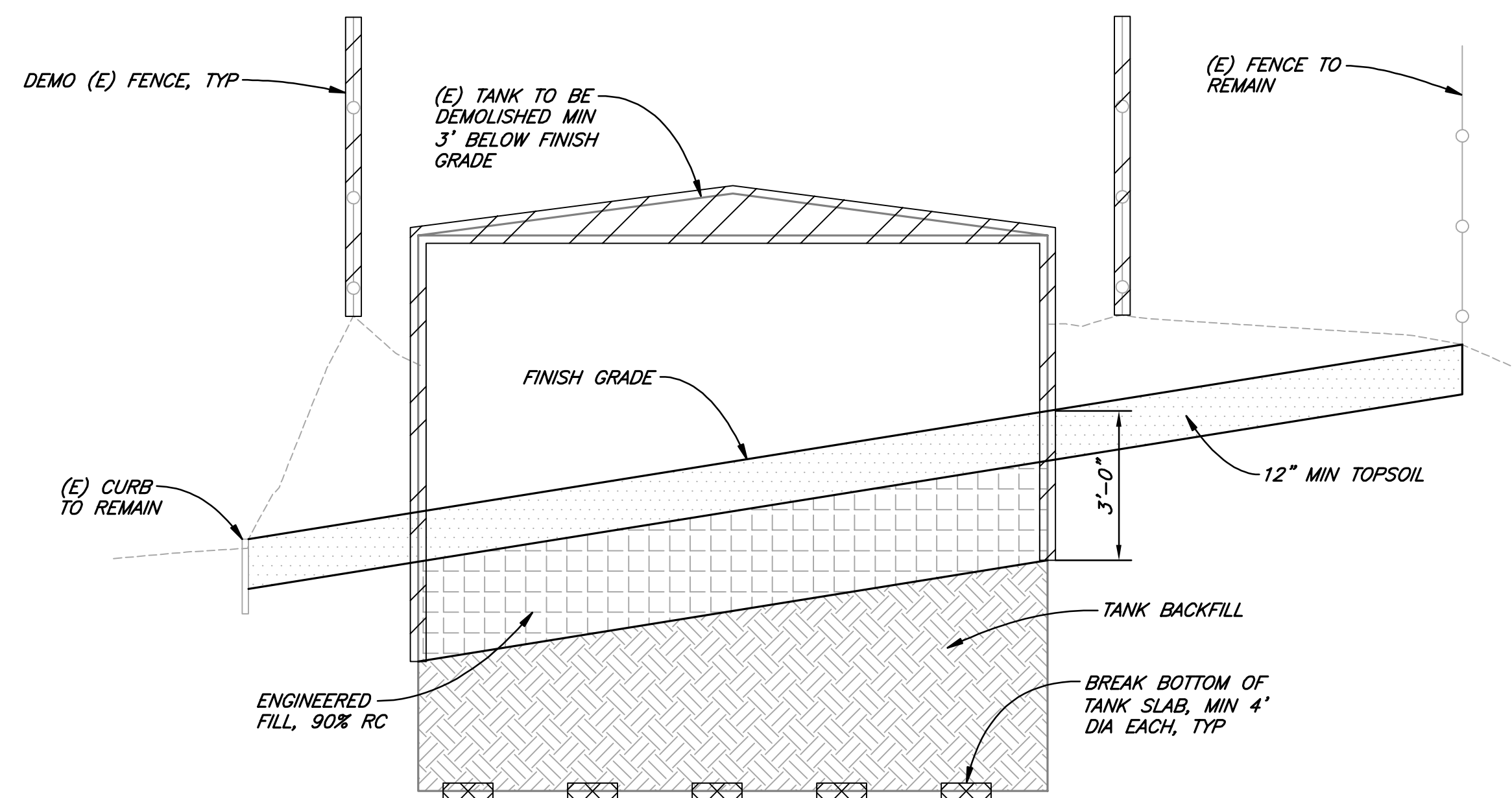
**ENLARGED DEMOLITION PLAN**  
 1"=10'

**LEGEND**

-  CLEARING AND GRUBBING
-  DEMOLITION



**SITE RESTORATION PLAN**  
 1"=20'




**SECTION A**  
 NTS

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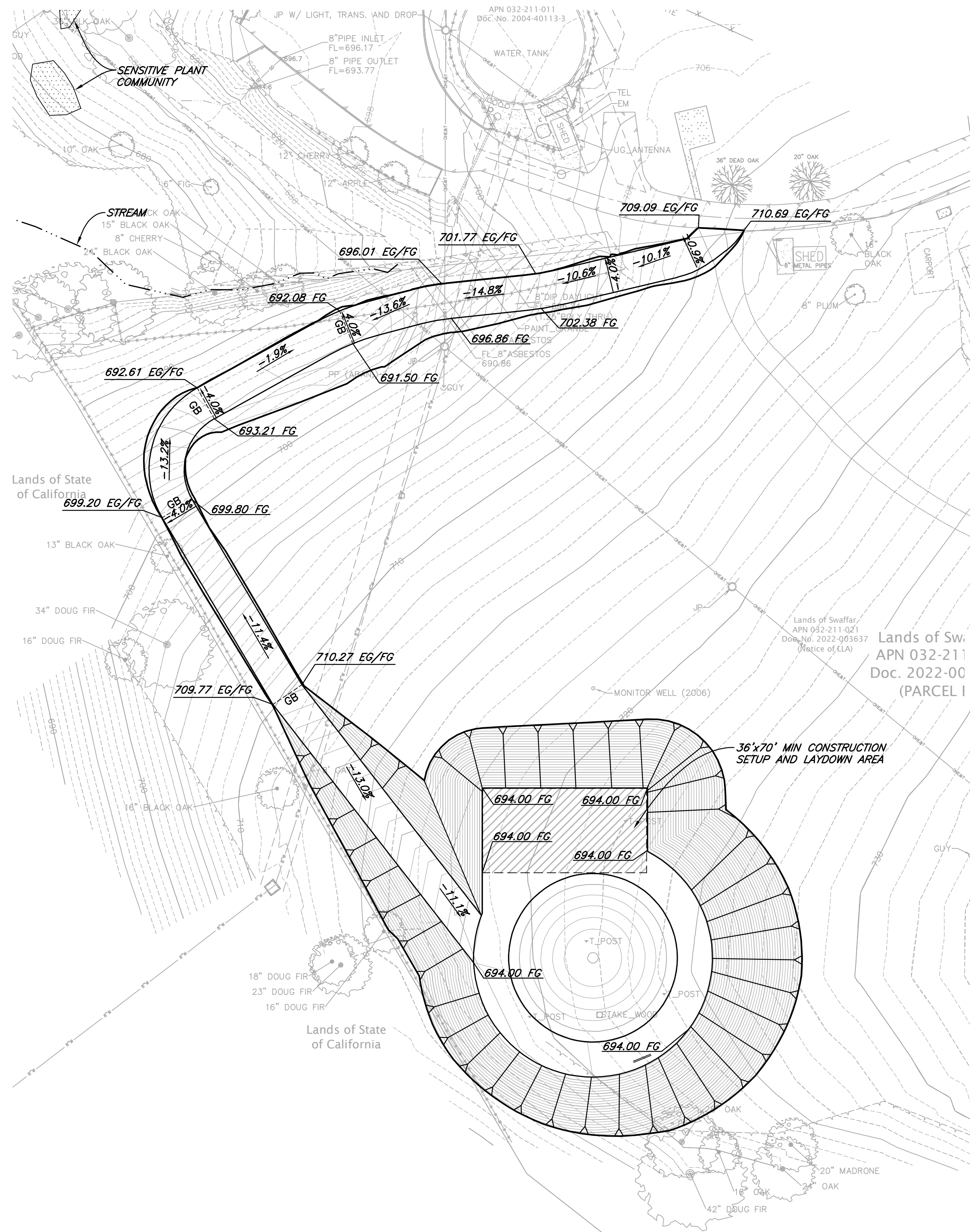
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 GARBERVILLE, CALIFORNIA

**ENLARGED DEMOLITION AND RESTORATION PLAN**

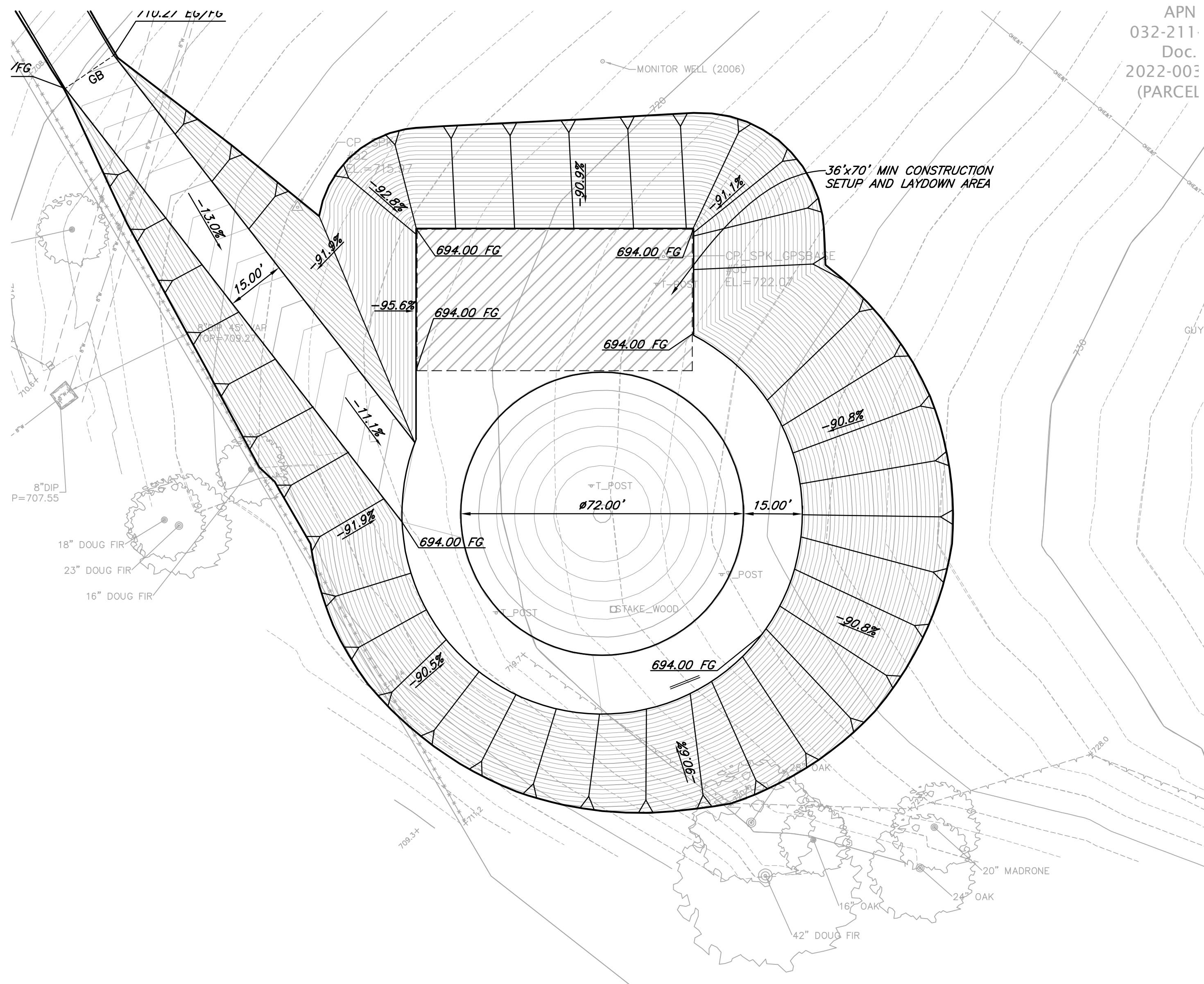
SHEET  
**C1.2**

SEQ  
 DATE 09/2023  
 PROJ. NO.  
 022067

SAVED: 9/29/2023 4:30 PM CNEWELL, PLOTTED: 9/29/2023 4:38 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-TANK-INT-GRDC.dwg



**PLAN**  
 1"=30'



**PLAN**  
 1"=20'

**NOTES:**

1. EXCAVATION GRADING DOES NOT SHOW EXCAVATION FOR TANK FOOTINGS, PIPING, ETC.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF ALL TEMPORARY EXCAVATIONS. REFER TO SHN GEOTECH REPORT FOR TEMPORARY SHORING PRECAUTIONS.

**60% DESIGN**

APN 032-211-011  
 Doc. 2022-003  
 (PARCEL)

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NO.	DATE	REVISION	BY

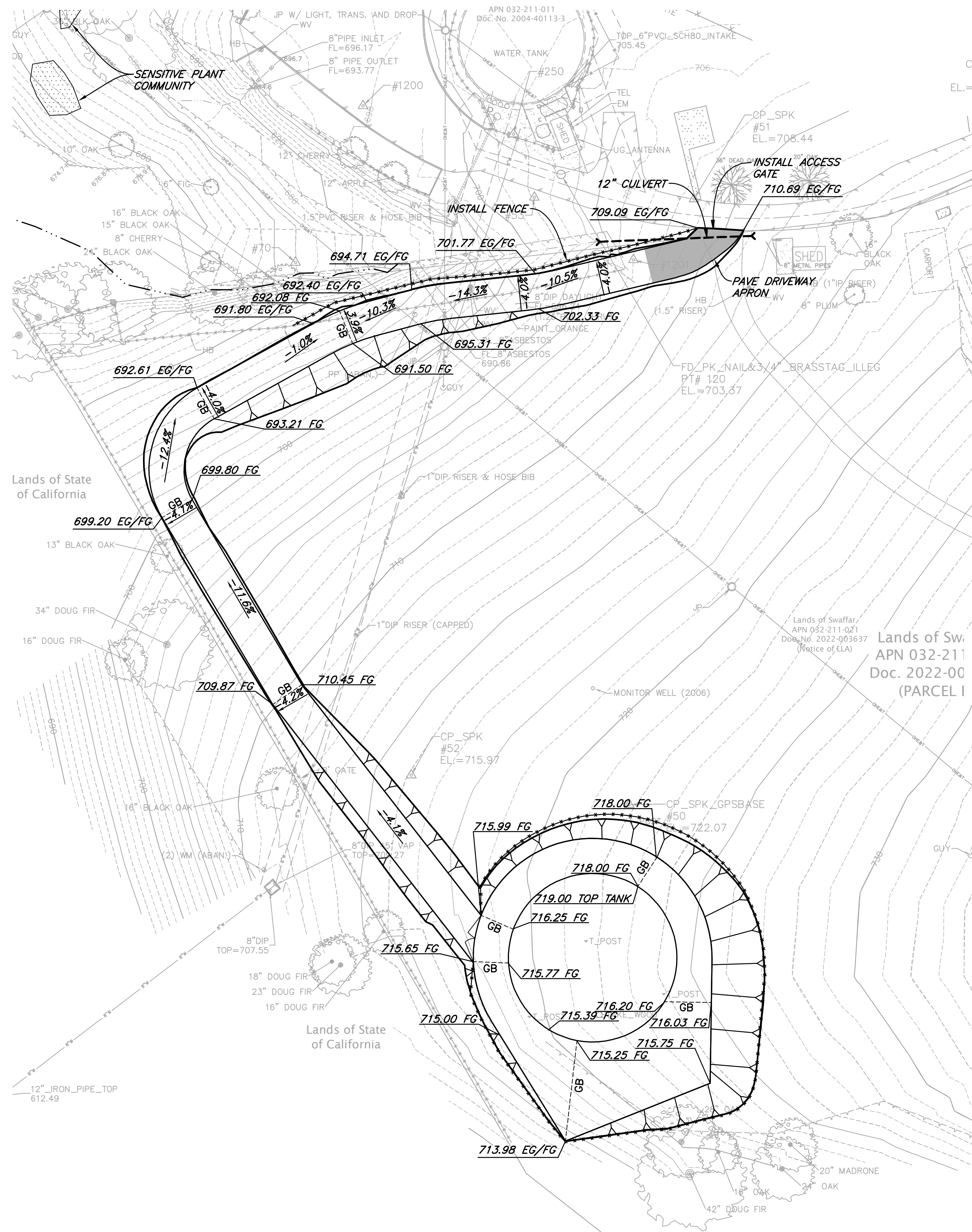
DSGN	MM
DR	JWF/CDN
CHK	JSO
APVD	

GARBerville SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBerville, CALIFORNIA  
**MAIN TANK CONSTRUCTION  
 EXCAVATION PLAN**

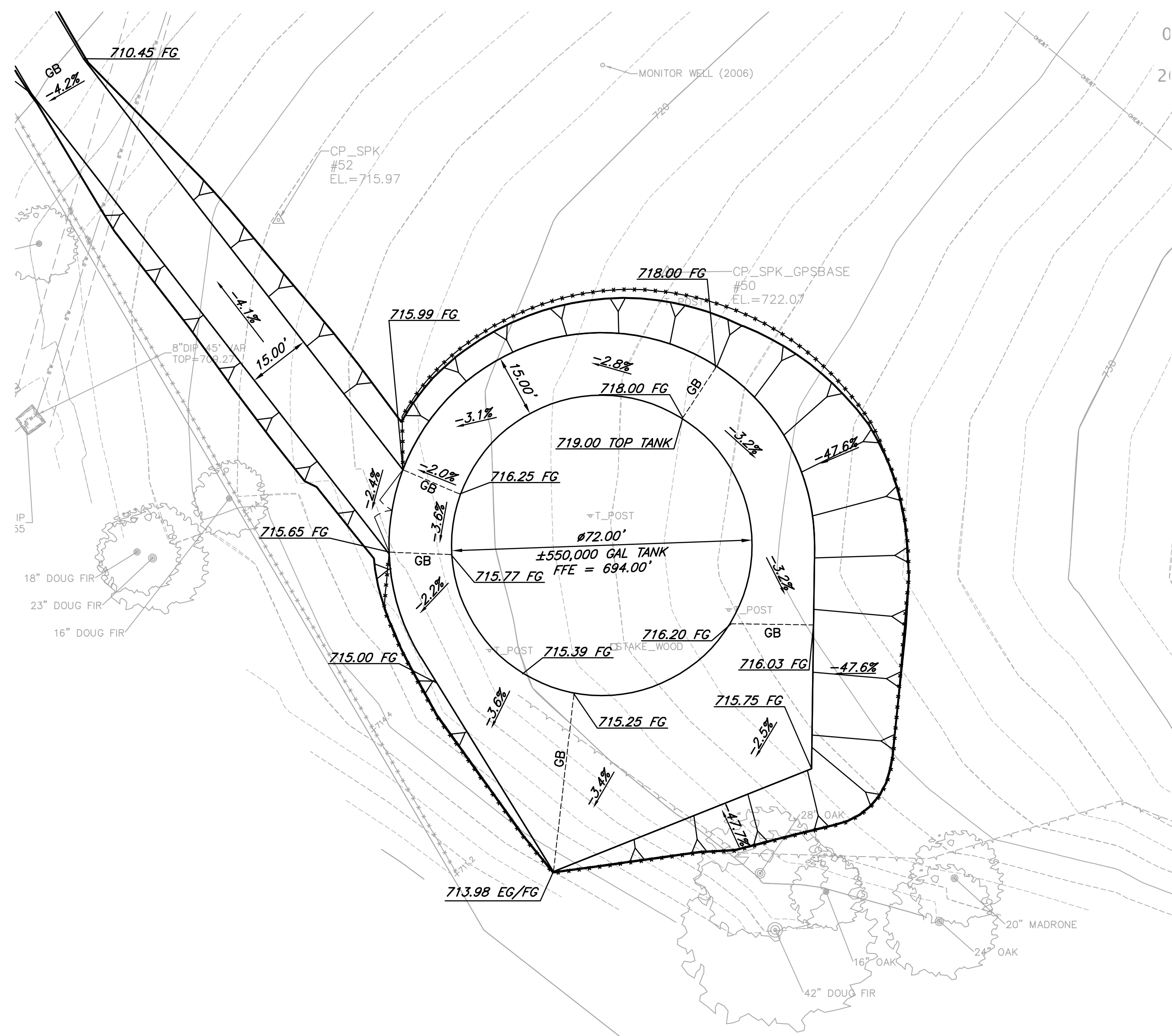
SHEET	C1.3
SEQ	
DATE	09/2023
PROJ. NO.	022067



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 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-TANK-FIN-GRDC.dwg




**PLAN**  
 1"=30'

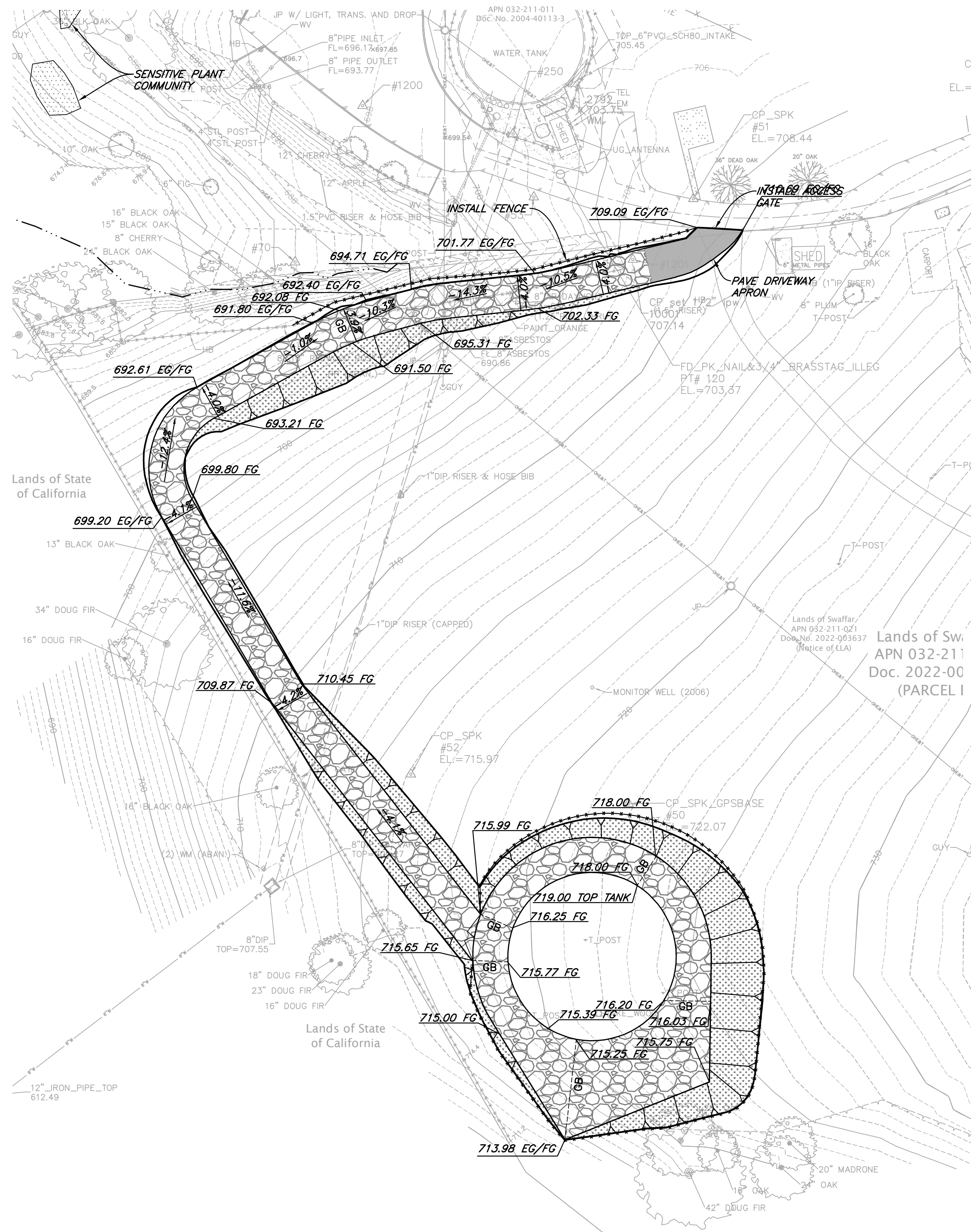


**PLAN**  
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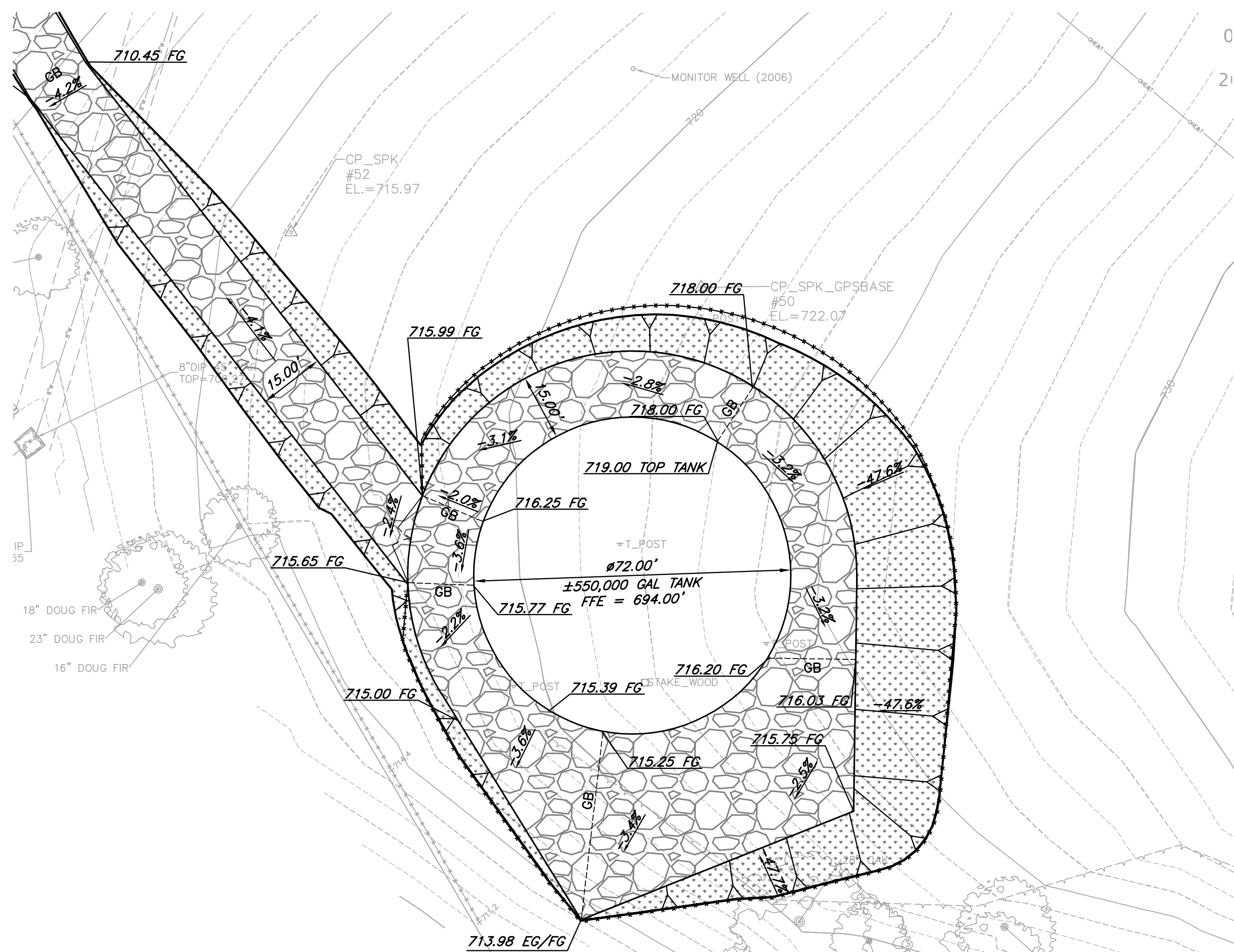
**60% DESIGN**

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		BY	
		REVISION	
DATE		NO.	
DSGN	MM	DR	JWF/CDN
CHK	JSO	APVD	
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>MAIN TANK FINISH GRADING PLAN</b>			
SHEET	C1.4		
SEQ			
DATE	09/2023		
PROJ. NO.	022067		

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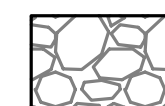

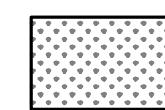


**PLAN**  
1"=30'



**PLAN**  
1"=20'

**LEGEND**

-  CLASS 2 AB AT 95% RC
-  AC PAVEMENT
-  EROSION CONTROL SEEDING/PLANTING

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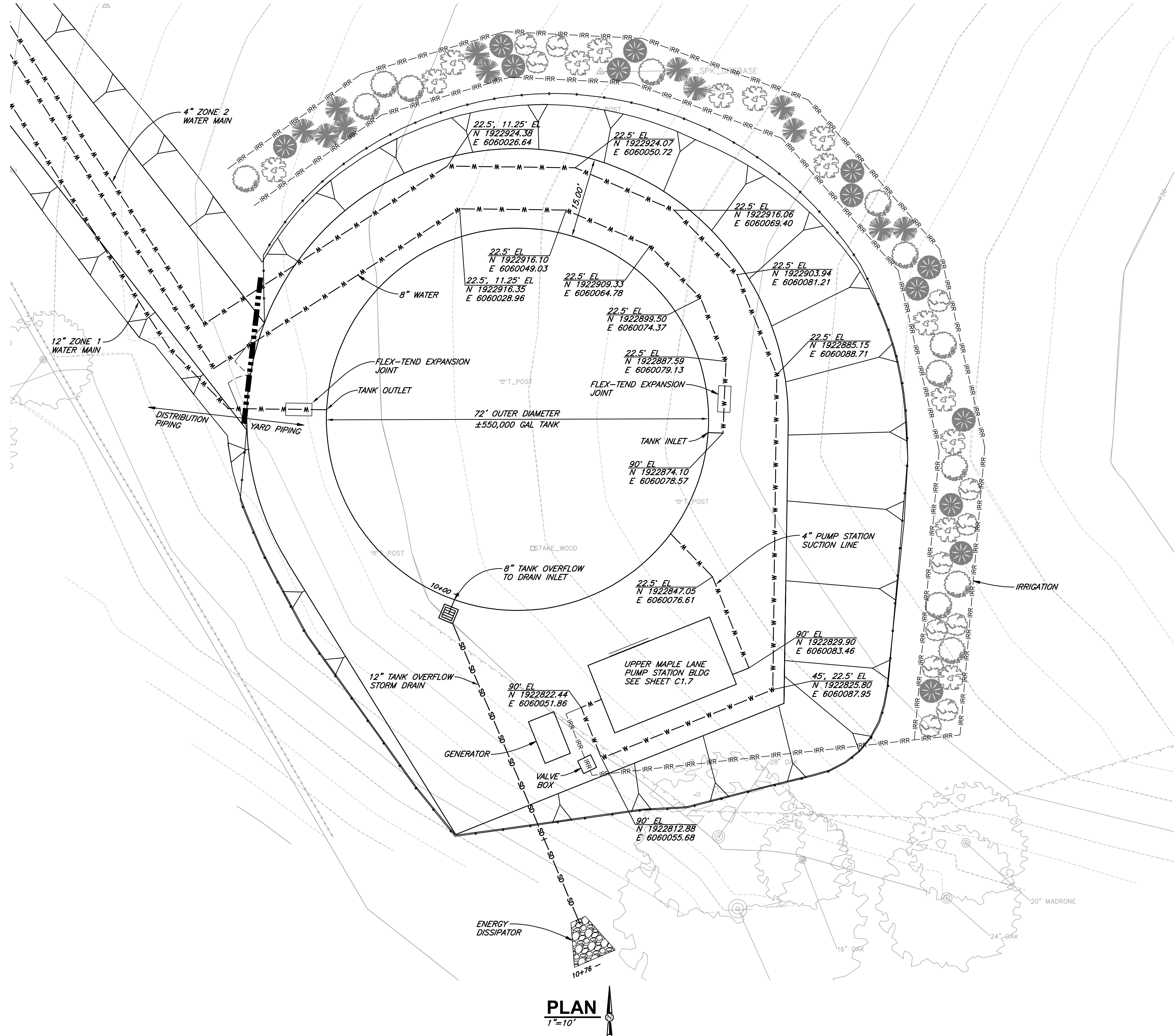
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DR	JWF/CDN
CHK	JSO
APVD	

GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK FINISH SURFACE MATERIALS**

SHEET	C1.5
SEQ	
DATE	09/2023
PROJ. NO.	022067

**60% DESIGN**

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 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-HURLBUTT-TANK-YARD-PIPE.dwg



**PLAN**  
 1"=10'

**60% DESIGN**

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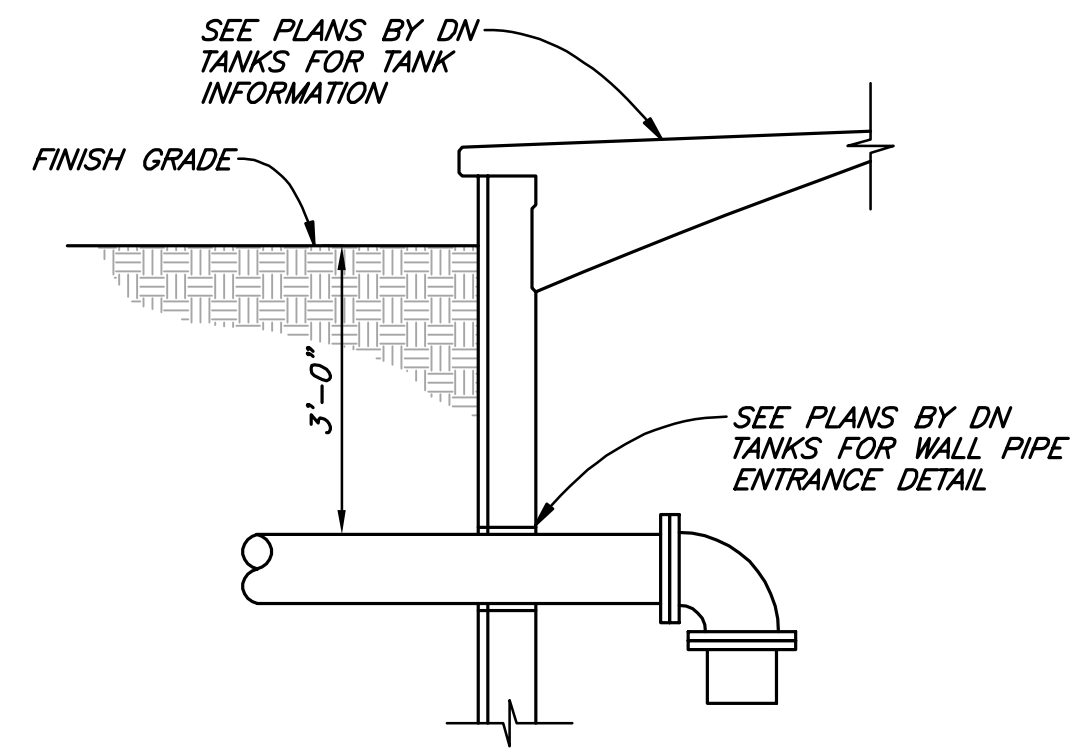
NO.	DATE	REVISION	BY

DSGN	MM
DR	JWF/CDN
CHK	JSO
APVD	

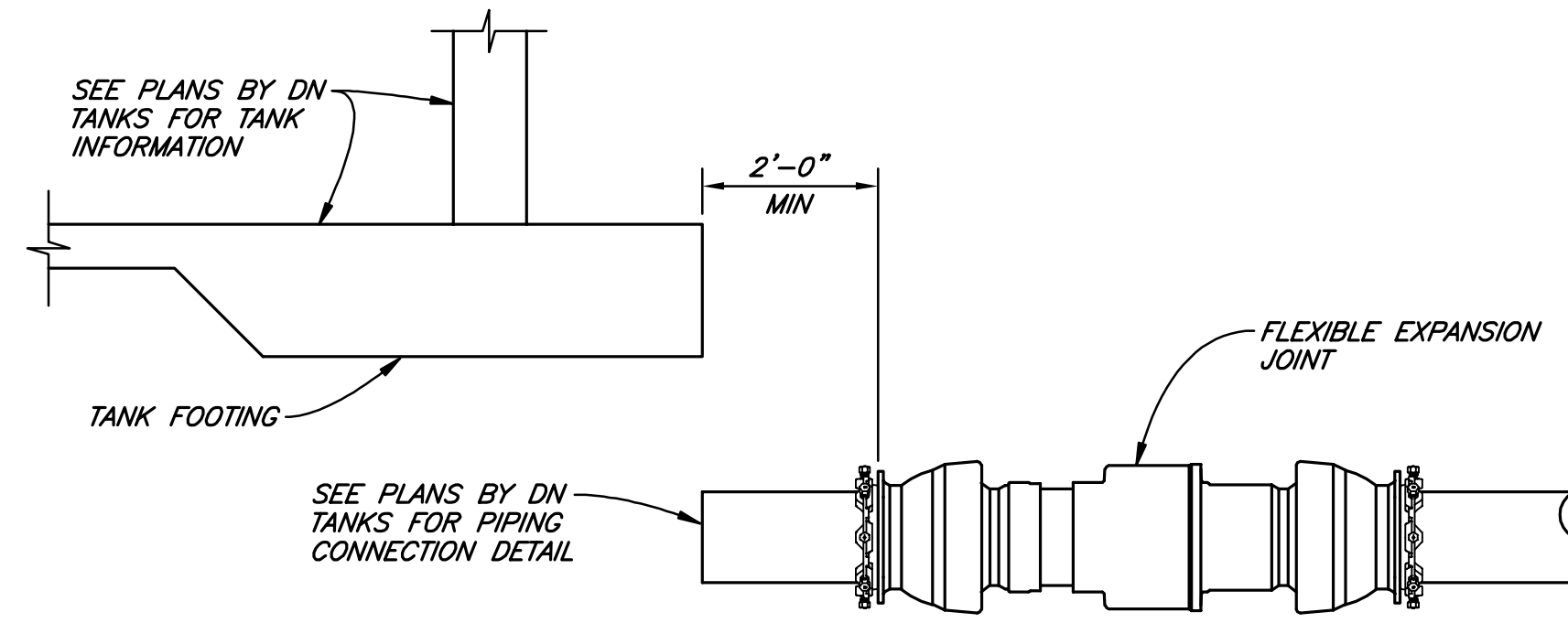
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK SITE PLAN & YARD PIPING**

SHEET	<b>C1.6</b>
SEQ	
DATE	09/2023
PROJ. NO.	022067

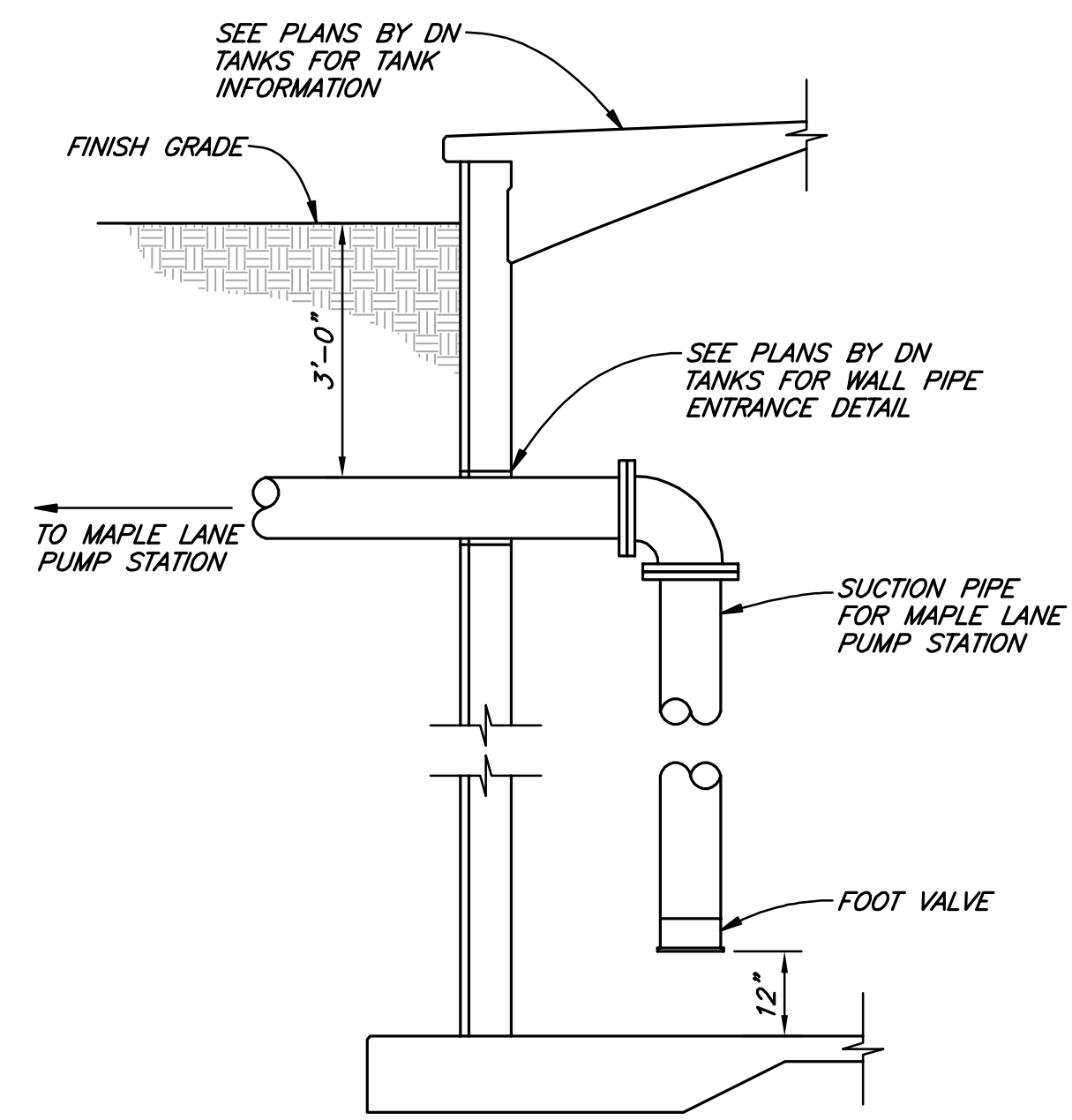
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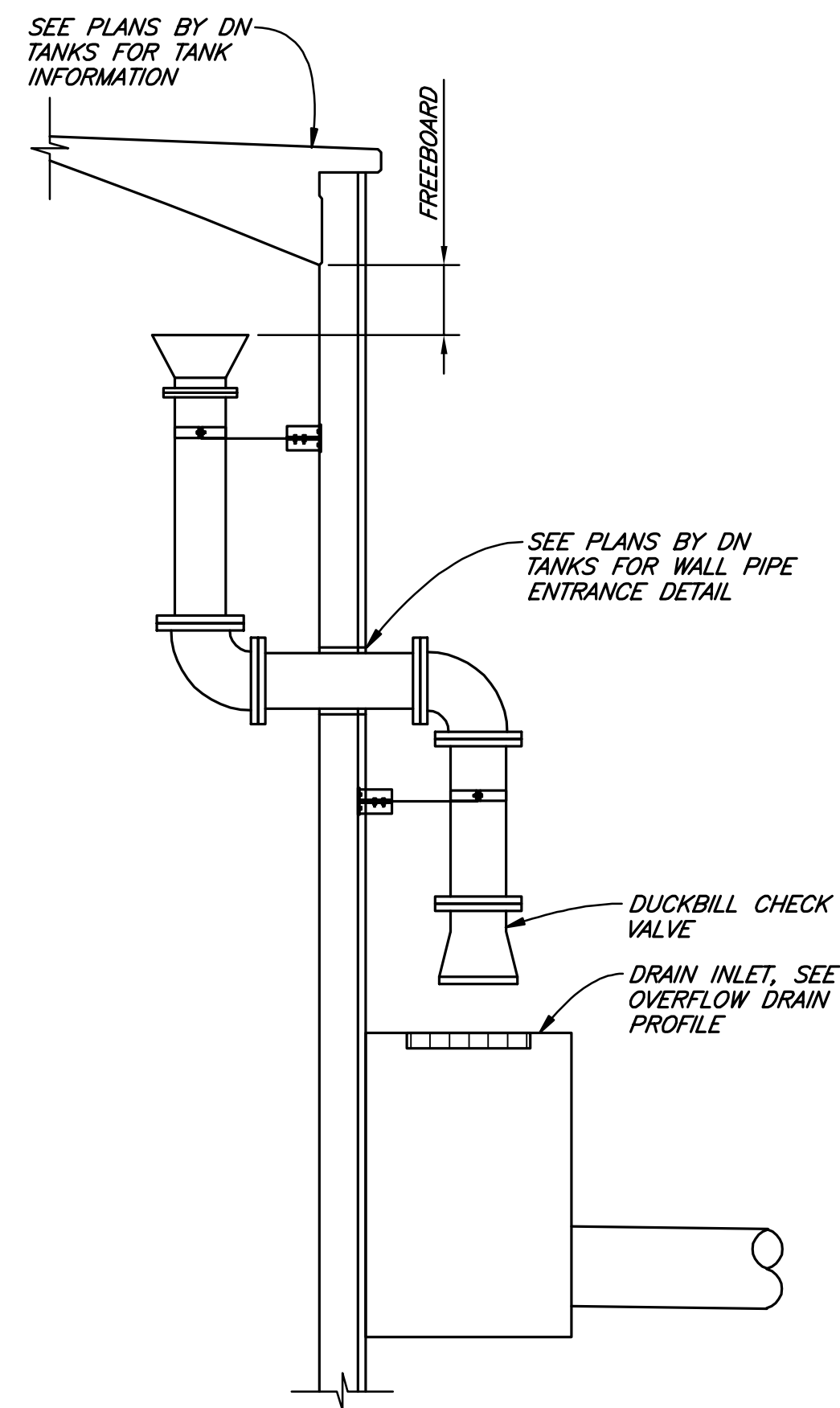
**TANK INLET**  
NTS



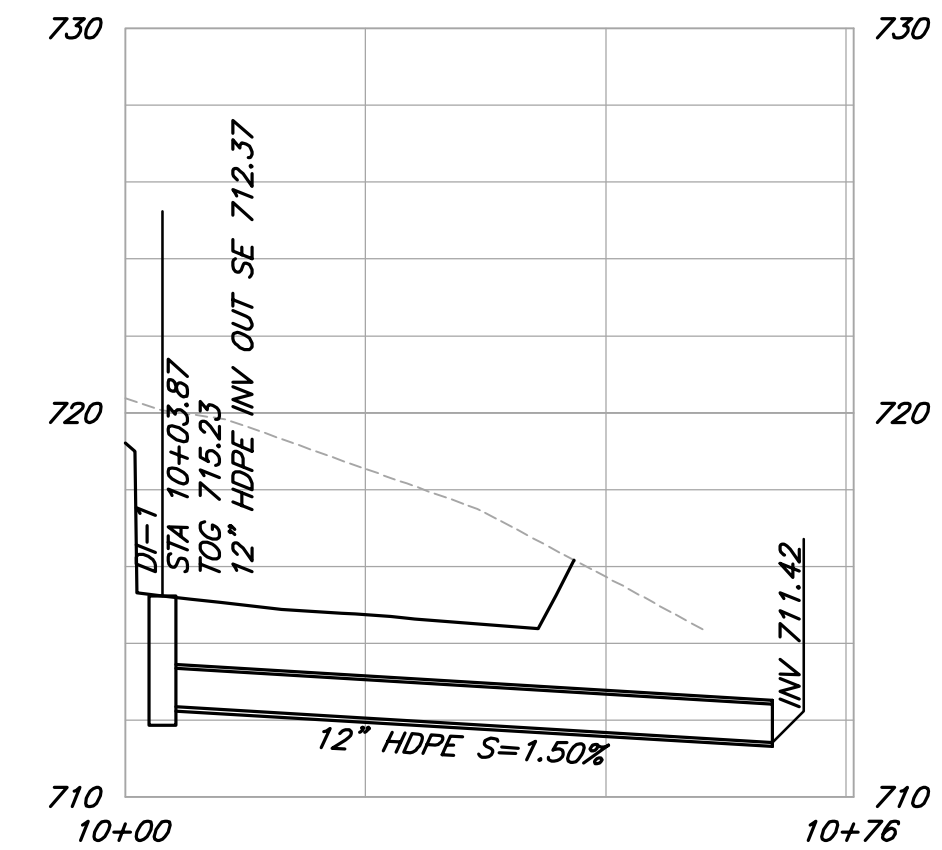
**TANK OUTLET**  
NTS



**UPPER MAPLE LANE PS CONNECTION**  
NTS



**TANK OVERFLOW**  
NTS

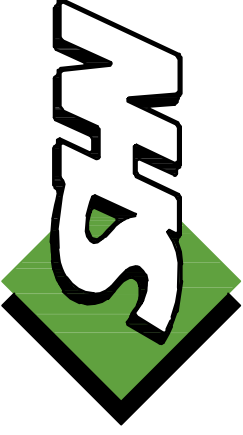


**OVERFLOW DRAIN PROFILE**  
SCALE: 1"=20' H  
1"=5' H

**60% DESIGN**

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NO.	DATE	REVISION	BY

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CHK	JSO
APVD	

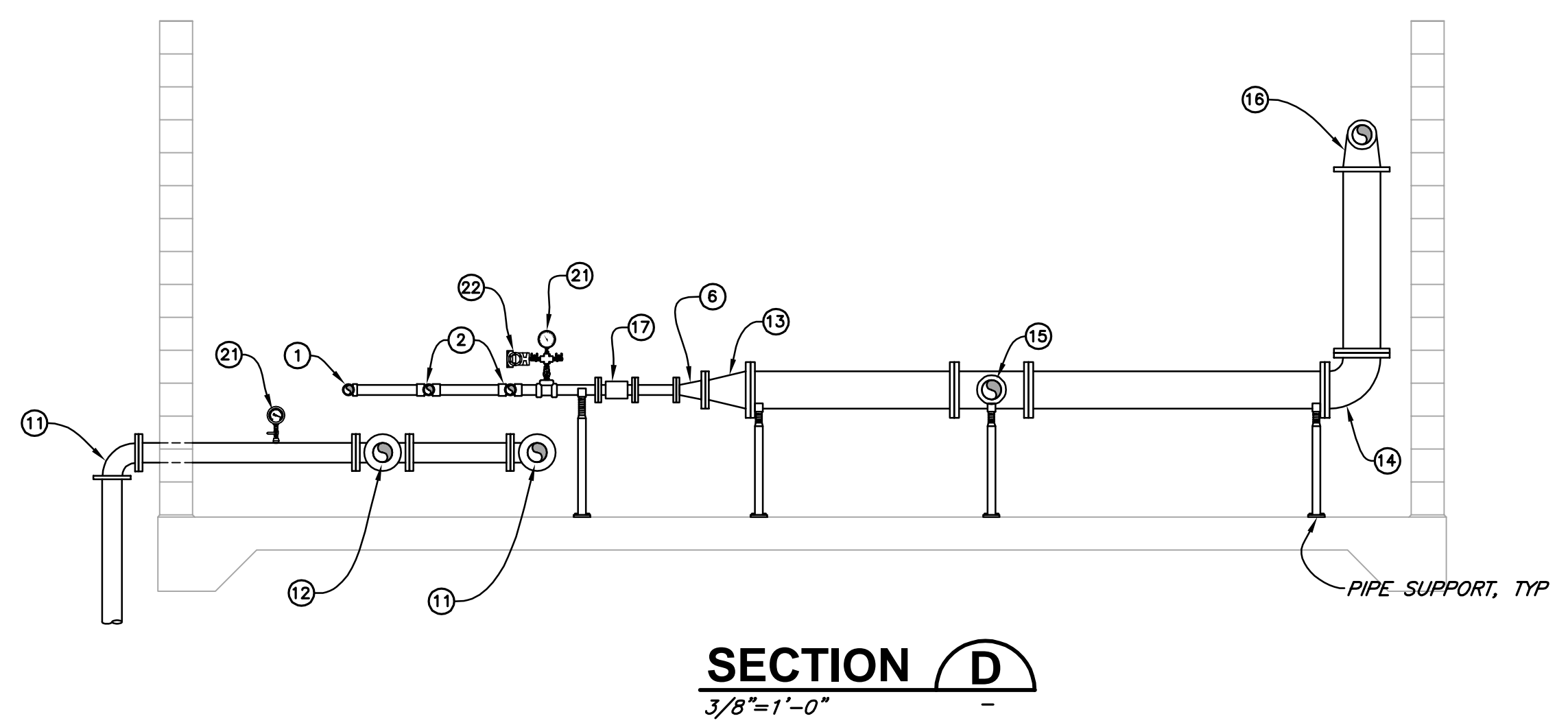
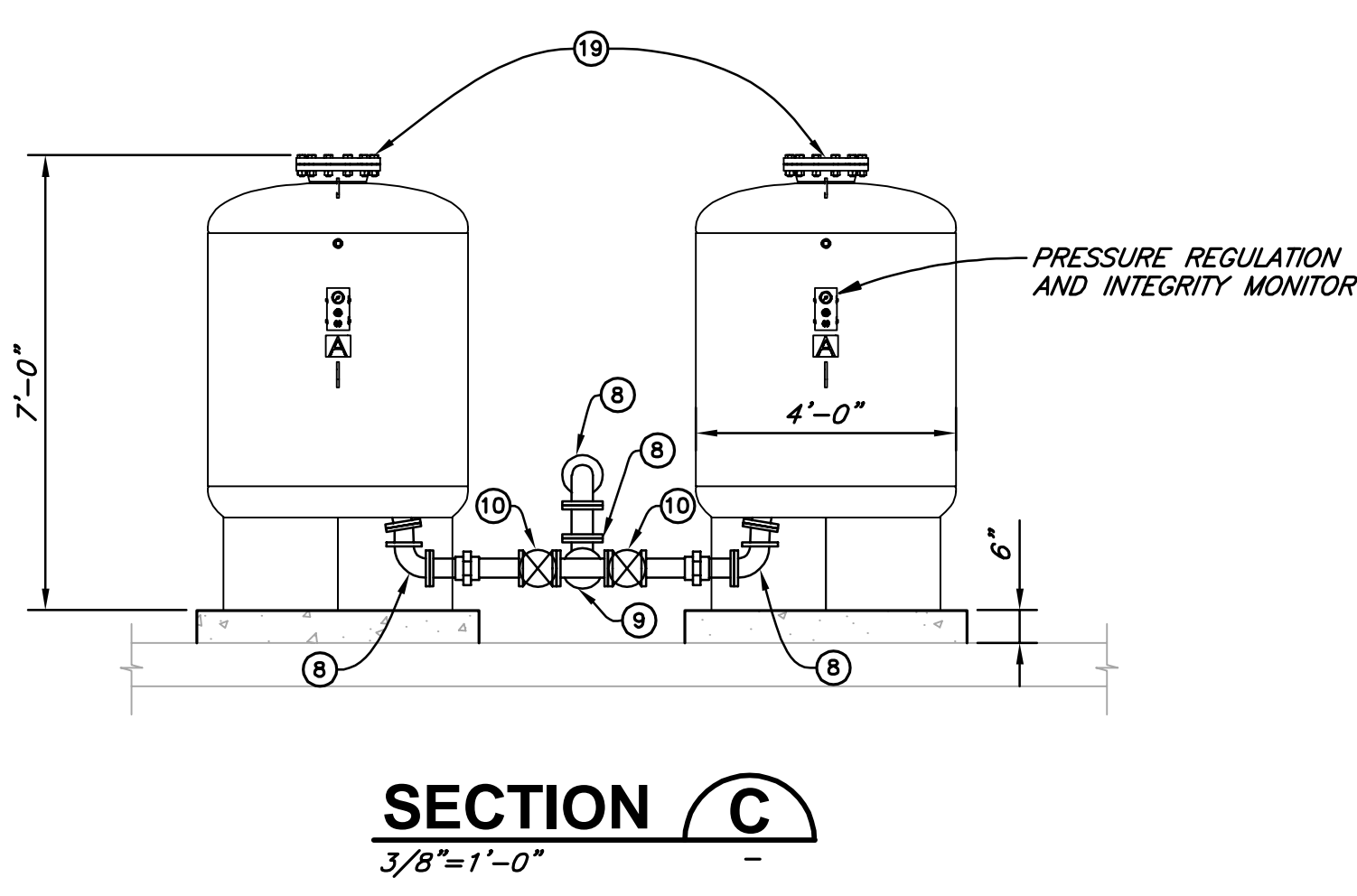
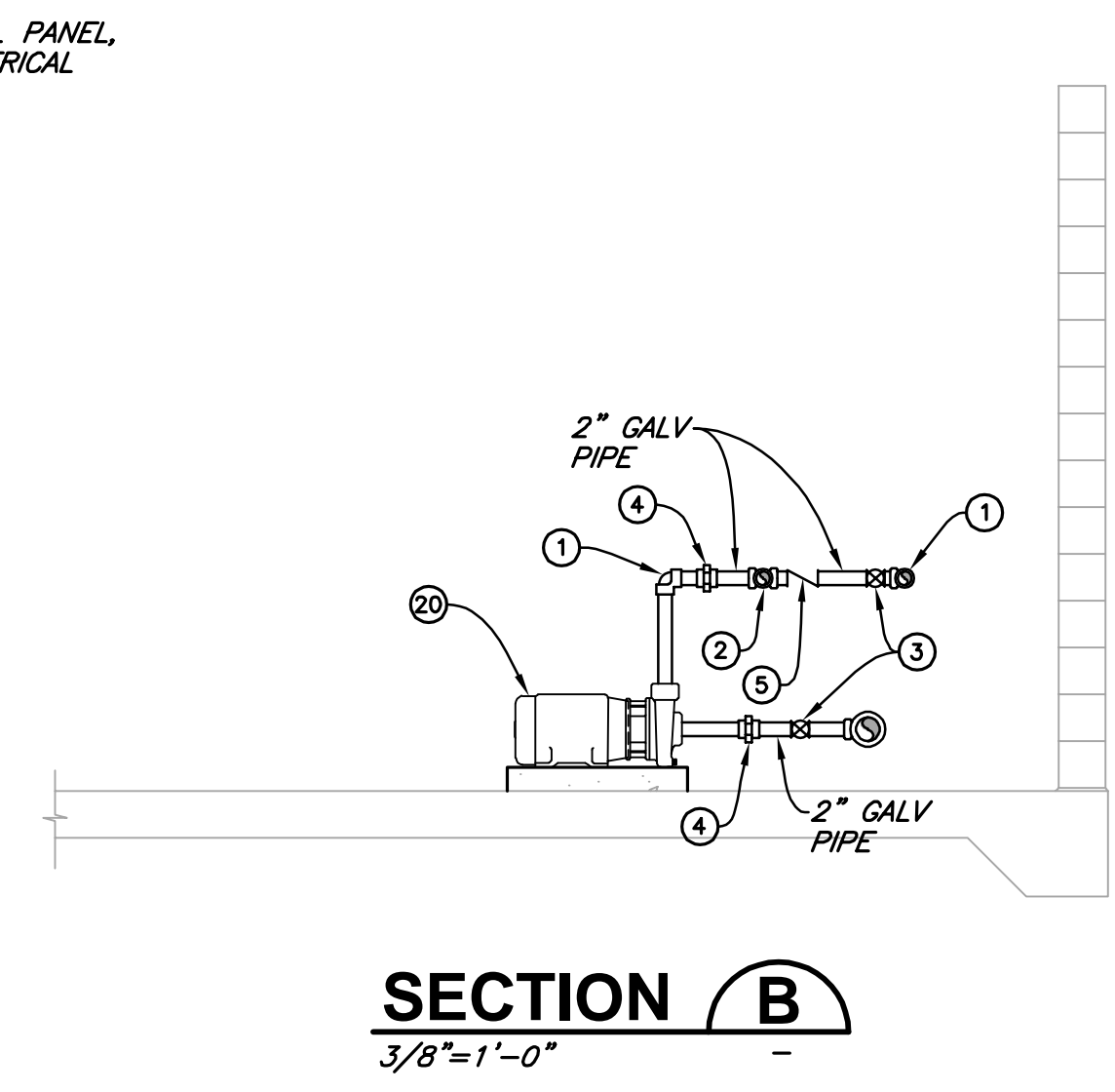
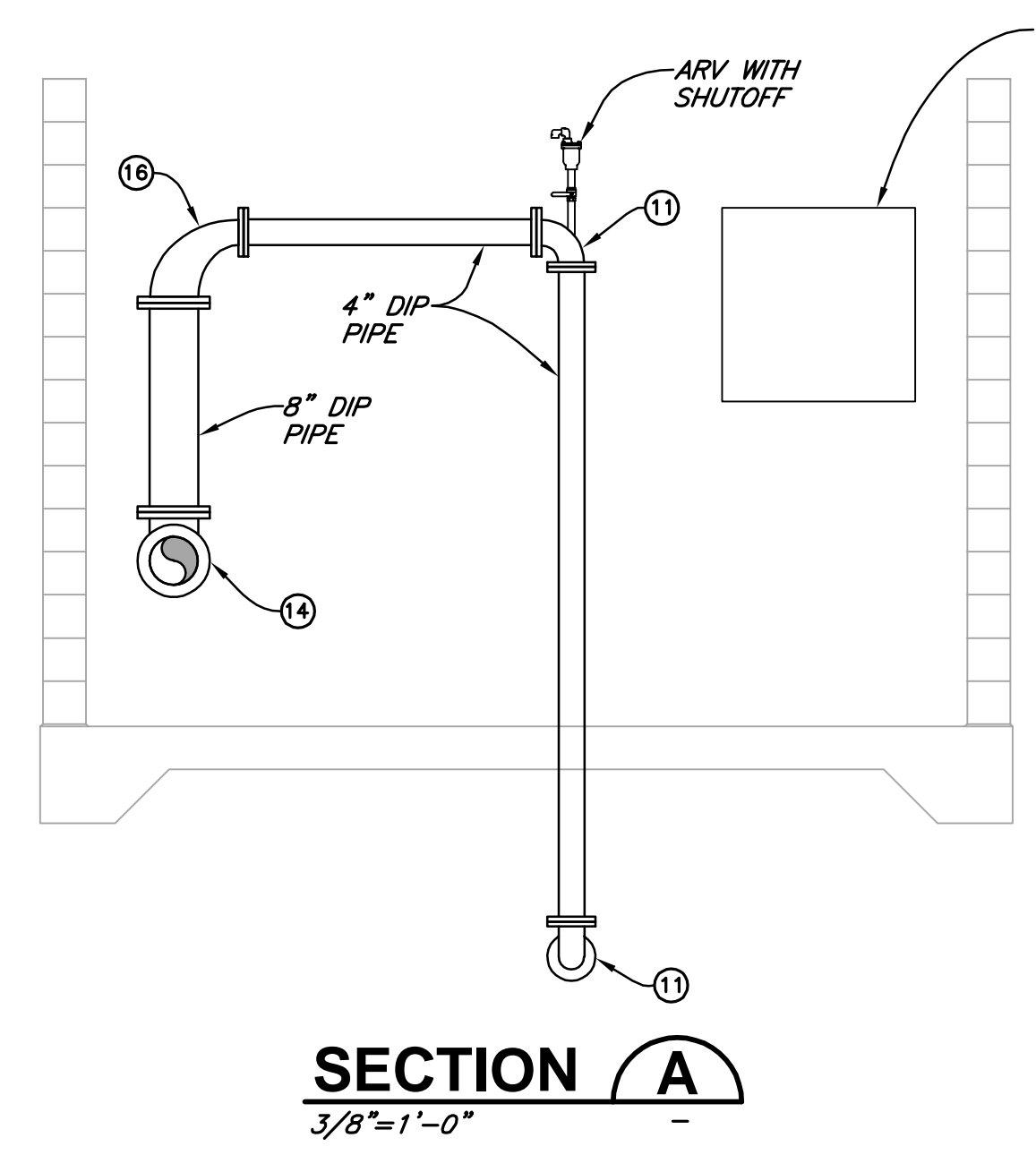
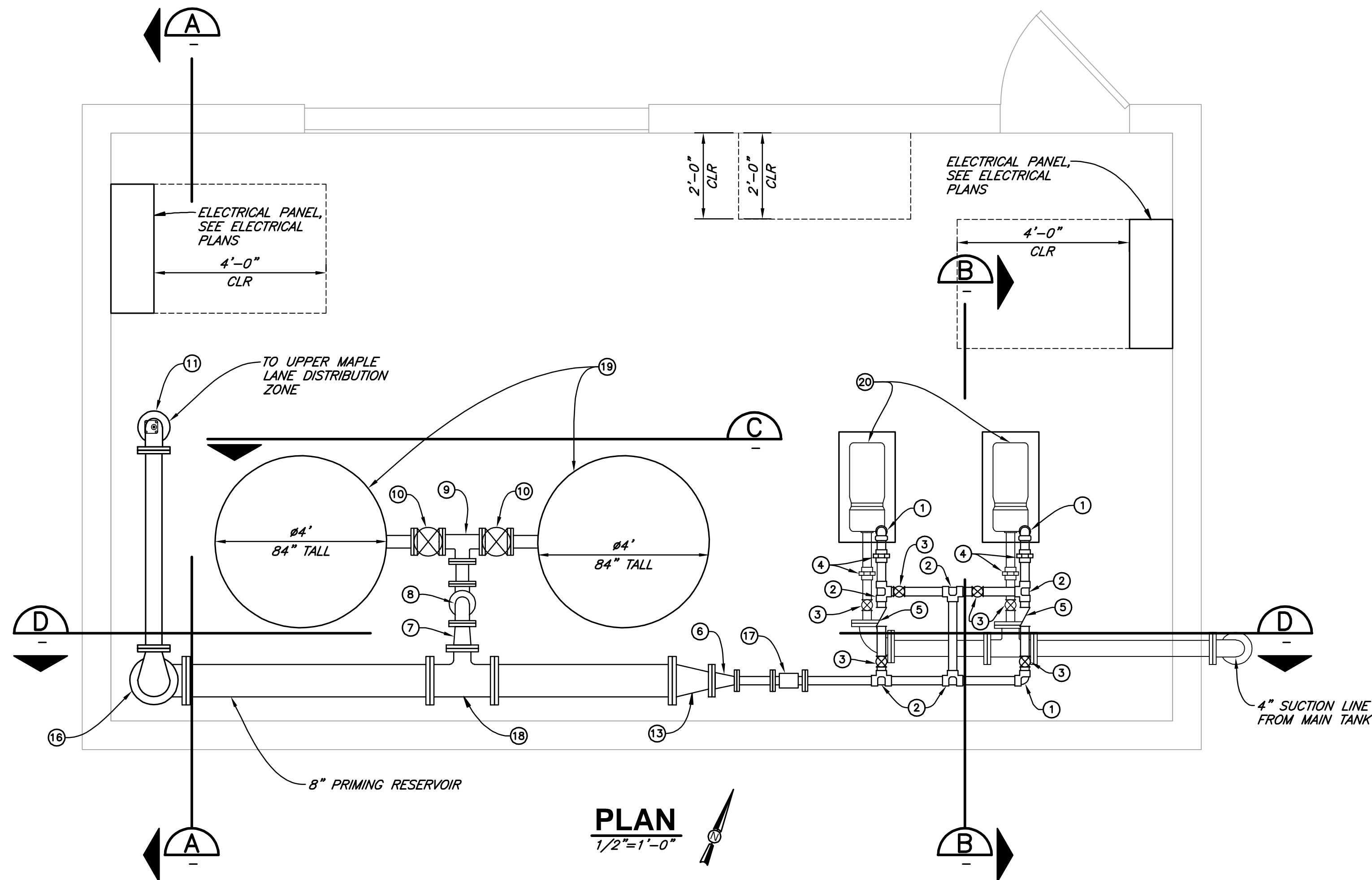
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

SHEET	C1.7
SEQ	
DATE	09/2023
PROJ. NO.	022067

**MAIN TANK CONNECTIONS**

**KEY NOTES:**

- ① 2" GALV EL
- ② 2" GALV TEE
- ③ 2" BALL VALVE
- ④ 2" GALV UNION
- ⑤ 2" CHECK VALVE
- ⑥ 4"x2" DIP RDCR
- ⑦ 4"x3" DIP RDCR
- ⑧ 3" DIP EL
- ⑨ 3" DIP TEE
- ⑩ 3" GATE VALVE
- ⑪ 4" DIP EL
- ⑫ 4" DIP TEE
- ⑬ 8"x4" DIP RDCR
- ⑭ 8" DIP EL
- ⑮ 8"x4" DIP RDCR TEE
- ⑯ 8"x4" RDCR EL
- ⑰ 2" MAG FLOW METER
- ⑱ 8"x4"x8" DIP TEE
- ⑲ 422 GAL PRESSURE TANK, FULL ACCEPTANCE REPLACEABLE BLADDER
- ⑳ 2" END SUCTION PUMP, SEE SPECIFICATIONS
- ㉑ PRESSURE GAUGE ASSEMBLY 0-100PSI
- ㉒ PRESSURE TRANSMITTER



SAVED: 9/29/2023 5:07 PM JFOSTER, PLOTTED: 9/29/2023 5:08 PM JOHN FOSTER  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-PUMP-STATION-MECH.dwg

**60% DESIGN**

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CHK	JSO	APVD	
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>UPPER MAPLE LANE PUMP STATION          MECHANICAL PLAN</b>			
SHEET		<b>C1.8</b>	
SEQ			
DATE		09/2023	
PROJ. NO.		022067	

SAVED: 9/29/2023 4:35 PM CNEWELL, PLOTTED: 9/29/2023 4:40 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-TANK-MATR-MAIN-OVER.dwg



PLAN  
 M/S



60% DESIGN

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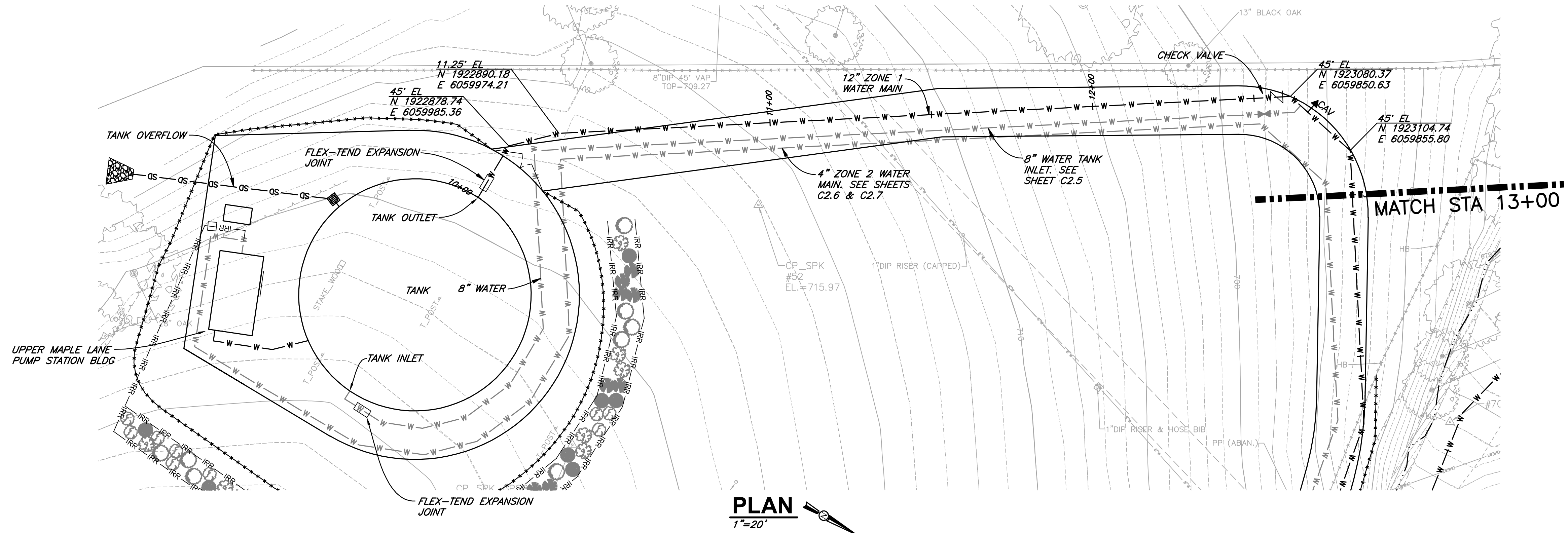


NO.	DATE	REVISION	BY

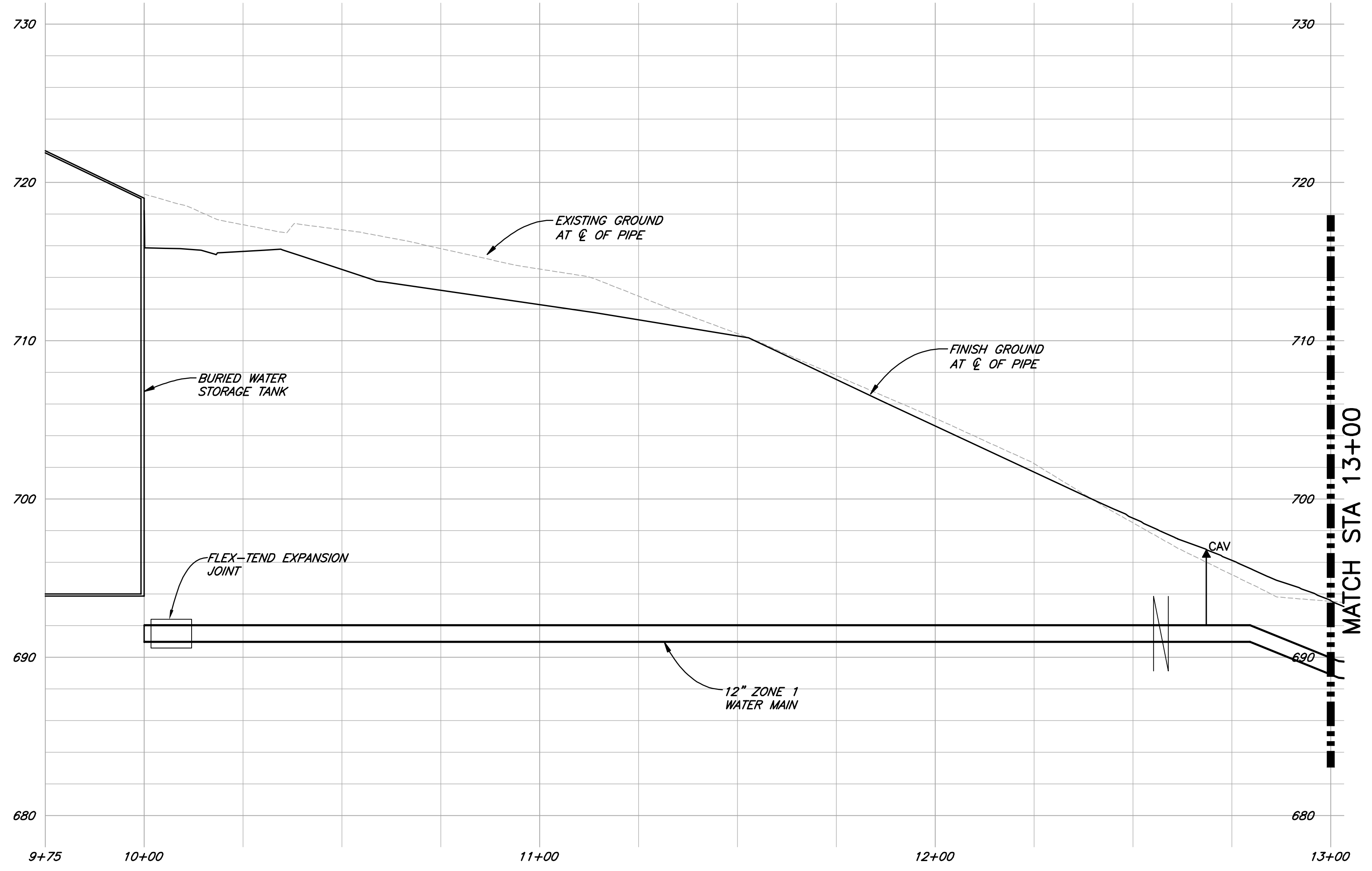
DESIGN -  
 DR CDN/JWF  
 CHK JSO  
 APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK WATER MAIN OVERVIEW**

SHEET	C2.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

SAVED: 9/29/2023 3:33 PM CNEWELL, PLOTTED: 9/29/2023 4:40 PM NEWELL, CHRIS  
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**PLAN**  
 1"=20'

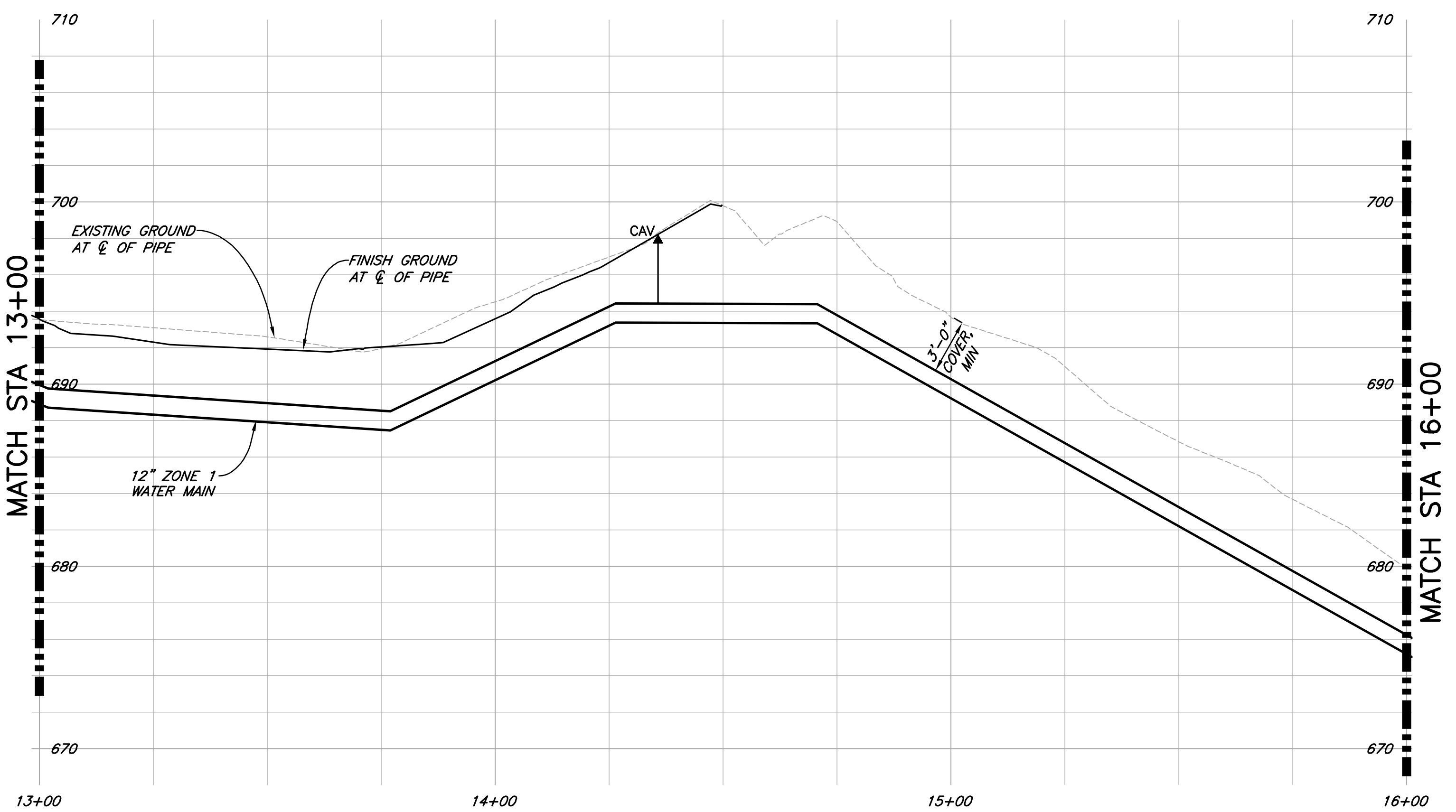
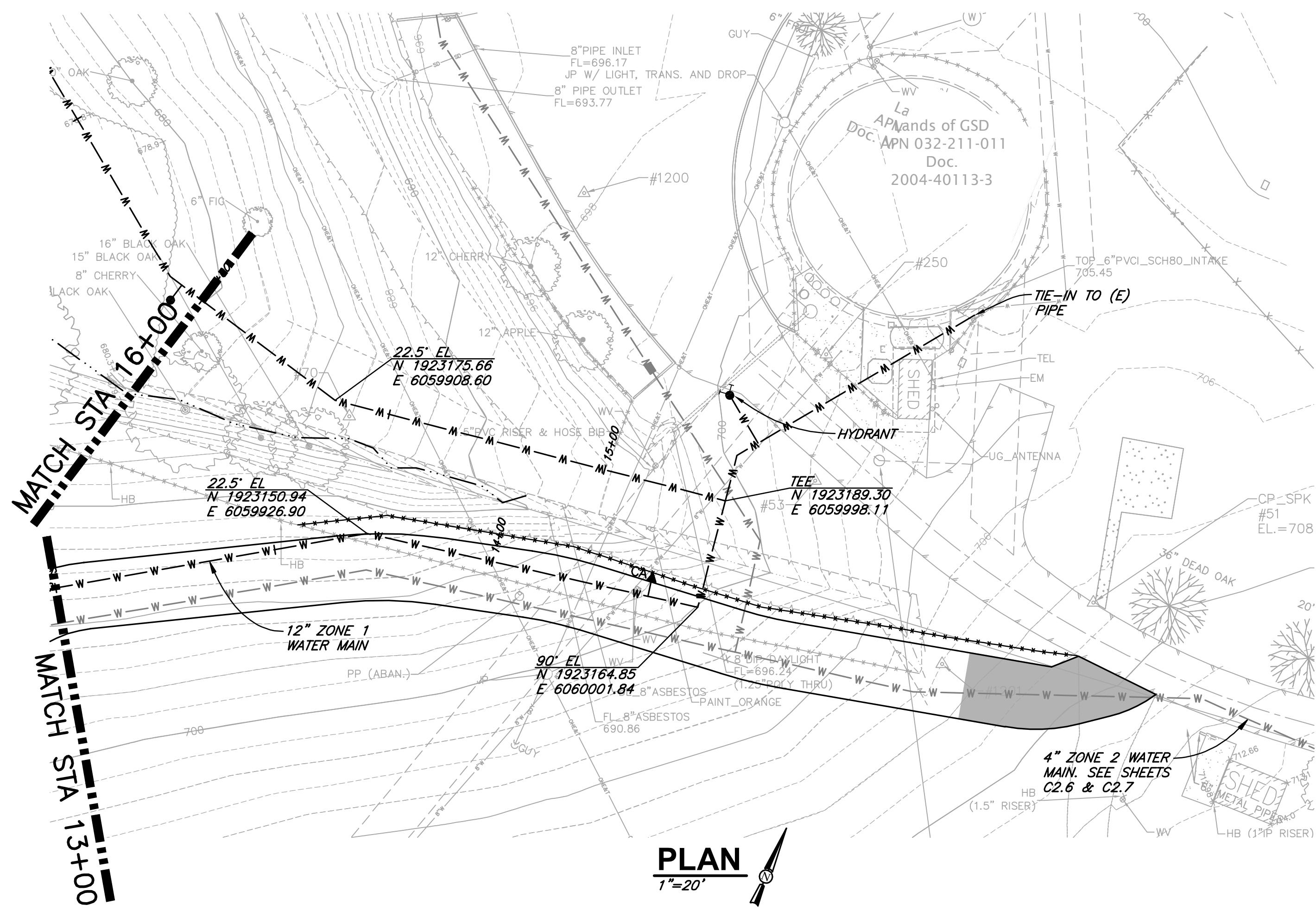


**12" ZONE 1 WATER MAIN PROFILE**  
 SCALE: 1"=20' H  
 1"=5' V

**60% DESIGN**

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DESIGN	BY
DR JWF/CDN	REVISION
CHK JSO	DATE
APVD	NO.
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>MAIN TANK WATER MAIN          PLAN AND PROFILE</b>	
SHEET C2.1	
SEQ	
DATE 09/2023	
PROJ. NO. 022067	

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 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-TANK-MATR-MAIN-PMP.dwg



**12" ZONE 1 WATER MAIN PROFILE**  
 SCALE: 1"=20' H  
 1"=5' V

**60% DESIGN**

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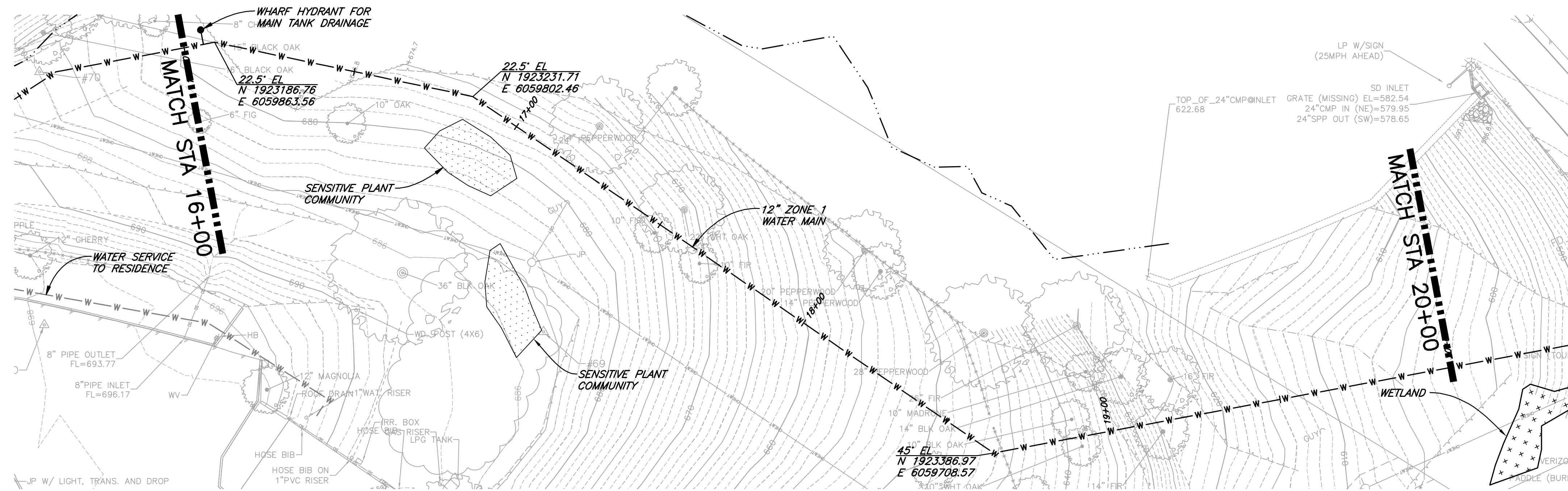
DESIGN	JWF/CDN
CHECK	JSO
APPROVED	

GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK WATER MAIN**  
**PLAN AND PROFILE**

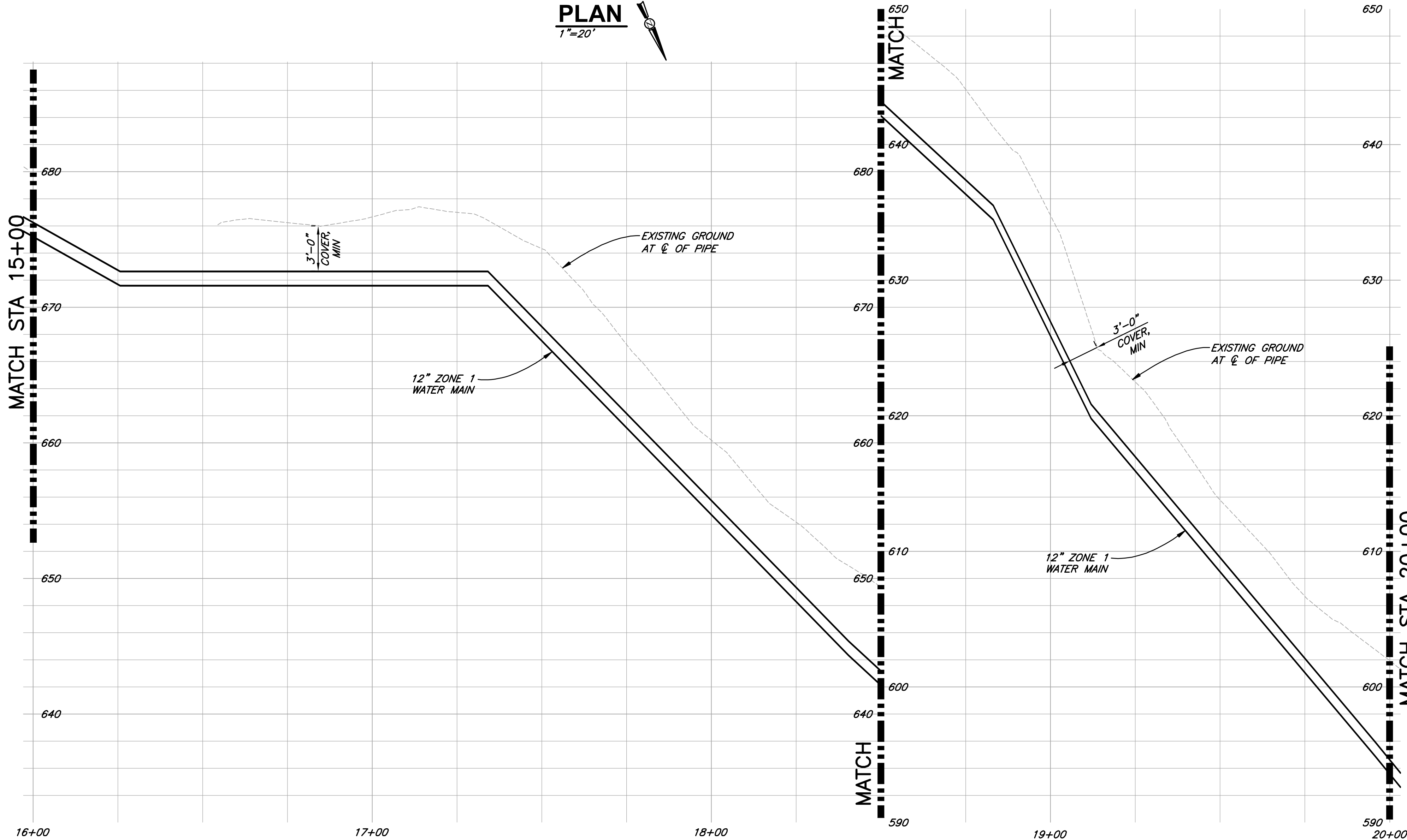
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DATE	08/2023
PROJ. NO.	022067



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**PLAN**  
 1"=20'



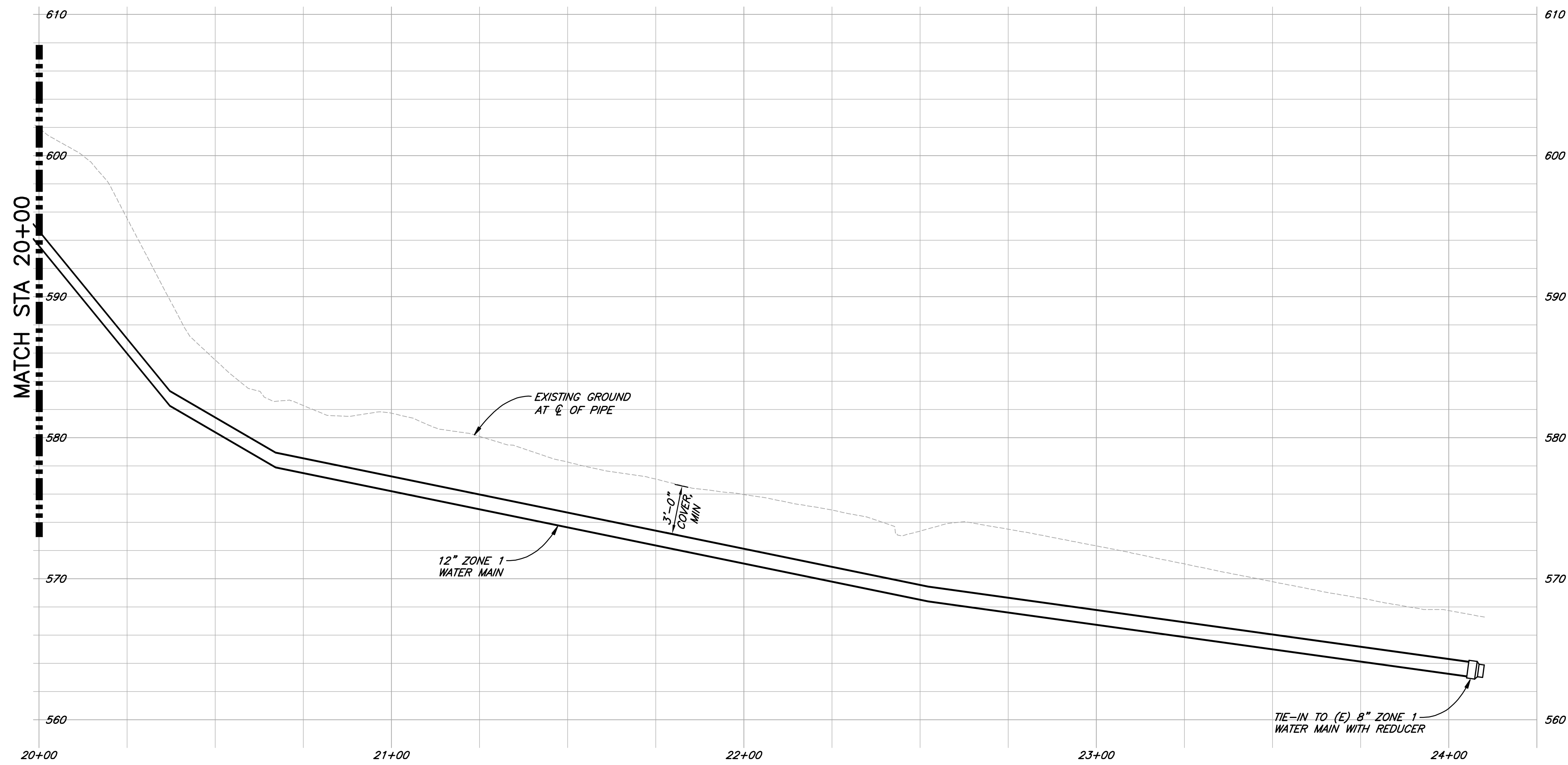
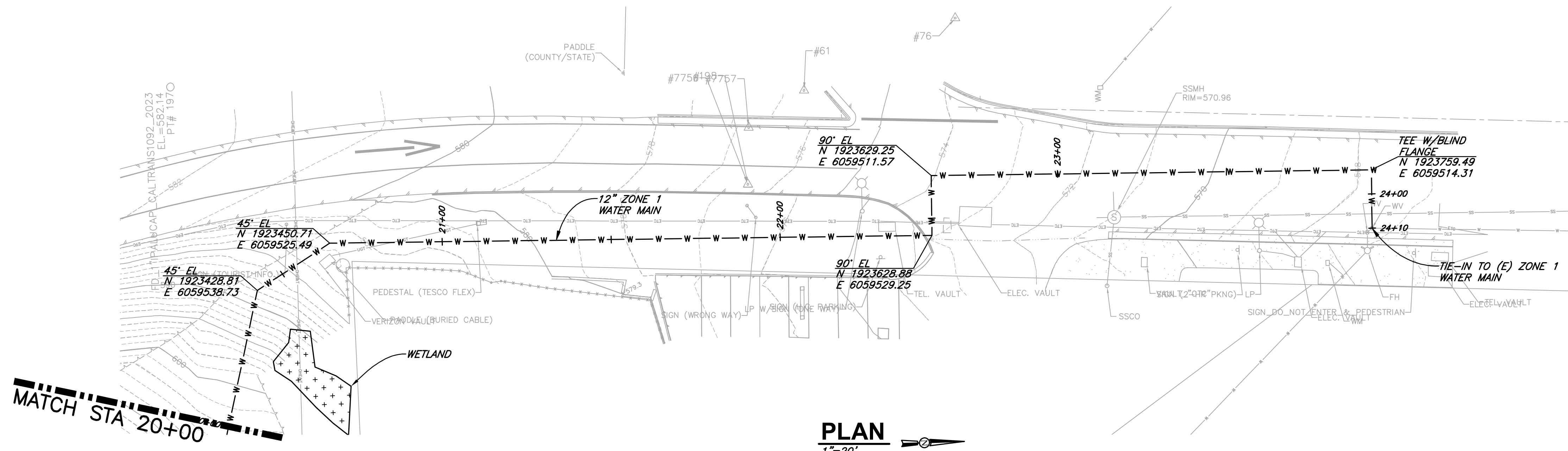
**12" ZONE 1 WATER MAIN PROFILE**

SCALE: 1"=20' H  
 1"=5' V

**60% DESIGN**

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<b>S&amp;W</b>	
DESIGN	BY
DR JWF/CDN	REVISION
CHK JSO	DATE
APVD	NO.
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>MAIN TANK WATER MAIN        PLAN AND PROFILE</b>	
SHEET <b>C2.3</b>	
DATE <b>08/2023</b>	
PROJ. NO. <b>022067</b>	

SAVED: 9/29/2023 3:33 PM CNEWELL, PLOTTED: 9/29/2023 4:41 PM NEWELL, CHRIS  
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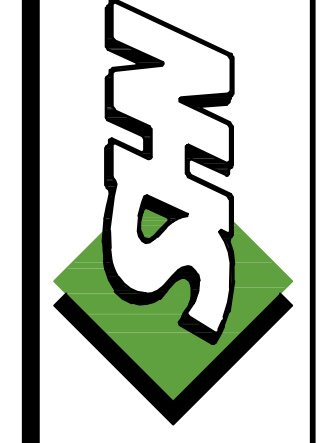
**12" ZONE 1 WATER MAIN PROFILE**

SCALE: 1"=20' H  
 1"=5' V

**60% DESIGN**

VERIFY SCALES  
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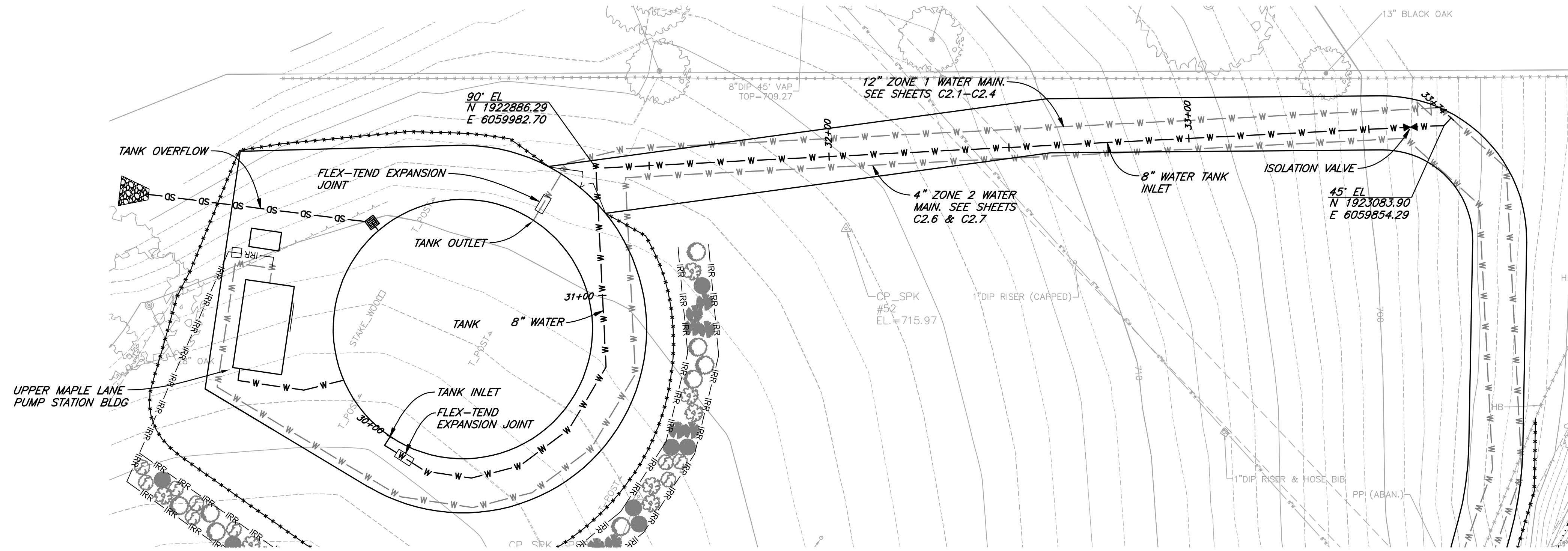


DESIGN	DR	JWF/CDN
CHECK	CHK	JSO
APPROVED	APVD	
NO.	DATE	BY
REVISION		

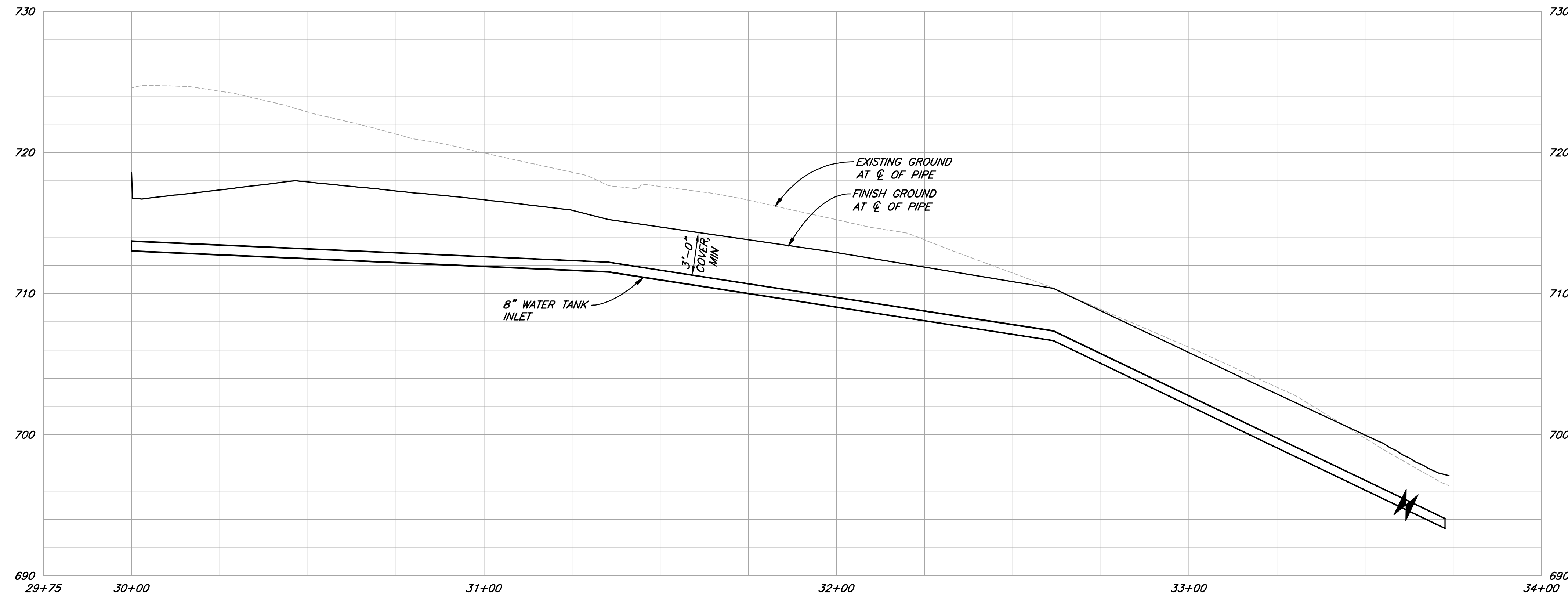
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK WATER MAIN  
 PLAN AND PROFILE**

SHEET	C2.4
SEQ	
DATE	08/2023
PROJ. NO.	022067

SAVED: 9/29/2023 5:08 PM CNEWELL, PLOTTED: 9/29/2023 5:08 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Drawings\022067-HURLBUTT-TANK-WATR-INLET-PNF.dwg



**PLAN**  
 1"=20'



**PROFILE**  
 SCALE: 1"=20' H  
 1"=5' V

**60% DESIGN**

VERIFY SCALES  
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 IF NOT ONE INCH ON THIS SHEET, VERIFY SCALES ACCORDINGLY

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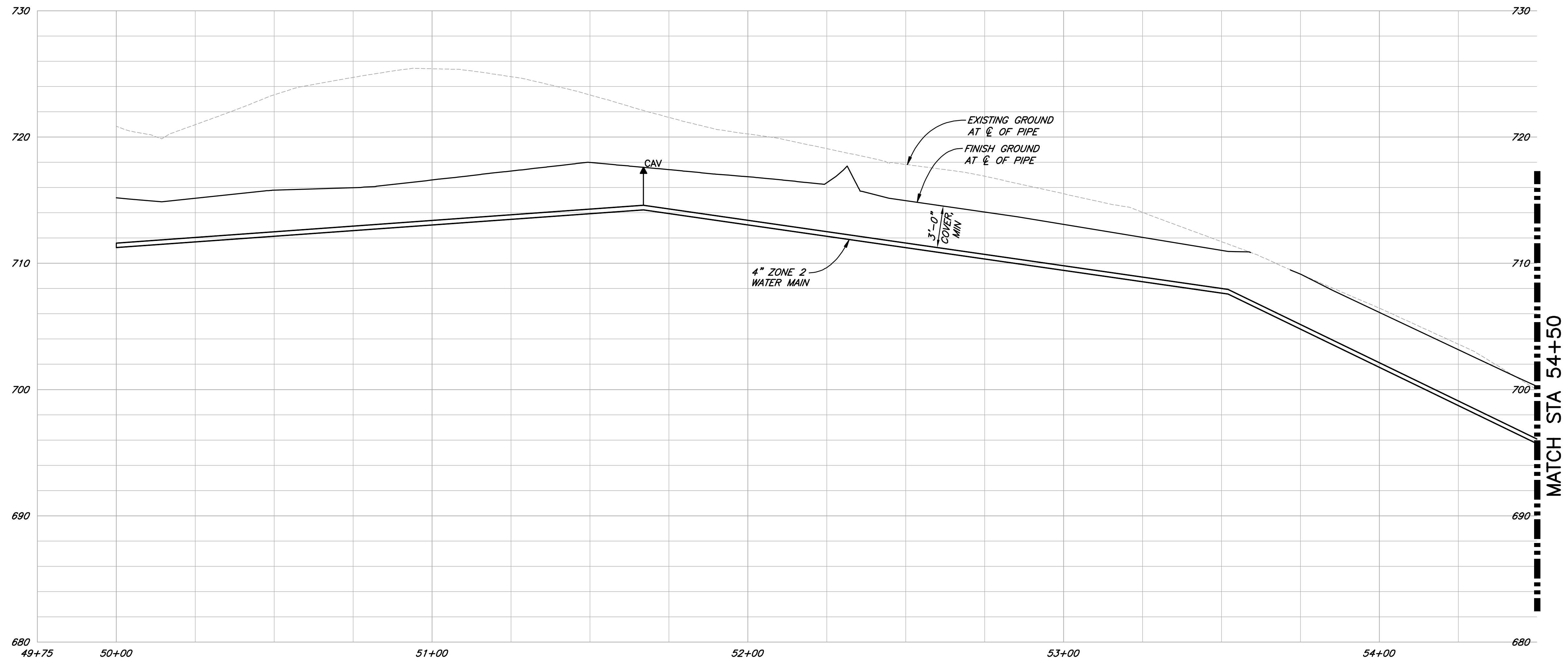
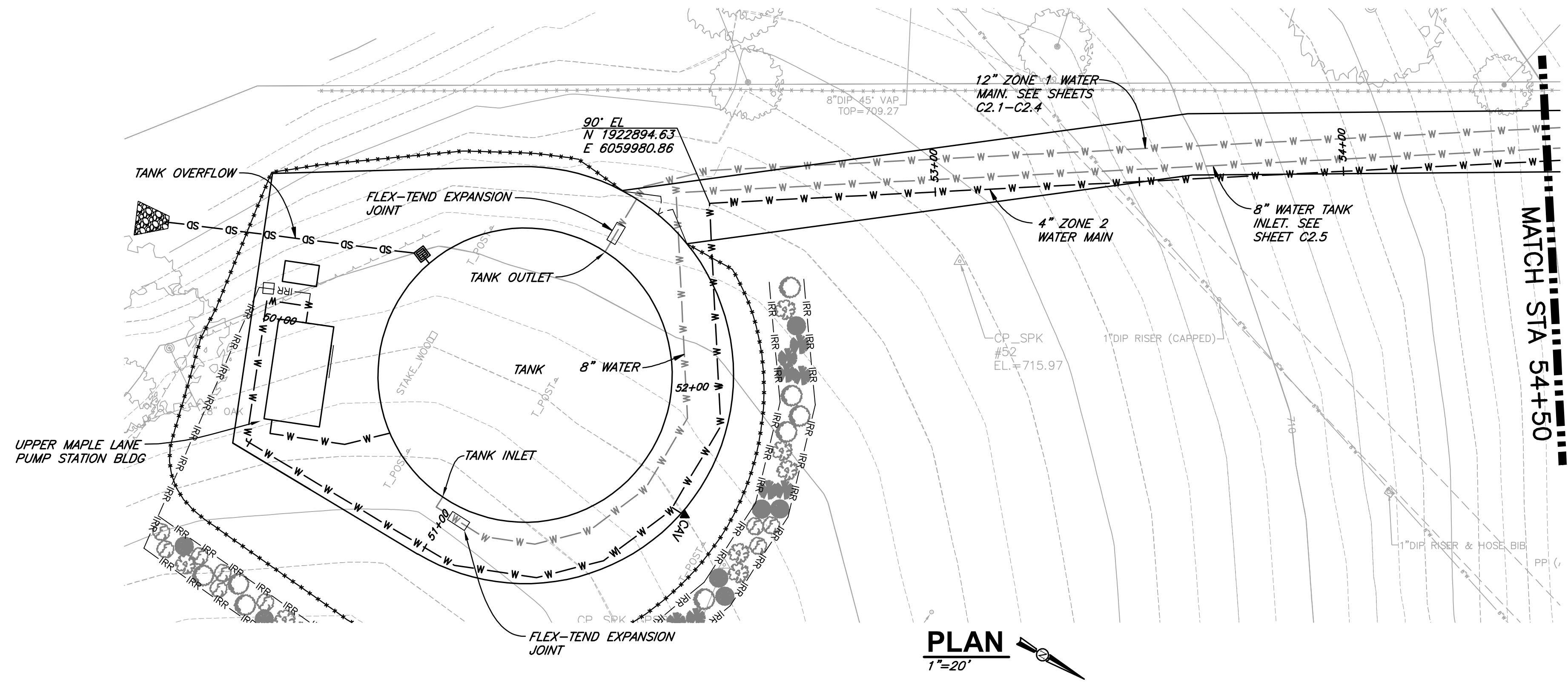


NO.	DATE	BY

DESIGN: JWF/CDN  
 CHECK: JSO  
 APPROVED: APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**MAIN TANK WATER INLET**  
**PLAN AND PROFILE**

SHEET  
**C2.5**  
 SEQ  
 DATE 09/2023  
 PROJ. NO.  
 022067

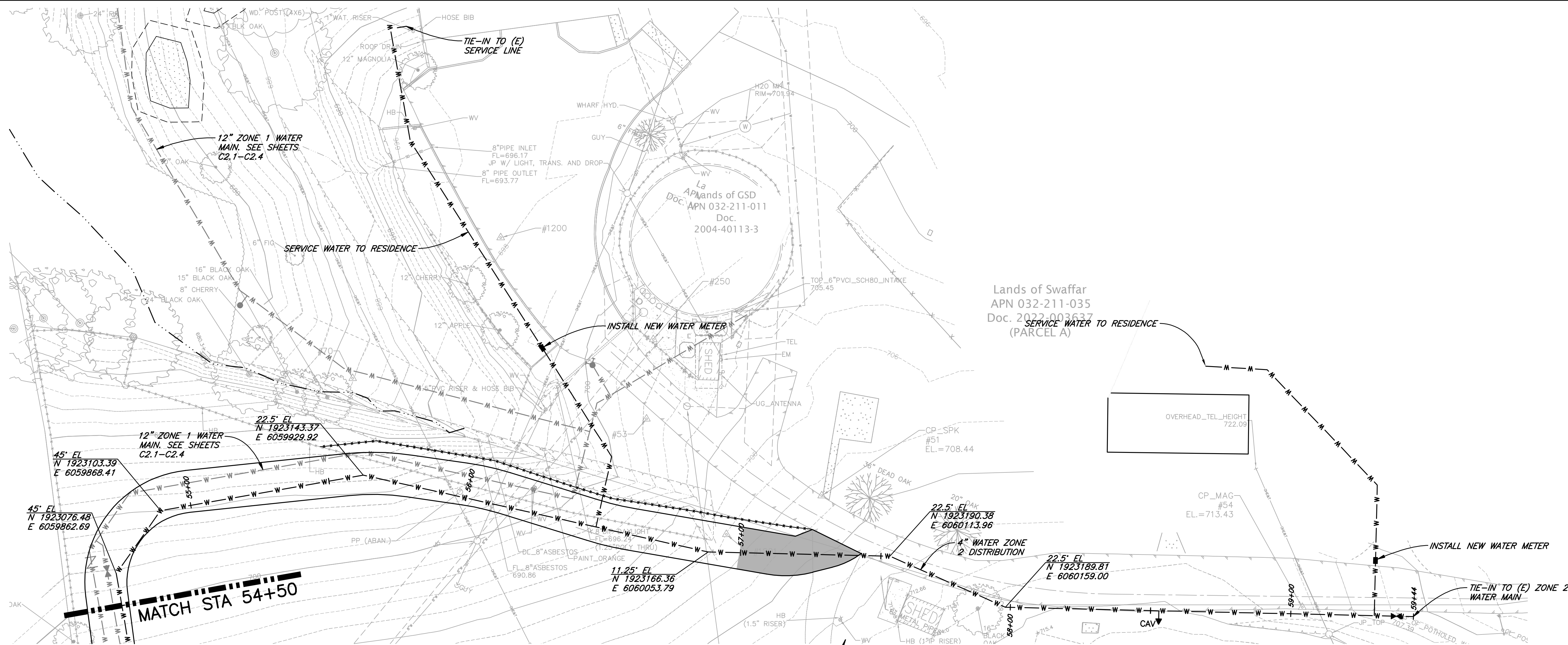
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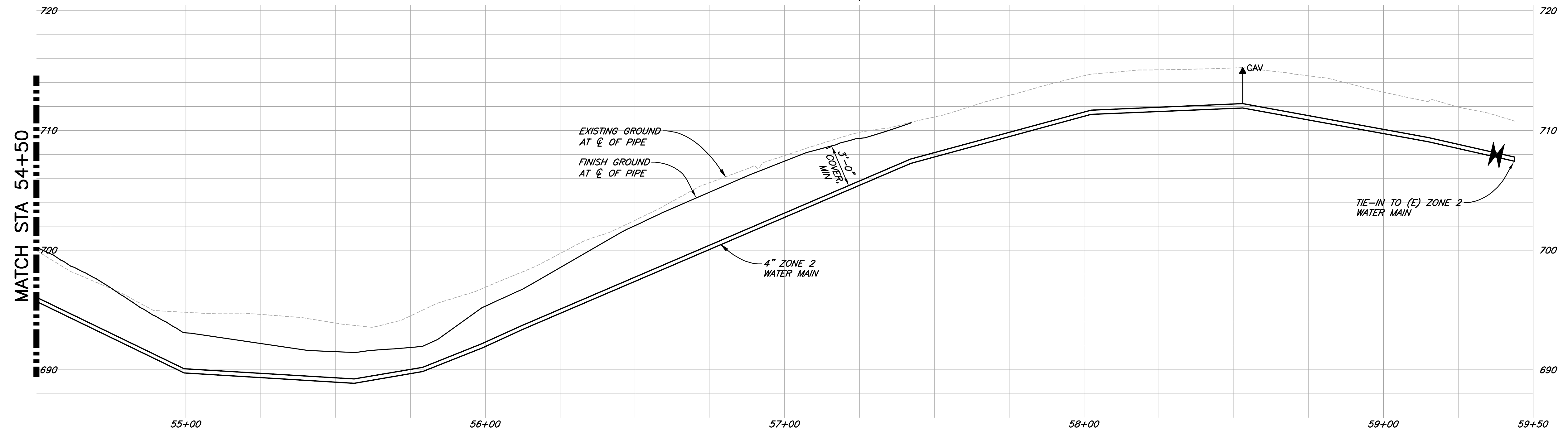
60% DESIGN

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING O IF NOT ONE INCH ON THIS SHEET, SCALES ACCORDINGLY	
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DESIGN	BY
DR JWF/CDN	REVISION
CHK JSO	DATE
APVD	NO.
GARBVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBVILLE, CALIFORNIA	
<b>MAIN TANK 4 INCH WATER DISTRIBUTION PLAN AND PROFILE</b>	
SHEET	C2.6
SEQ	
DATE	09/2023
PROJ. NO.	022067

SAVED: 9/29/2023 3:32 PM CNEWELL, PLOTTED: 9/29/2023 4:42 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-HURLBUTT-TANK-WATR-MAPLE-PWP.dwg



**PLAN**  
1"=20'



**4" ZONE 2 WATER MAIN PROFILE**  
SCALE: 1"=20' H  
1"=5' V

**60% DESIGN**

		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, SCALES ACCORDINGLY	
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GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA		NO. DATE REVISION BY	
<b>MAIN TANK 4 INCH WATER DISTRIBUTION PLAN AND PROFILE</b>		SHEET <b>C2.7</b>	
PROJ. NO. 022067		DATE 09/2023	

SAVED: 9/28/2023 11:49 AM CNEWELL, PLOTTED: 9/29/2023 4:42 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TANK-OVER.dwg



**PLAN**  
 1"=80'

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET SCALES ACCORDINGLY

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 WWW.S2H-PR.COM  
 707-441-8885

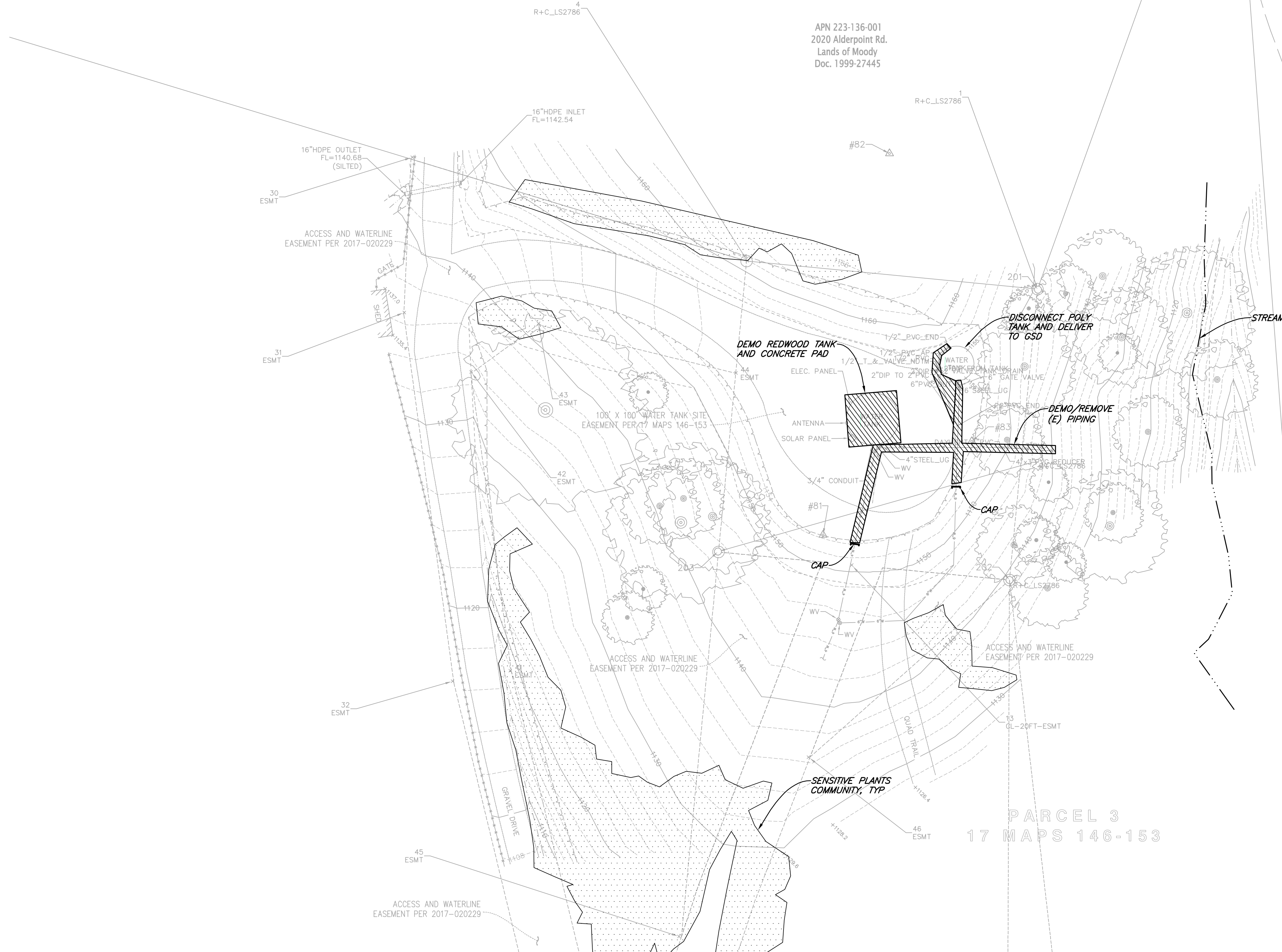


NO.	DATE	REVISION	BY

DESIGN -  
 DR CDN/JWF  
 CHK JSO  
 APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**WALLAN TANK AND PUMP STATION  
 OVERVIEW**

SHEET  
**C3.0**  
 SEQ  
 DATE 09/2023  
 PROJ. NO.  
 022067

SAVED: 9/28/2023 11:52 AM CNEWELL, PLOTTED: 9/29/2023 4:42 PM NEWELL, CHRIS  
 P:\Eureka\2022\022067-GSD-Water\Drawings\022067-WALL-TNK-ESCP.dwg



APN 223-136-001  
 2020 Alderpoint Rd.  
 Lands of Moody  
 Doc. 1999-27445

APN 223-191-007  
 240 Pidgeon Rd.  
 Lands of Wantt  
 1824 O.R. 305



PARCEL 3  
 17 MAPS 146-153

**DEMOLITION NOTES:**

1. EXISTING POLY TANK SHALL REMAIN FULLY OPERATIONAL UNTIL NEW TANK IS CONSTRUCTED AND APPROVED FOR USE BY THE OWNER AND ENGINEER.
2. CONTRACTOR SHALL DEMOLISH AND PROPERLY DISPOSE OF ALL ITEMS SHOWN TO BE DEMOLISHED.

**PLAN**  
 1"=20'

**LEGEND**

-  DEMOLITION/REMOVE
-  SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET, VERIFY SCALES ACCORDINGLY

812 W. WABASH AVE.  
 EUREKA, CA 95501  
 WWW.S&W-ENR.COM  
 707-441-8885



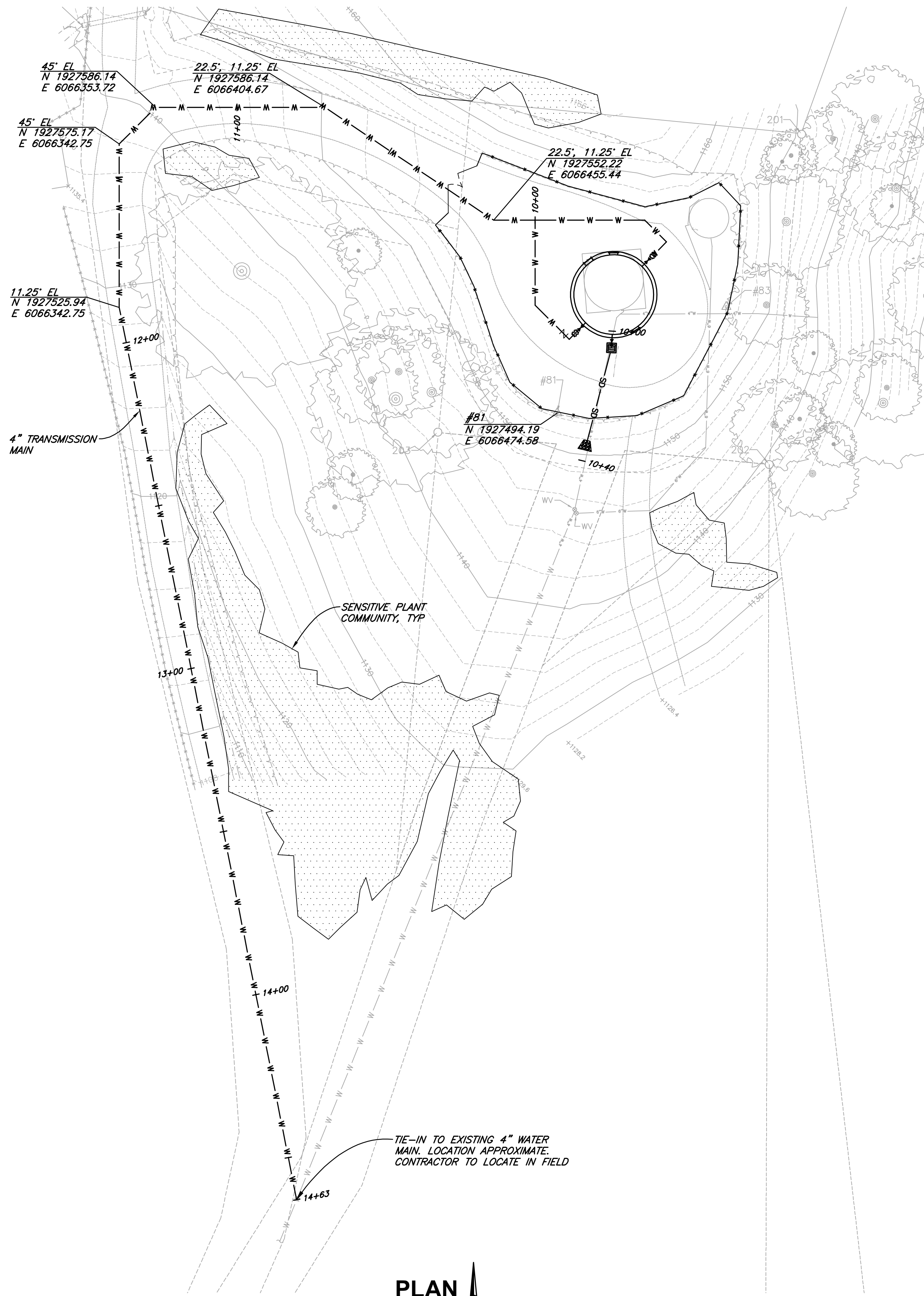
NO.	DATE	REVISION	BY

DSGN	
DR	CDN/JWF
CHK	JSO
APVD	

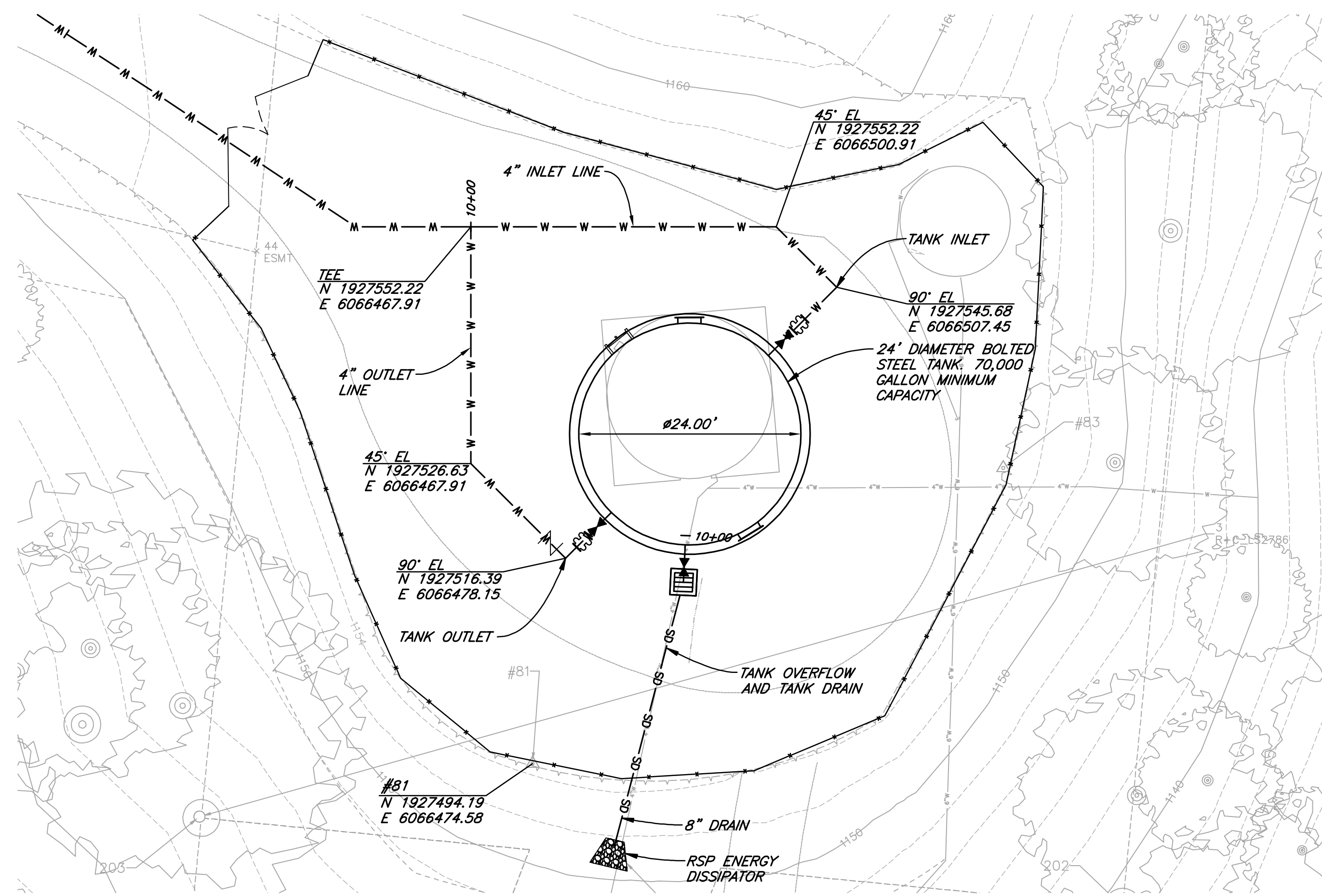
GARBVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBVILLE, CALIFORNIA  
**WALLAN TANK CLEARING, GRUBBING,  
 AND DEMOLITION PLAN**

SHEET	C3.1
SEQ	
DATE	09/2023
PROJ. NO.	022067

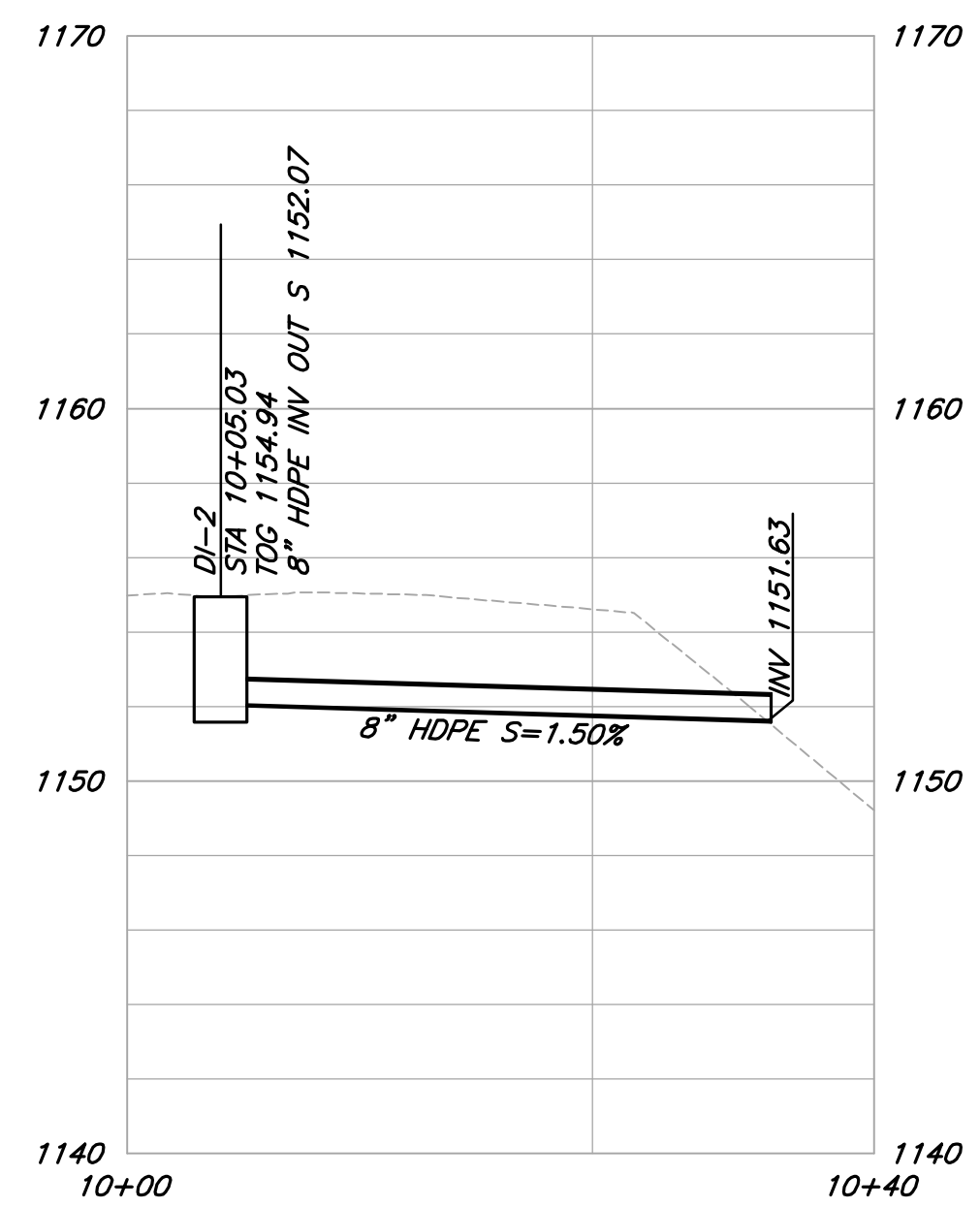
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 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TNK-SITE.dwg



**PLAN**  
1"=20'



**PLAN**  
1"=10'



**TANK DRAIN PROFILE**  
SCALE: 1"=10' H  
1"=5' H

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 O IF NOT ONE INCH ON THIS SHEET ACCORDINGLY SCALES ACCORDINGLY

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 EUREKA, CA 95501  
 WWW.SFH.COM  
 707-441-8885

**SFH**

NO.	DATE	REVISION	BY

DSGN -  
 DR CDN/JWF  
 CHK JSO  
 APVD

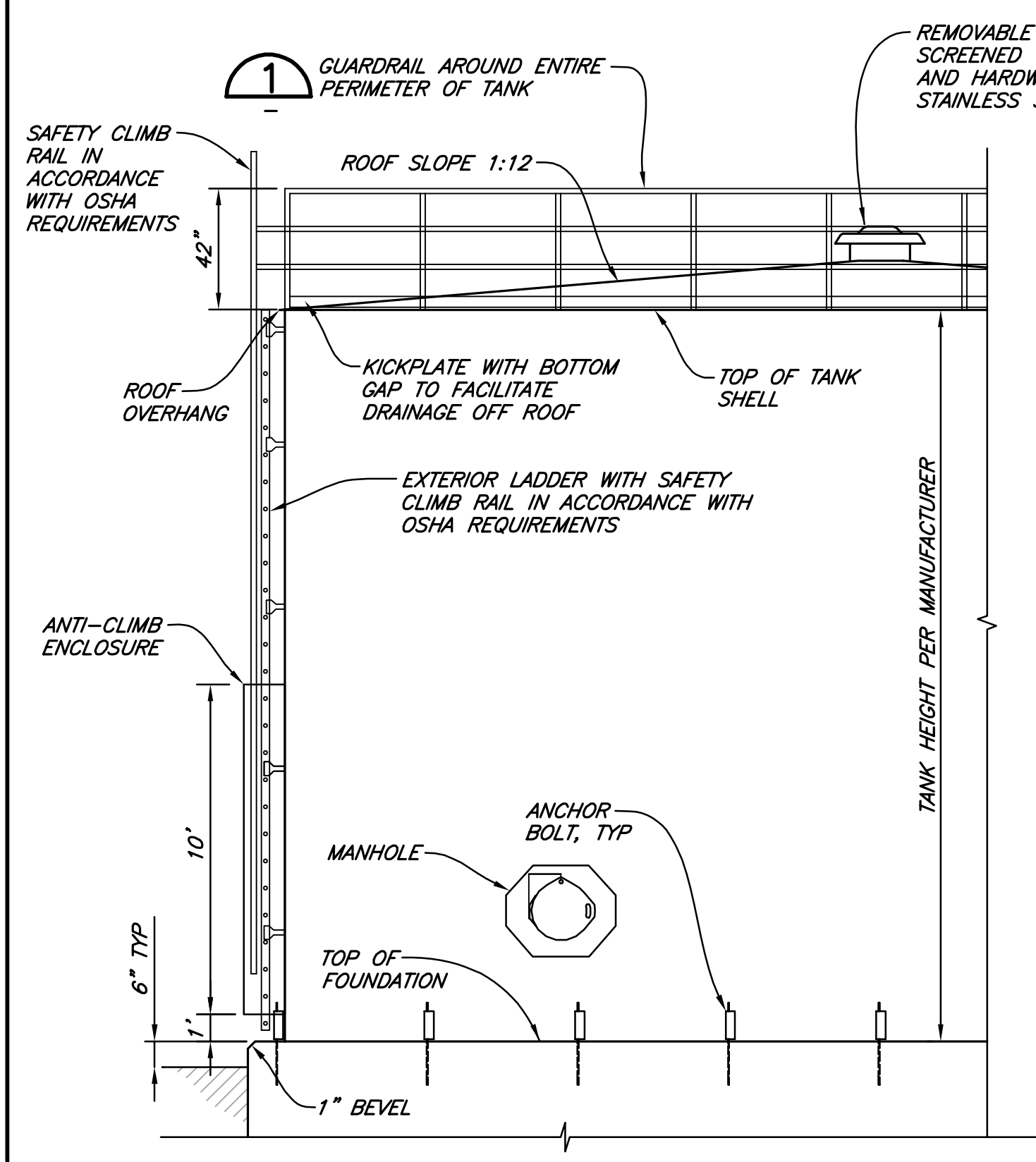
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**WALLAN TANK SITE PLAN & YARD PIPING**

SHEET  
**C3.2**

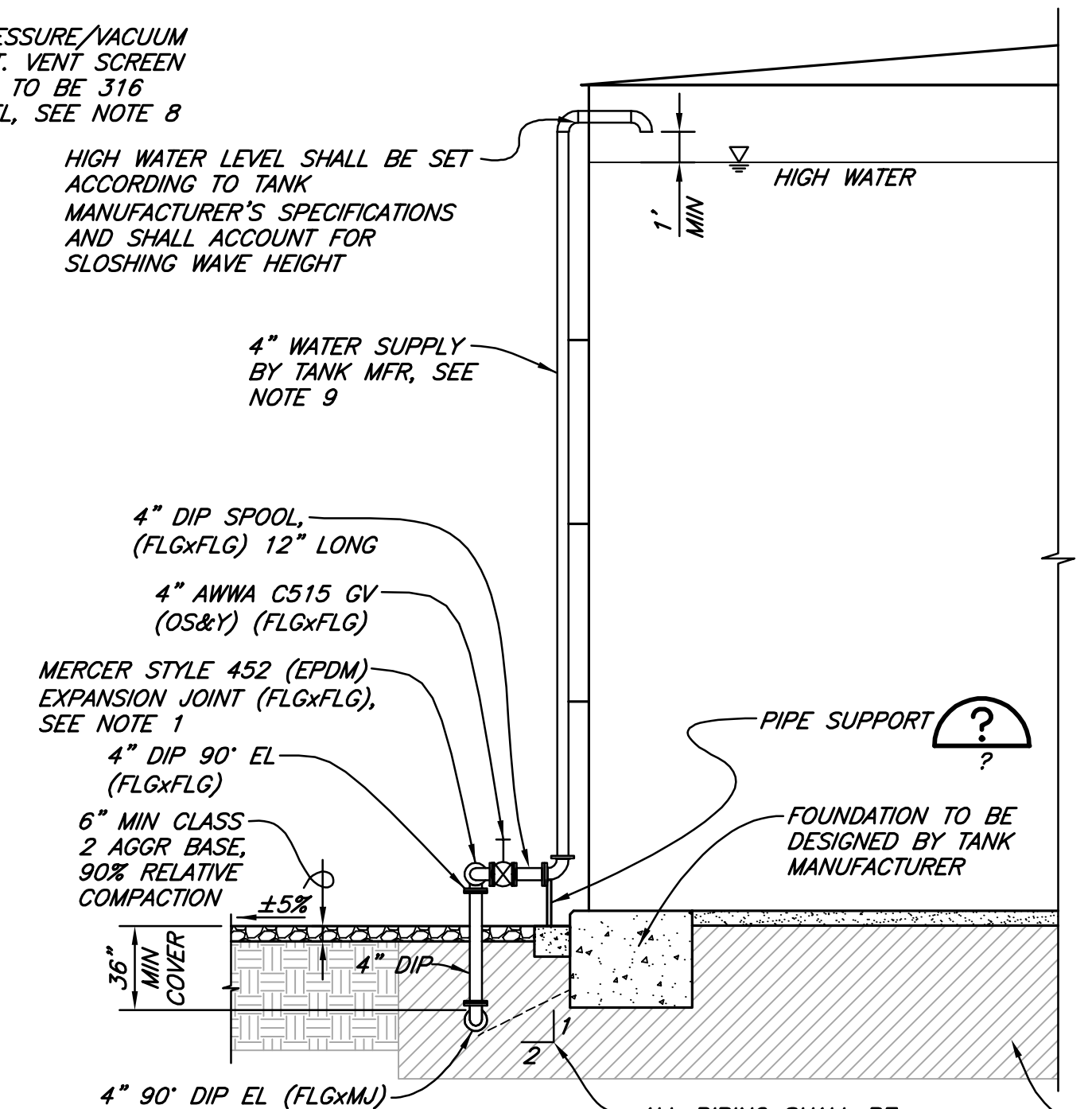
SEQ  
 DATE 09/2023  
 PROJ. NO.  
 022067



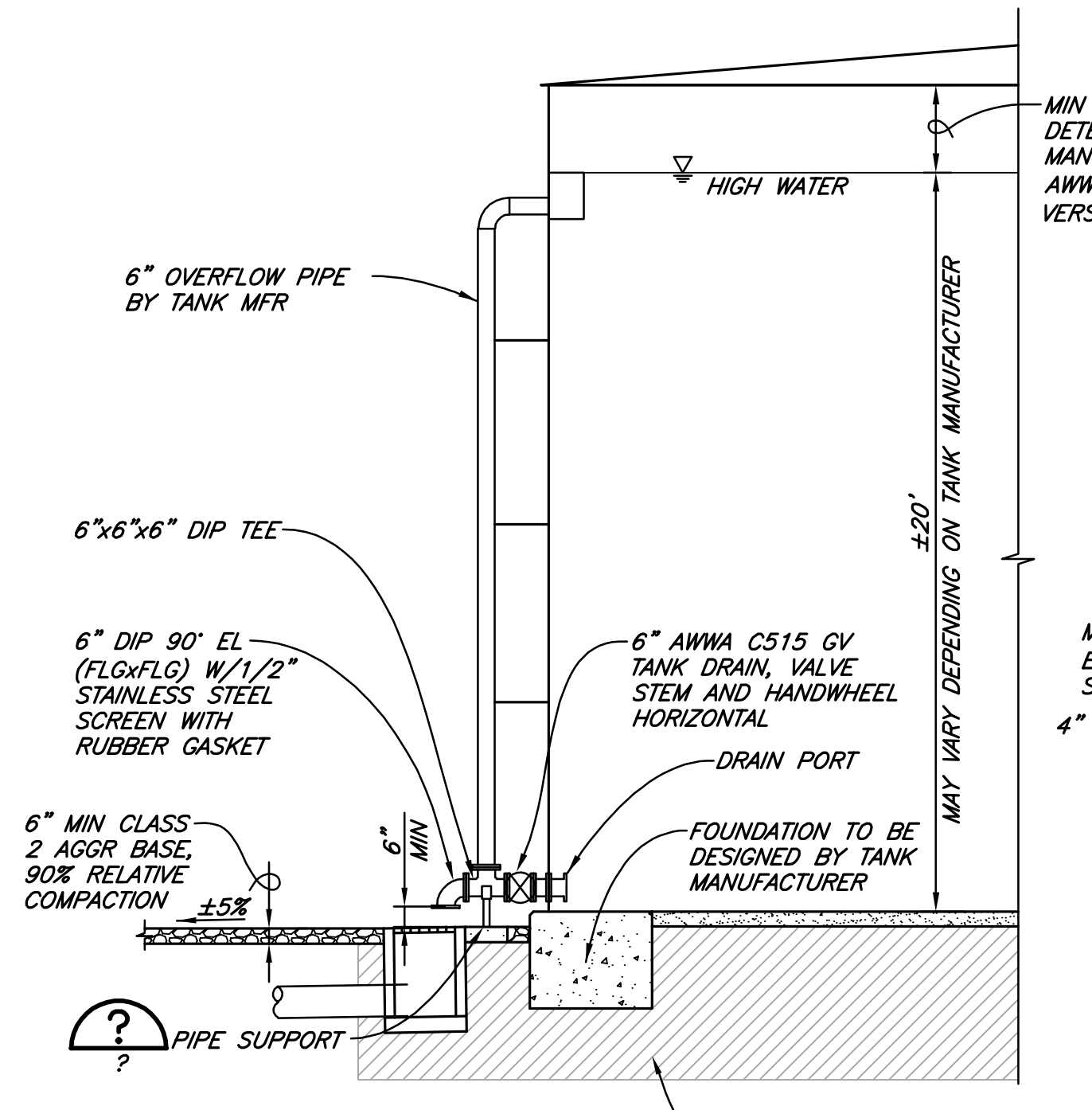
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 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TANK-LAYOUT.dwg



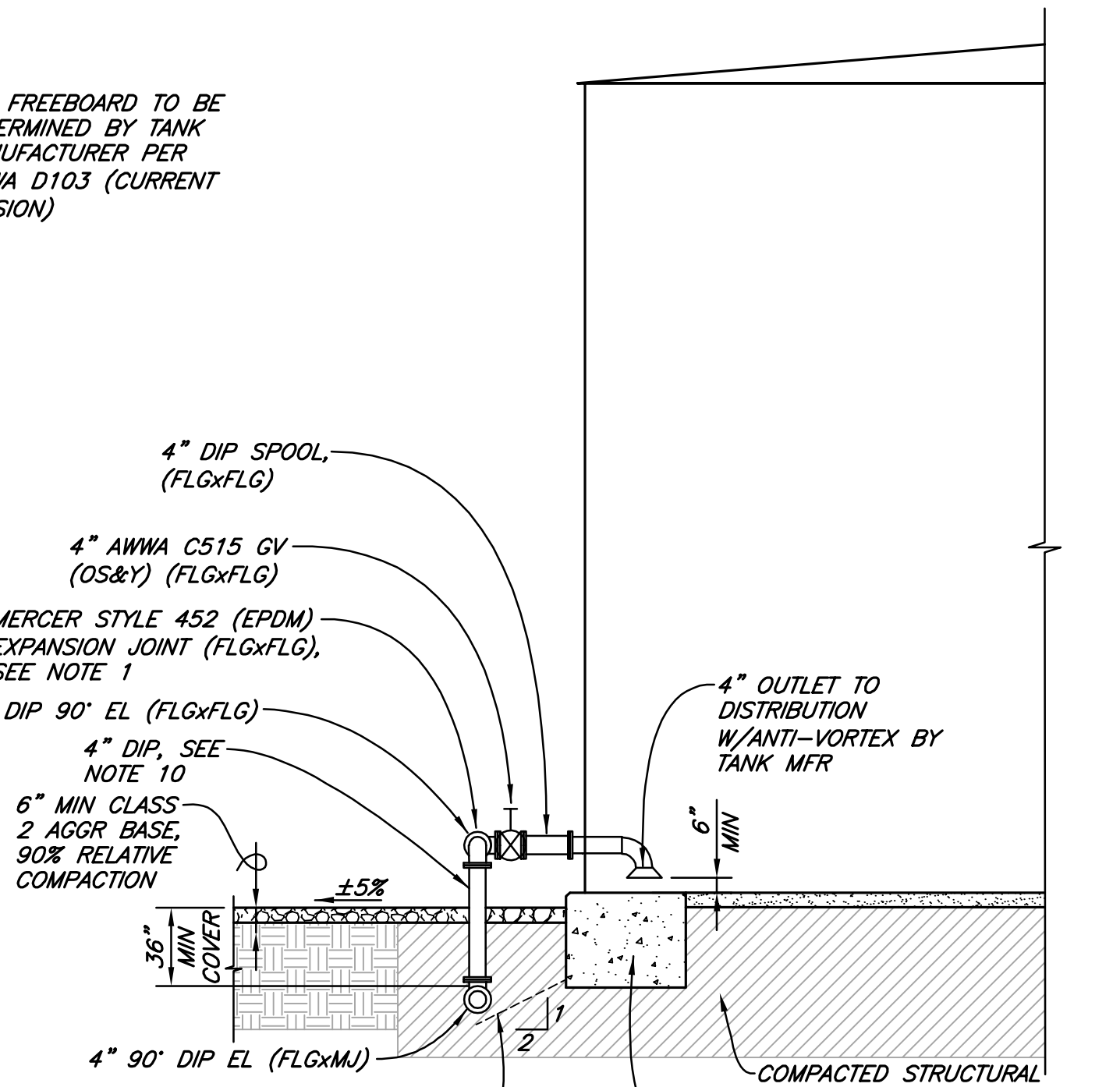
**TANK ELEVATION**  
NTS



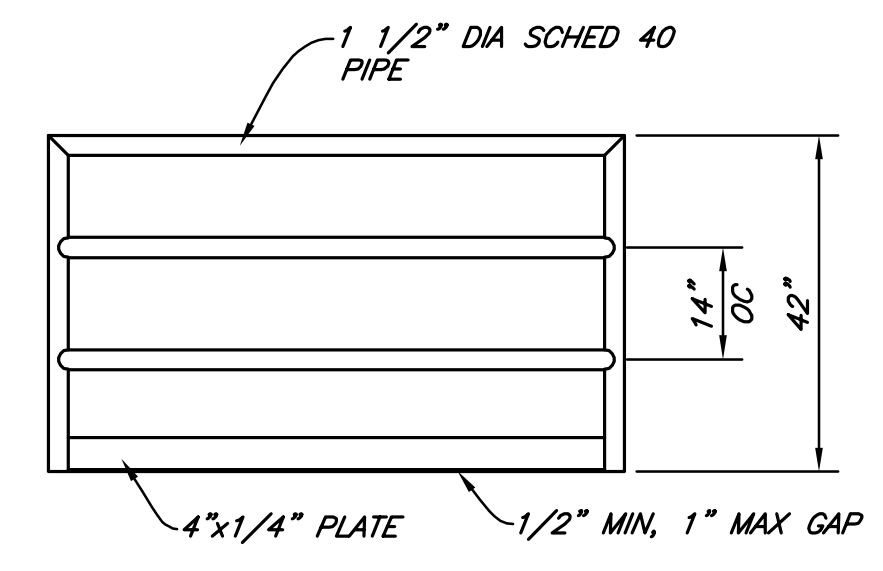
**INLET/SUPPLY**  
NTS



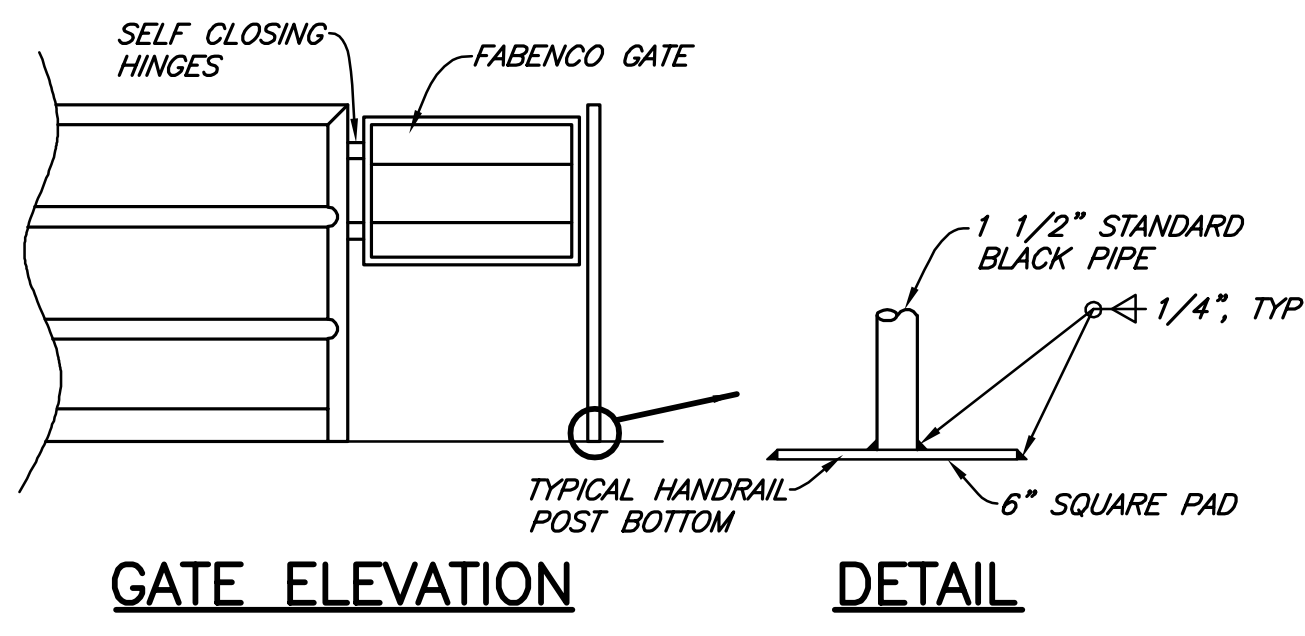
**HIGH WATER OVERFLOW/TANK DRAIN**  
NTS (APPROX NORTH)



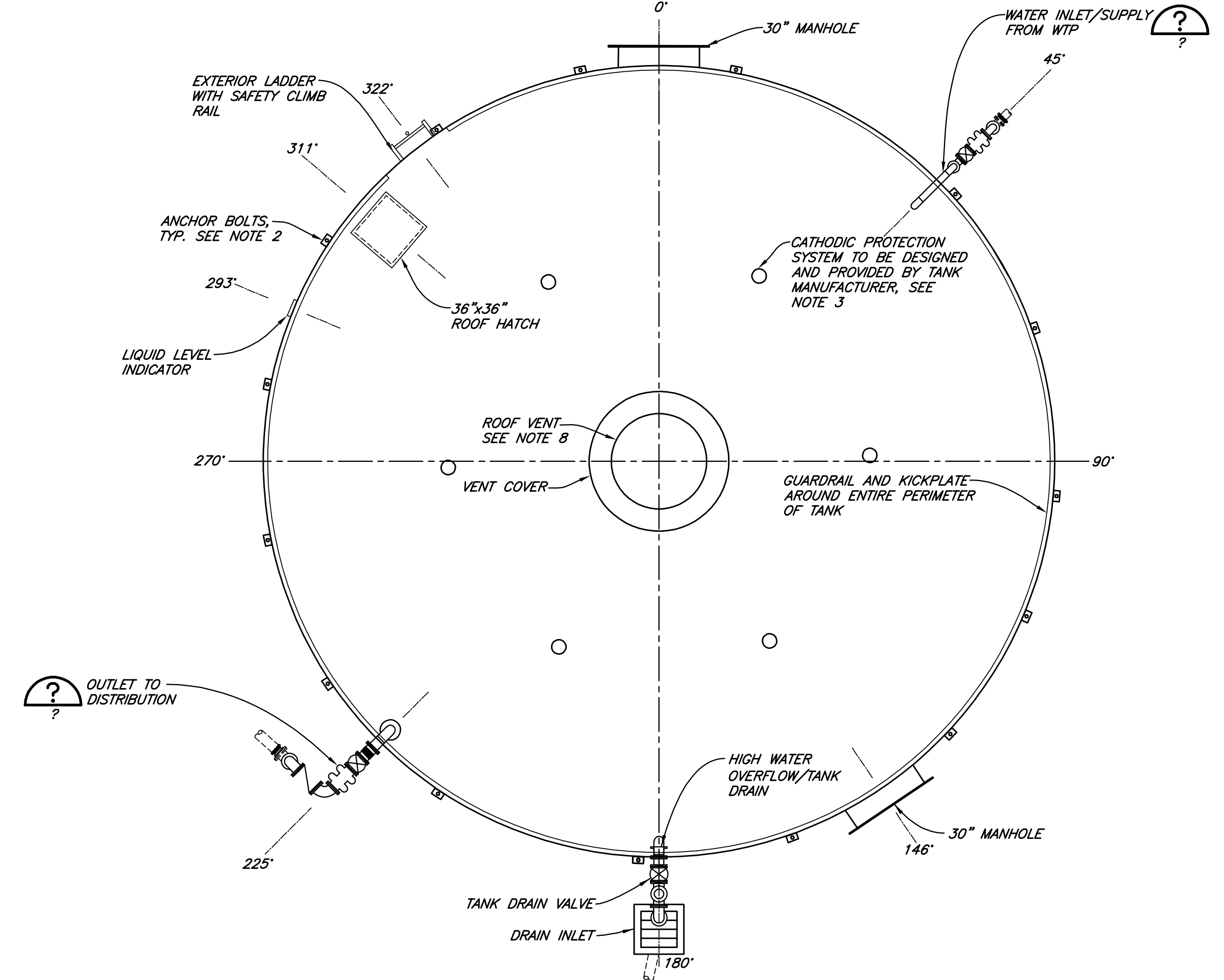
**OUTLET TO DISTRIBUTION**  
NTS



**RAIL ELEVATION**



**DETAIL 1**  
NTS (GUARDRAILING)



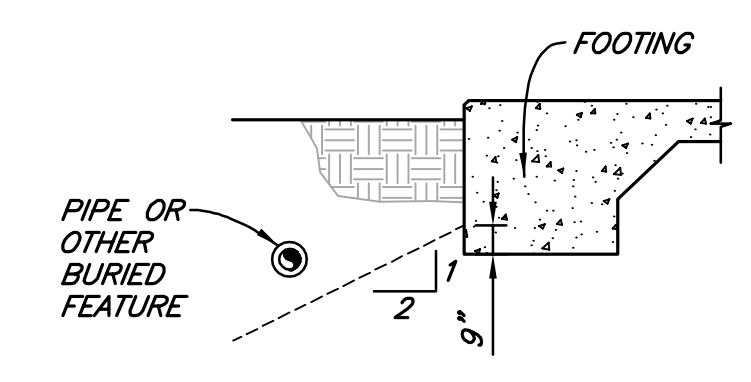
**TANK PLAN**  
NTS

**NOTES:**

1. ALL PIPING CONNECTIONS SHALL HAVE ADEQUATE CAPACITY TO ACCOMMODATE CALCULATED DISPLACEMENTS DUE TO SEISMIC LOADS, IN ACCORDANCE WITH AWWA D100 OR D103 AS APPROPRIATE (CURRENT VERSION). PIPING CONNECTIONS SHOWN ON THESE PLANS REPRESENT MINIMUM REQUIREMENTS AND SHOULD BE MODIFIED IN COORDINATION WITH THE ENGINEER IF IT IS DETERMINED BY THE TANK MANUFACTURER THAT ADDITIONAL DISPLACEMENT CAPACITY IS NEEDED.
2. THE SIZE AND NUMBER OF ANCHOR BOLTS SHALL BE DETERMINED BY TANK MANUFACTURER'S ENGINEER.
3. TANK MANUFACTURER SHALL COORDINATE THE DESIGN AND INSTALLATION OF THE CATHODIC PROTECTION SYSTEM.
4. FINAL LOCATION OF TANK APPURTENANCES AND PIPING CONNECTIONS TO BE DETERMINED IN COORDINATION WITH THE OWNER IN THE FIELD. PROVIDE AS CLOSE TO 180° SEPARATION BETWEEN TANK INLET AND OUTLET AS POSSIBLE.
5. ALL EXTERIOR PIPES AND PIPE SUPPORTS SHALL BE COATED WITH TANK EXTERIOR COATING SYSTEM.
6. TANK BOTTOM AND TANK SHELL TO BOTTOM CONNECTION SHALL ALL BE VACUUM OR AIR-PRESSURE TESTED FOR WATER-TIGHTNESS.
7. ALL SAFETY RELATED COMPONENTS SHALL COMPLY WITH OSHA REQUIREMENTS.
8. TANK VENTS SHALL PREVENT ENTRY OF RAIN WATER OR RUNOFF, BIRDS, INSECTS, RODENTS, AND OTHER ANIMALS, PROVIDE SUFFICIENT AIRFLOW IF 50% BLOCKED, AND COVERED BY STAINLESS STEEL #24 MESH.
9. PROVIDE 1" THICK RIGID INSULATION, UV RESISTANT AND RATED FOR EXTERIOR USE ON ALL EXPOSED PIPING AND VALVES.

**FLANGE NOTE:**

DIELECTRIC ISOLATION KITS SHALL BE USED WITH ALL STAINLESS STEEL HARDWARE AND FASTENERS.



**DETAIL 2**  
NTS

**60% DESIGN**

		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, SCALES ACCORDINGLY
812 W. WABASH AVE. EUREKA, CA 95501 WWW.S&W-ENR.COM 707-441-8885		BY: _____ DATE: _____ NO.: _____ REVISION: _____
DSGN: _____ DR: JWF/CON CHK: JSO APVD: _____	<b>WALLAN TANK LAYOUT</b>	
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA		
SHEET <b>C3.3</b> SEQ _____ DATE <b>09/2023</b> PROJ. NO. <b>022067</b>		

SAVED: 9/29/2023 3:18 PM JFOSTER, PLOTTED: 9/29/2023 4:43 PM NEWELL, CHRIS  
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**PLAN**  
 1"=20'

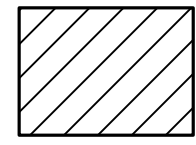


**PUMP STATION EXTERIOR**

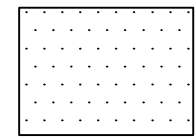


**PUMP STATION INTERIOR**

**LEGEND**



DEMOLITION/REMOVE



SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

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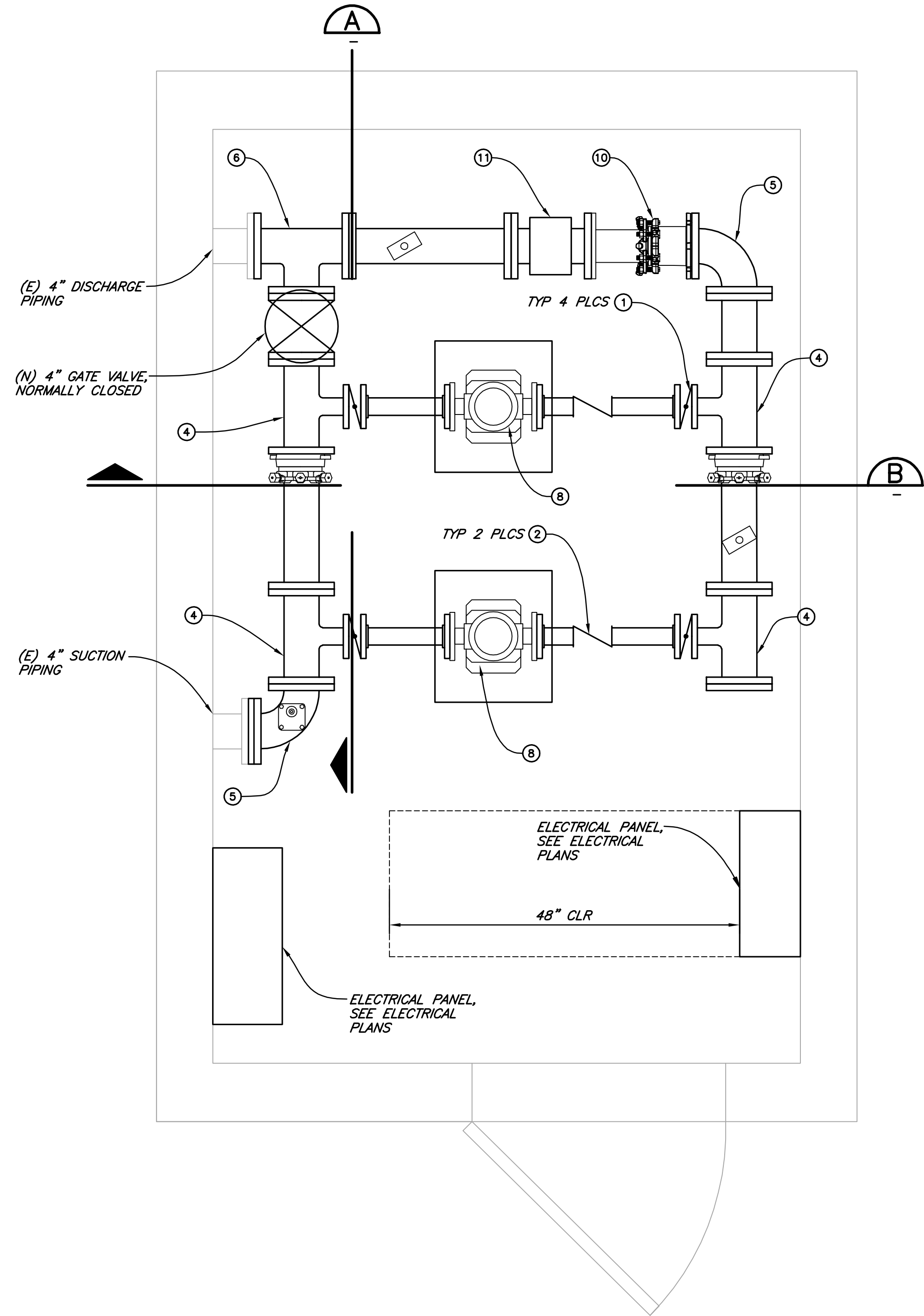
DESIGN -  
 DR CDN/JWF  
 CHK JSO  
 APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**WALLAN PUMP STATION UPGRADES**

SHEET	C4.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

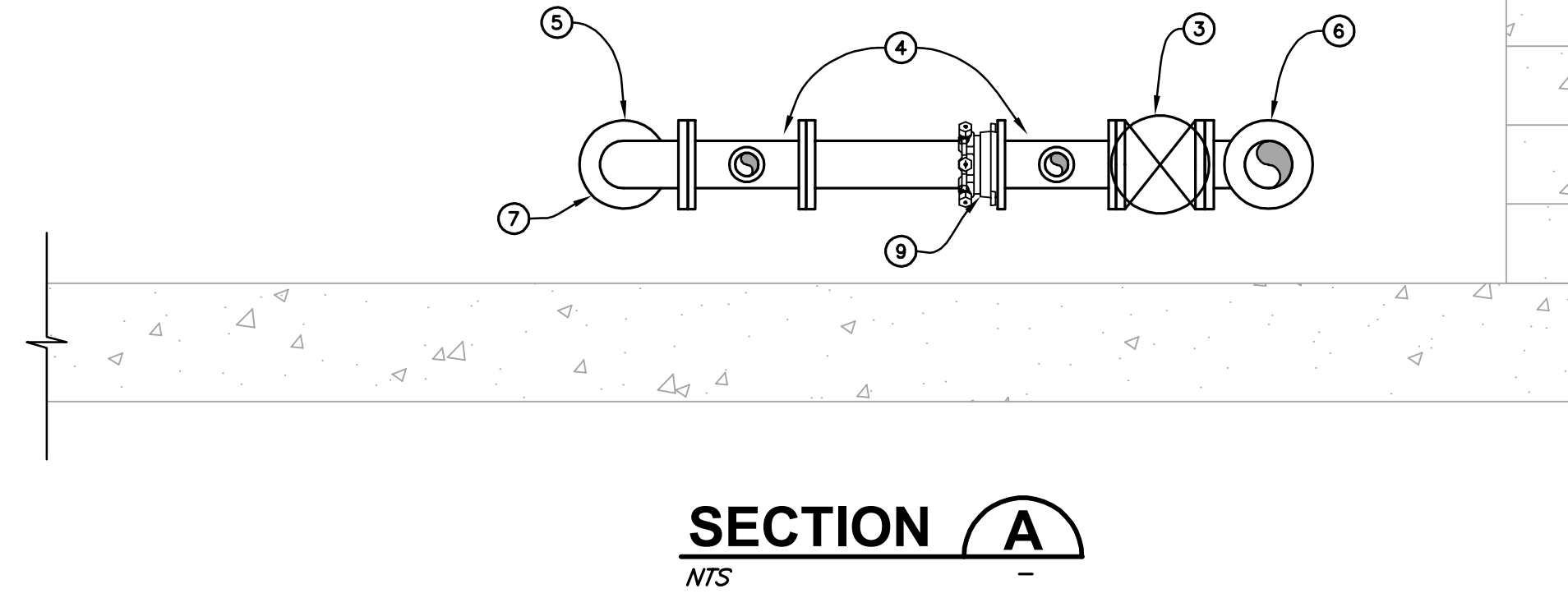
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**KEY NOTES:**

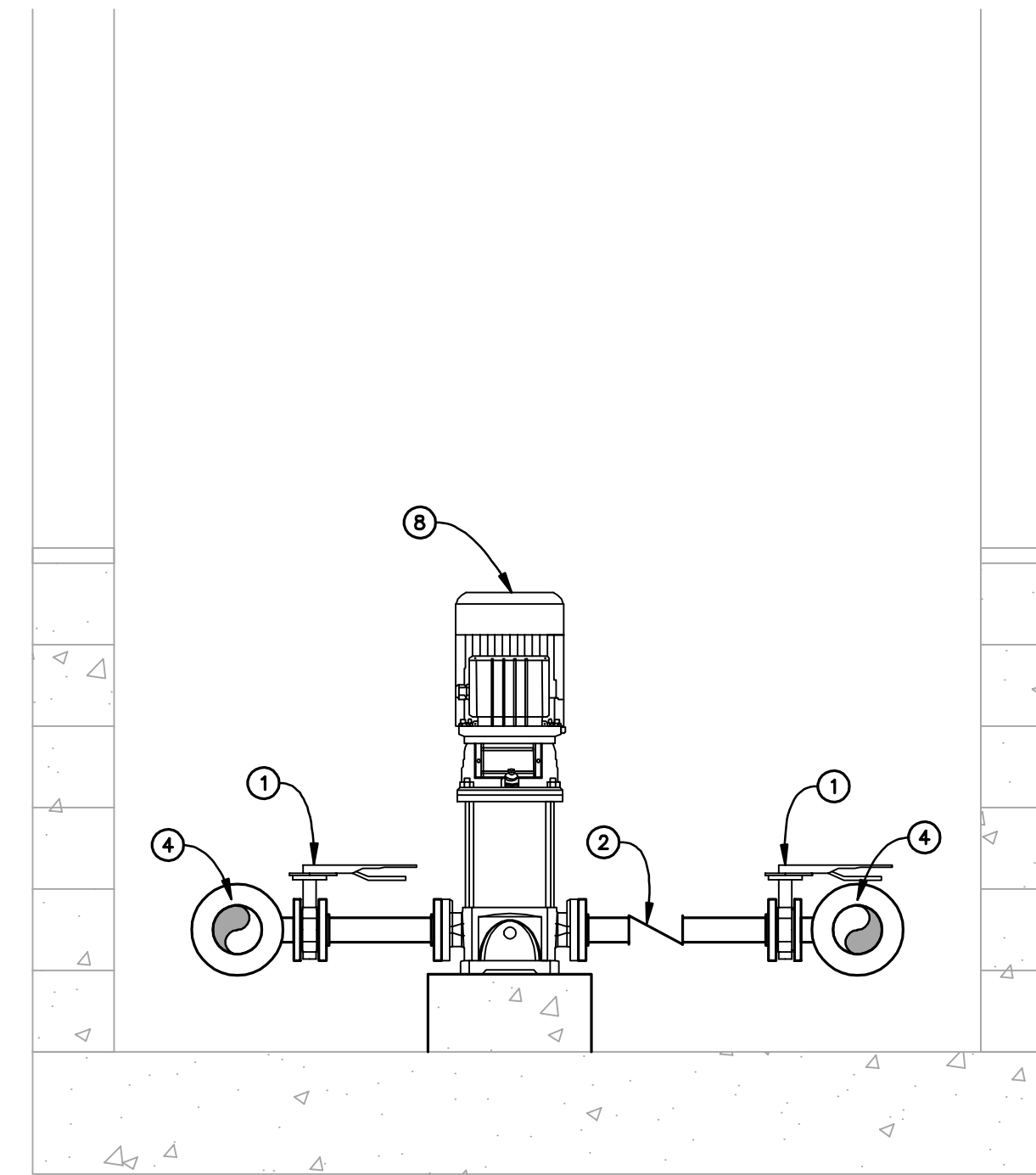
- |                    |                                     |         |         |
|--------------------|-------------------------------------|---------|---------|
| ① 2" BFV, LUG      | ⑦ CONNECT TO EXISTING PIPE          | ⑫ ----- | ⑱ ----- |
| ② 2" CHECK VALVE   | ⑧ BOOSTER PUMP 55GPM @ 306', 7.5 HP | ⑬ ----- | ⑲ ----- |
| ③ 4" DIP GV        | ⑨ 4" RCFA                           | ⑭ ----- | ⑳ ----- |
| ④ 4"x4"x2" DIP TEE | ⑩ 4" DISMANTLING JOINT              | ⑮ ----- | ㉑ ----- |
| ⑤ 4" DIP EL        | ⑪ 4" MAGNETIC FLOW METER            | ⑯ ----- | ㉒ ----- |
| ⑥ 4" DIP TEE       |                                     | ⑰ ----- | ㉓ ----- |



**PLAN**  
1"=1'-0"



**SECTION A**  
NTS

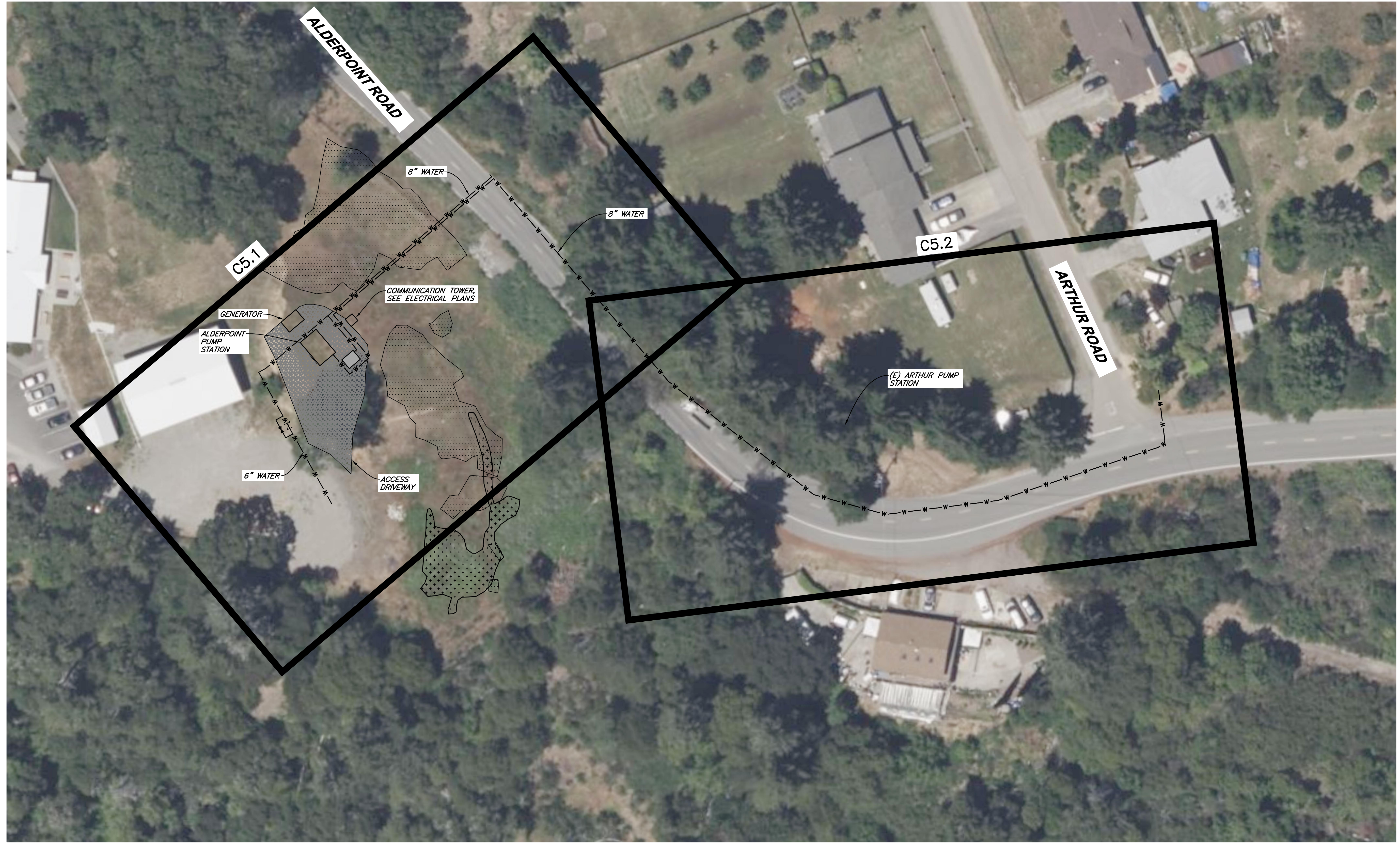


**SECTION B**  
NTS

**60% DESIGN**

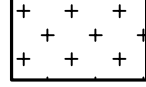
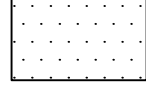
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812 W. WABASH AVE. EUREKA, CA 95501 WWW.S&W-PR.COM 707-441-8885			
		BY	
		REVISION	
		DATE	
		NO.	
DSGN DR CDN/JWF CHK JSO APVD			
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>WALLAN PUMP STATION MECHANICAL PLAN</b>			
SHEET C4.1			
SEQ			
DATE 09/2023			
PROJ. NO. 022067			

10/11/2023 10:09 AM JFOSTER, PLOTTED: 10/11/2023 10:24 AM JOHN FOSTER  
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-ALDRPNT-WATER-MAIN-OVER.dwg



**PLAN**  
 1"=30'

**LEGEND**

-  WETLAND AREA
-  SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 NOT ONE INCH ON THIS SHEET UNLESS SCALES ACCORDINGLY

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 EUREKA, CA 95501  
 WWW.S&W-ENR.COM  
 707-441-8865

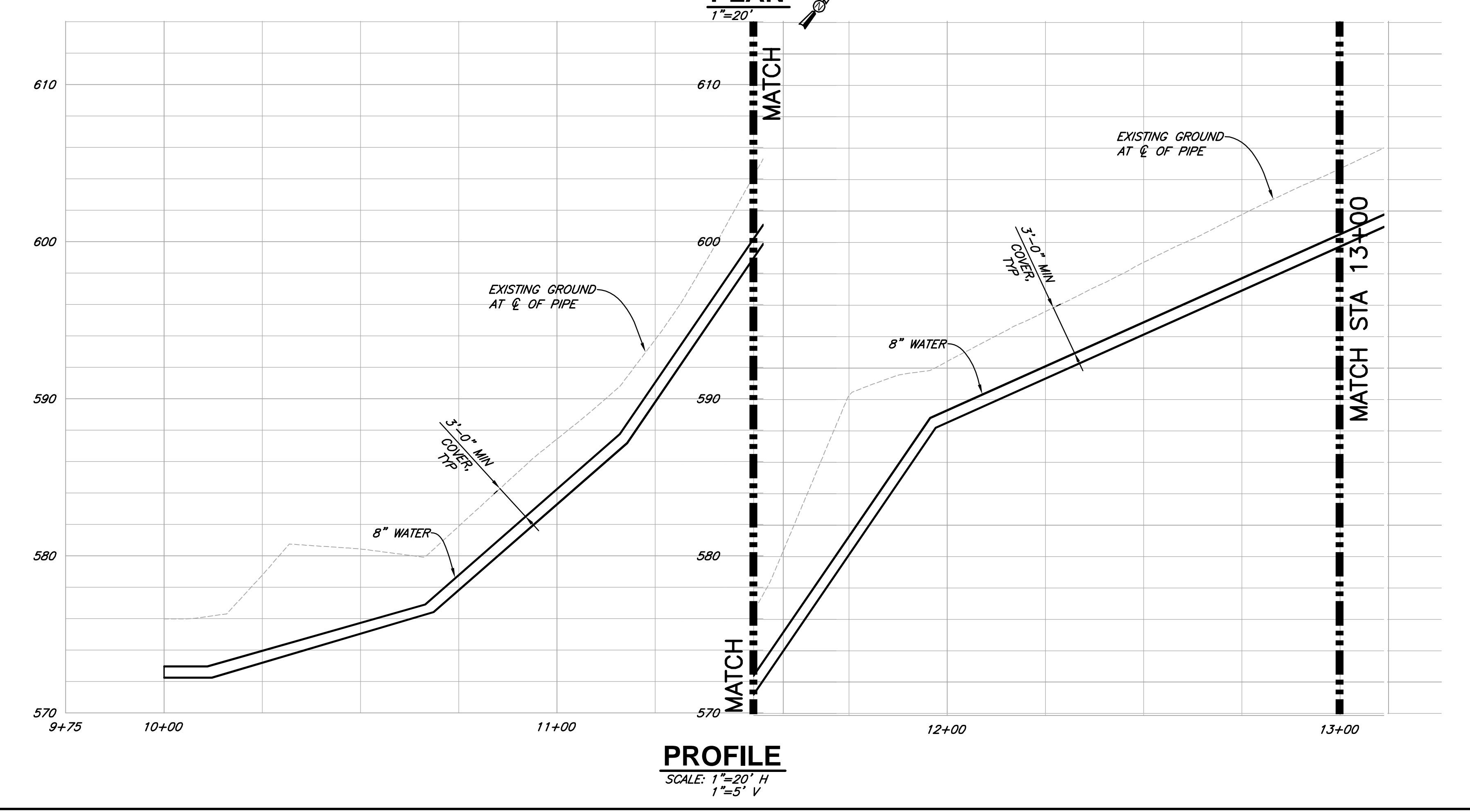
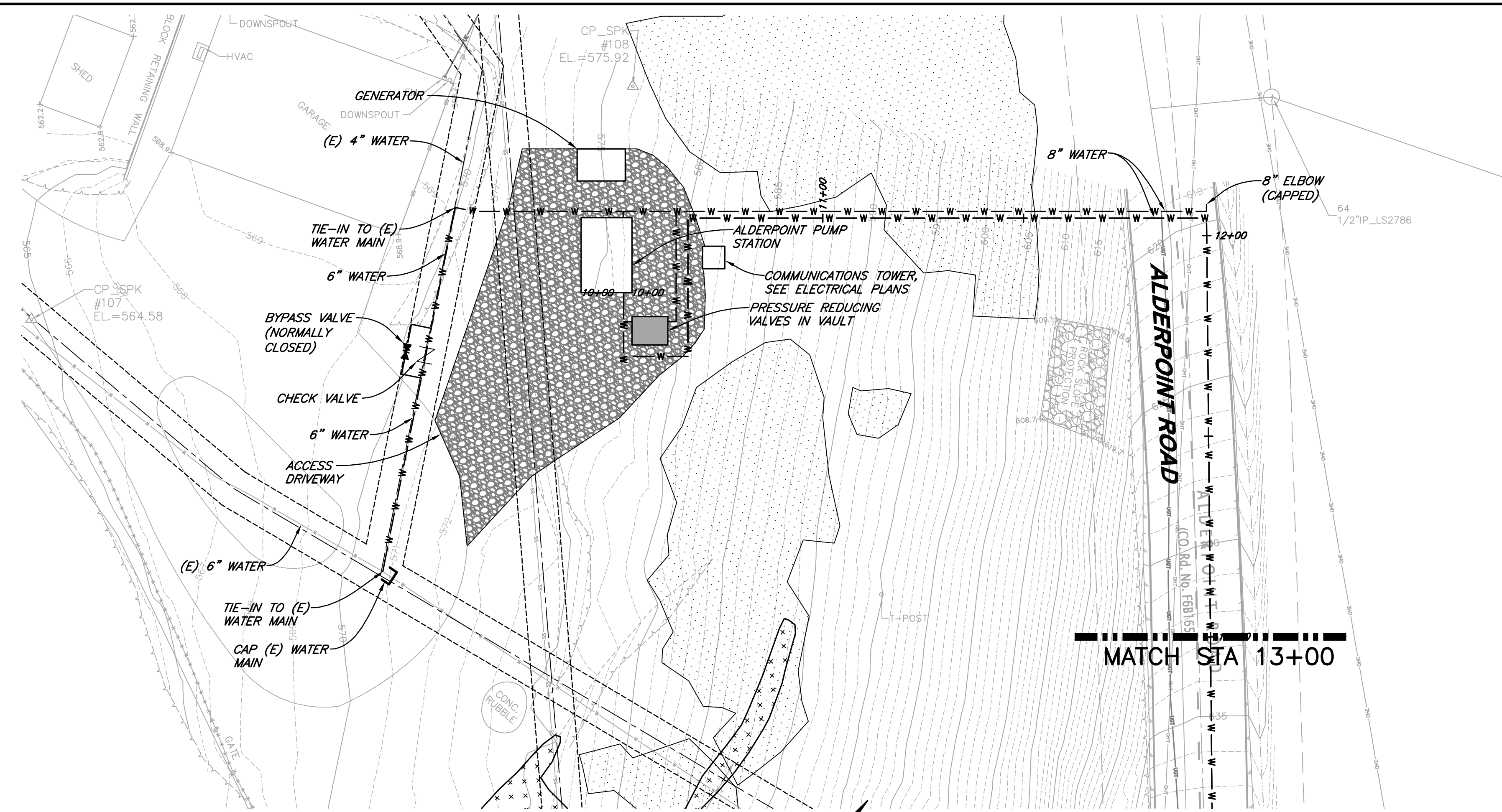


NO.	DATE	REVISION	BY

GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**ALDERPOINT PUMP STATION AND  
 WATER MAIN OVERVIEW**

SHEET	C5.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

SAVED: 10/11/2023 9:54 AM JFOSTER, PLOTTED: 10/11/2023 10:27 AM JOHN FOSTER  
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-WATER-PNP.dwg



**LEGEND**

- WETLAND AREA
- SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET, ORIGINAL SCALES ACCORDINGLY

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 707-441-8865

NO.	DATE	REVISION	BY

DSGN —  
 DR CDN/JWF  
 CHK JSO  
 APVD

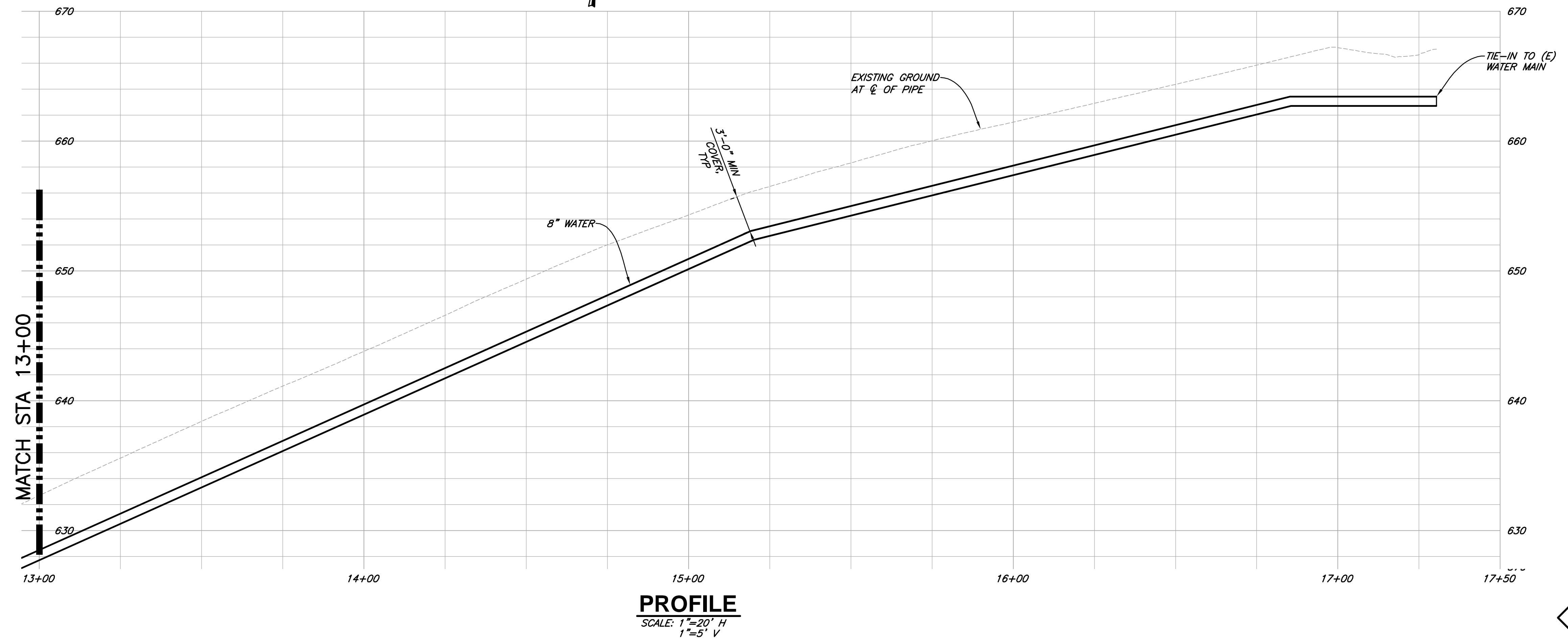
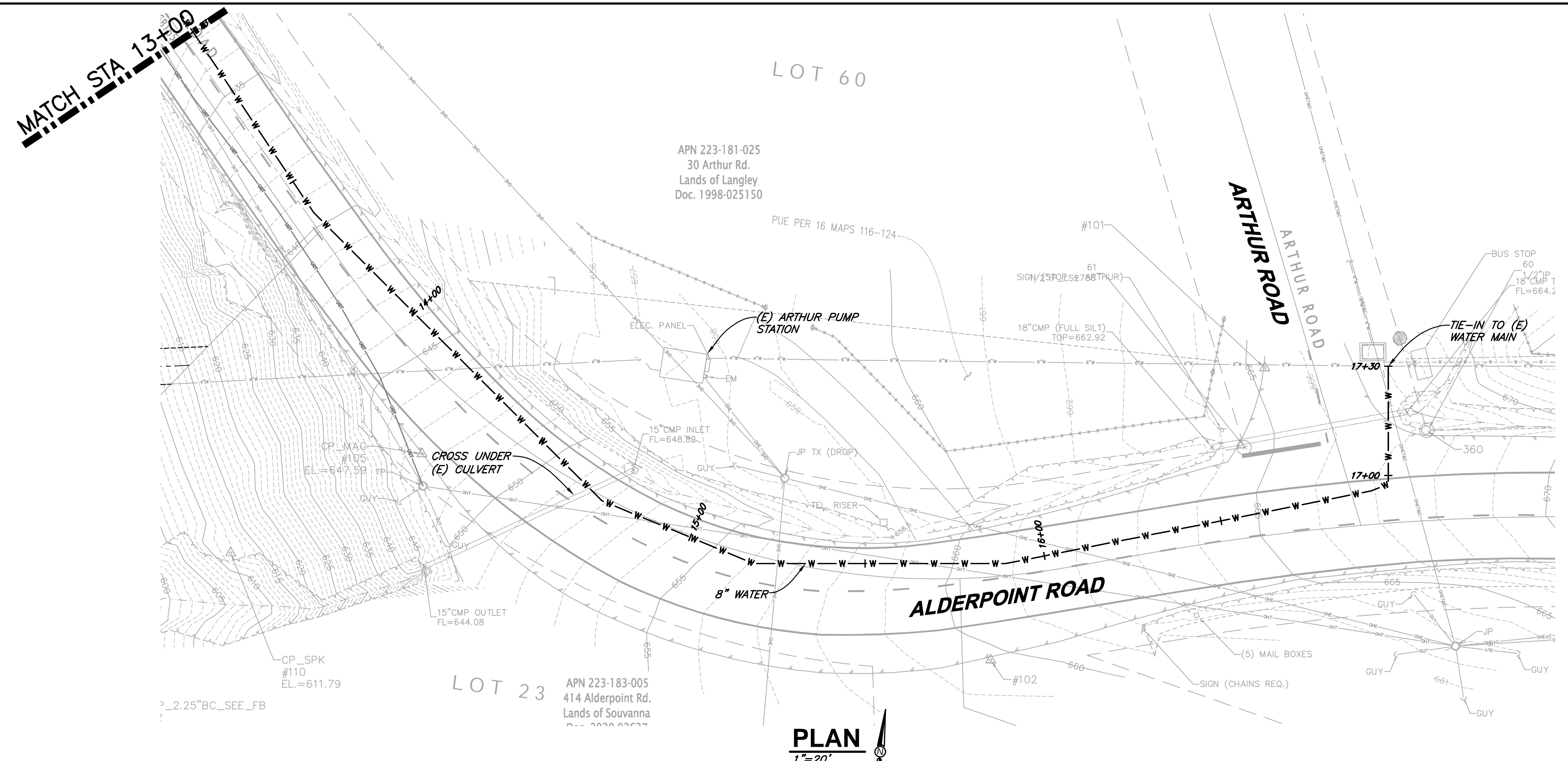
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

**ALDERPOINT PUMP STATION AND WATER MAIN PLAN AND PROFILE**

SHEET  
**C5.1**

SEQ  
 DATE 09/2023  
 PROJ. NO.  
 022067

SAVED: 10/11/2023 9:54 AM JFOSTER, PLOTTED: 10/11/2023 10:28 AM JOHN FOSTER  
 F:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-WATER-RWP.dwg



**LEGEND**

WETLAND AREA

SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
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**SFW**

NO.	DATE	REVISION	BY

DSGN	DR	CHK	APVD
	CDN/JWF	JSO	

GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

**ALDERPOINT PUMP STATION AND WATER MAIN PLAN AND PROFILE**

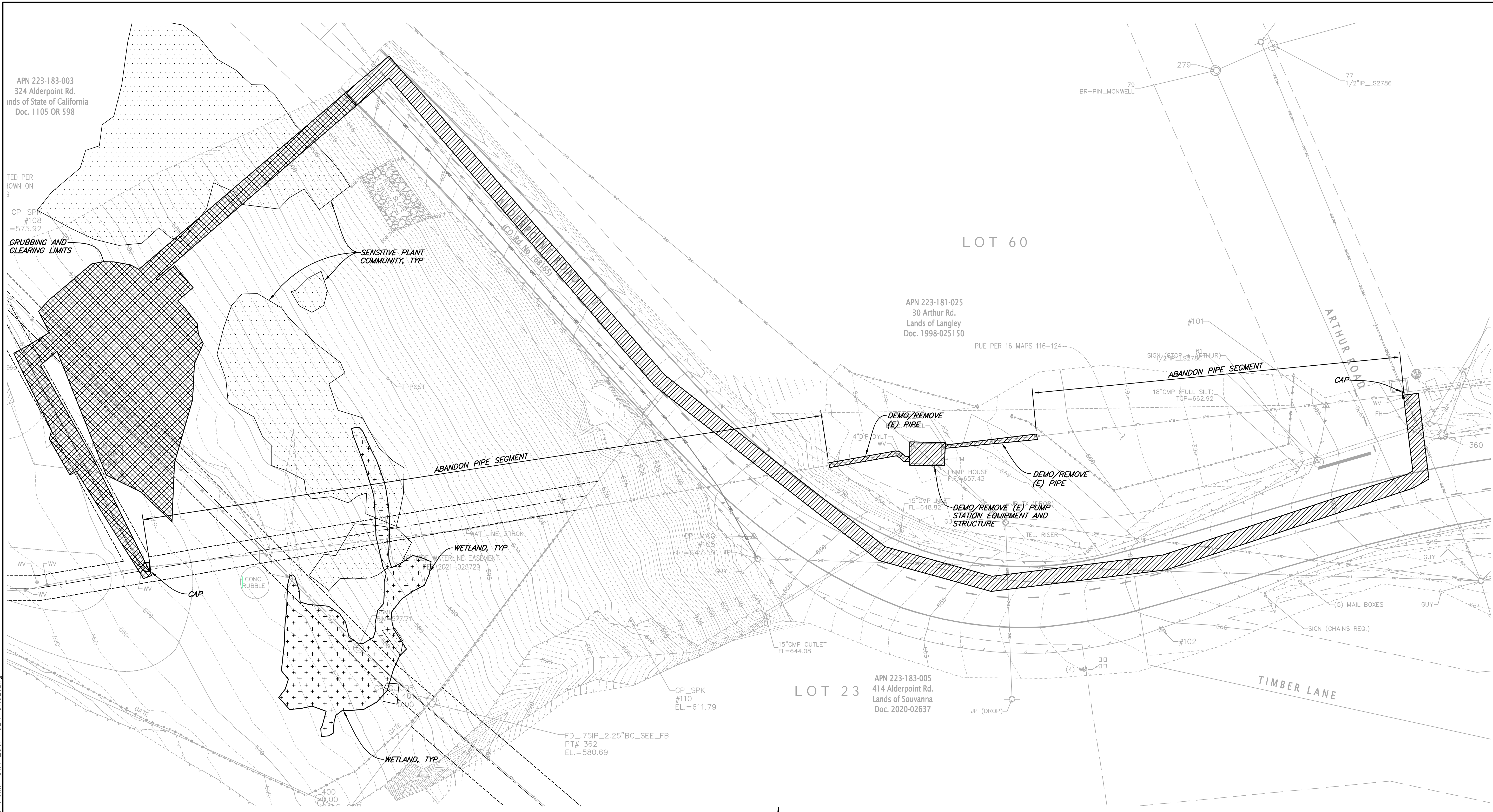
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SEQ

DATE 09/2023

PROJ. NO.  
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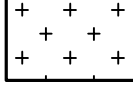
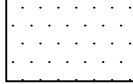


APN 223-183-003  
 324 Alderpoint Rd.  
 Lands of State of California  
 Doc. 1105 OR 598

APN 223-181-025  
 30 Arthur Rd.  
 Lands of Langley  
 Doc. 1998-025150

LOT 23  
 APN 223-183-005  
 414 Alderpoint Rd.  
 Lands of Souvanna  
 Doc. 2020-02637

**PLAN**  
 1"=20'

**LEGEND**

-  WETLAND AREA
-  SENSITIVE PLANTS COMMUNITY
-  CLEARING AND GRUBBING
-  DEMO

**DEMOLITION NOTE:**

EXISTING FACILITIES SHALL REMAIN FULLY OPERATIONAL UNTIL NEW FACILITIES ARE FULLY OPERATIONAL. DEMOLITION OF EXISTING FACILITIES SHALL NOT BEGIN UNTIL APPROVED BY THE OWNER AND THE ENGINEER.

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET, VERIFY SCALES ACCORDINGLY

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NO.	DATE	REVISION	BY

DESIGN: DR CDN/JWF  
 CHECK: CHK JSO  
 APPROVED: APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**ALDERPOINT PUMP STATION SITE PREPARATION AND DEMOLITION**

SHEET	C5.3
SEQ	
DATE	09/2023
PROJ. NO.	022067



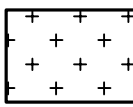
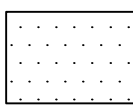


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 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ROB-TANK-EXIST-COND.dwg



**PLAN**  
 1"=20'

**LEGEND**

-  WETLAND AREA
-  SENSITIVE PLANTS COMMUNITY

**60% DESIGN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET, VERIFY SCALES ACCORDINGLY

812 W. WABASH AVE.  
 EUREKA, CA 95501  
 WWW.S2W-ENR.COM  
 707-441-8885

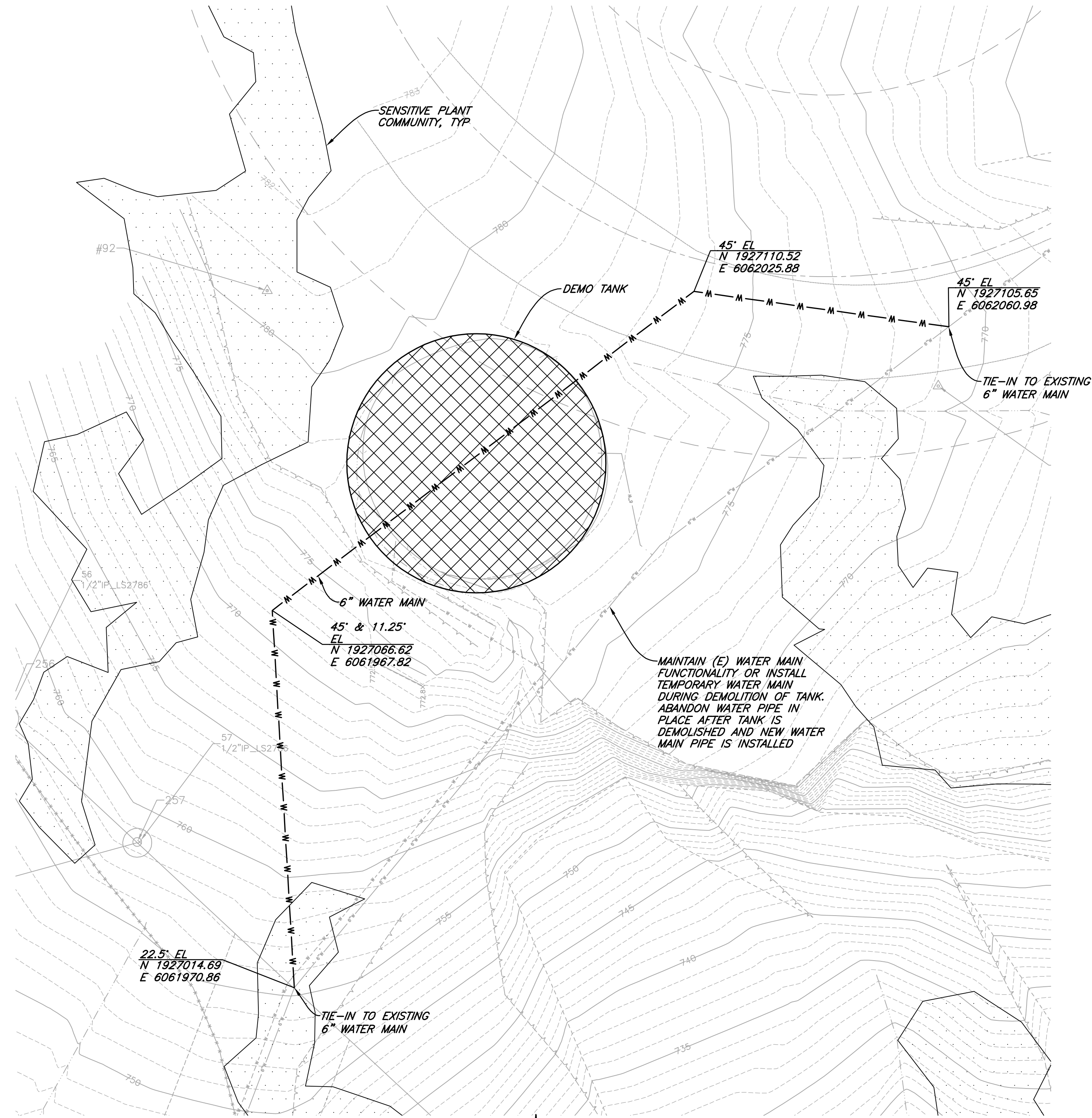


NO.	DATE	REVISION	BY

DESIGN -  
 DR CDN/JWF  
 CHK JSO  
 APVD  
 GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**ROBERTSON TANK OVERVIEW**

SHEET	C6.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

SAVED: 9/29/2023 3:38 PM JFOSTER, PLOTTED: 9/29/2023 4:47 PM NEWELL, CHRIS  
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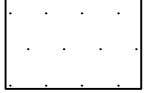
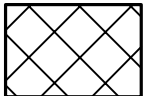


**PLAN**  
 1"=10'


**NOTES:**

1. ALL DEMOLITION SHALL BE CARRIED OUT IN A MANNER WHICH WILL PREVENT INJURY TO WORKERS AND DAMAGE TO ADJACENT FACILITIES. DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND ORDINANCES. EXISTING MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL NOT BE REUSED IN THE WORK UNLESS OTHERWISE SPECIFIED, AND BECOME THE CONTRACTORS PROPERTY AND BE REMOVED FROM THE JOB SITE, EXCEPT AS NOTED BELOW.
2. TANK DEMOLITION
  - A. REMOVE TANK ROOF AND SUPPORT STRUCTURE.
  - B. BREAK A MINIMUM OF FOUR-4 FOOT DIAMETER HOLES THROUGH TANK FLOOR TO PROVIDE DRAINAGE THROUGH TANK.
  - C. REMOVE TANK WALLS TO 3'-0" BELOW FINISHED GRADE. CONCRETE RUBBLE TO BE PACED EVENLY ACROSS TANK BOTTOM.
  - D. BACKFILL TANK TO A MINIMUM OF 2 FEET OVER TOP OF CONCRETE RUBBLE WITH CLASS 2 PERMEABLE MATERIAL IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATION SECTION 68-1.025.
  - E. BACKFILL REMAINING TANK WITH NATIVE MATERIAL TO 6" BELOW FINISHED GRADE. NATIVE MATERIAL TO BE PLACED IN 8-INCH LIFTS AND SHALL BE WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT. COMPACT NATIVE MATERIAL TO 90% RELATIVE COMPACTION.
3. FINISH GRADE PREPARATION
  - A. PLACE 6" MINIMUM TOPSOIL OVER BACKFILL.
  - B. GRADE SMOOTH AND ROLL TO MATCH EXISTING CONTOURS.
  - C. PLANT ENTIRE RECLAIMED AREA WITH LAWN GRASS AND APPLY FERTILIZER AT MANUFACTURERS RECOMMENDED RATES.
4. CONTRACTOR TO PROVIDE PHOTO AND VIDEO SURVEY OF PROPERTY TO DOCUMENT EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK IN THIS AREA.
5. CONTRACTOR TO PROTECT IN PLACE ALL LANDSCAPING AND ARCHITECTURAL ELEMENTS. IF DAMAGE OCCURS, THE CONTRACTOR IS TO REPLACE DAMAGED ELEMENTS IN KIND.

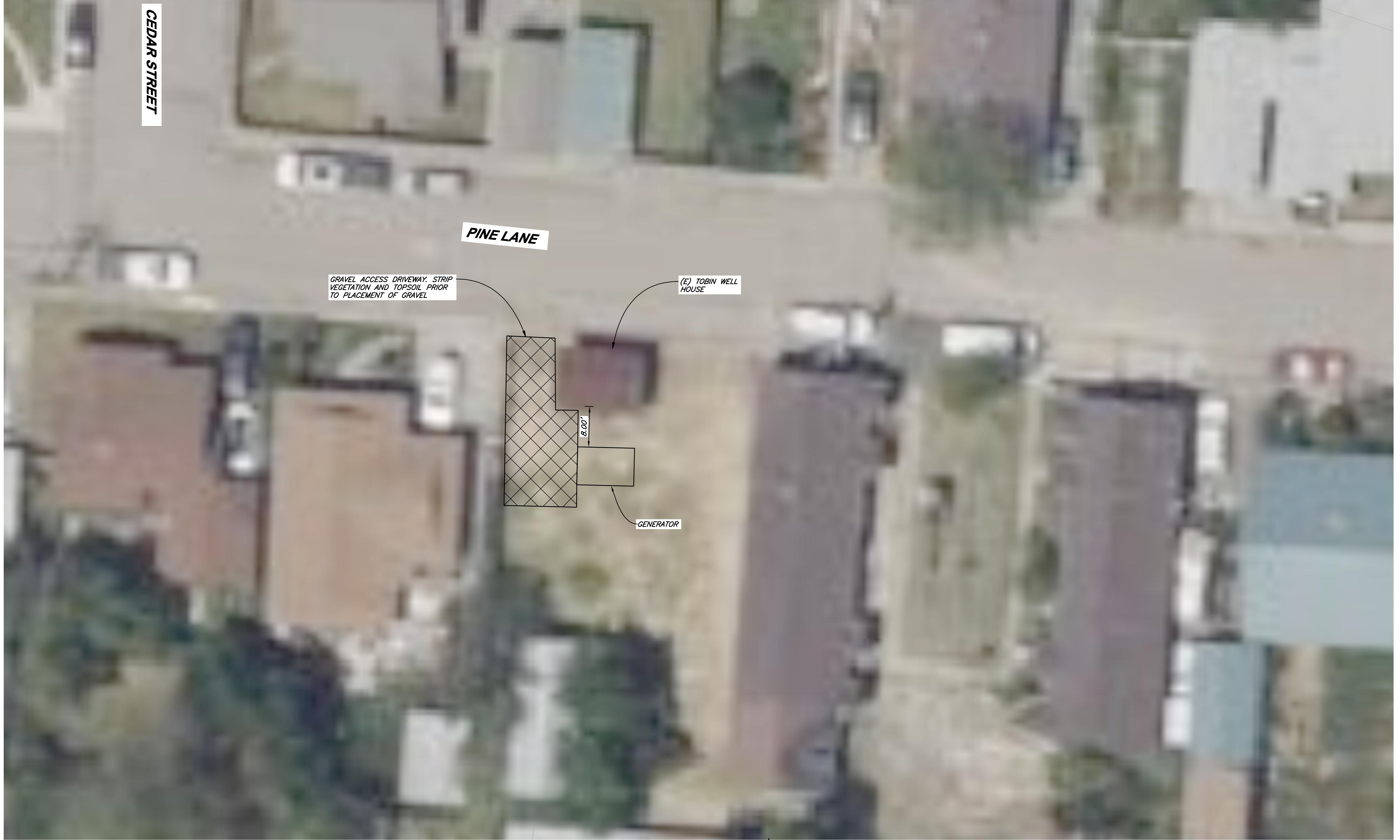
**LEGEND**

-  SENSITIVE PLANTS COMMUNITY
-  DEMO

**60% DESIGN**

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DSGN - DR CDN/JWF CHK JSO APVD	BY REVISION DATE NO.
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>ROBERTSON TANK DEMOLITION PLAN          AND WATER MAIN REPLACEMENT</b>	
SHEET <b>C6.1</b>	
SEQ	
DATE <b>09/2023</b>	
PROJ. NO. <b>022067</b>	

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GRAVEL ACCESS DRIVEWAY. STRIP VEGETATION AND TOPSOIL PRIOR TO PLACEMENT OF GRAVEL

PINE LANE

(E) TOBIN WELL HOUSE

GENERATOR

8.00'

PLAN  
 1" = 10'



60% DESIGN

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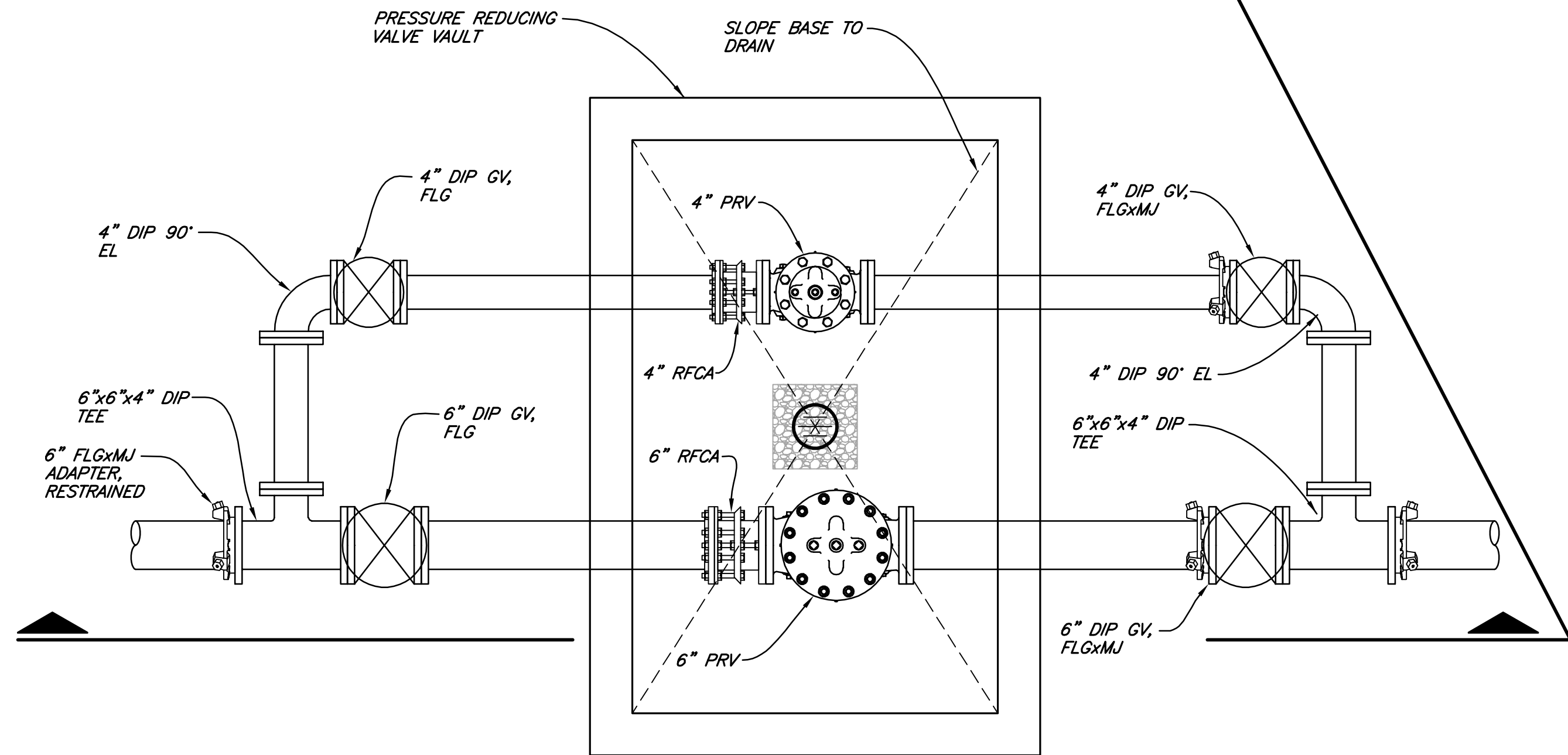
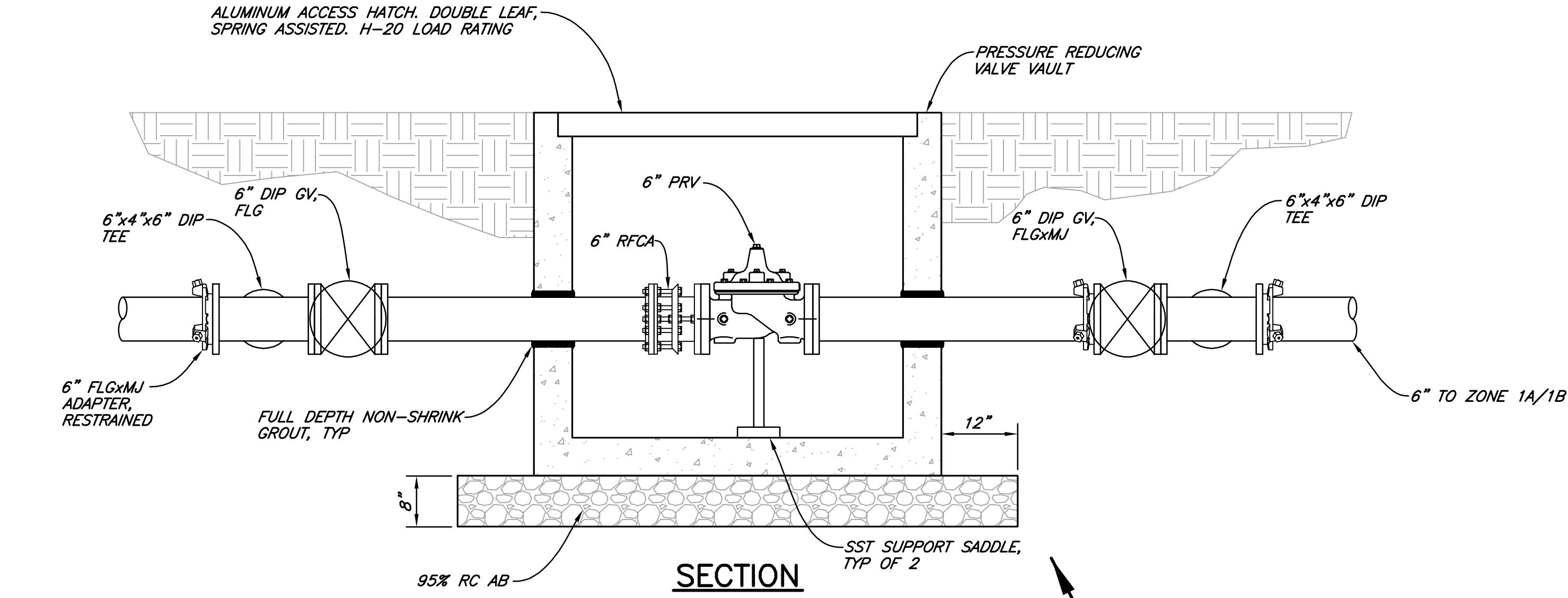


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 GARBERVILLE, CALIFORNIA  
**TOBIN WELL GENERATOR SITE PLAN**

SHEET	C7.0
SEQ	
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PROJ. NO.	022067

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**SECTION**  
**PLAN**  
**DETAIL 1**  
 (PRESSURE REDUCING VALVE VAULT)

**60% DESIGN**

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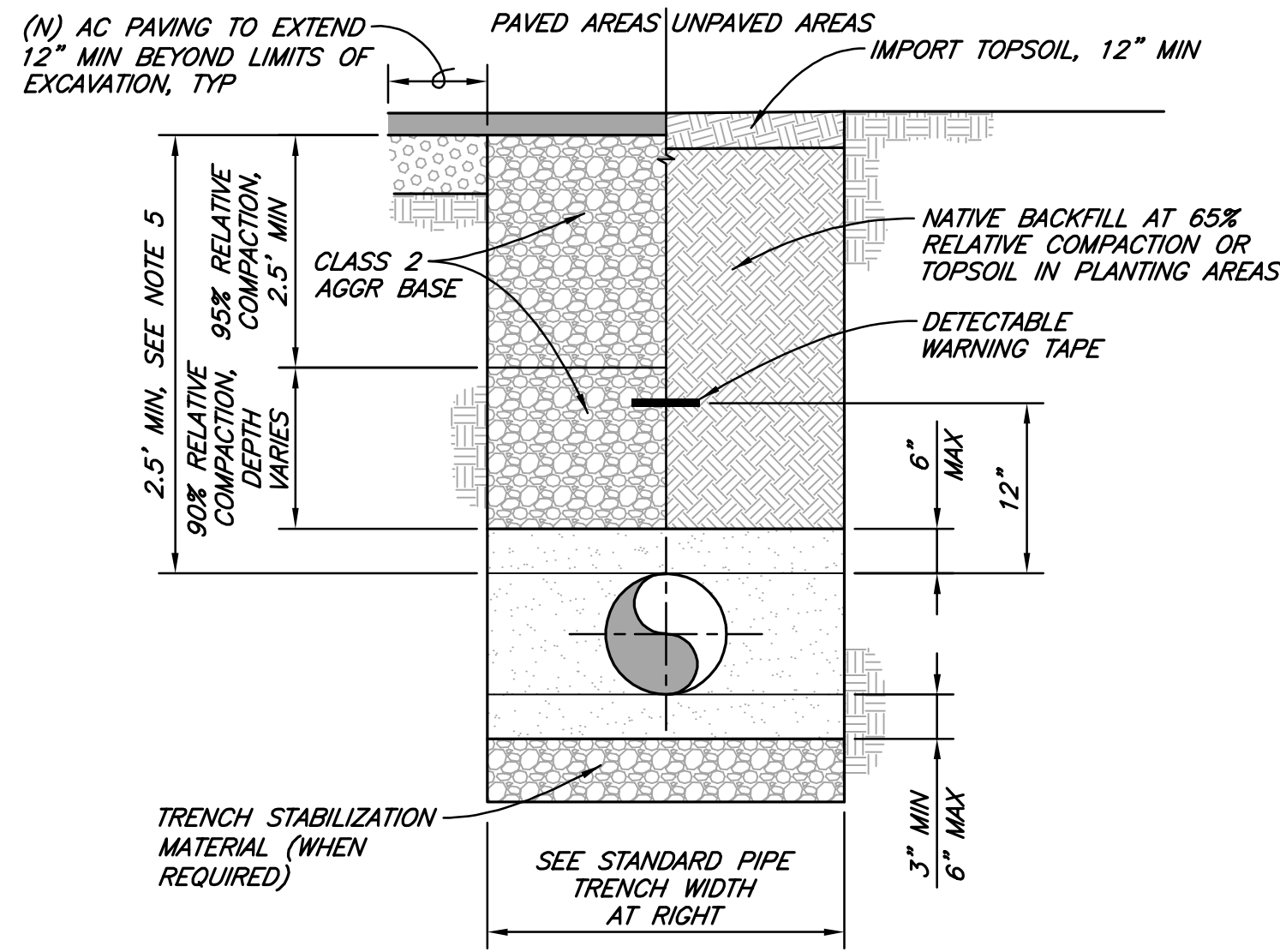
DR	JWF/CDN
CHK	JSO
APVD	

GARBVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBVILLE, CALIFORNIA

SHEET	C8.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

**CIVIL DETAILS**

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PIPE DIA "D"	MINIMUM "A"	MAXIMUM "A"
<4"	3"	6"
4" TO 6"	6"	12"
6" TO 15"	8"	14"
16" TO 21"	10"	16"
24" TO 30"	12"	18"
33" TO 42"	15"	21"
48" & LARGER	18"	24"

**NOTES:**

1. WIDER TRENCHES MAY REQUIRE HIGHER STRENGTH PIPE AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTHS REQUIRE PRIOR APPROVAL OF ENGINEER.
3. IN MAKING EXCAVATIONS FOR THIS PROJECT, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING AND INSTALLING ADEQUATE SHEETING, SHORING AND BRACING AS MAY BE NECESSARY AS A PRECAUTION AGAINST SLIDES OR CAVE-INS, AND TO PROTECT ALL EXISTING IMPROVEMENTS OF ANY KIND, EITHER ON PUBLIC OR PRIVATE PROPERTY, FULLY FROM DAMAGE.
4. SATISFACTORY NATIVE BACKFILL MATERIAL USED AS UTILITY TRENCH BACKFILL BELOW UNPAVED AREAS SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.
5. 2-SACK SLURRY BACKFILL MAY BE USED IN TRENCH WHEN MINIMUM PIPE COVER NOT POSSIBLE, WHEN APPROVED BY OWNER'S REPRESENTATIVE.
6. CLASS 2 AGGREGATE BASE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
7. DETECTABLE WARNING TAPE SHALL BE BRIGHT COLORED, CONTINUOUSLY PRINTED, MINIMUM 6" WIDE BY 4 MIL THICK, MANUFACTURED FOR DIRECT BURIAL.
8. DETECTABLE WARNING TAPE NOT REQUIRED FOR IRRIGATION LINES.
9. GRAVEL ROADS SHALL USE PAVED AREA TRENCH SECTION BUT WITH AGGREGATE BASE TO SURFACE, UNLESS NOTED OTHERWISE.

**DETAIL 1**  
 NTS  
 (TYPICAL TRENCH)

**STEM EXTENSION FABRICATION NOTES**

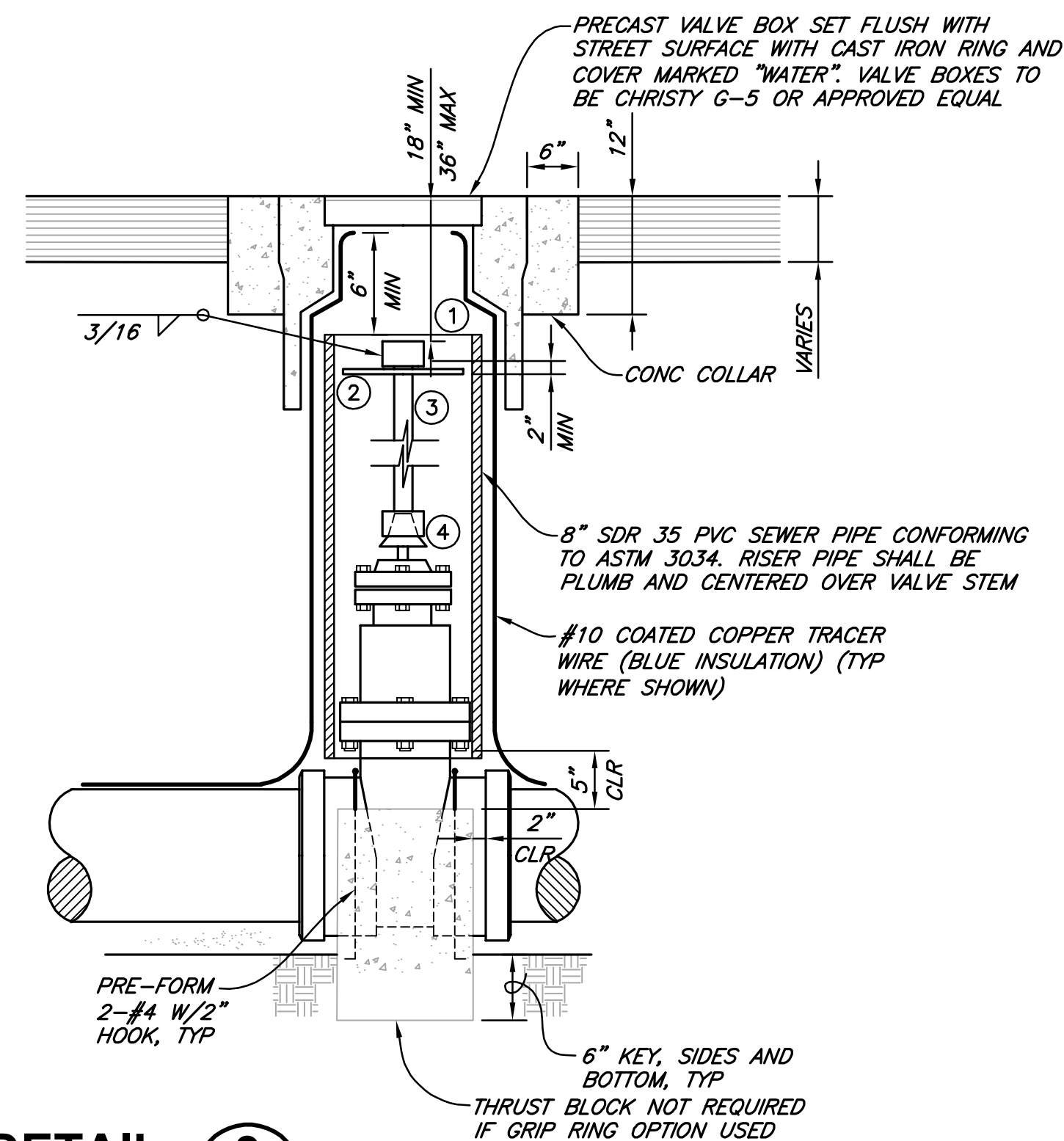
1. ALL WELDS TO RISER SHAFT SHALL BE FILLET WELD ALL AROUND, AS SPECIFIED BELOW.
2. ALL STEEL REQUIRED FOR RISER FABRICATION SHALL BE STRUCTURAL STEEL PER ASTM A36.

**VALVE STEM EXTENTION PARTS LIST**

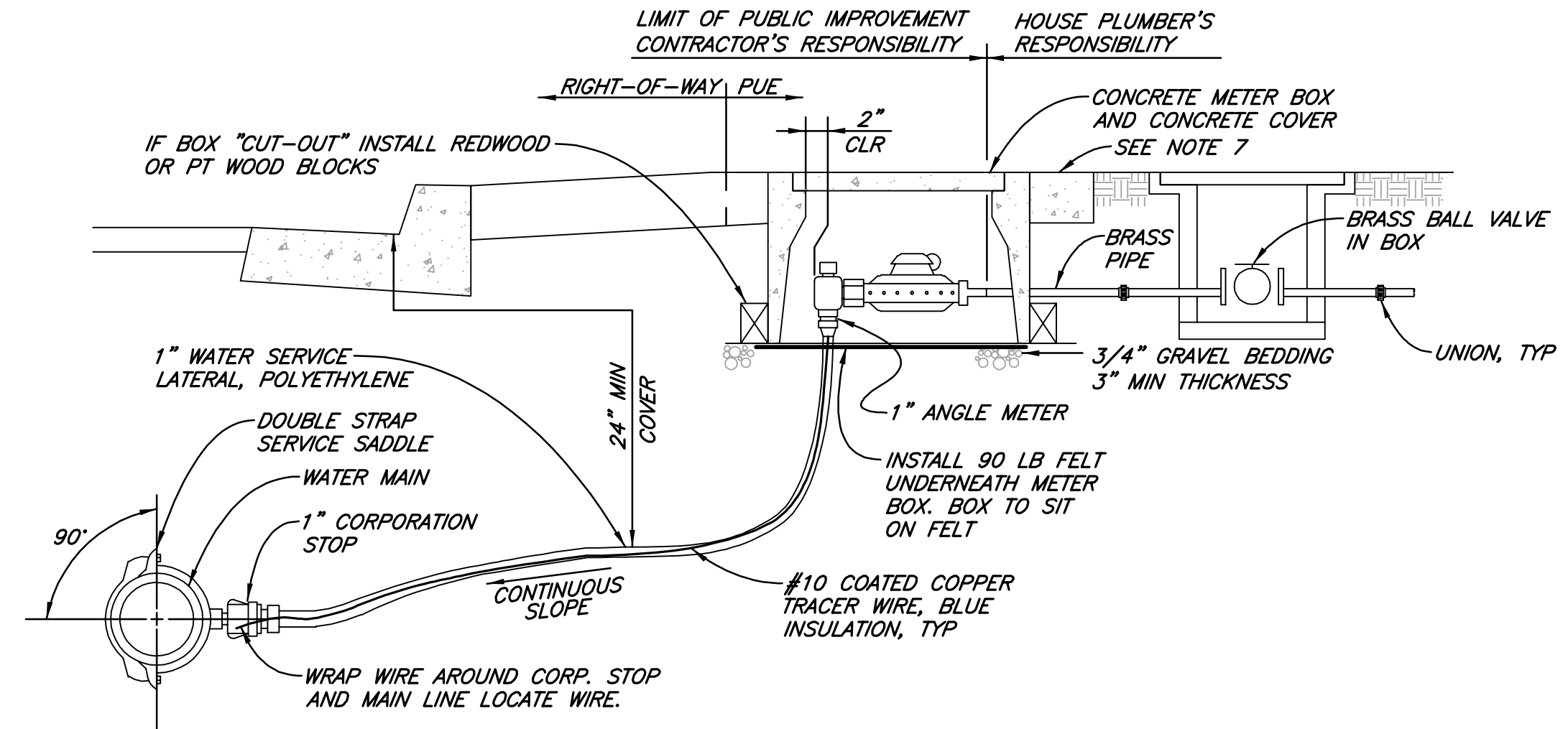
1. VALVE OPERATING NUT OR 1-7/8" x 1-7/8" x 2" HIGH, SOLID STEEL WELDED TO RISER SHAFT.
2. 1/8" THK x 7-1/2" DIA GUIDE PLATE WELDED TO RISER SHAFT.
3. 1-1/2" x 3/16" SQUARE STEEL TUBING, LENGTH AS REQUIRED. EDGE WELD OPERATING NUT AT BOTH ENDS.
4. 2-1/2" x 3/16" SQUARE STEEL TUBING 2-1/2" IN LENGTH WELDED TO RISER SHAFT.

**NOTES:**

1. IF VALVE IS INSTALLED SO THAT THE TOP OF THE OPERATING NUT IS LESS THAN 36" BELOW FINISHED GRADE, THE STEM RISER IS NOT REQUIRED.
2. ALL EXTERNAL BOLTS AND NUTS ON VALVES SHALL BE 304 STAINLESS STEEL OR VALVE ASSEMBLY SHALL BE POLY WRAPPED.
3. IF ENDLINE VALVE, THEN PROVIDE ADEQUATE THRUST BLOCKING & RESTRAINT OR FLANGED/MJ CONNECTION.
4. PROVIDE CLOW, WATEROUS, OR AVK VALVE.



**DETAIL 3**  
 NTS  
 (GATE VALVE INSTALLATION)



**NOTES:**

1. ALL WATER SERVICE MATERIALS SHALL BE AS SPECIFIED IN THE DESIGN SPECIFICATIONS (OR APPROVED EQUAL).
2. FACTORY MANUFACTURED FITTINGS SHALL BE USED EXCLUSIVELY.
3. #10 COPPER TRACER WIRE WITH BLUE INSULATION SHALL BE TAPED TO ALL WATER MAINS, SERVICES, AND FITTINGS. TRACER WIRE SHALL BE SECURELY CONNECTED TO THE WATER MAIN TRACER WIRE AT ONE END, AND SHALL TERMINATE IN A LOOP JUST BELOW THE LID IN THE METER BOX AT THE OTHER END.
4. ALL WATER SERVICE SADDLES SHALL HAVE ALL EXPOSED NUTS AND BOLTS COMPLETELY COVERED WITH SPRAY-ON RUBBERIZED UNDERCOATING.
5. CONNECTIONS BETWEEN FITTINGS AND WATER SERVICE PIPING SHALL BE MADE WITH PACK JOINTS, AND STAINLESS STEEL INSERT STIFFENERS SHALL BE USED AS NEEDED WHEN CONNECTING WATER SERVICE PIPING TO PACK JOINTS.
6. NEW WATER SERVICES SHALL BE PUSHED OR BORED UNDER EXISTING SIDEWALK UNLESS NOTED OTHERWISE.
7. WHERE NO SIDEWALK EXISTS, CONSTRUCT A 4" THICK BY 6" CLEAR WIDTH CONCRETE COLLAR PAD FOR METER BOX SET.
8. PRIOR TO METER SET, ADDRESS TO BE CLEARLY MARKED ON UNDERSIDE BOX LID WITH PERMANENT FELT MARKER.

**DETAIL 2**  
 NTS  
 (WATER SERVICE)

**HORIZONTAL BENDS, DEAD ENDS, AND INLINE VALVES**

Pipe Size	1 1/4" Bend	2 1/4" Bend	45° Bend	90° Bend	Dead End & Inline Valve
3"	2'	3'	6'	13'	39'
4"	2'	3'	6'	14'	43'
6"	2'	4'	8'	19'	60'
8"	3'	5'	11'	25'	79'
10"	3'	6'	13'	30'	94'
12"	4'	7'	15'	35'	111'
14"	4'	8'	17'	40'	129'
16"	5'	9'	19'	44'	143'
18"	5'	10'	20'	48'	158'

**TEES RUN SIZE**

BRANCH SIZE	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	2'	1'	1'	1'	1'	1'	1'	1'
8"	1'	2'	2'	1'	1'	1'	1'	1'	1'
10"	1'	2'	2'	2'	1'	1'	1'	1'	1'
12"	1'	2'	2'	2'	2'	1'	1'	1'	1'
14"	1'	2'	2'	2'	2'	2'	1'	1'	1'
16"	1'	2'	2'	2'	2'	2'	2'	1'	1'
18"	1'	2'	2'	2'	2'	2'	2'	2'	1'

**REDUCERS**

BRANCH SIZE	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	1'	1'	1'	1'	1'	1'	1'	1'
8"	1'	1'	1'	1'	1'	1'	1'	1'	1'
10"	1'	1'	1'	1'	1'	1'	1'	1'	1'
12"	1'	1'	1'	1'	1'	1'	1'	1'	1'
14"	1'	1'	1'	1'	1'	1'	1'	1'	1'
16"	1'	1'	1'	1'	1'	1'	1'	1'	1'
18"	1'	1'	1'	1'	1'	1'	1'	1'	1'

**VERTICAL OFFSET**

BRANCH SIZE	L1	L2
3"	4'	17'
4"	4'	18'
6"	5'	25'
8"	7'	35'
10"	8'	39'
12"	9'	46'
14"	11'	54'
16"	12'	59'
18"	13'	66'

**NOTES:**

1. JOINT RESTRAINT DEVICES SHALL BE USED IN LIEU OF THRUST BLOCKING FOR ALL PRESSURE MAIN AND APPURTENANCE INSTALLATIONS UNLESS PROJECT PLANS OR DESIGN CONDITIONS SPECIFICALLY REQUIRE THRUST BLOCKING.
2. THE RESTRAINED LENGTHS LISTED IN THE ABOVE TABLES ARE VALID FOR THE FOLLOWING INSTALLATION CONDITIONS:  
 SOIL CLASSIFICATION: GW (ASTM STD. D2487); INCLUDES CLASS 2 AGGREGATE BASE BACKFILL  
 TRENCH TYPE: TYPE 5 (AWWA C605)  
 TEST PRESSURE: 150 PSI  
 SAFETY FACTOR: 2 TO 1  
 DEPTH OF BURY: 36" FROM SURFACE TO TOP OF PIPE  
 PIPE TYPE: PVC C900  
 WHERE INSTALLATION CONDITIONS DO NOT MATCH THOSE LISTED ABOVE, THE RESTRAINED LENGTHS SHALL BE RECALCULATED TO SUIT THE ACTUAL SITE CONDITIONS. ALL REVISED CALCULATIONS SHALL BE MADE WITH A TEST PRESSURE OF 150 PSI MINIMUM AND A SAFETY FACTOR OF 2. REVISED RESTRAINED LENGTHS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PIPE INSTALLATION.
3. ALL RESTRAINT FITTINGS SHALL BE FACTORY MANUFACTURED AND APPROVED FOR USE BY THE ENGINEER PRIOR TO PIPE INSTALLATION. THE FOLLOWING RESTRAINT FITTINGS HAVE BEEN PREQUALIFIED FOR USE:  
 MECHANICAL JOINT GLANDS: ROMAC 'GRIPRING' PIPE RESTRAINER  
 EBBA IRON SERIES 2000 PV  
 BELL AND SPIGOT JOINTS: ROMAC MODEL 611 (4" THROUGH 8")  
 EBBA IRON SERIES 1600 (4" THROUGH 12")  
 EBBA IRON SERIES 2800 (14" THROUGH 36")
4. ALL MECHANICAL JOINT CONNECTIONS AT FITTINGS SHALL BE RESTRAINED.

**DETAIL 4**  
 NTS  
 (RESTRAINED JOINTS)

**60% DESIGN**

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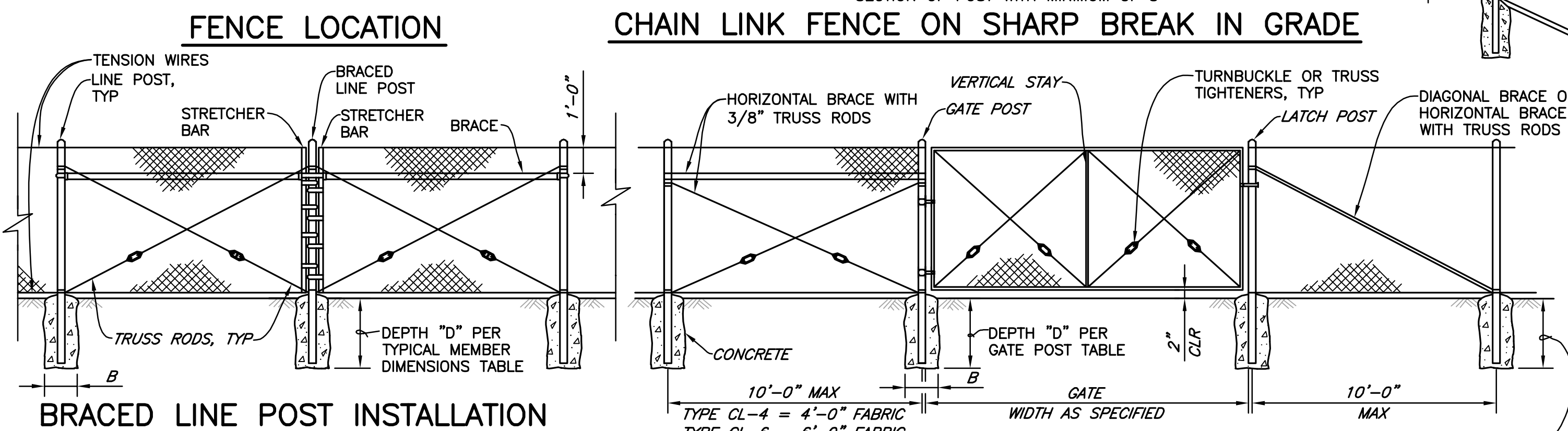
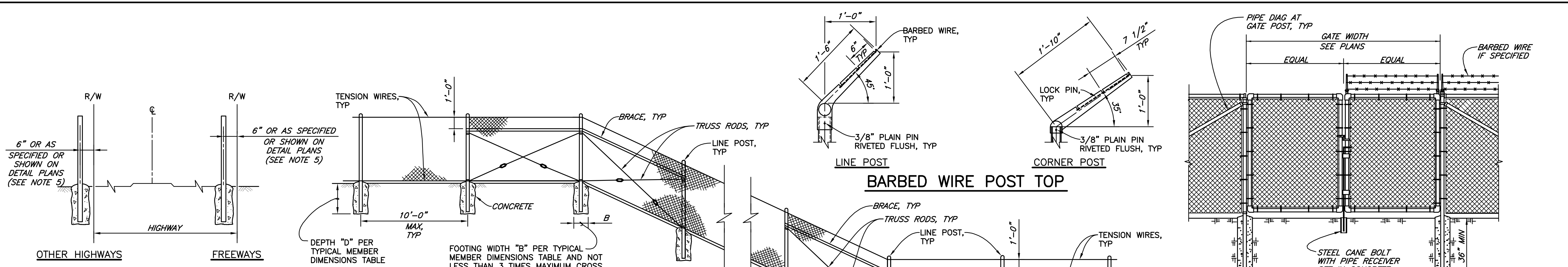
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GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA

**CIVIL DETAILS**

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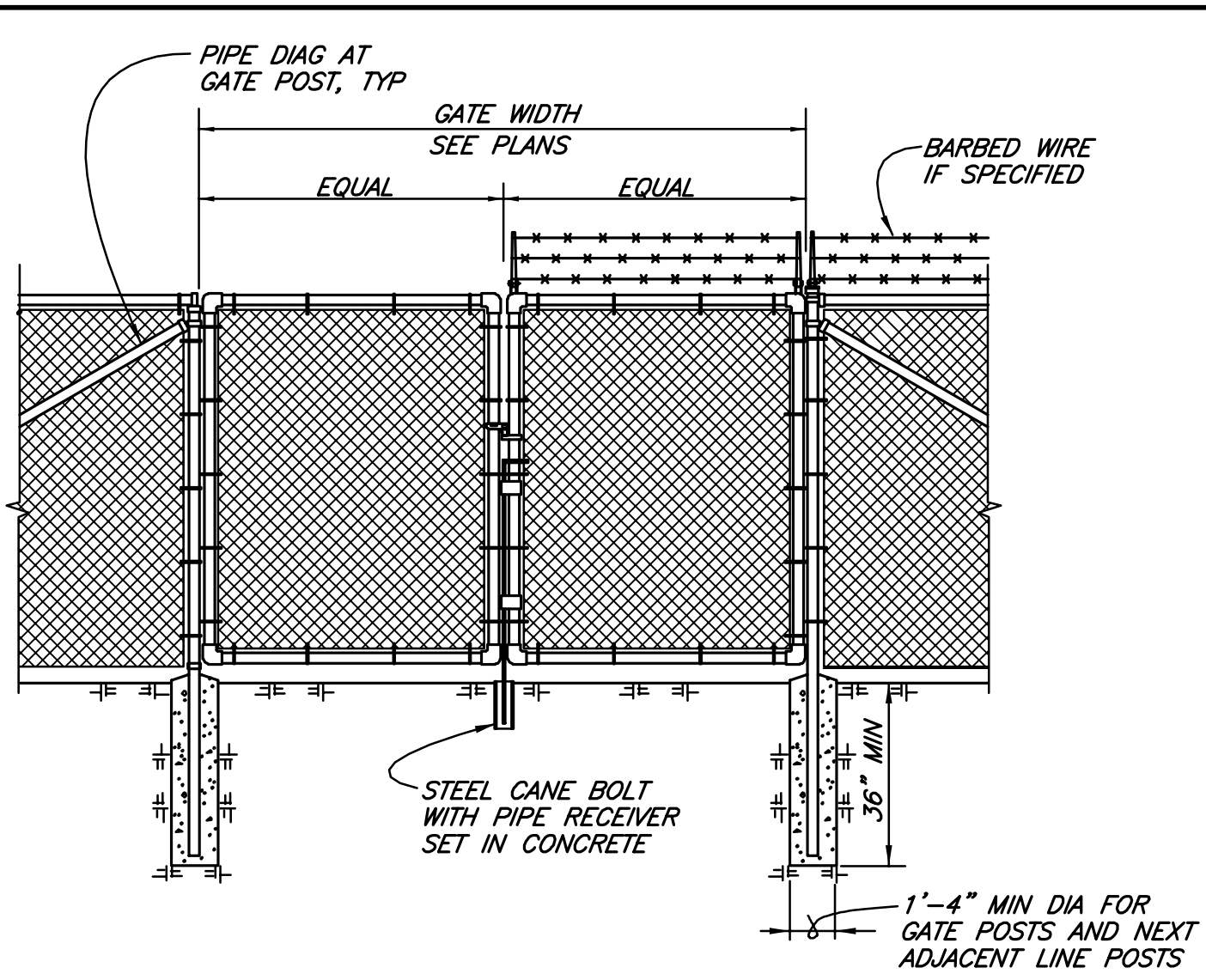
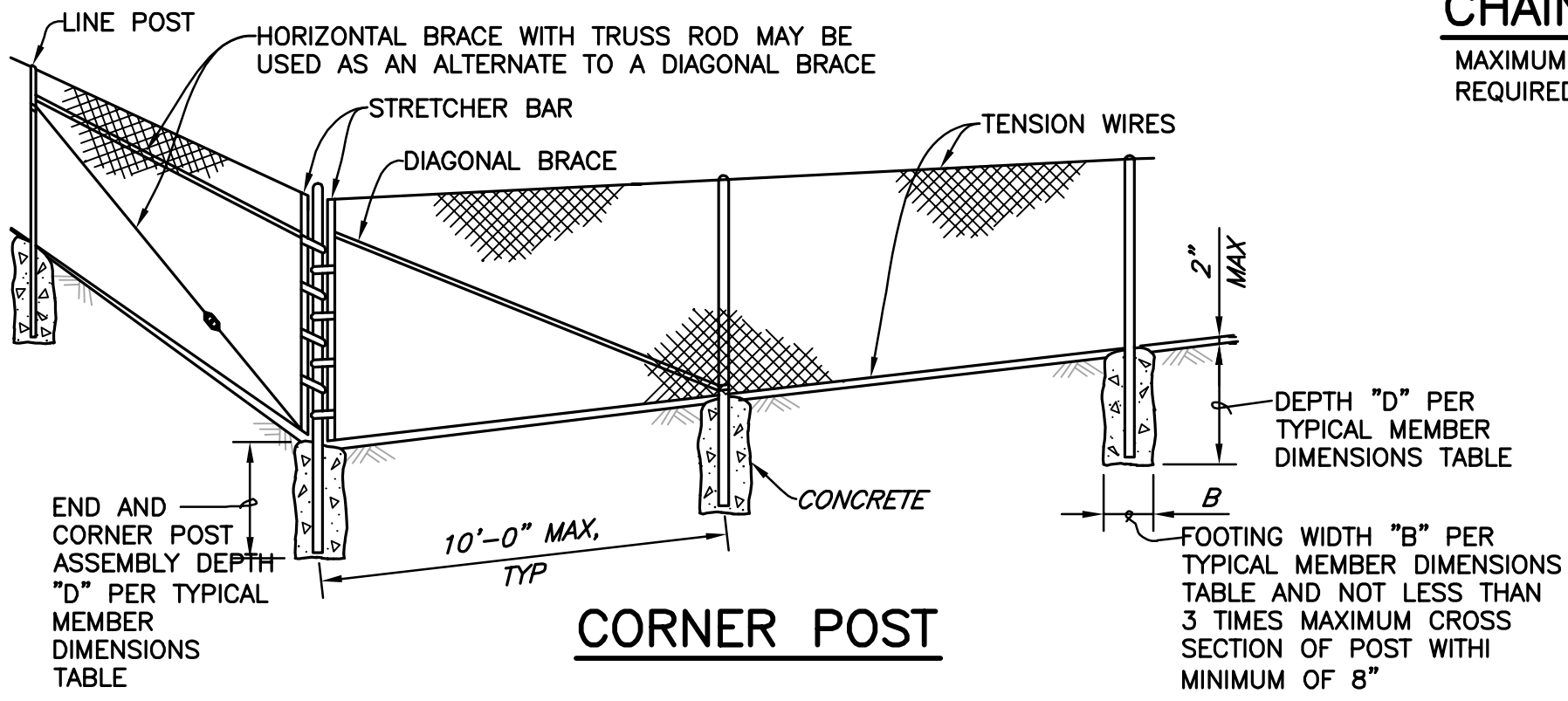
**GATE POST**

FENCE HEIGHT (MAX)	SLATTED	B (IN)	D (FT)	ROUND PIPE		
				SECTION	ROUND OD PIPE	WEIGHT (LB/FT)
5'-0"	NO	12"	2'-6"	3 Std	3.50"	7.58
6'-0"	NO	12"	2'-6"	3 Std	3.50"	7.58
8'-0"	NO	12"	3'-0"	3 Std	3.50"	7.58
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12
6'-0"	YES	14"	3'-6"	4 Std	4.50"	10.80
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00

ABOVE POST DIMENSIONS AND WEIGHTS ARE MINIMUMS. LARGER SIZES MAY BE USED UPON APPROVAL.

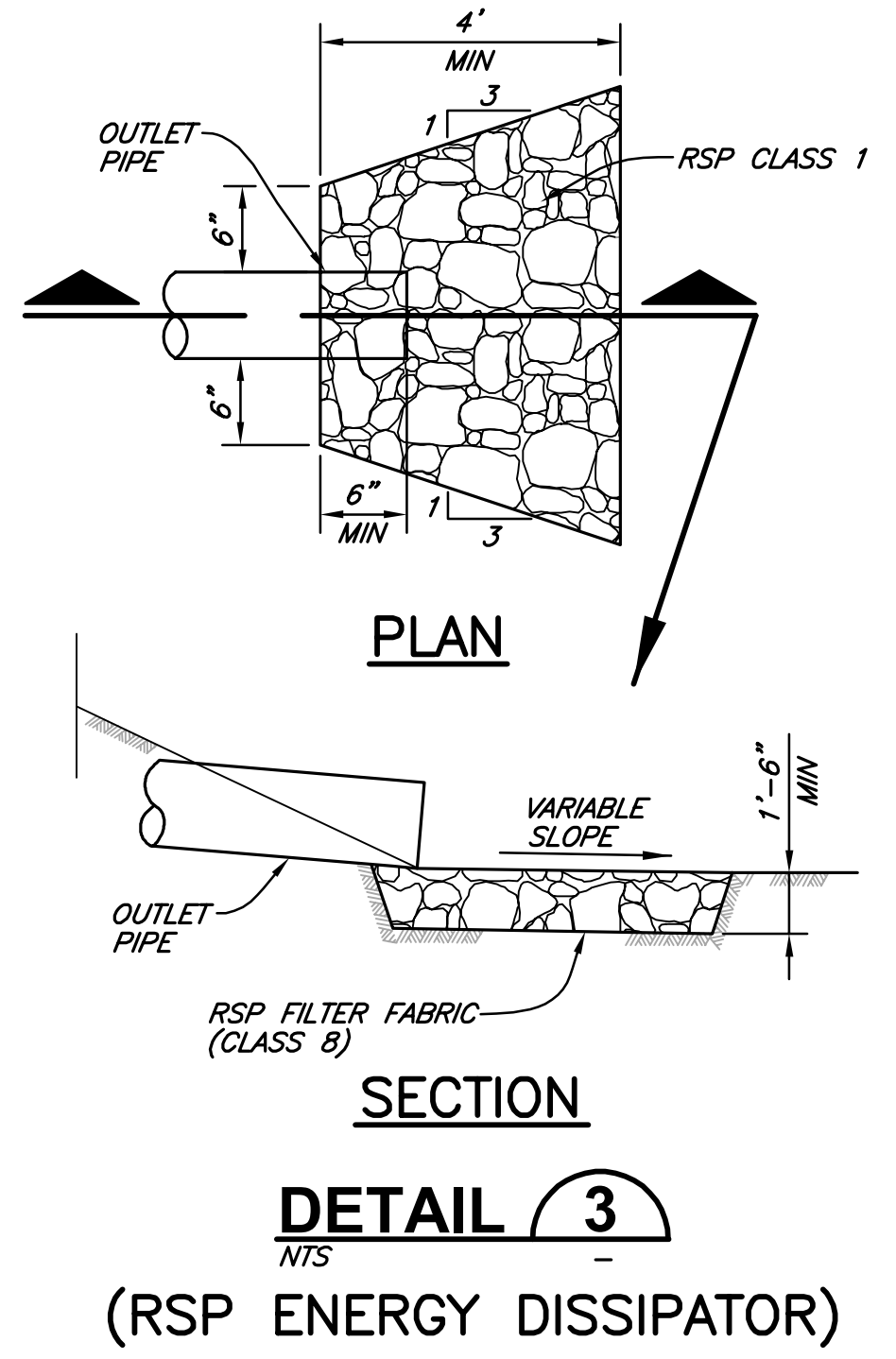
**TYPICAL MEMBER DIMENSIONS (SEE NOTES)**

FENCE HEIGHT (MAX)	SLATTED	B (IN)	D (FT)	LINE POSTS				BRACES					
				ROUND PIPE		ROLL FORMED		ROUND PIPE		ROLL FORMED			
				SECTION	ROUND OD PIPE	WEIGHT (LB/FT)	SECTION	WEIGHT (LB/FT)	SECTION	ROUND OD PIPE	WEIGHT (LB/FT)	SECTION	WEIGHT (LB/FT)
5'-0"	NO	8"	2'-6"	1 1/2 Std	1.90"	2.72	1.875" x 1.625"	1.85	1 1/2" Std	1.90"	2.72	1.625" x 1.250"	1.35
6'-0"	NO	10"	2'-6"	2 Std	2.38"	3.66	1.875" x 1.625"	2.40	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
8'-0"	NO	12"	3'-0"	2 1/2 Std	2.88"	5.80	3.250" x 2.500"	4.50	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58	3.250" x 2.500"	4.50	2 1/2 Std	2.88"	5.80	1.625" x 1.250"	1.35
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12	N/A	-	2 Std	2.38"	3.66	N/A	-
6'-0"	YES	14"	3'-0"	4 Std	4.50"	10.80	N/A	-	2 Std	2.38"	3.66	N/A	-
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60	N/A	-	2 Std	2.38"	3.66	N/A	-
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00	N/A	-	2 1/2 Std	2.88"	5.80	N/A	-



**NOTE:**

- LATCH MECHANISM SHALL BE LOCKABLE. FREE END OF GATES SHALL BE EQUIPPED WITH DEVICES TO HOLD BOTH GATES IN THE OPEN POSITION.
- FENCE AND DOUBLE LEAF SWING GATE PER CALTRANS STANDARD DETAIL A-85.



**DETAIL 1**  
NTS  
(SECURITY FENCE)

**NOTES:**

- THE TABLE TO THE RIGHT SHOWS MINIMUM SIZED POSTS AND BRACES COMPLYING WITH THE SPECIFICATIONS. LARGER OR HEAVIER POST AND BRACE SIZES MAY BE USED UPON APPROVAL.
- SECTIONS SHOWN IN THE TABLES MUST ALSO COMPLY WITH STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS.
- OTHER SECTIONS WHICH COMPLY WITH THE STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS MAY BE USED UPON APPROVAL.
- OPTIONS EXERCISED SHALL BE UNIFORM ON ANY ONE PROJECT.
- OFFSET TO BE 2'-0" AT MONUMENT LOCATIONS. MEASURED AT RIGHT ANGLES TO R/W LINES. TAPER TO ACHIEVE OFFSET TO BE AT LEAST 20'-0" LONG.
- SEE STANDARD PLAN A85B FOR BRACE, STRETCHER BAR, AND TRUSS TIGHTENER DETAILS.

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 GARBERVILLE, CALIFORNIA

**CIVIL DETAILS**

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**C8.2**  
 SEQ  
 DATE 09/2023  
 PROJ. NO.  
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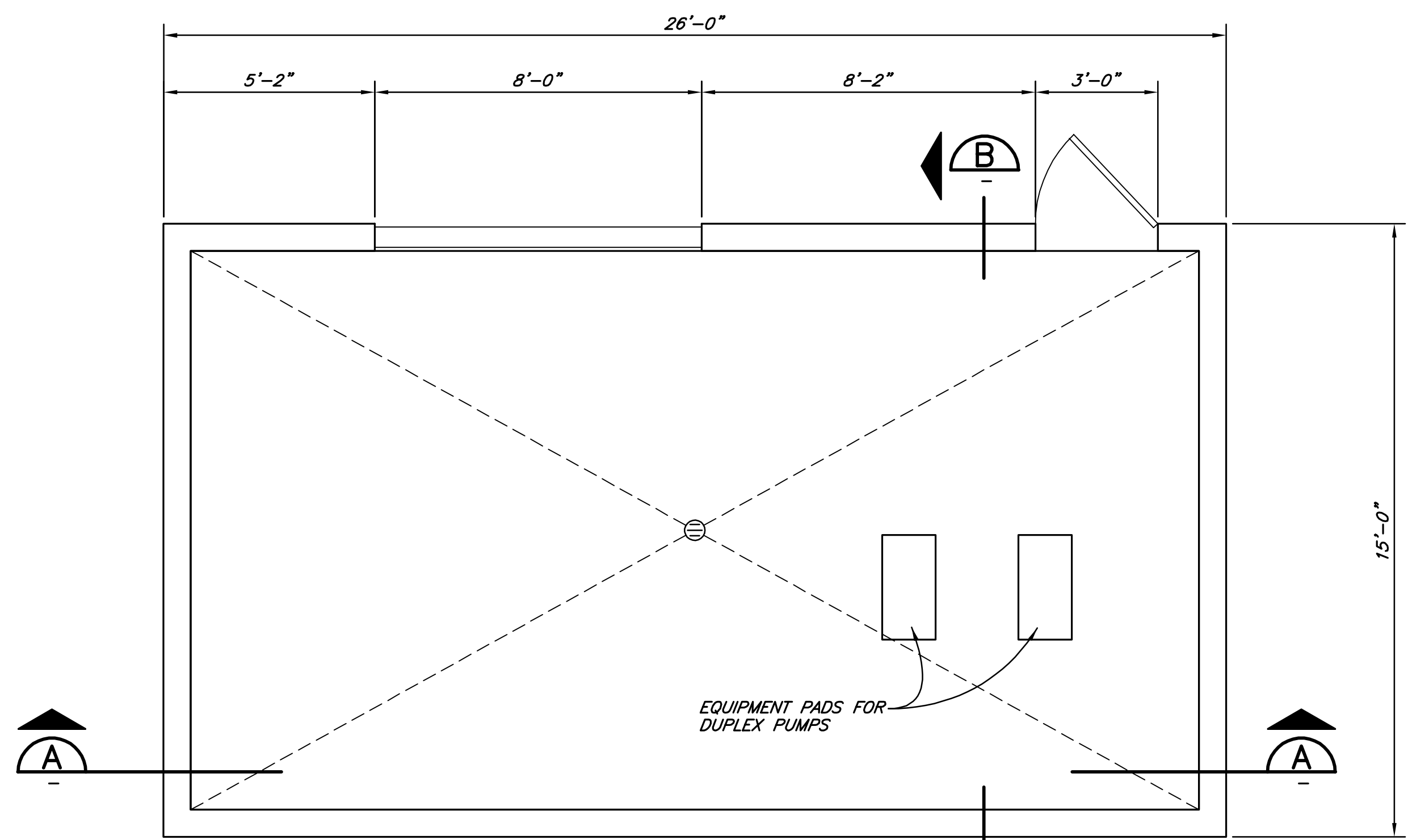
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DATE		09/2023	
PROJ. NO.		022067	
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA			
STRUCTURAL NOTES AND LEGEND			
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CHK JSO			
APVD			
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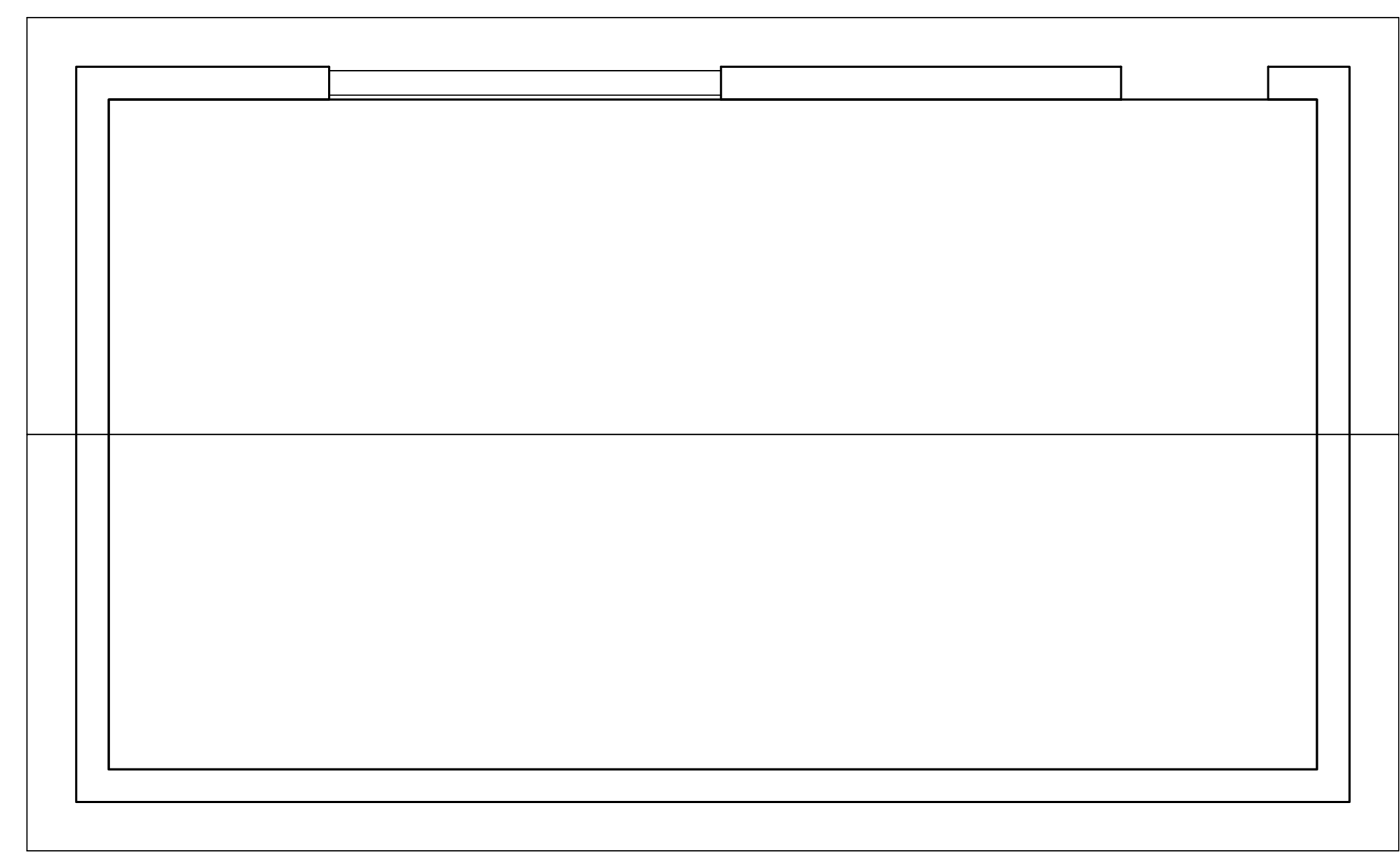


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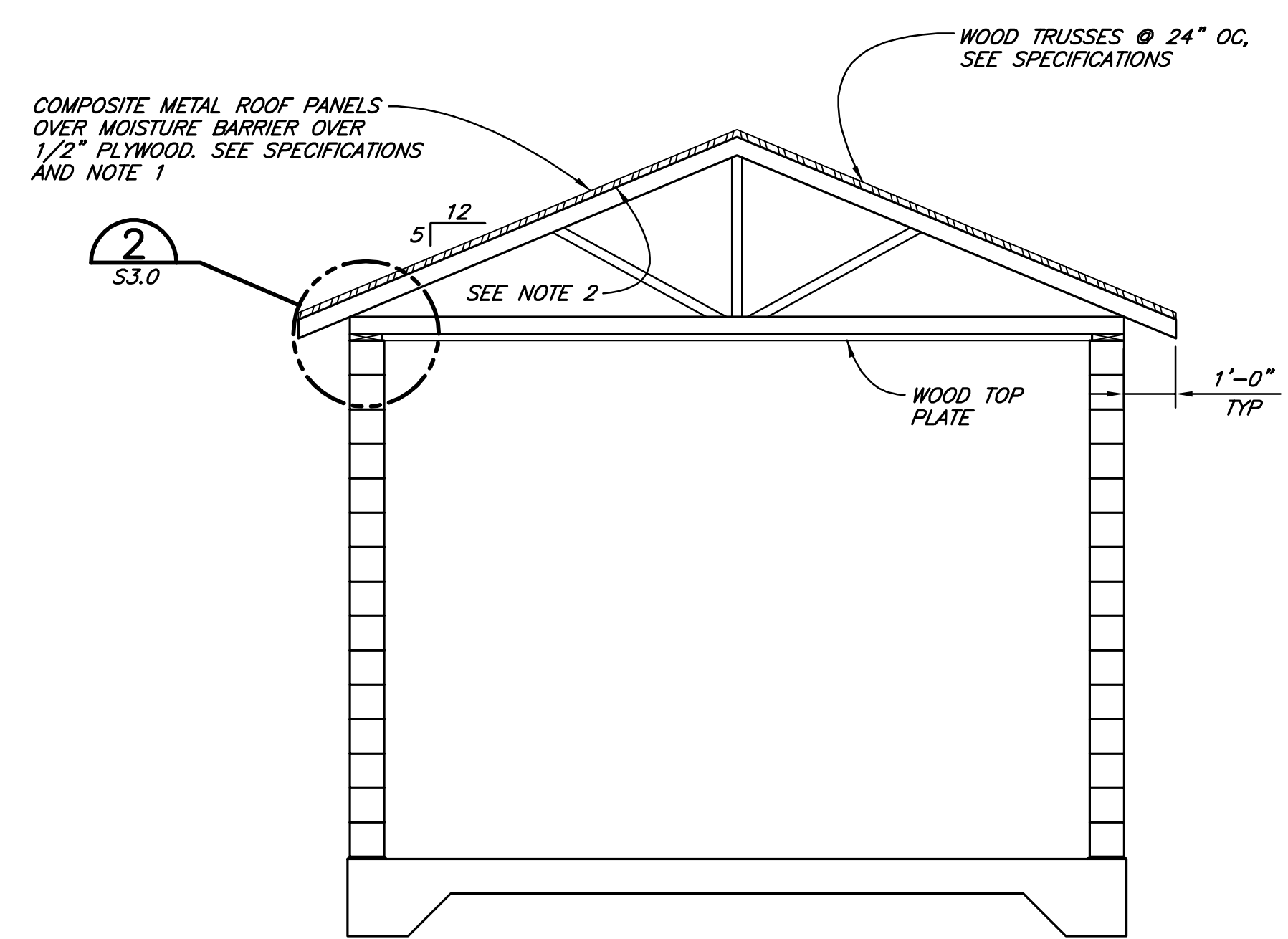
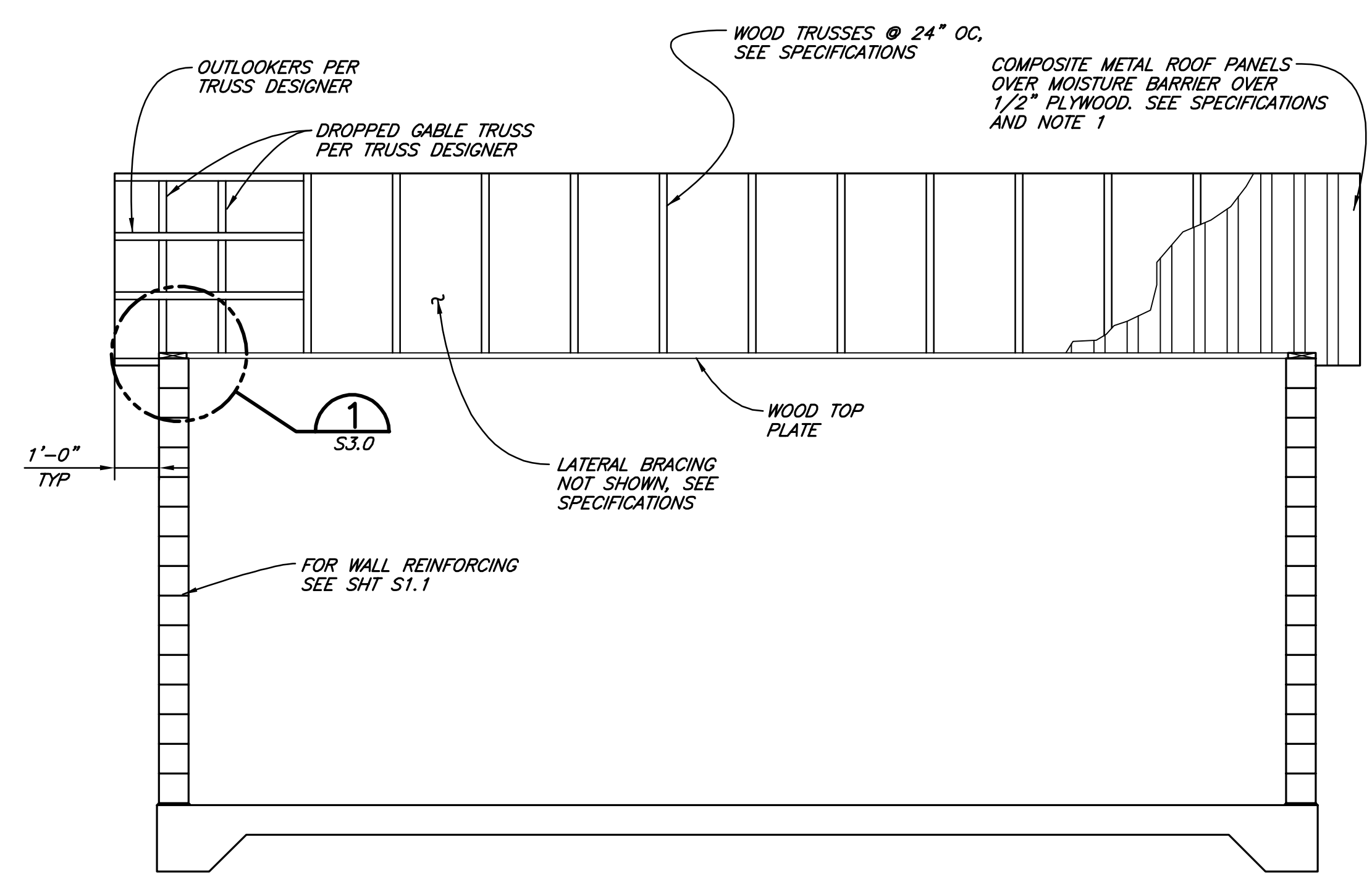


**NOTE:**  
 f = 4,000 PSI  
 f = 60,000 PSI

**FLOOR PLAN**  
 3/8" = 1'-0"



**ROOF PLAN**  
 3/8" = 1'-0"

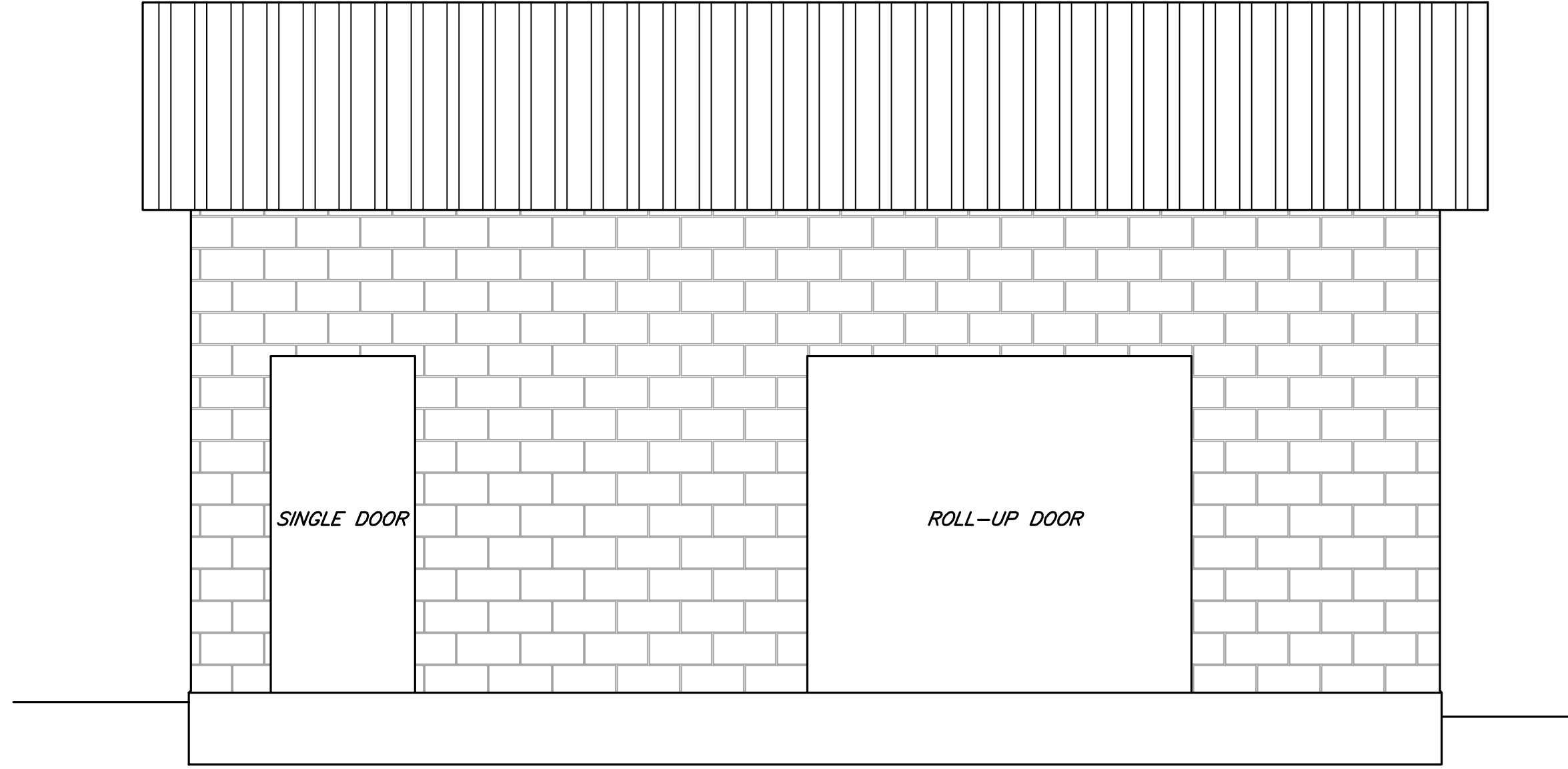


- NOTES:**
- PLYWOOD SHALL HAVE PANEL SPAN RATING ROOF/FLOOR OF 24/16. PROVIDE EDGE SUPPORT.
  - PAINT INTERIOR FACE OF PLYWOOD WITH ONE COAT OF PRIMER AND TWO COATS OF ENAMEL. COLOR TO BE APPROVED BY OWNER.
  - ALL DIMENSIONS FOR OPENINGS IN CMU ARE NOMINAL, CONTRACTOR TO ADJUST PER BLOCK CONSTRUCTION.

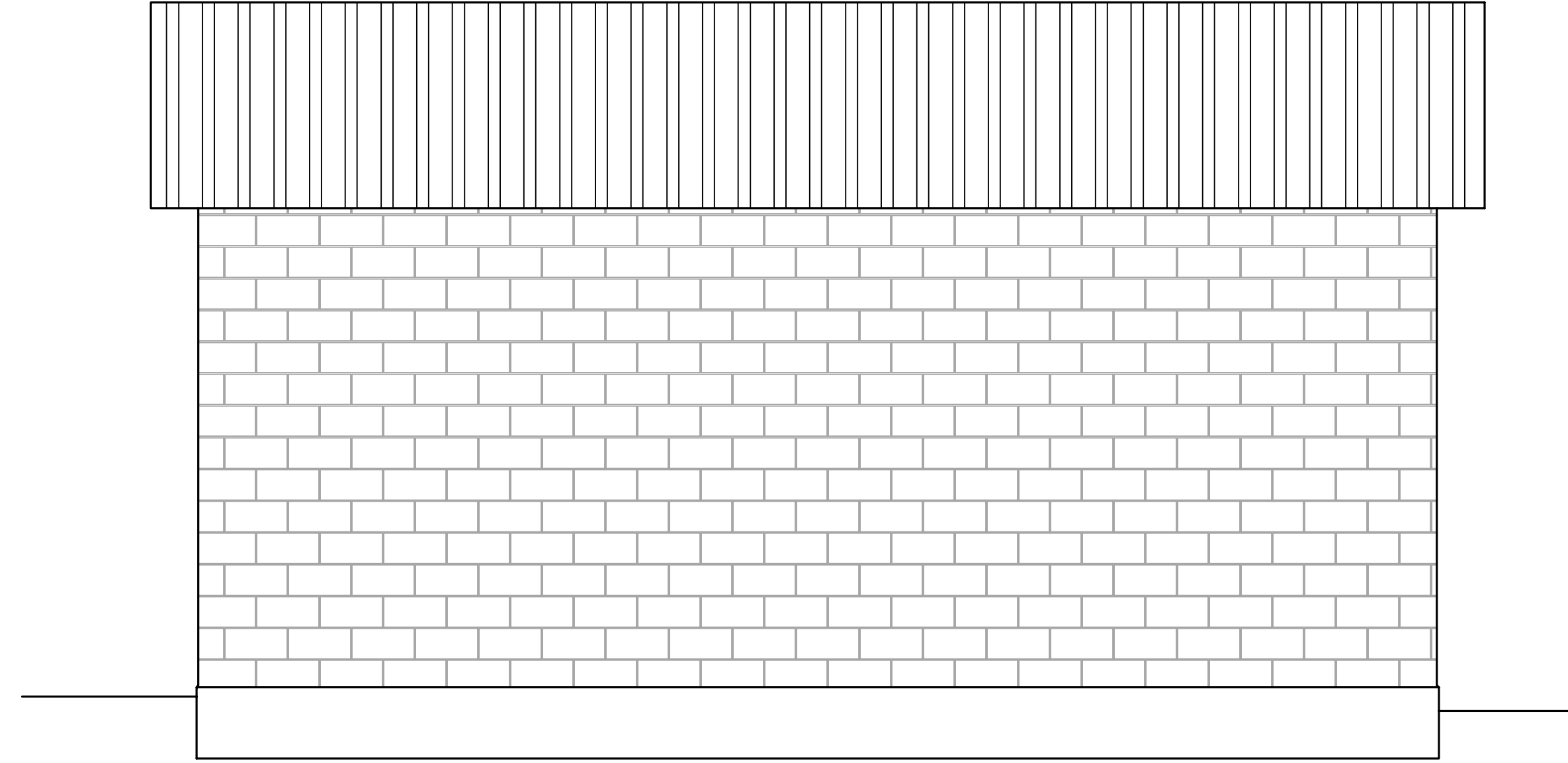
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GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>UPPER MAPLE LANE PUMP STATION</b> <b>PLAN AND SECTIONS</b>	
SHEET	S1.0
DATE	09/2023
PROJ. NO.	022067

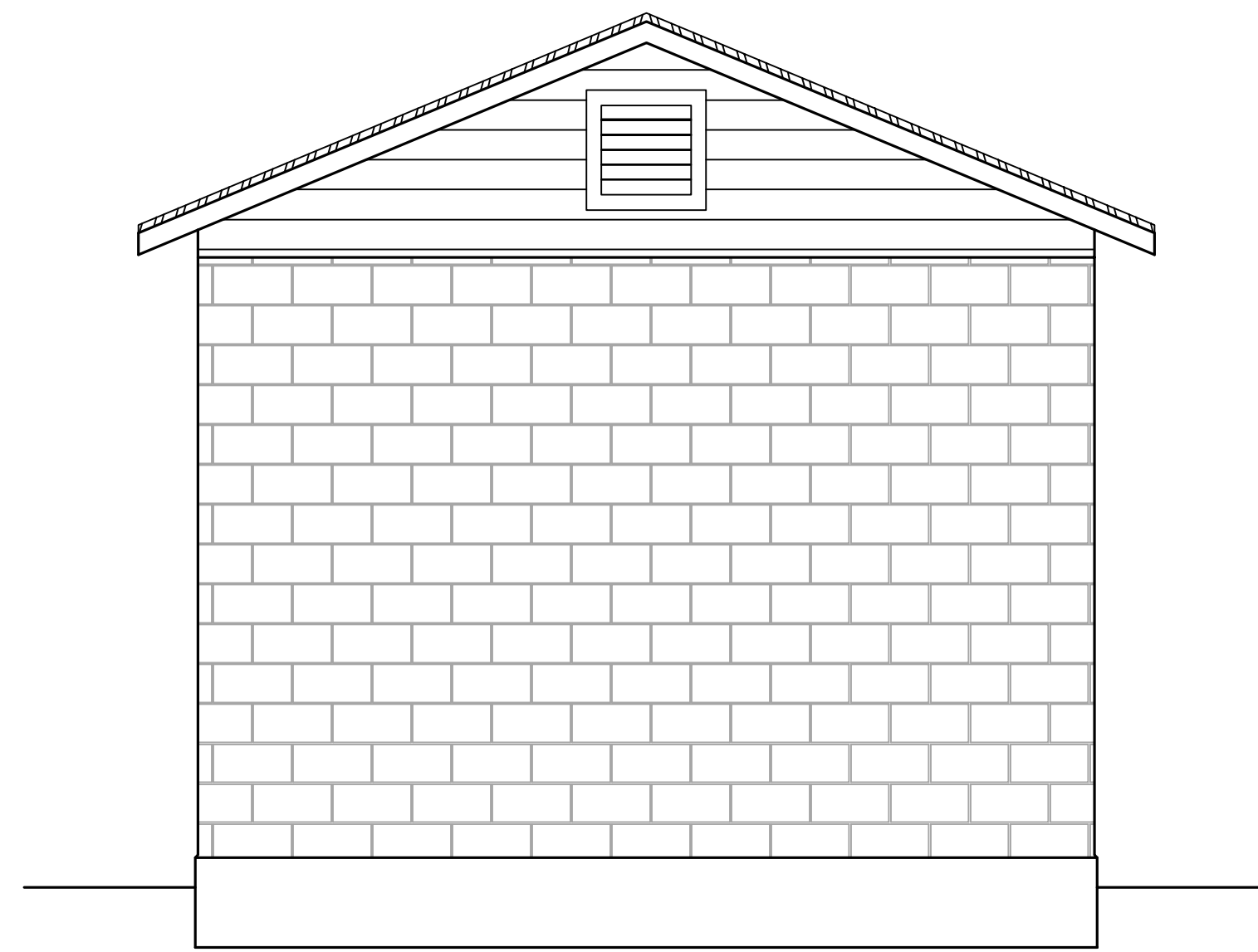
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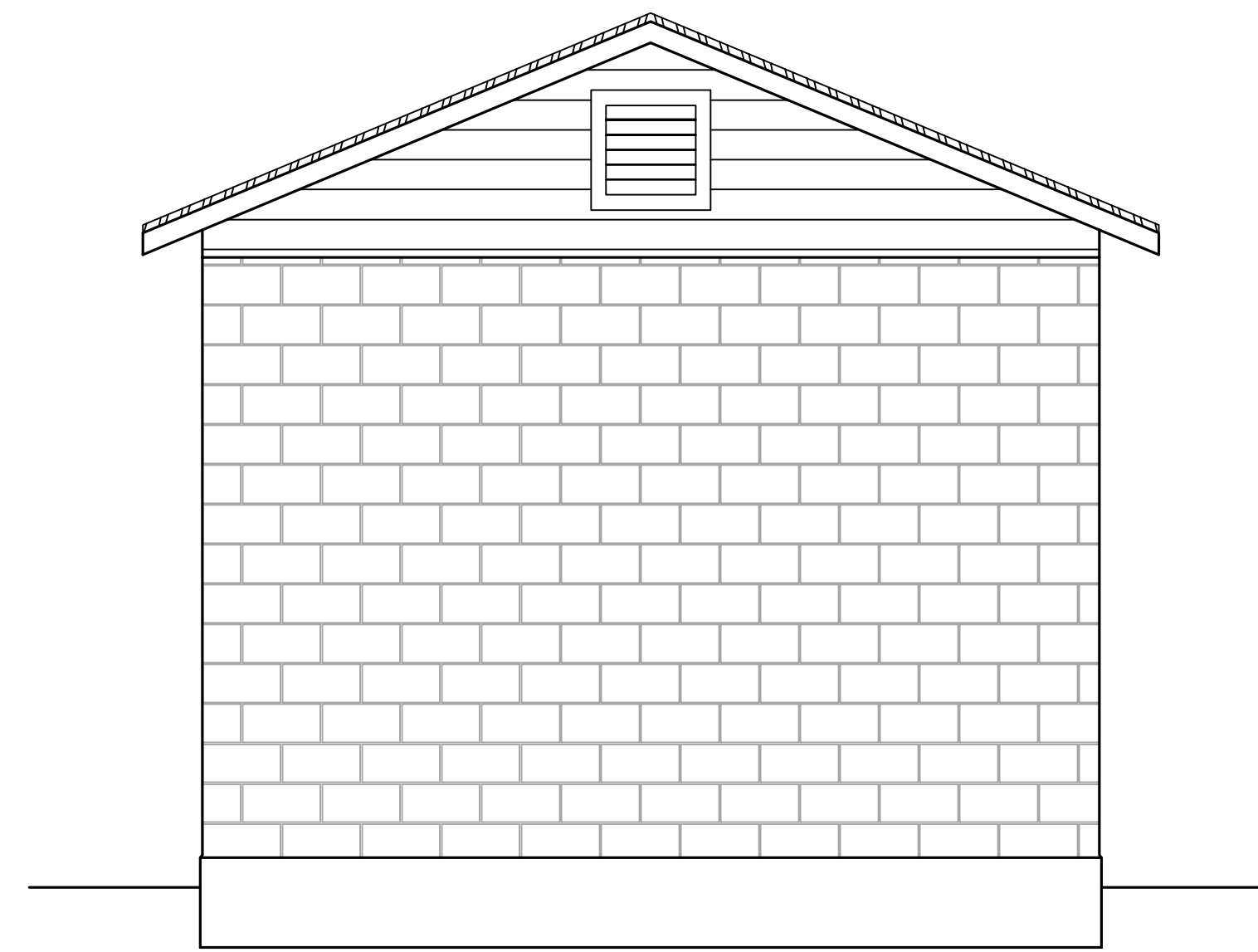
**NORTH ELEVATION**  
 $\frac{3}{8}''=1'-0''$



**SOUTH ELEVATION**  
 $\frac{3}{8}''=1'-0''$



**EAST ELEVATION**  
 $\frac{3}{8}''=1'-0''$



**WEST ELEVATION**  
 $\frac{3}{8}''=1'-0''$

**60% DESIGN**

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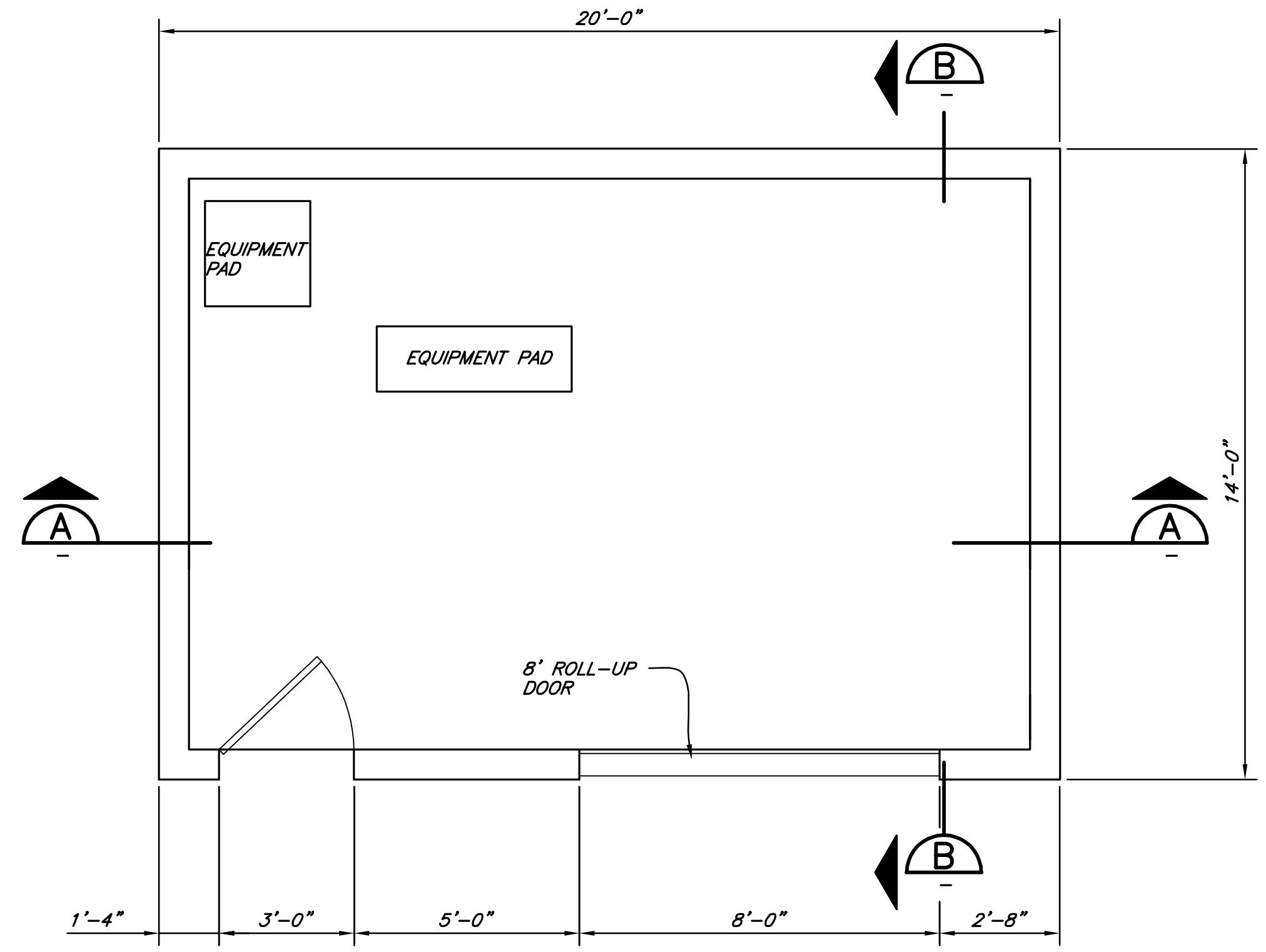


NO.	DATE	REVISION	BY

DESIGN	PEG
DR	JWF/CDN
CHK	JSO
APVD	

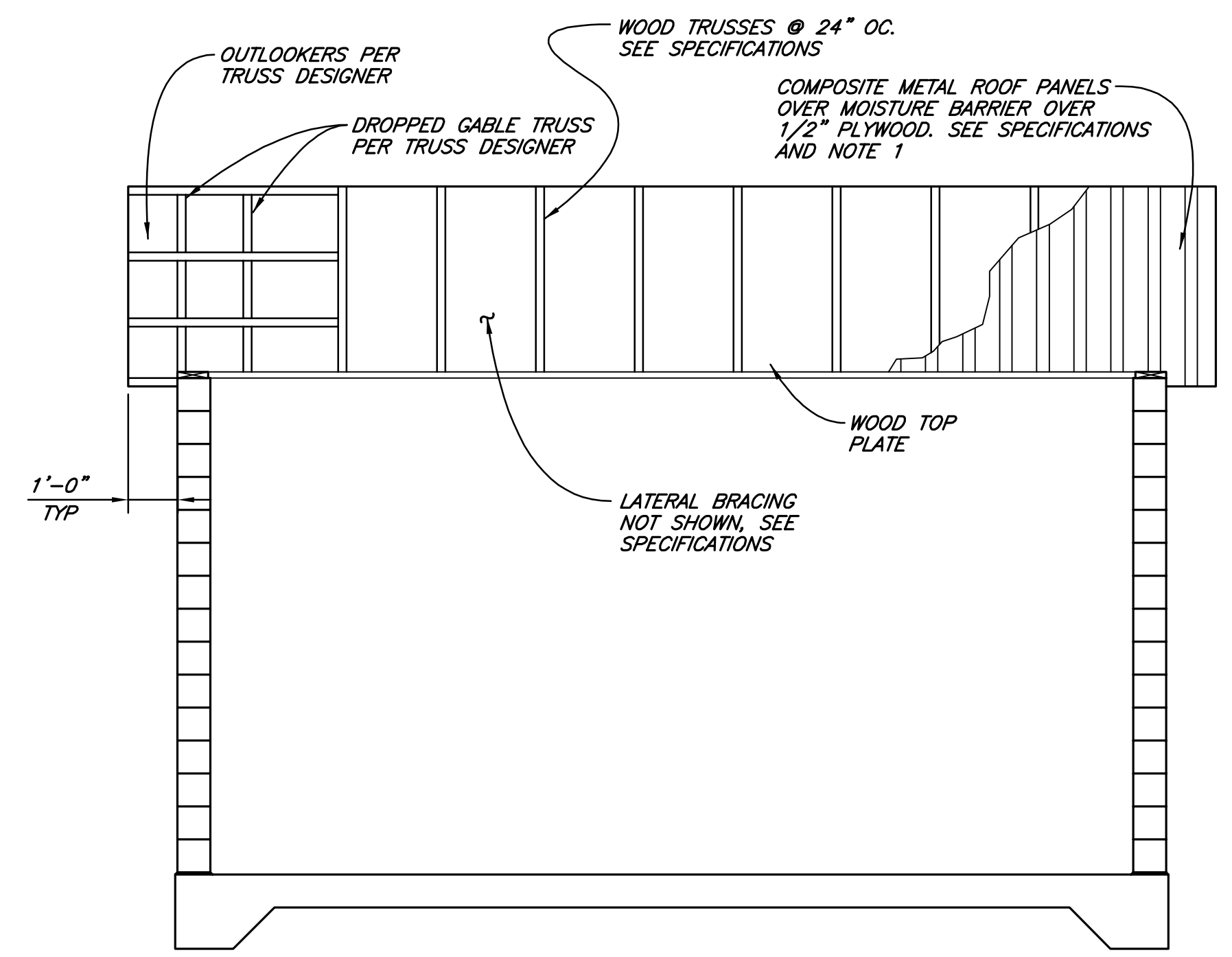
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**UPPER MAPLE LANE PUMP STATION  
 REINFORCING DETAILS**

SHEET	S1.1
SEQ	
DATE	09/2023
PROJ. NO.	022067

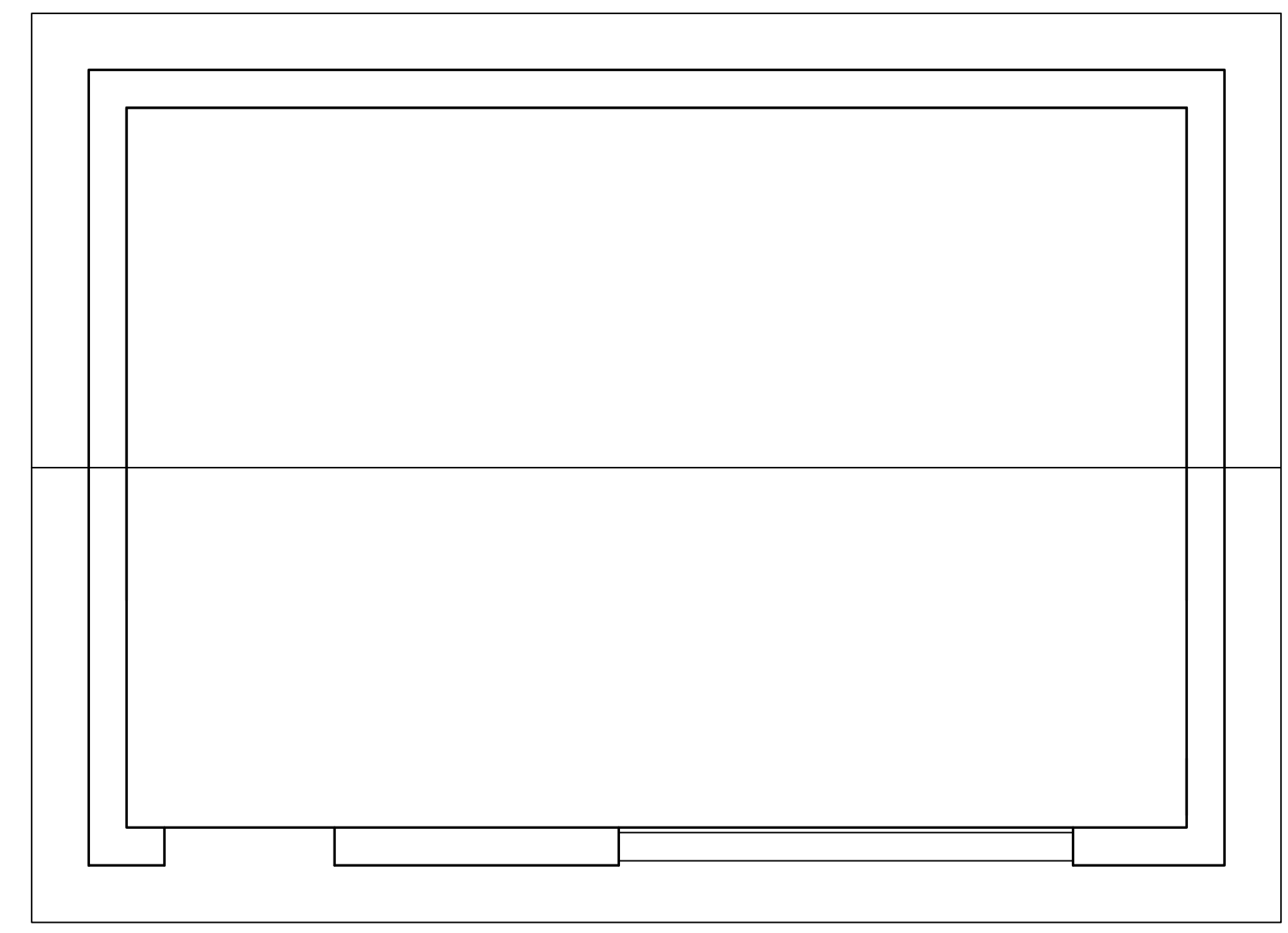


**NOTE:**  
 f = 4,000 PSI  
 f = 60,000 PSI

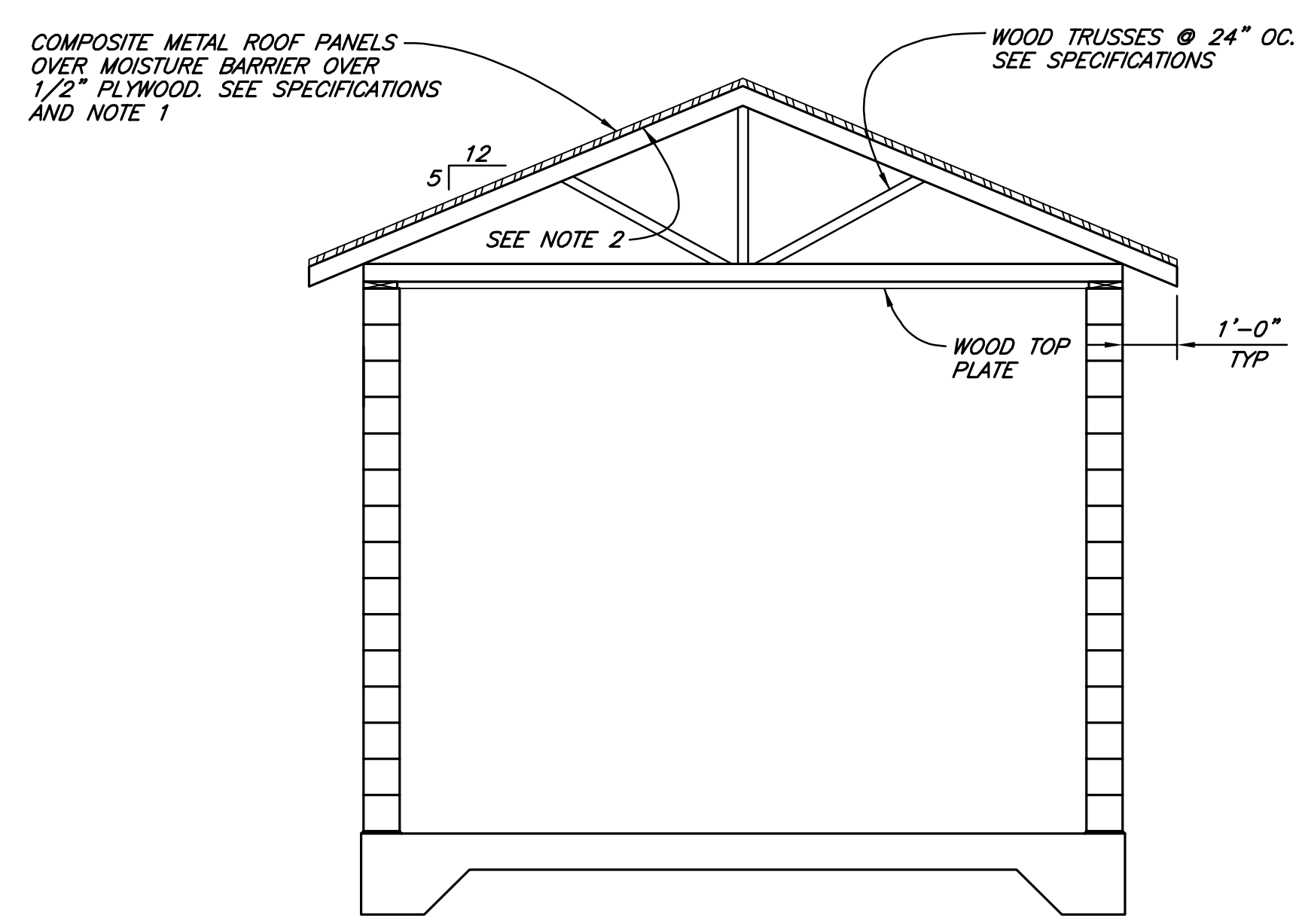
**FLOOR PLAN**  
 3/8"=1'-0"



**SECTION A**  
 3/8"=1'-0"



**ROOF PLAN**  
 3/8"=1'-0"



**SECTION B**  
 3/8"=1'-0"

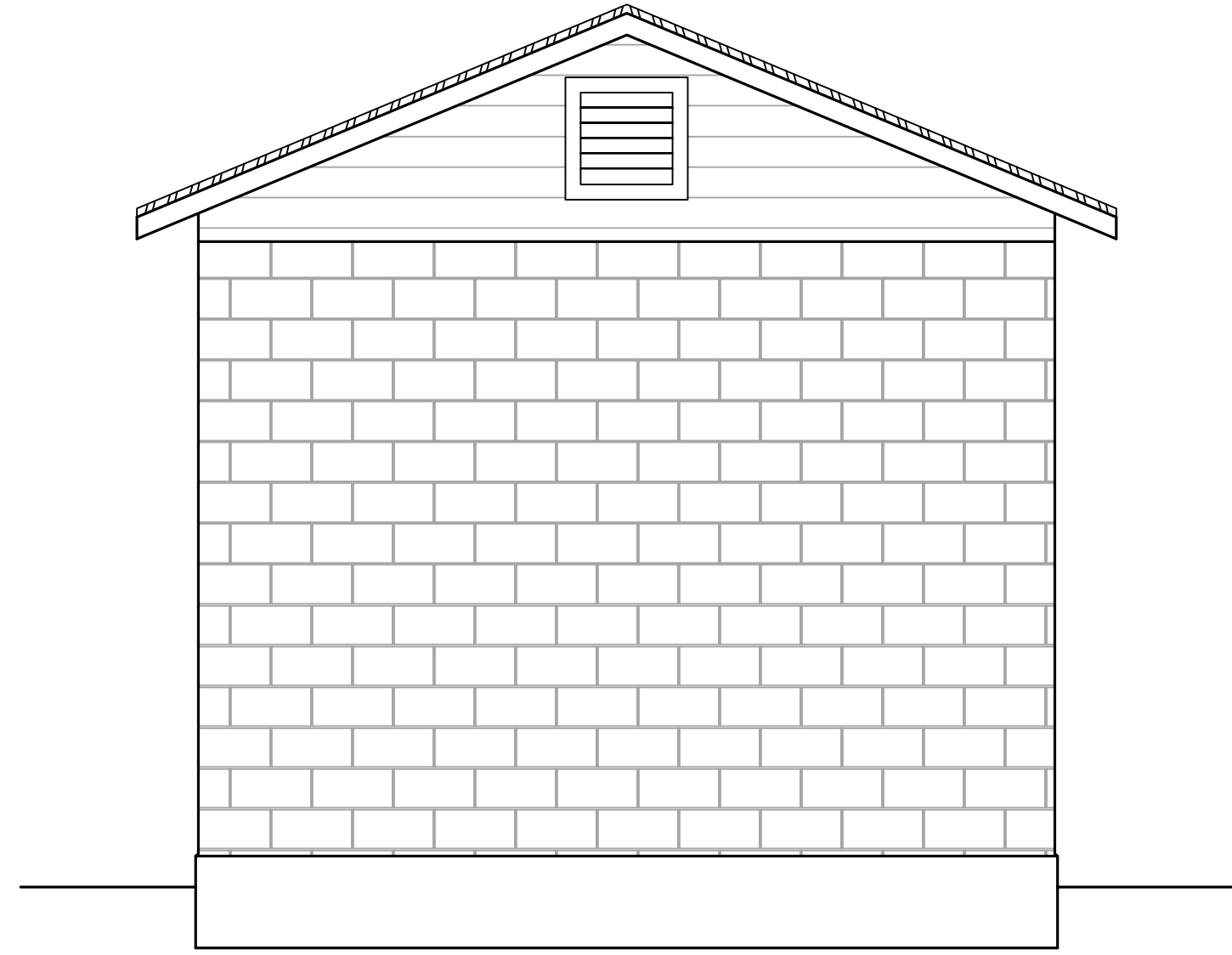
- NOTES:**
- PLYWOOD SHALL HAVE PANEL SPAN RATING ROOF/FLOOR OF 24/16. PROVIDE EDGE SUPPORT.
  - PAINT INTERIOR FACE OF PLYWOOD WITH ONE COAT OF PRIMER AND TWO COATS OF ENAMEL. COLOR TO BE APPROVED BY OWNER.
  - ALL DIMENSIONS FOR OPENINGS IN CMU ARE NOMINAL, CONTRACTOR TO ADJUST PER BLOCK CONSTRUCTION.

**60% DESIGN**

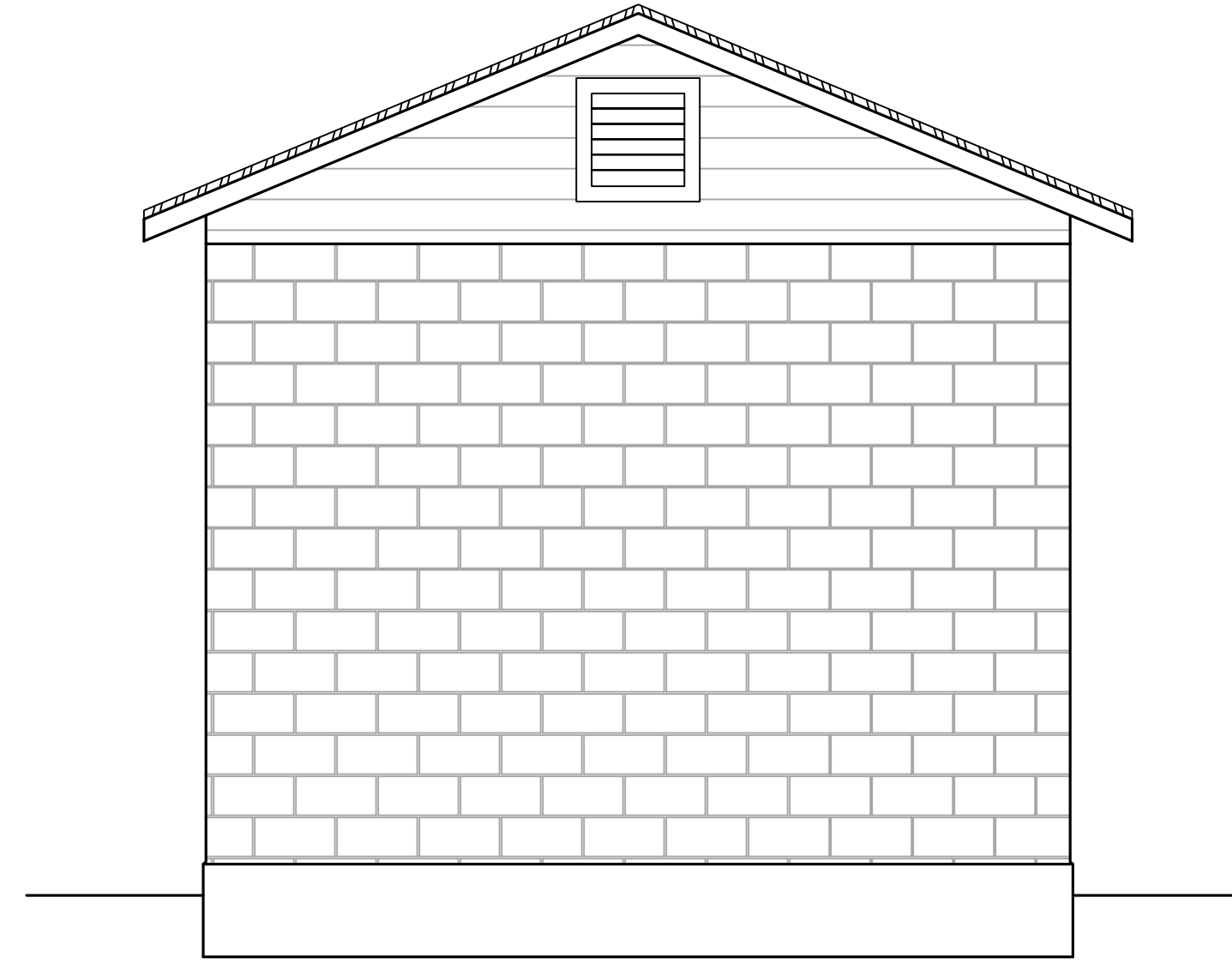
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GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA <b>ALDERPOINT PUMP STATION PLAN AND SECTIONS</b>	
SHEET	S2.0
SEQ	
DATE	09/2023
PROJ. NO.	022067

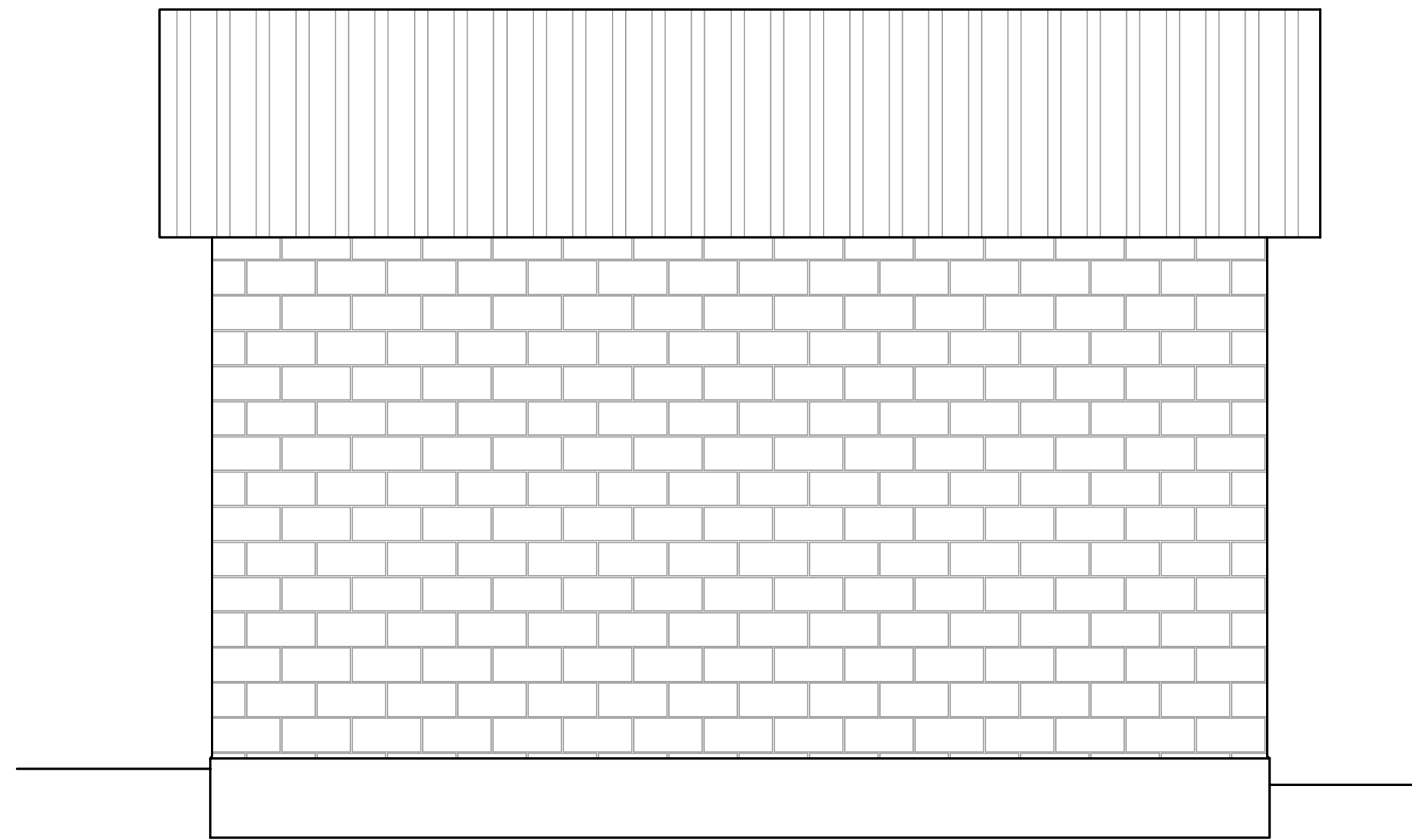
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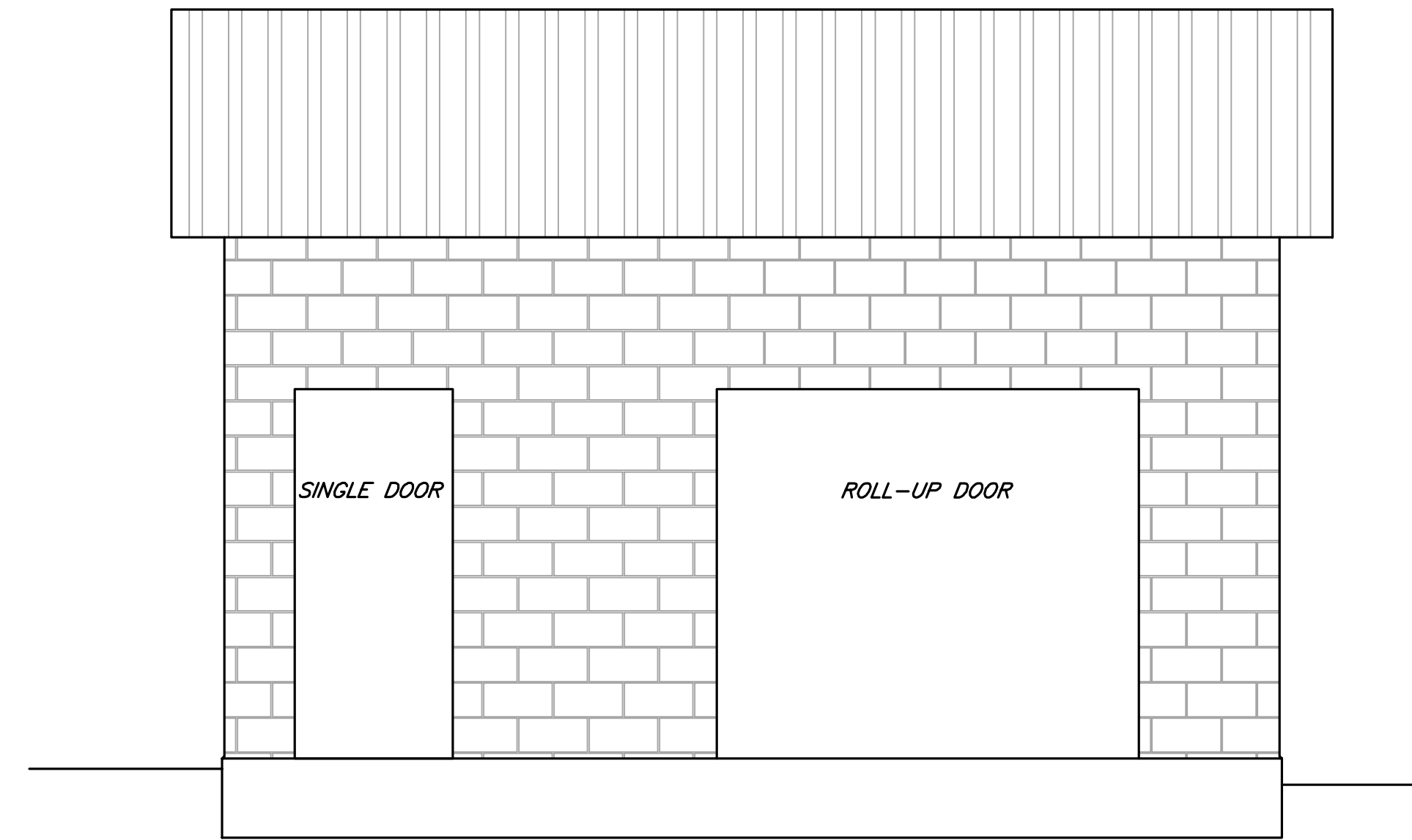
**NORTH ELEVATION**  
 3/8"=1'-0"



**SOUTH ELEVATION**  
 3/8"=1'-0"



**EAST ELEVATION**  
 3/8"=1'-0"



**WEST ELEVATION**  
 3/8"=1'-0"

**60% DESIGN**

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GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**ALDERPOINT PUMP STATION  
 REINFORCING DETAILS**

SHEET	S2.1
SEQ	
DATE	09/2023
PROJ. NO.	022067

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

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

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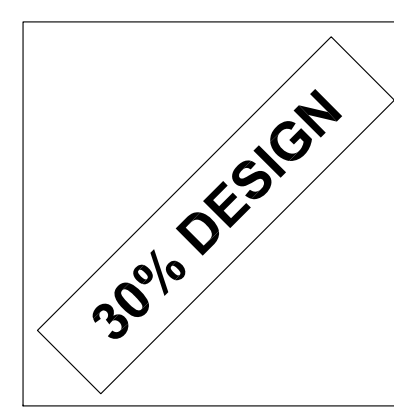
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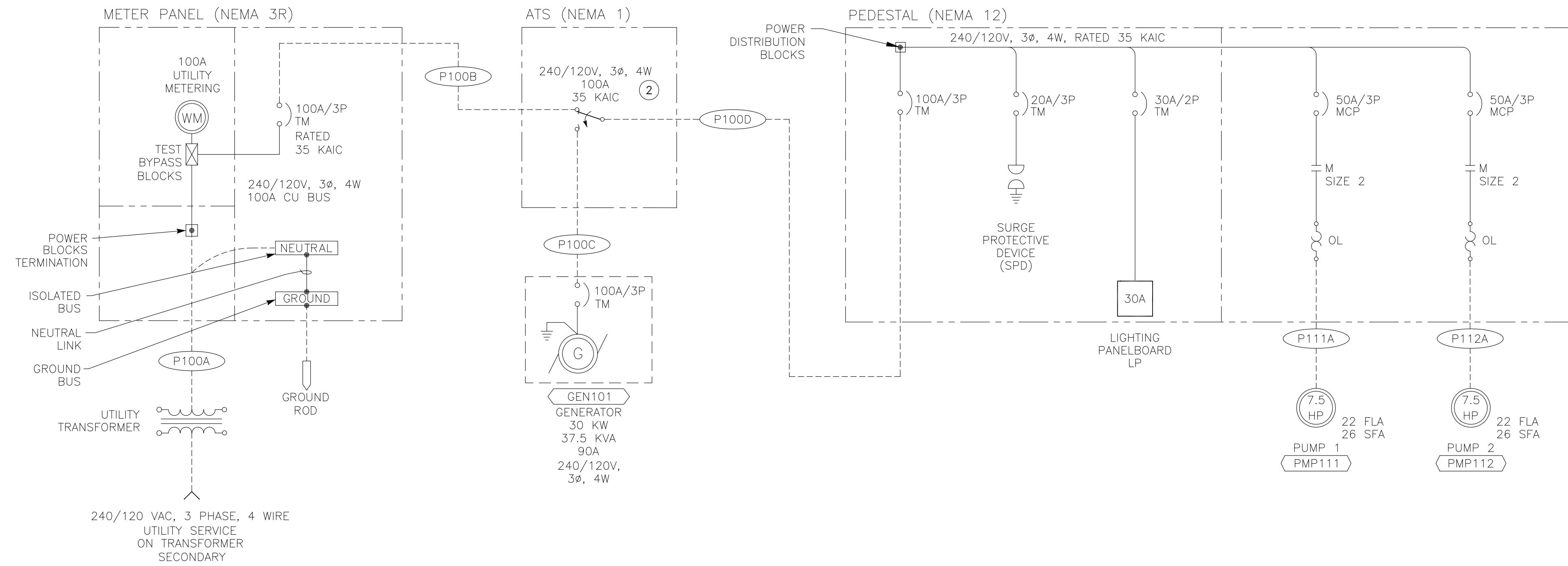
GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUIT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**ELECTRICAL SYMBOLS & ABBREVIATIONS**

SHEET: E1  
 SEQ: \_\_\_\_\_  
 DATE: 9/18/23  
 PROJ. NO.: ###



POWER UTILITY SERVICE DIVISION OF WORK	Electrical Contractor	Utility Company
Primary Conductors	N/A	N/A
Primary Conductors		
Transformer Pad	N/A	
Transformer		X
Transformer Connections		X
Transformer Ground Rod	N/A	
Secondary Conduits	X	
Secondary Conductors		X
Bollards	X	
Meter Enclosure/Base	X	
Utility Meter		X
C/T Enclosure	N/A	
Current Transformers C/T		N/A
Meter Room Lock Box	N/A	
<b>Power Company Information:</b>		
Contact Name:		
Power Utility:	Pacific Gas & Electric	
Address:		
City/State/Zip:		
Phone:		
Fax:		
E-mail:		
<b>Notes:</b>		
1. All Utility Service installation work shall be done by Contractor per Power Utility Engineered drawings (which supersedes what is shown on Contract Drawings).		
2. Contractor shall coordinate and schedule all Power Utility inspections and tests in strict compliance with Power Utility requirements.		

HP DESCRIPTION	UTILITY SERVICE						GENERATOR SERVICE	
	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA
7.5 PUMP	22.0	2	18,290	44.0	2	18,290	2	18,290
LP	5.7		2,385	5.7		2,385		2,385
SUBTOTAL	49.7		20,675	49.7		20,675		20,675
DIVERSITY FACTOR			100 %					
7.5 HP Largest motor @ 25% additional						GEN SIZE 30 KW 38 KVA 90 AMPS		
TOTAL						AMPS= 49.7		
/ 240 V, 3 Phase, 4 Wire, Service Amps =			55.2 Amps			KVA= 20.7		
			1.25 Multiplier			%GEN LOAD= 55.1%		
			69.0 Amps					
			Main Breaker Size = 100.0 Amps					
			% Main Breaker Load = 69.0%					



MAIN TANK & UPPER MAPLE LANE PUMP STATION ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER. SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".  
 ② ATS SHALL BE OPEN TRANSITION TYPE.

**30% DESIGN**

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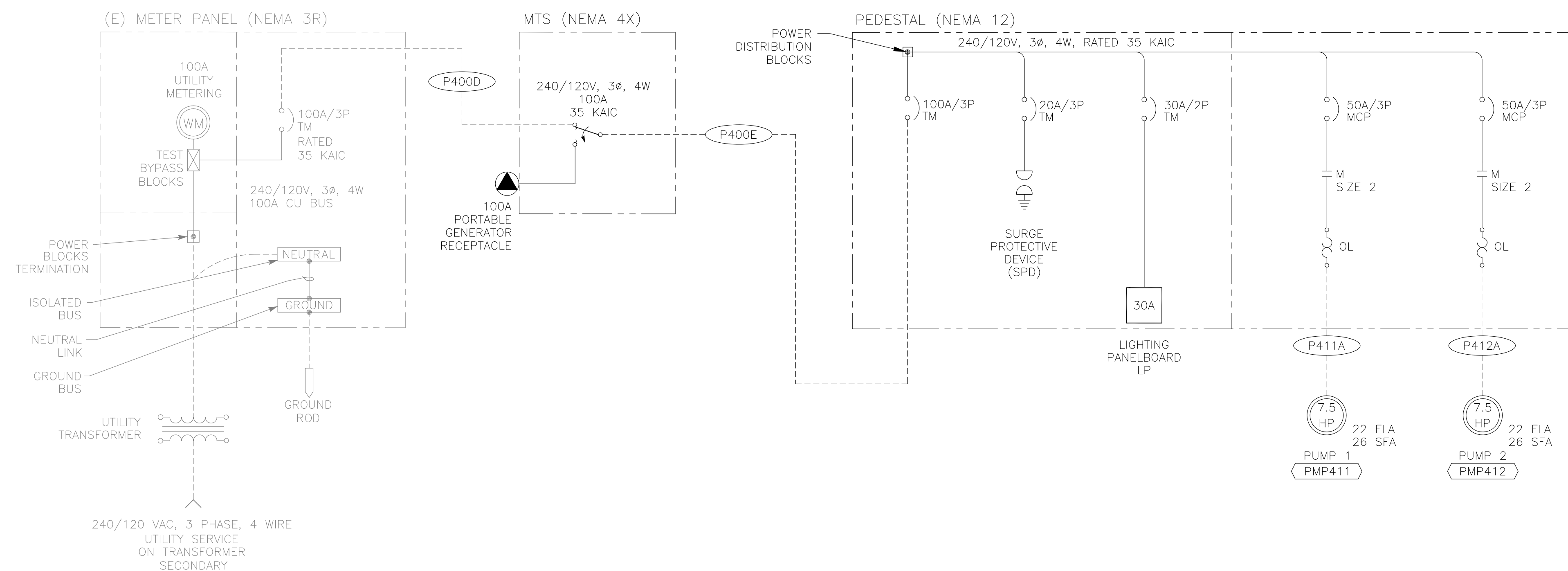
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 GARBVILLE, CALIFORNIA  
 MAIN TANK & UPPER MAPLE LANE  
 PUMP STATION ONE LINE DIAGRAM

SHEET E101  
 SEQ  
 DATE 9/18/23  
 PROJ. NO. ###

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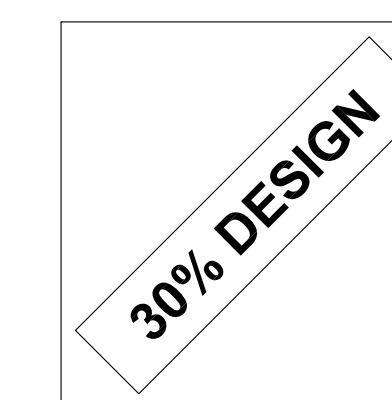
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### WALLAN PUMP STATION ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER, SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".  
 ② ATS SHALL BE OPEN TRANSITION TYPE.

WALLAN PS LOAD CALCULATIONS		UTILITY SERVICE				
HP DESCRIPTION	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA
7.5 PUMP	22.0	2	18,290	44.0	2	18,290
LP	5.7		2,385	5.7		2,385
<b>SUBTOTAL</b>	<b>49.7</b>		<b>20,675</b>	<b>49.7</b>		<b>20,675</b>
<b>DIVERSITY FACTOR</b>	<b>100 %</b>					
7.5 HP Largest motor @ 25% additional				22.0	0.25	2,286
<b>TOTAL</b>						<b>22,962</b>
/ 240 V, 3 Phase, 4 Wire, Service Amps =		55.2 Amps 1.25 Multiplier Service Size = 69.0 Amps Main Breaker Size = 100.0 Amps % Main Breaker Load = 69.0%				



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 APPROVED: APVD

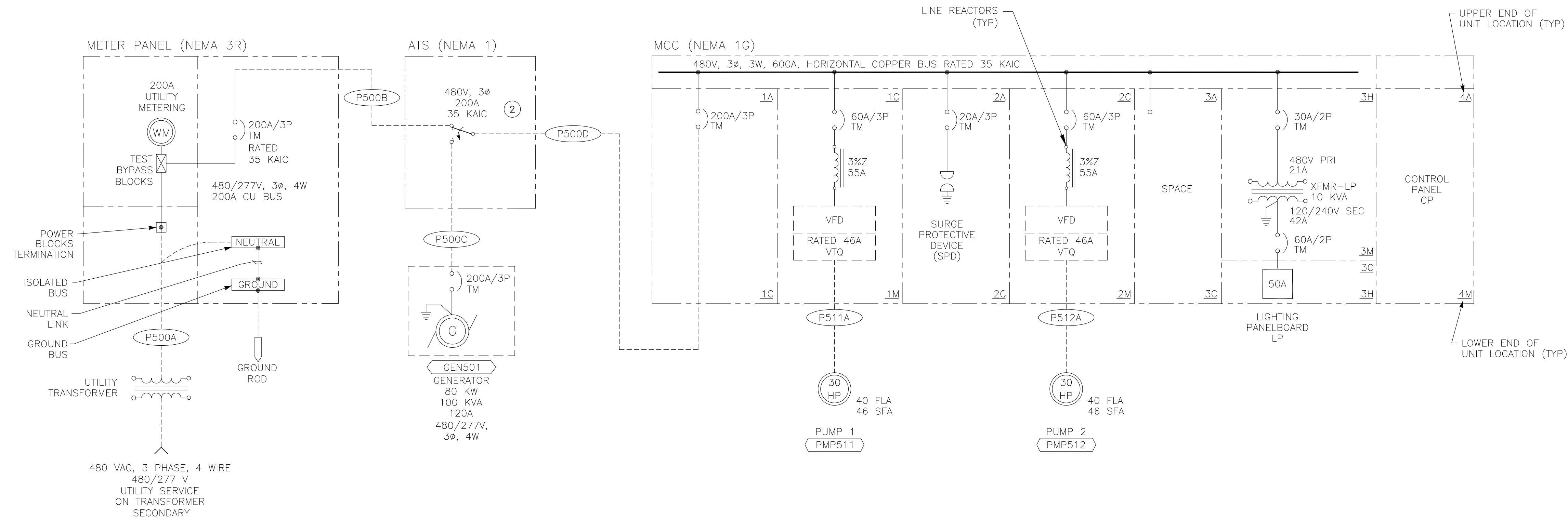
GARBVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBVILLE, CALIFORNIA  
**WALLAN PUMP STATION ONE LINE DIAGRAM**

NO. DATE REVISION BY

SHEET E401  
 SEQ  
 DATE 9/18/23  
 PROJ. NO. ###

POWER UTILITY SERVICE DIVISION OF WORK	Electrical Contractor	Utility Company
Primary Conduits	N/A	N/A
Primary Conductors		
Transformer Pad	N/A	
Transformer		X
Transformer Connections		X
Transformer Ground Rod	N/A	
Secondary Conduits	X	
Secondary Conductors		X
Bollards	X	
Meter Enclosure/Base	X	
Utility Meter		X
C/T Enclosure	N/A	
Current Transformers C/T		N/A
Meter Room Lock Box	N/A	
<b>Power Company Information:</b>		
Contact Name:		
Power Utility:	Pacific Gas & Electric	
Address:		
City/State/Zip:		
Phone:		
Fax:		
E-mail:		
<b>Notes:</b>		
1. All Utility Service installation work shall be done by Contractor per Power Utility Engineered drawings (which supersedes what is shown on Contract Drawings).		
2. Contractor shall coordinate and schedule all Power Utility inspections and tests in strict compliance with Power Utility requirements.		

ALDERPOINT PS LOAD CALCULATIONS	UTILITY SERVICE						GENERATOR SERVICE	
	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA
30 PUMP	40.0	2	66,511	80.0	2	66,511	2	66,511
PANEL LP	1.2		963	1.2		963		963
<b>SUBTOTAL</b>	<b>81.2</b>		<b>67,474</b>	<b>81.2</b>		<b>67,474</b>		<b>67,474</b>
<b>DIVERSITY FACTOR</b>	100 %						<b>GEN SIZE</b>	
30 HP Largest motor @ 25% additional	40.0						0.25	8,314
<b>TOTAL</b>								<b>75,788</b>
/ 480 V, 3 Phase, 4 Wire, Service Amps =		91.2 Amps		1.25 Multiplier		AMPS= 81.2		
Service Size =		113.9 Amps		Main Breaker Size =		KVA= 67.5		
% Main Breaker Load =		57.0%		200.0 Amps		%GEN LOAD= 67.5%		

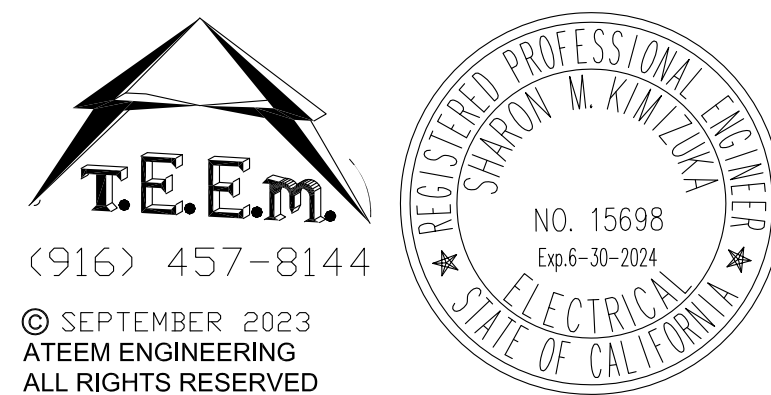


ALDERPOINT PUMP STATION ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER, SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".
- ② ATS SHALL BE OPEN TRANSITION TYPE.

**30% DESIGN**

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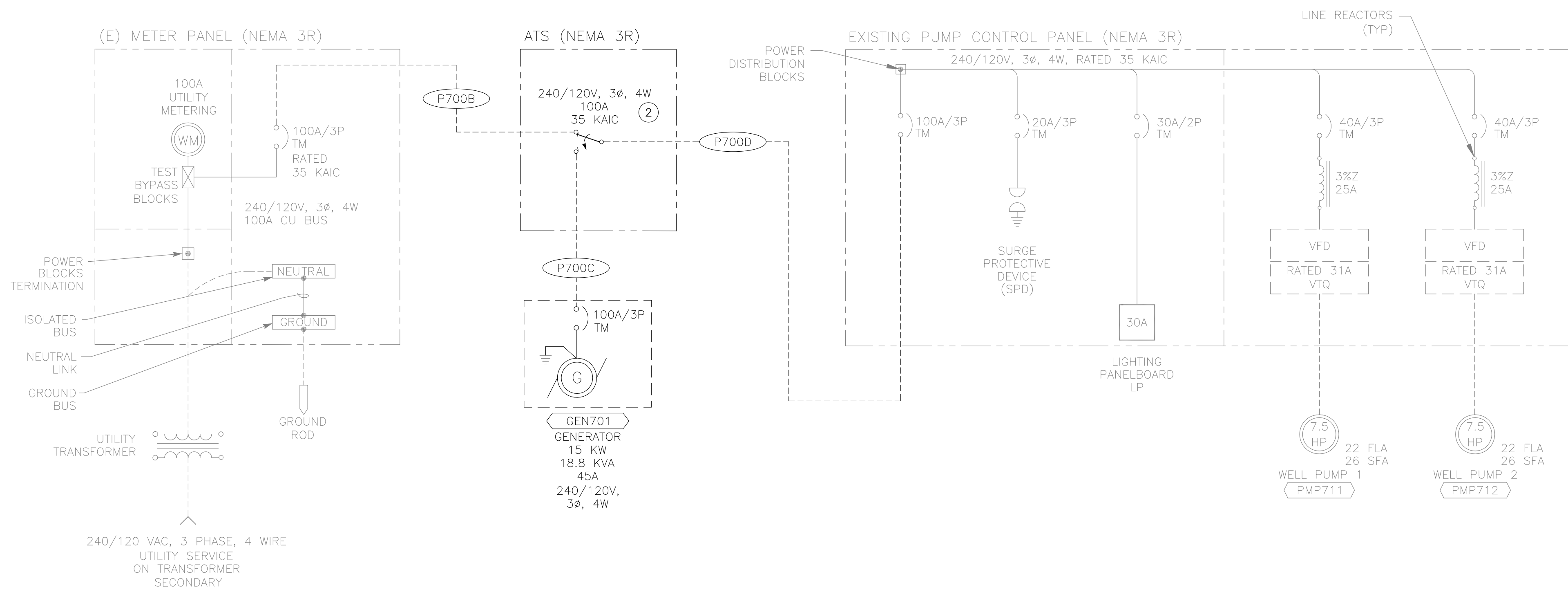
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APVD					
GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA ALDERPOINT PUMP STATION ONE LINE DIAGRAM					
SHEET	E501				
SEQ					
DATE	9/18/23				
PROJ. NO.	###				



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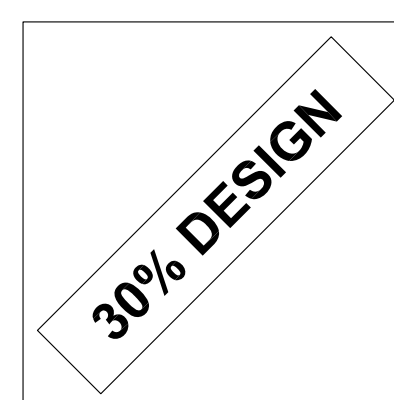
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### TOBIN WELL ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER, SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".  
 ② ATS SHALL BE OPEN TRANSITION TYPE.

HP DESCRIPTION	UTILITY SERVICE						GENERATOR SERVICE	
	LOAD AMPS	QTY	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA
7.5 PUMP	22.0	2	18,290	22.0	1	9,145	1	9,145
LP	5.7		2,385	5.7		2,385		2,385
<b>SUBTOTAL</b>	<b>49.7</b>		<b>20,675</b>	<b>27.7</b>		<b>11,530</b>		<b>11,530</b>
<b>DIVERSITY FACTOR</b> 56 %								
7.5 HP Largest motor @ 25% additional				22.0	0.25	2,286		
<b>TOTAL</b>						<b>13,817</b>		
/ 240 V, 3 Phase, 4 Wire, Service Amps = 33.2 Amps 1.25 Multiplier Service Size = 41.5 Amps Main Breaker Size = 100.0 Amps % Main Breaker Load = 41.5%							AMPS= 27.7	
							KVA= 11.5	
							%GEN LOAD= 61.5%	



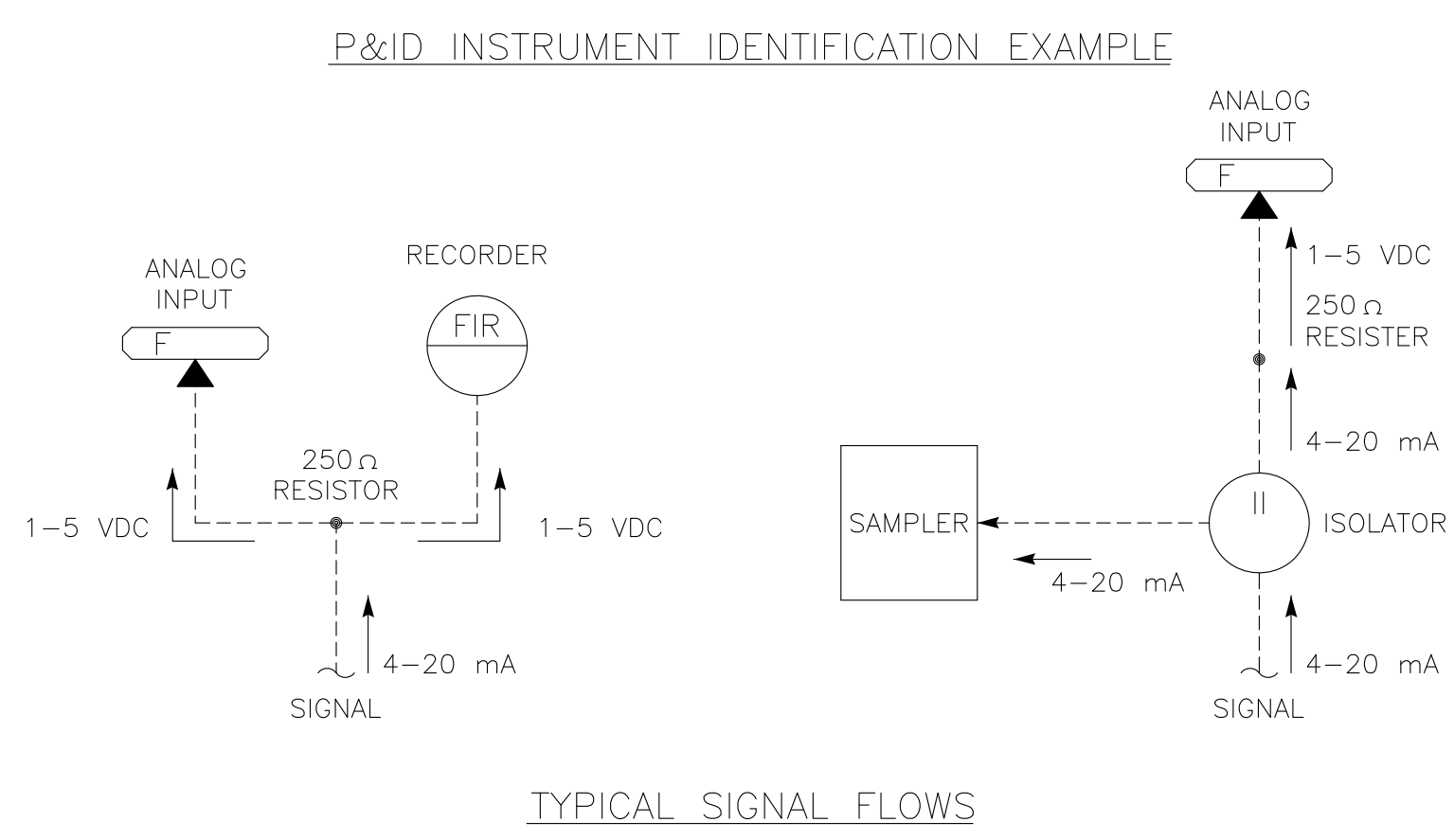
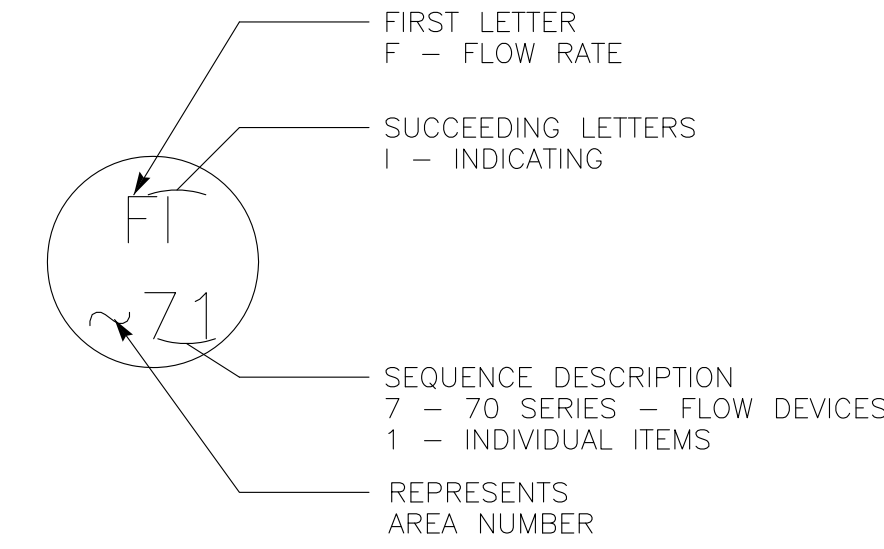
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GARBERVILLE SANITARY DISTRICT ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT GARBERVILLE, CALIFORNIA TOBIN WELL ONE LINE DIAGRAM			
NO.	DATE	REVISION	BY
SHEET	E701		
SEQ			
DATE	9/18/23		
PROJ. NO.	###		

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SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
<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		
P PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q QUANTITY	INTERGRATE, 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 POSITION DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	



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

**30% DESIGN**

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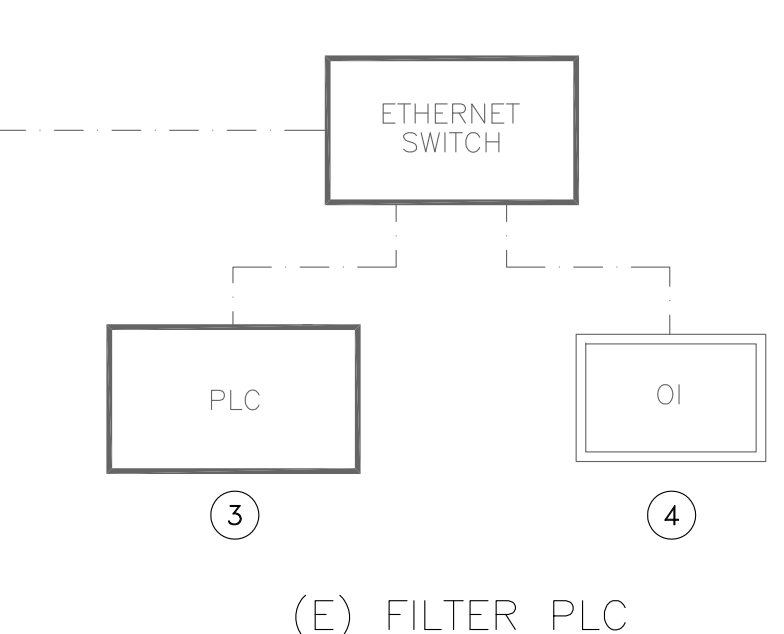
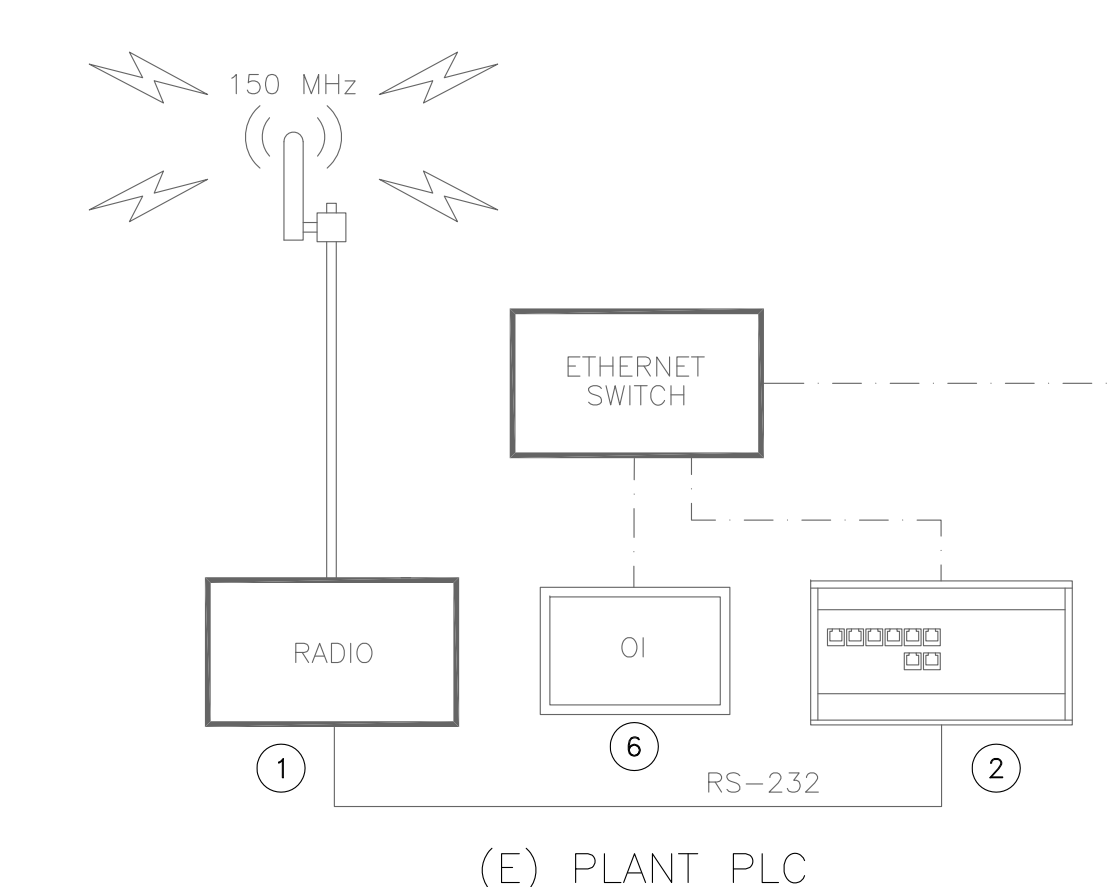
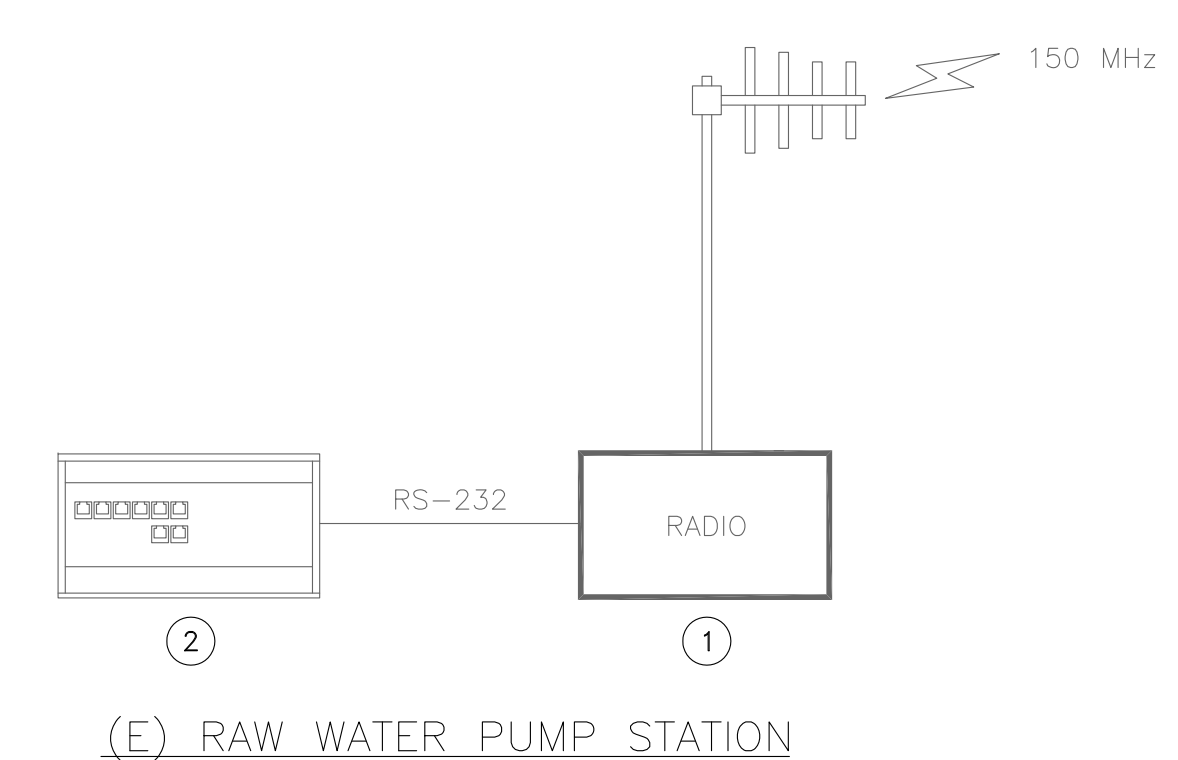
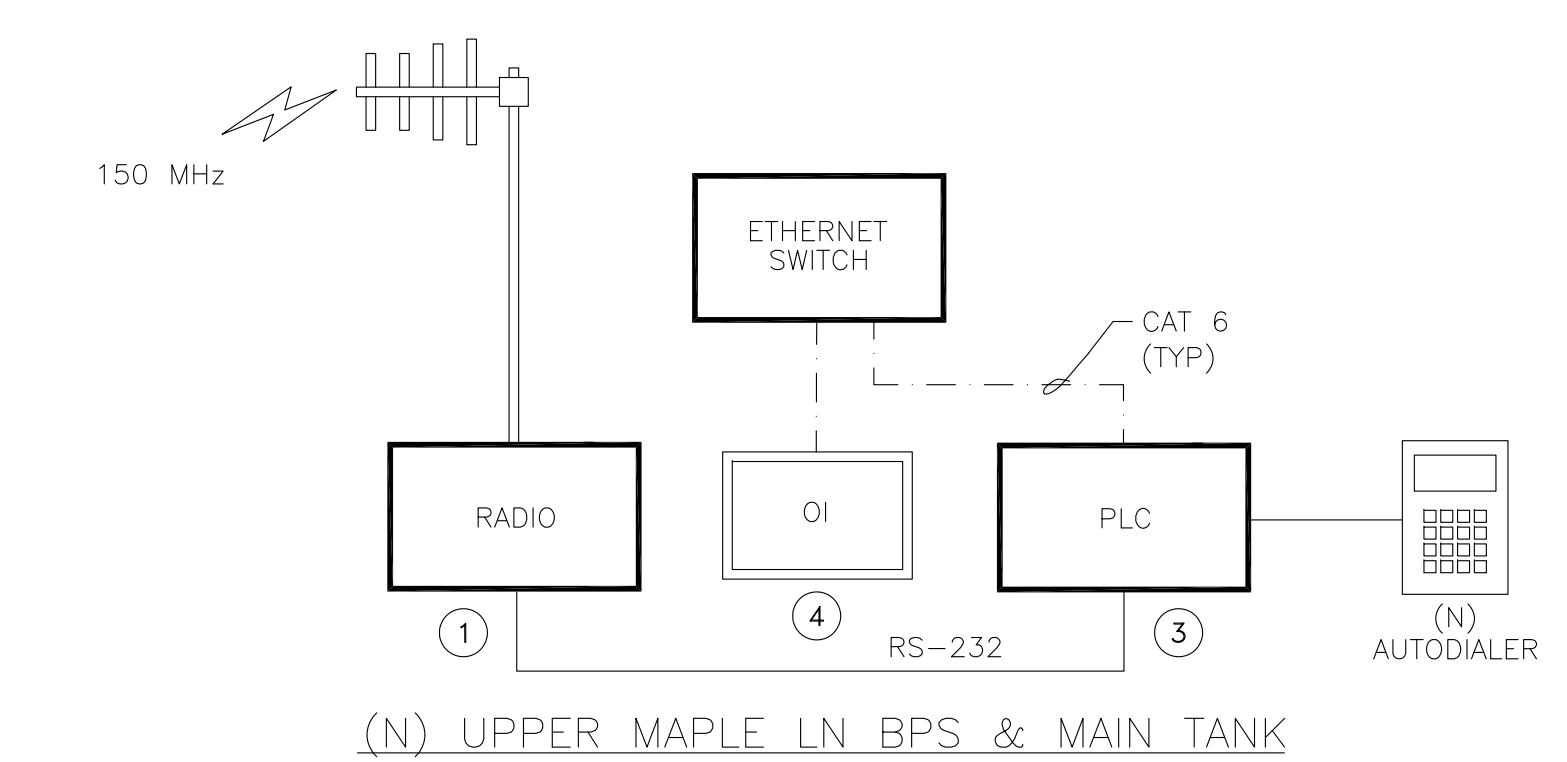
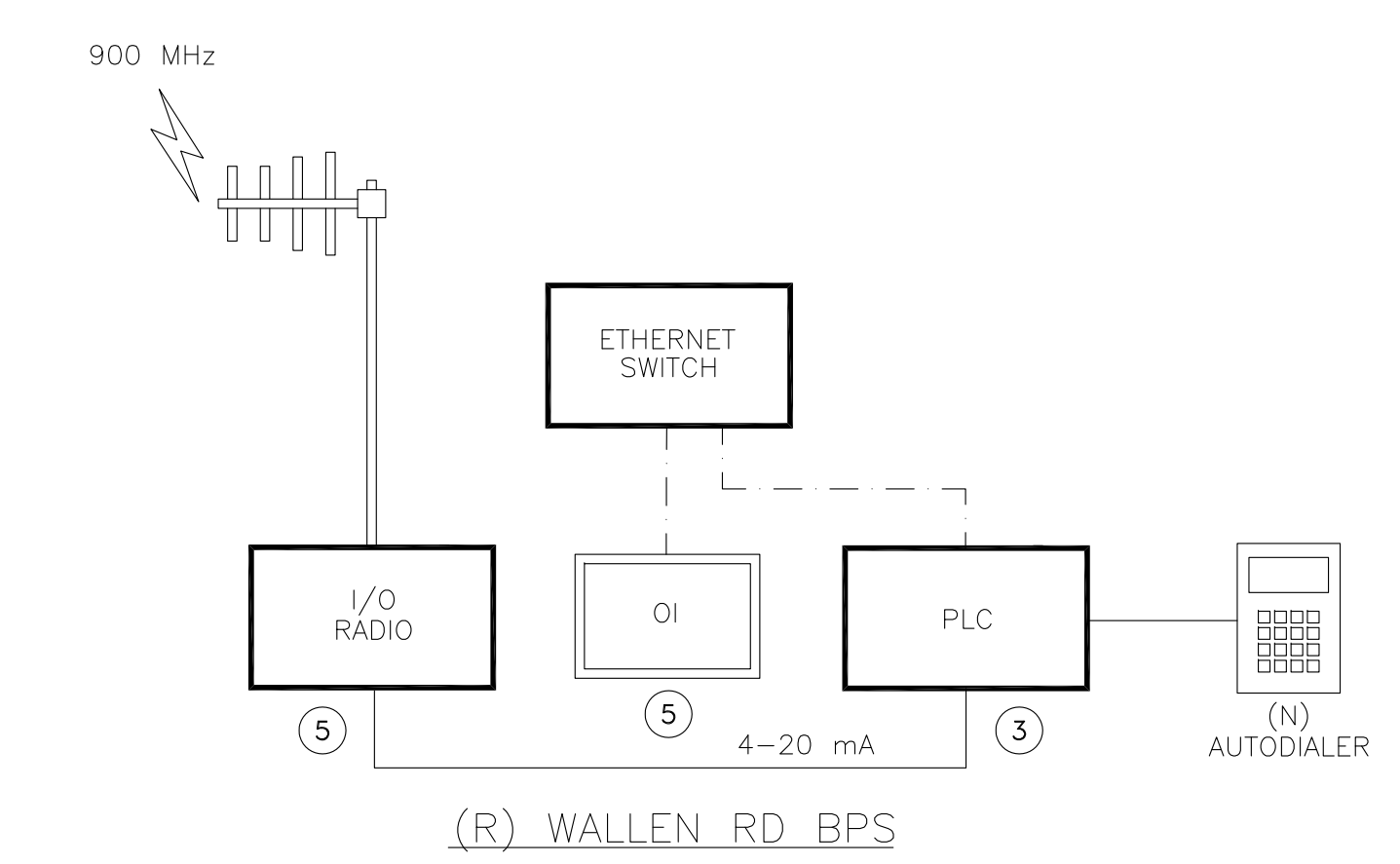
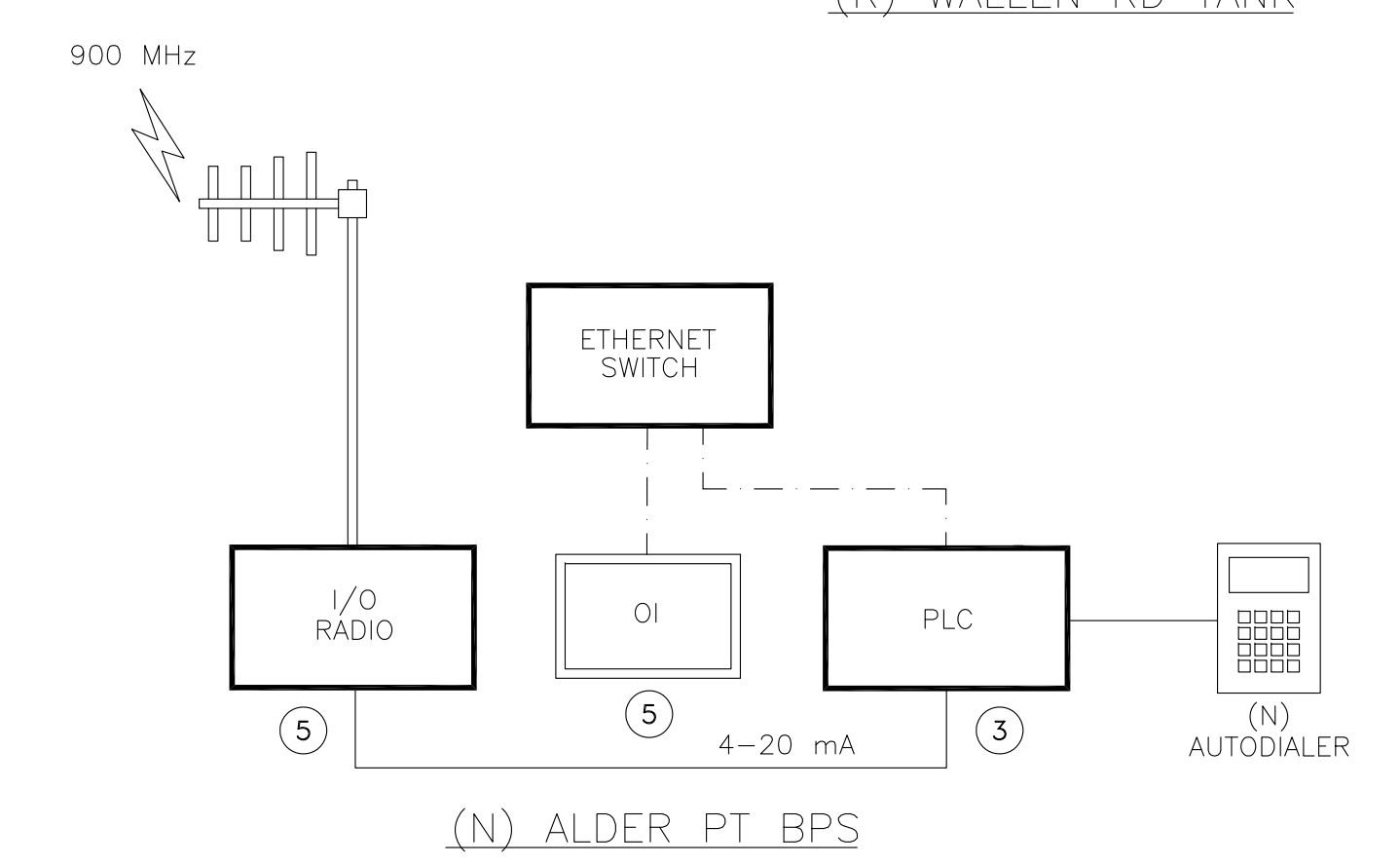
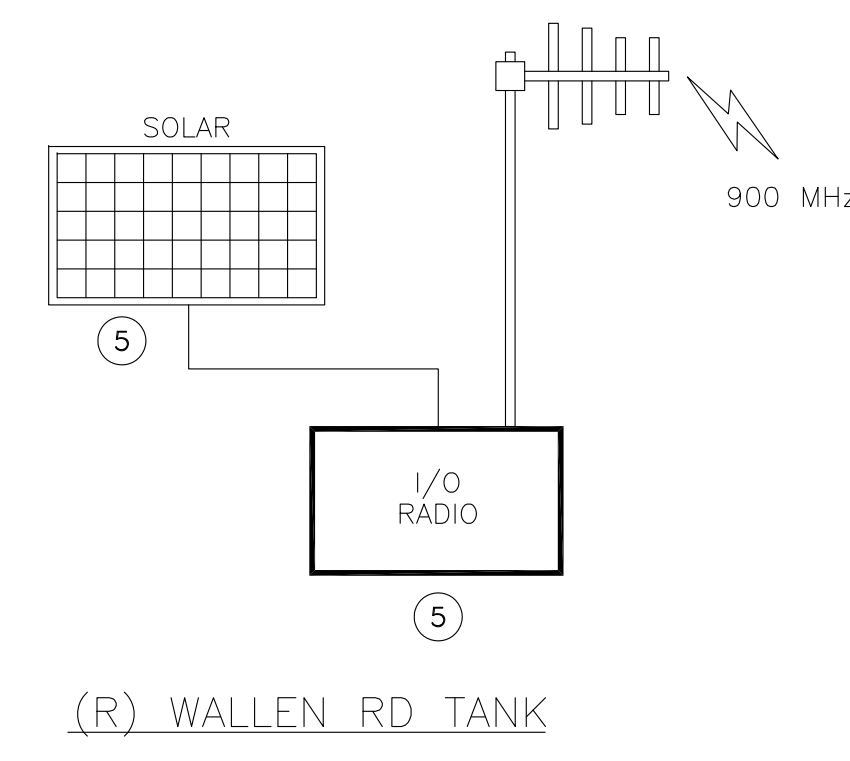
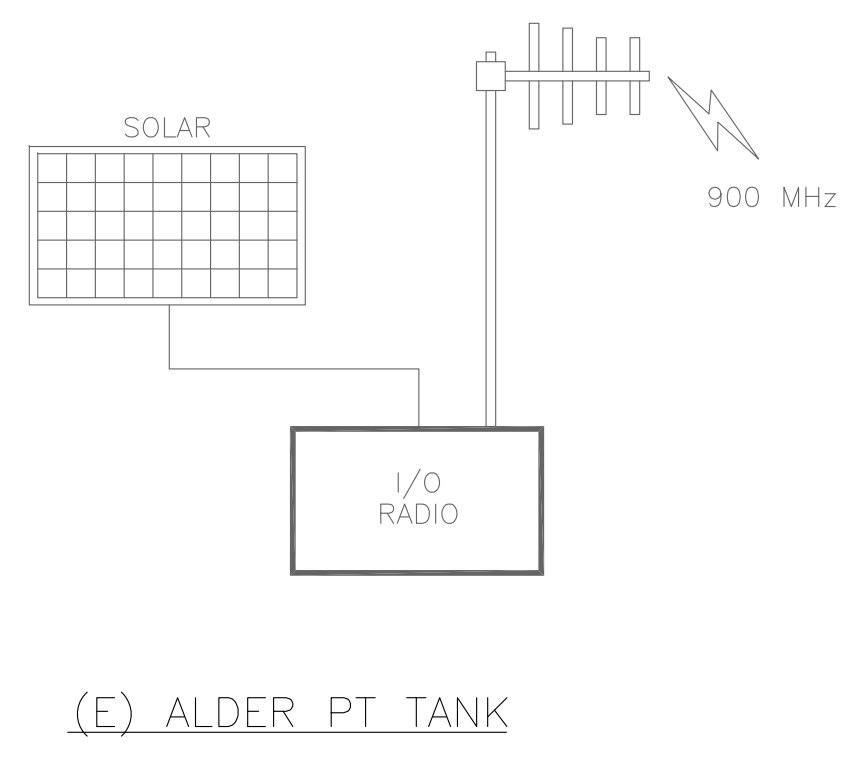
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 DR ZKV  
 CHK XML  
 APVD

GARBERVILLE SANITARY DISTRICT  
 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
**INSTRUMENTATION SYMBOLS & ABBREVIATIONS**

SHEET 11  
 SEQ  
 DATE 9/18/23  
 PROJ. NO. ###

REVISION  
 DATE  
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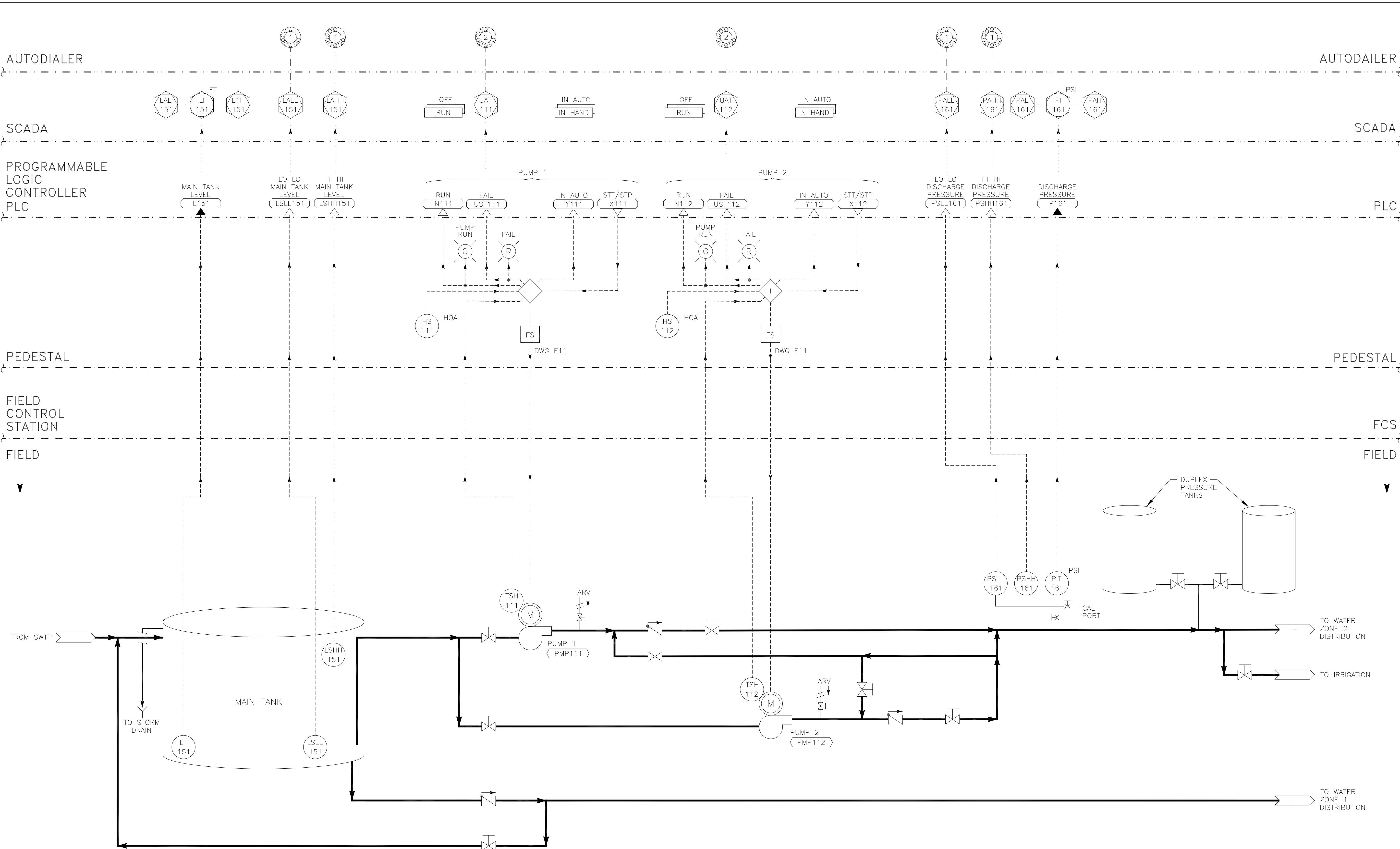
### SCADA BLOCK DIAGRAM

- NOTES: ① RAVEON RADIO. ④ C-MORE HMI.  
 ② ICL SHASTA PROGRAMABLE SCADA CONTROLLERS. ⑤ RELOCATE/REUSE.  
 ③ ALLEN-BRADLEY MICROLOGIX SERIES PLC SYSTEM. ⑥ MAPLE SYSTEMS HMI.

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CHK	XML	APVD	
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SCADA BLOCK DIAGRAM			
SHEET		12	
SEQ			
DATE		9/18/23	
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MAIN TANK AND UPPER MAPLE LANE PUMP STATION

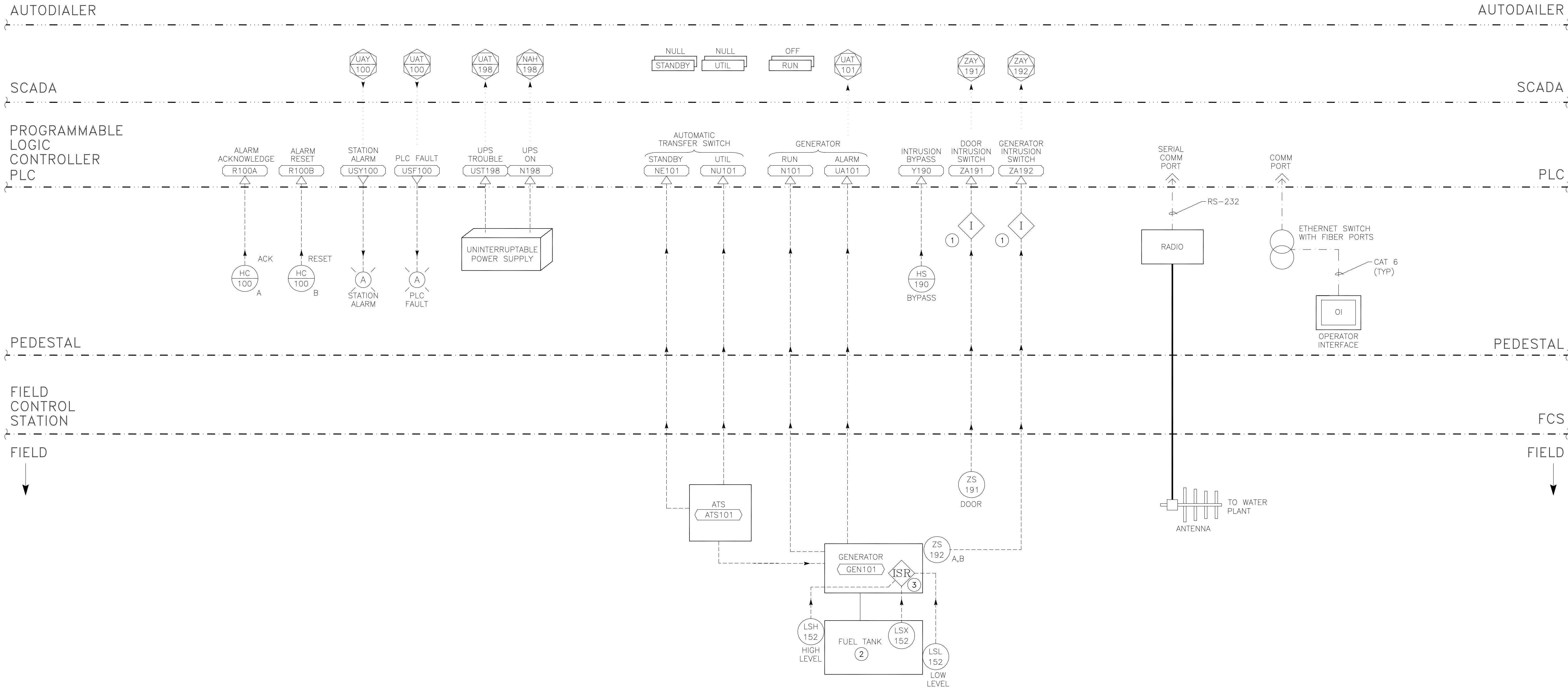
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SHEET 1101 SEQ DATE 9/18/23 PROJ. NO. ###	

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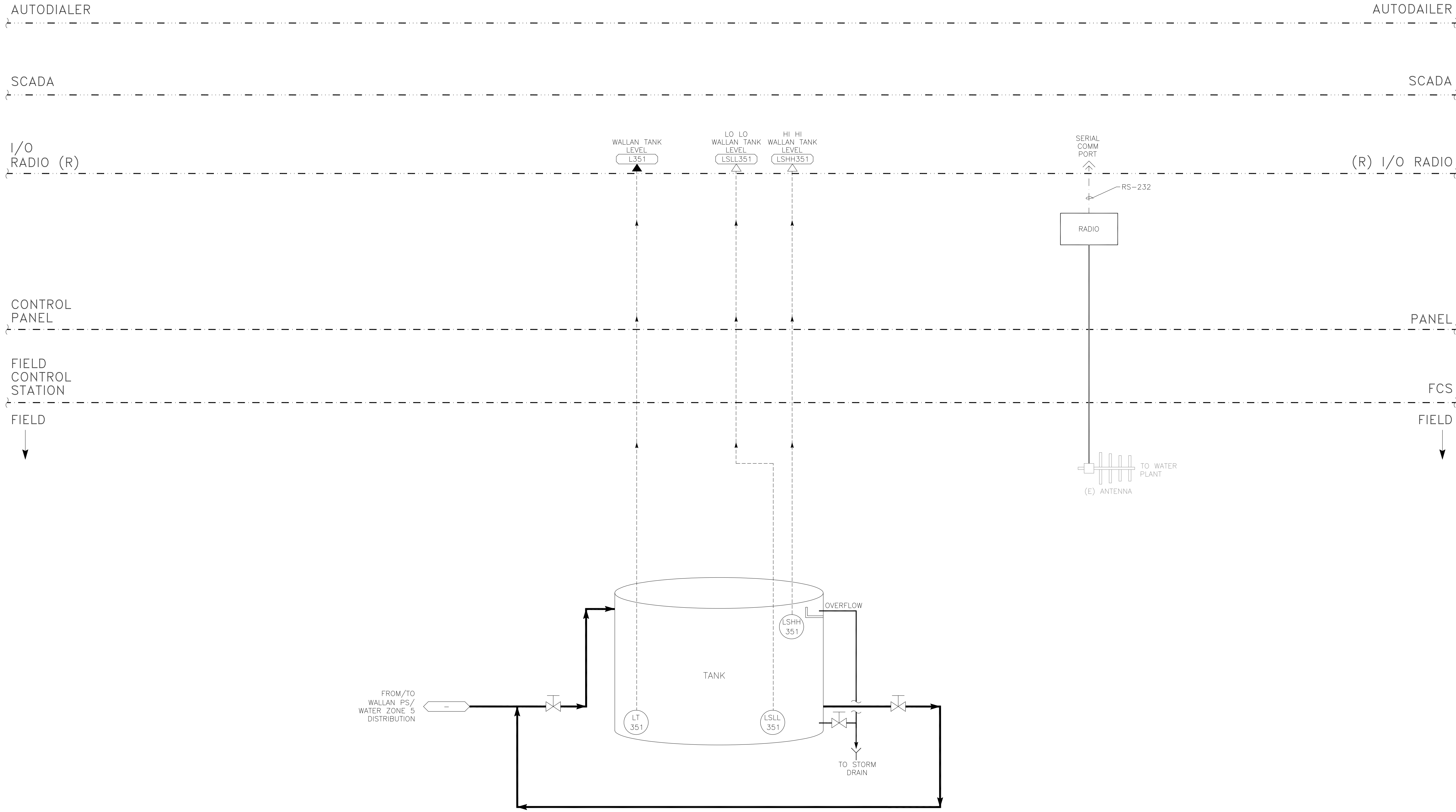
### MAIN TANK AND UPPER MAPLE LANE PS AUXILIARY SYSTEMS

- NOTES:
- ① WIRE SWITCHES IN SERIES ON TERMINAL BLOCKS.
  - ② DOUBLE WALLED SUB-BASE FUEL TANK WITH HIGH & LOW LEVEL SWITCHES AND LEAK DETECTION.
  - ③ ISR => INTRINSIC SAFE RELAY.

**30% DESIGN**

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WALLAN TANK

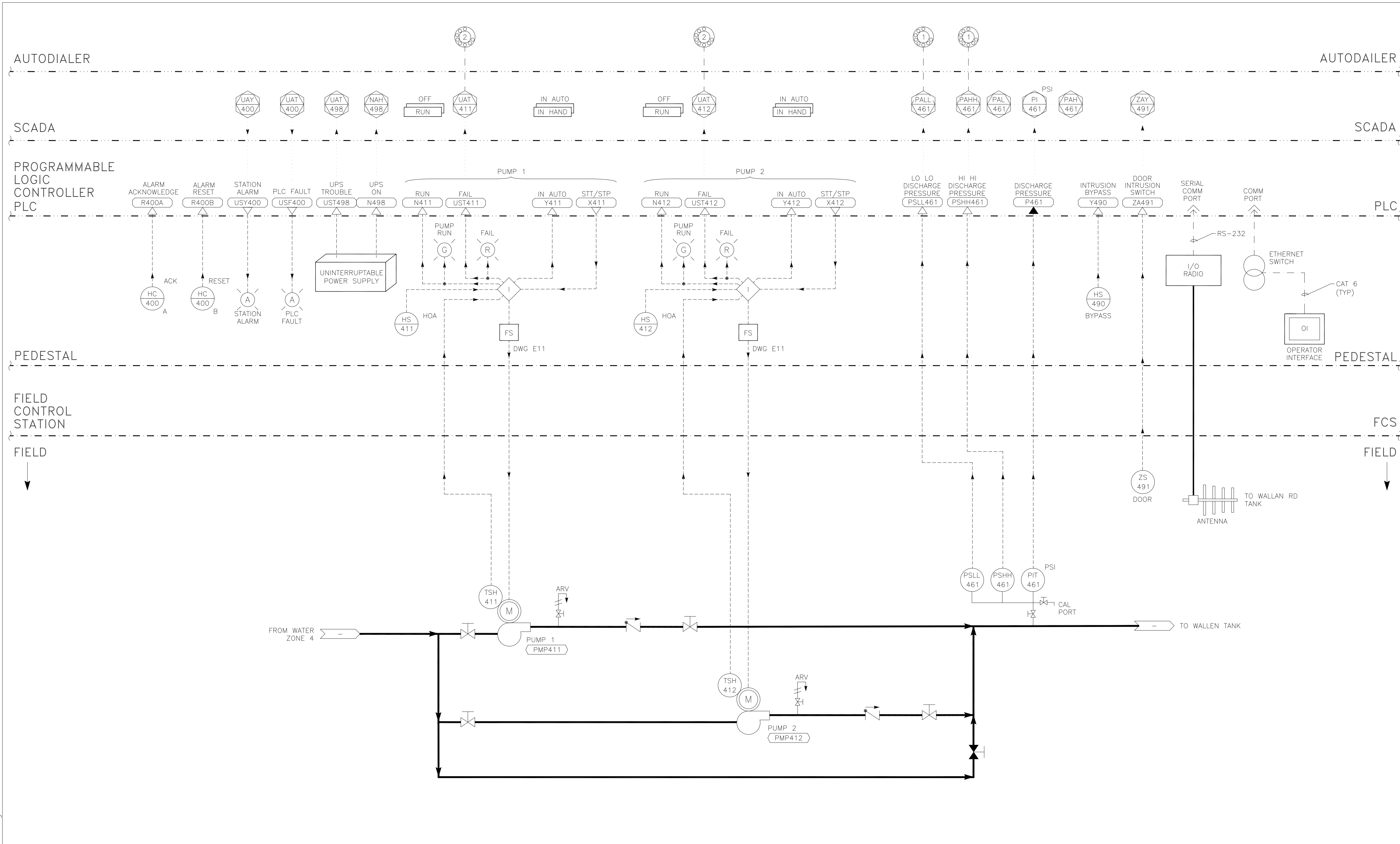
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REVISION	BY
APVD	CHK
XML	ZKV
SMK	DR
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SHEET	1301
DATE	9/18/23
PROJ. NO.	###

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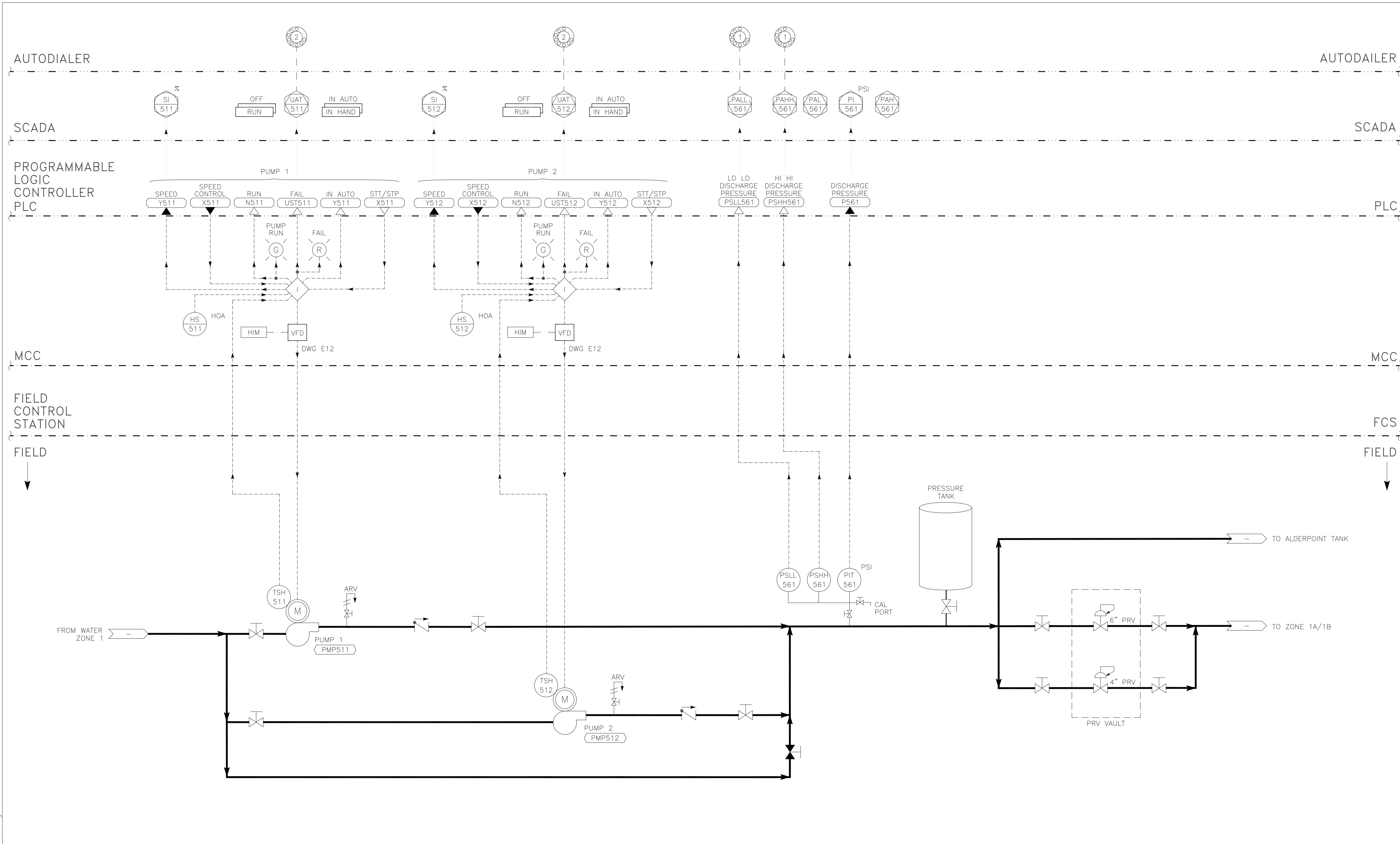
WALLAN PUMP STATION

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ALDERPOINT PUMP STATION

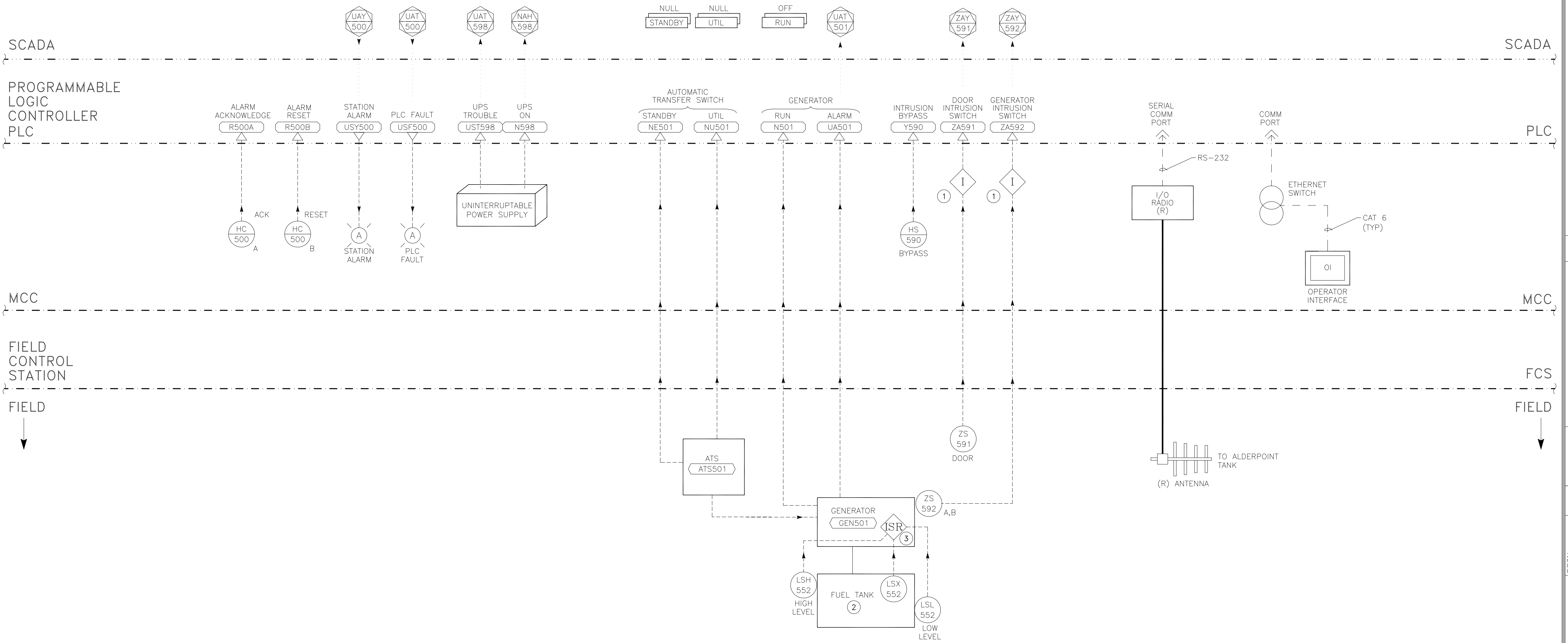
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SHEET		1501		
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(E) AUTODIALER

(E) AUTODIALER



### ALDERPOINT PS AUXILIARY SYSTEMS

- NOTES:
- ① WIRE SWITCHES IN SERIES ON TERMINAL BLOCKS.
  - ② DOUBLE WALLED SUB-BASE FUEL TANK WITH HIGH & LOW LEVEL SWITCHES AND LEAK DETECTION.
  - ③ ISR => INTRINSIC SAFE RELAY.

VERIFY SCALES  
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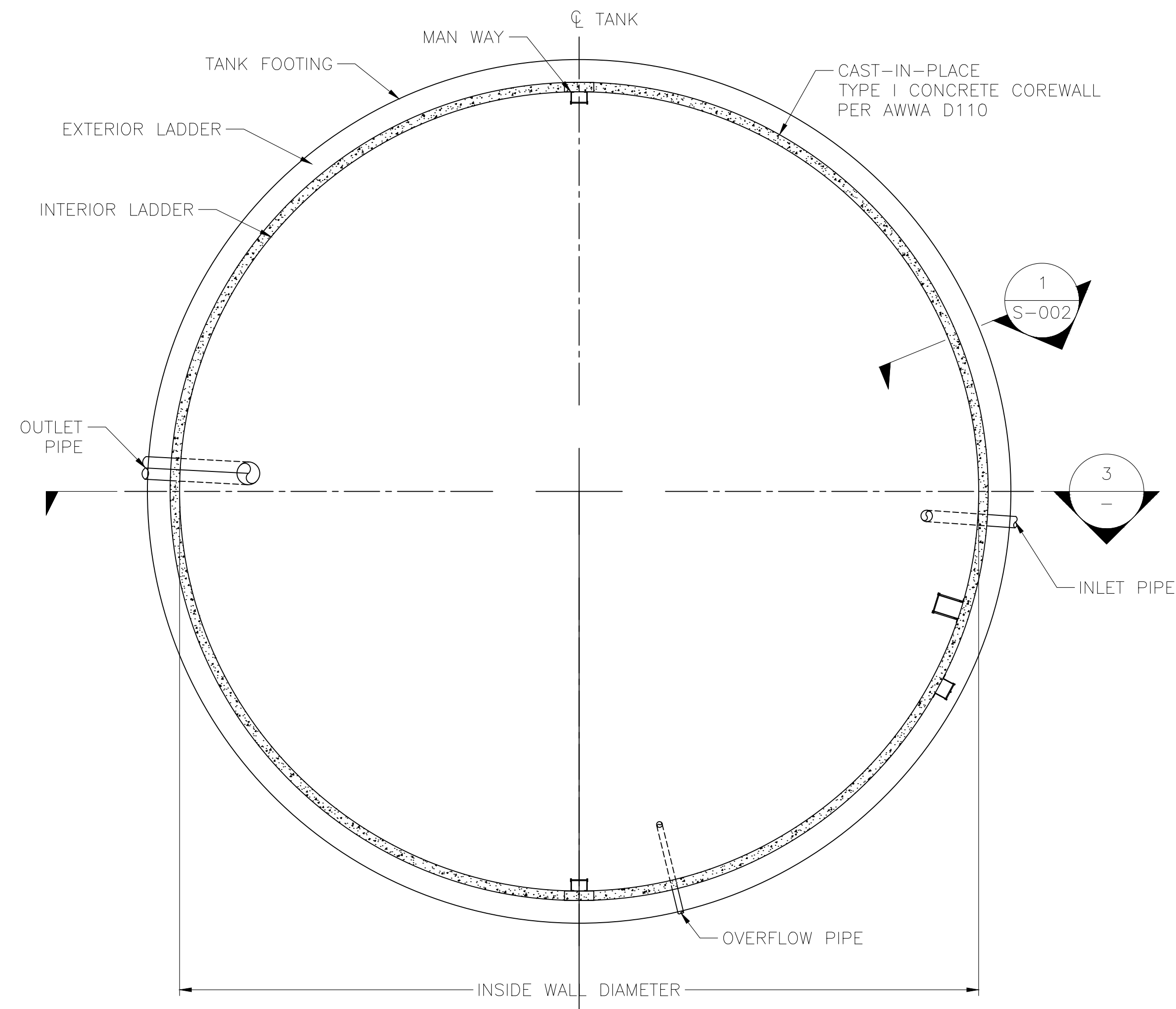
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 ROBERTSON/WALLAN/HURLBUTT TANKS REPLACEMENT  
 GARBERVILLE, CALIFORNIA  
 ALDERPOINT PS  
 AUXILIARY SYSTEMS P&ID

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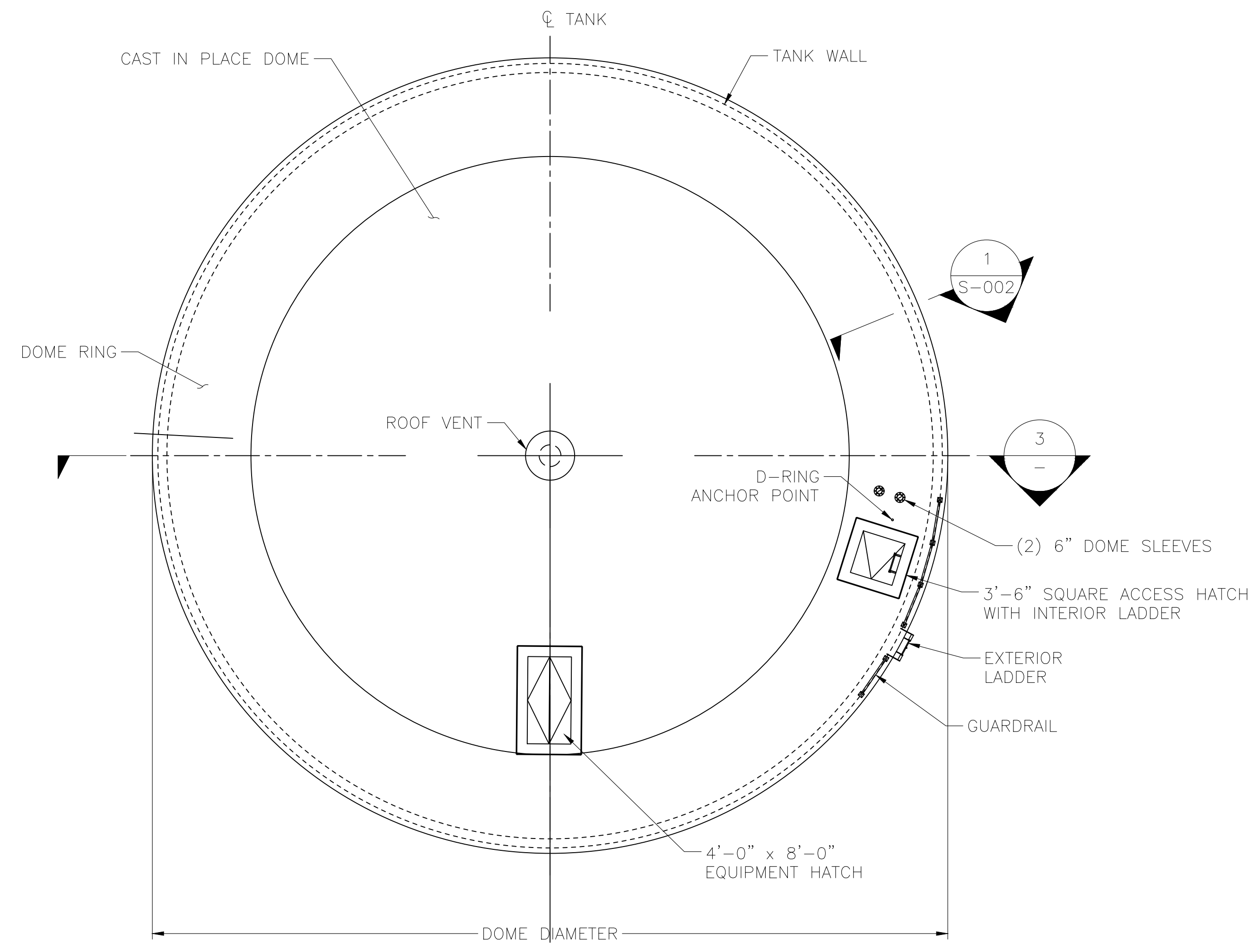
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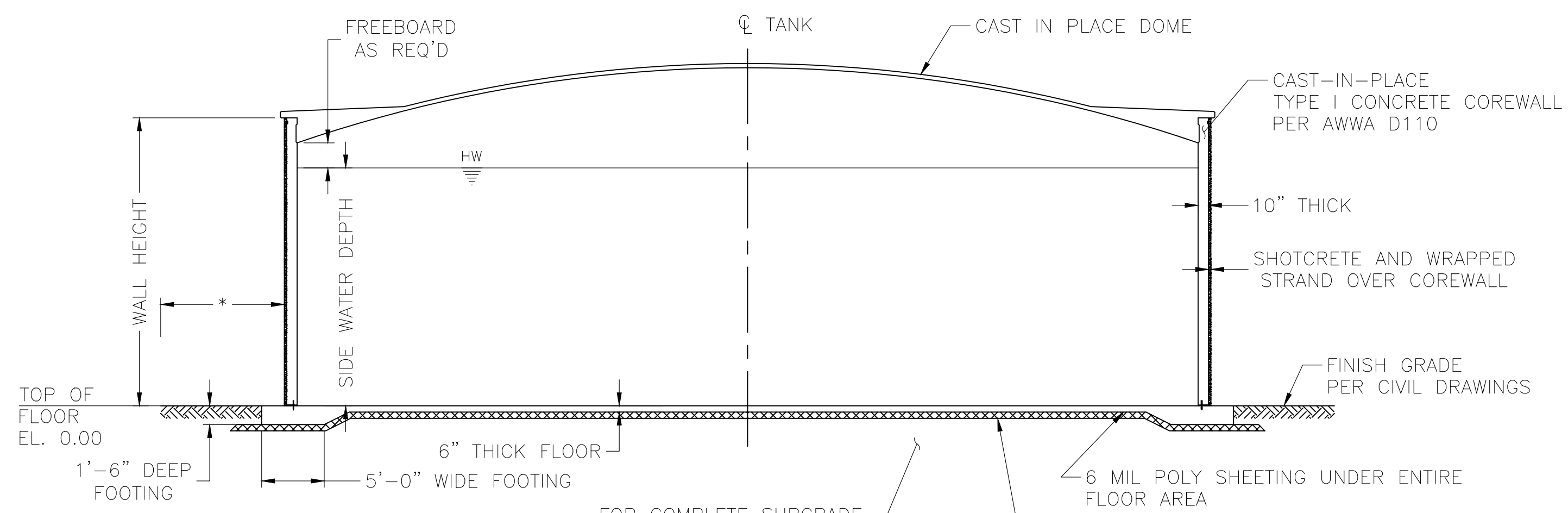
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FLOOR PLAN 1



ROOF PLAN 2



TANK SECTION 3

**GENERAL NOTES:**

\*ALL DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS. TANK CONTRACTOR TO VERIFY DIMENSIONS WITH STRUCTURAL CALCULATIONS.

**A. DESIGN LOADS**

- 1. ROOF LOAD : 20.0 PSF LIVE; SNOW
- 2. LIQUID (WATER) : 62.4PCF
- 3. R<sub>i</sub>, IMPULSIVE STRUCTURAL RESPONSE COEFFICIENT : 3.25 (ASCE 7 WITH CABLES) 1.50 (ASCE 7 W/O CABLES)  
3.50 (AWWA WITH CABLES) 1.50 (AWWA W/O CABLES)
- 4. R<sub>c</sub>, CONVECTIVE STRUCTURAL RESPONSE COEFFICIENT : 1.0
- 5. ANALYSIS PROCEDURE USED : EQUIVALENT LATERAL FORCE ANALYSIS BASED ON AWWA D110 AND ACI 350.3

**B. CONCRETE AND SHOTCRETE**

- 1. FLOOR, AND FOOTINGS : 4000 PSI
- 2. DOME : 4000 PSI
- 3. COREWALL : 4000 PSI
- 4. SHOTCRETE FOR STRAND COVER AND COVER COAT (1C:3S) : 4500 PSI
- 5. SEE TECHNICAL SPECIFICATION FOR COMPLETE MIX DESIGN INFORMATION INCLUDING MINIMUM CEMENT CONTENT, MAXIMUM WATER-CEMENT RATIO, AGGREGATE SIZE AND ACCEPTABLE ADMIXTURES.
- 6. SEE TECHNICAL SPECIFICATION FOR CONCRETE PLACING AND FORMING PROCEDURES.

**C. METALS**

- 1. ALL STAINLESS STEEL (SST) TO BE 304L UNLESS OTHERWISE NOTED.

**D. REINFORCING STEEL**

- 1. ALL REINFORCING IN TANK SHALL CONFORM TO ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED ON THESE DRAWINGS.
- 2. REINFORCING STEEL CALLED OUT AS GALVANIZED SHALL HAVE A CLASS 1 COATING IN ACCORDANCE WITH ASTM A767, WITHOUT CHROMATE.

**E. EARTHWORK REQUIREMENTS**

- 1. MINIMUM COMPACTION OF CRUSHED ROCK AND SUBGRADE UNDER AND AROUND PIPE BLOCKS AND UNDER FLOOR AND FOOTINGS SHALL EQUAL 95% RELATIVE COMPACTION AS DETERMINED IN ACCORDANCE WITH ASTM D1557.
- 2. COMPACTION OF BACKFILL AROUND TANK SHALL EQUAL 90% RELATIVE COMPACTION AS DETERMINED IN ACCORDANCE WITH ASTM D1557. USE ONLY HAND HELD COMPACTION EQUIPMENT WITHIN 5' OF TANK WALL AND LIGHTWEIGHT EQUIPMENT (15,600 LBS MAX) BEYOND THE 5' AND WITHIN 15' OF THE TANK SO AS NOT TO DAMAGE THE WALL. BRING UP THE BACKFILL AROUND THE TANK IN UNIFORM LIFTS WHEN POSSIBLE. DIFFERENCE IN BACKFILL HEIGHTS DURING INSTALLATION SHALL NEVER EXCEED THE FINAL DIFFERENCE IN BACKFILL HEIGHTS.

**0.55 MG WATER STORAGE TANK**

**GARBERVILLE (SANATARY DITRICT), CA**  
ENGR.: SHN ENGINEERING  
EUREKA, CA

DATE: 09/19/23

CHK:WINTERS  
DESIGNER

DWN:JMEZA  
REV

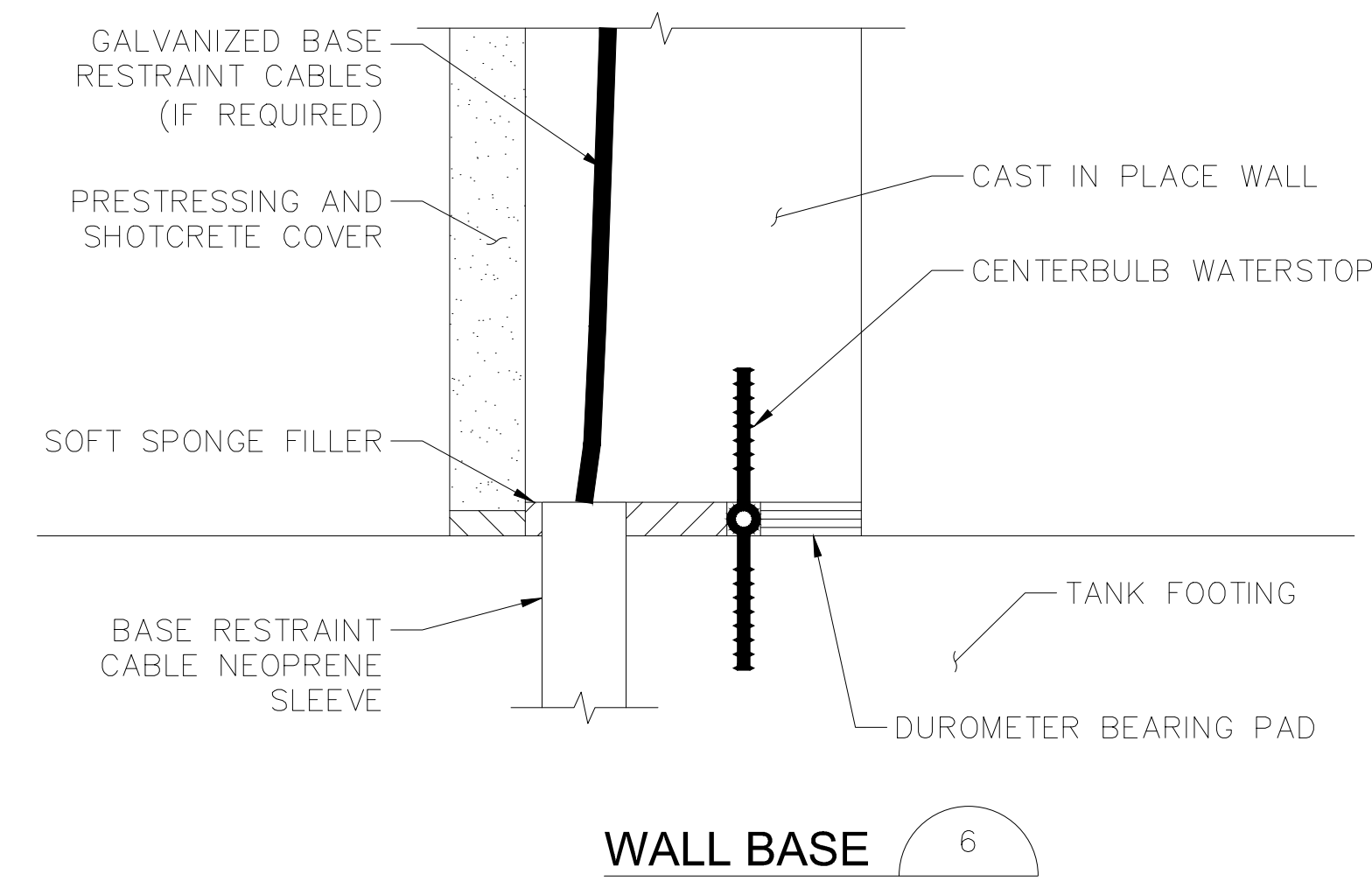
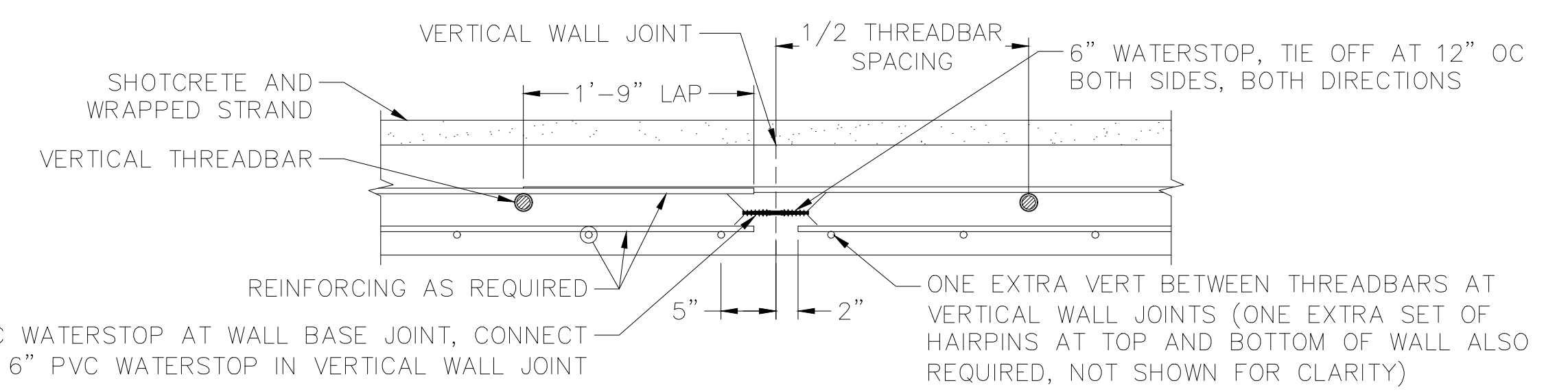
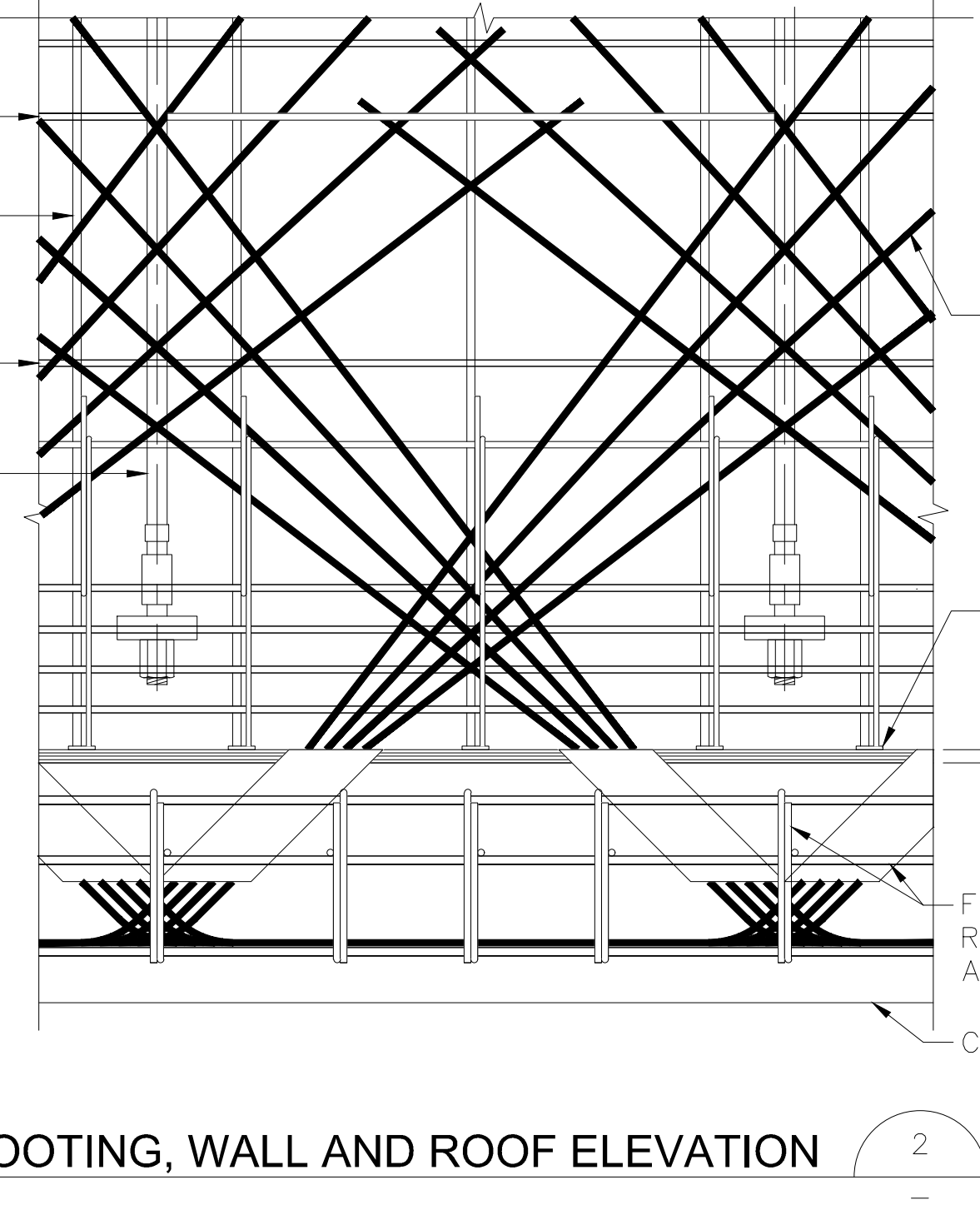
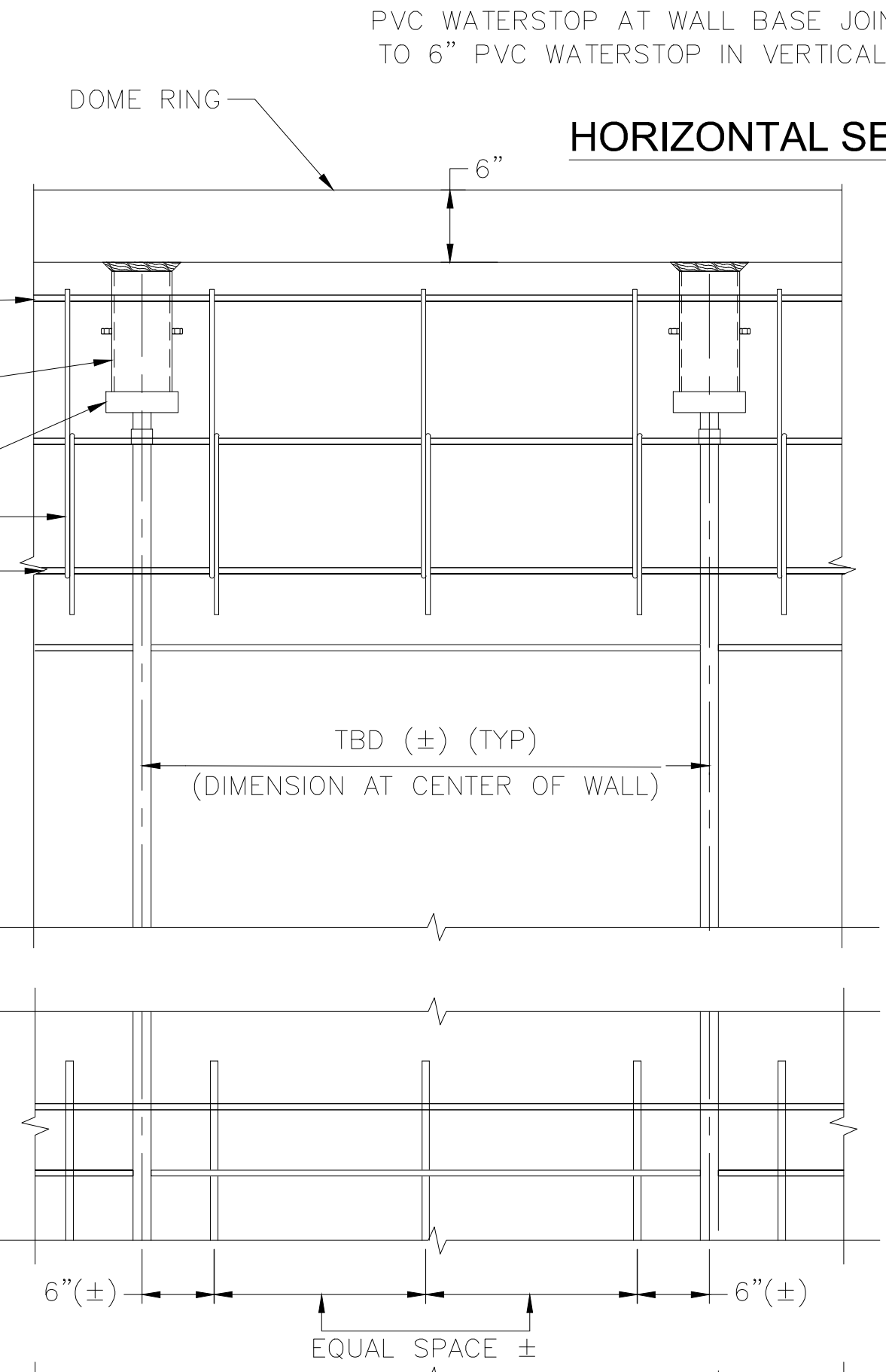
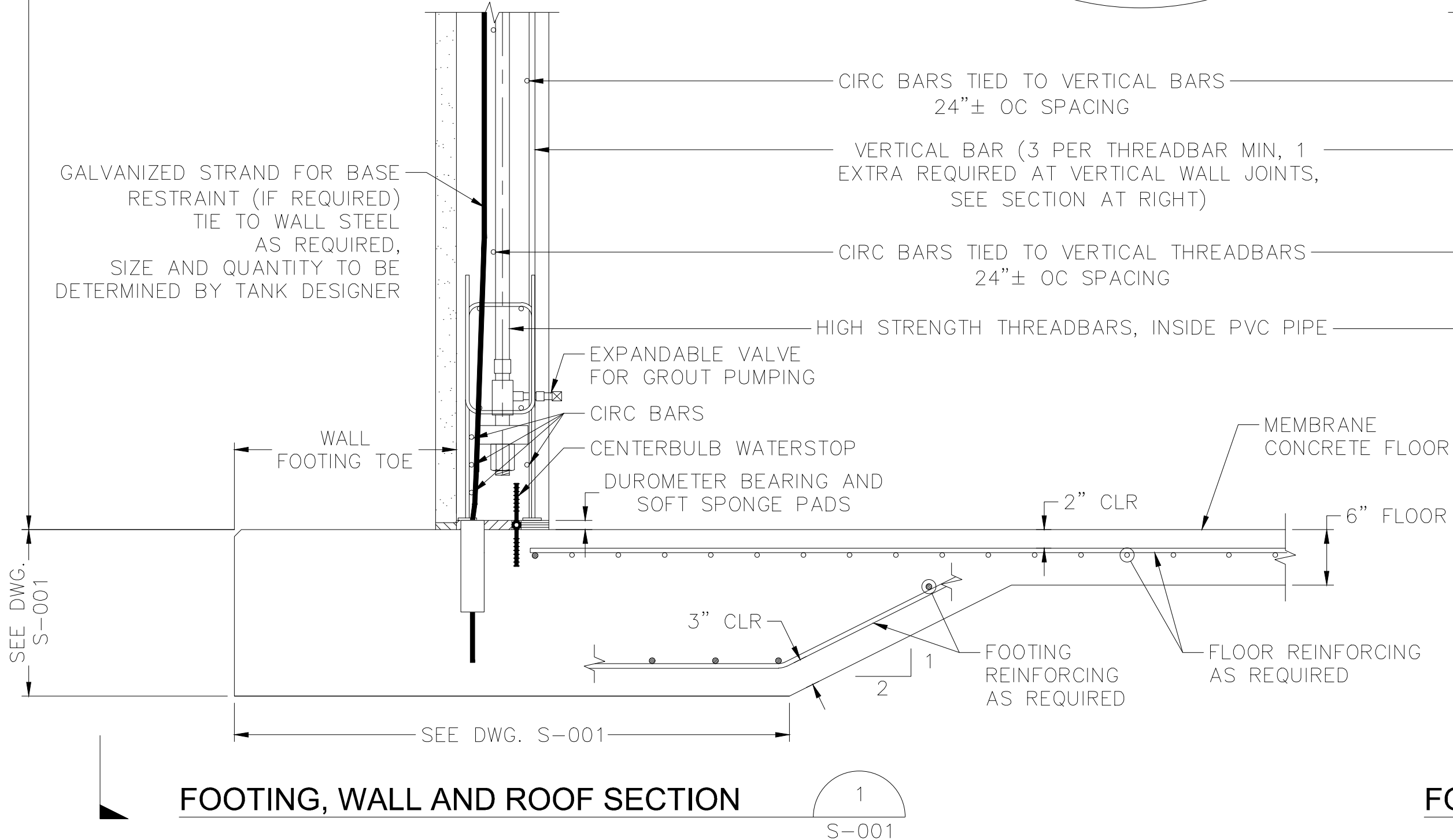
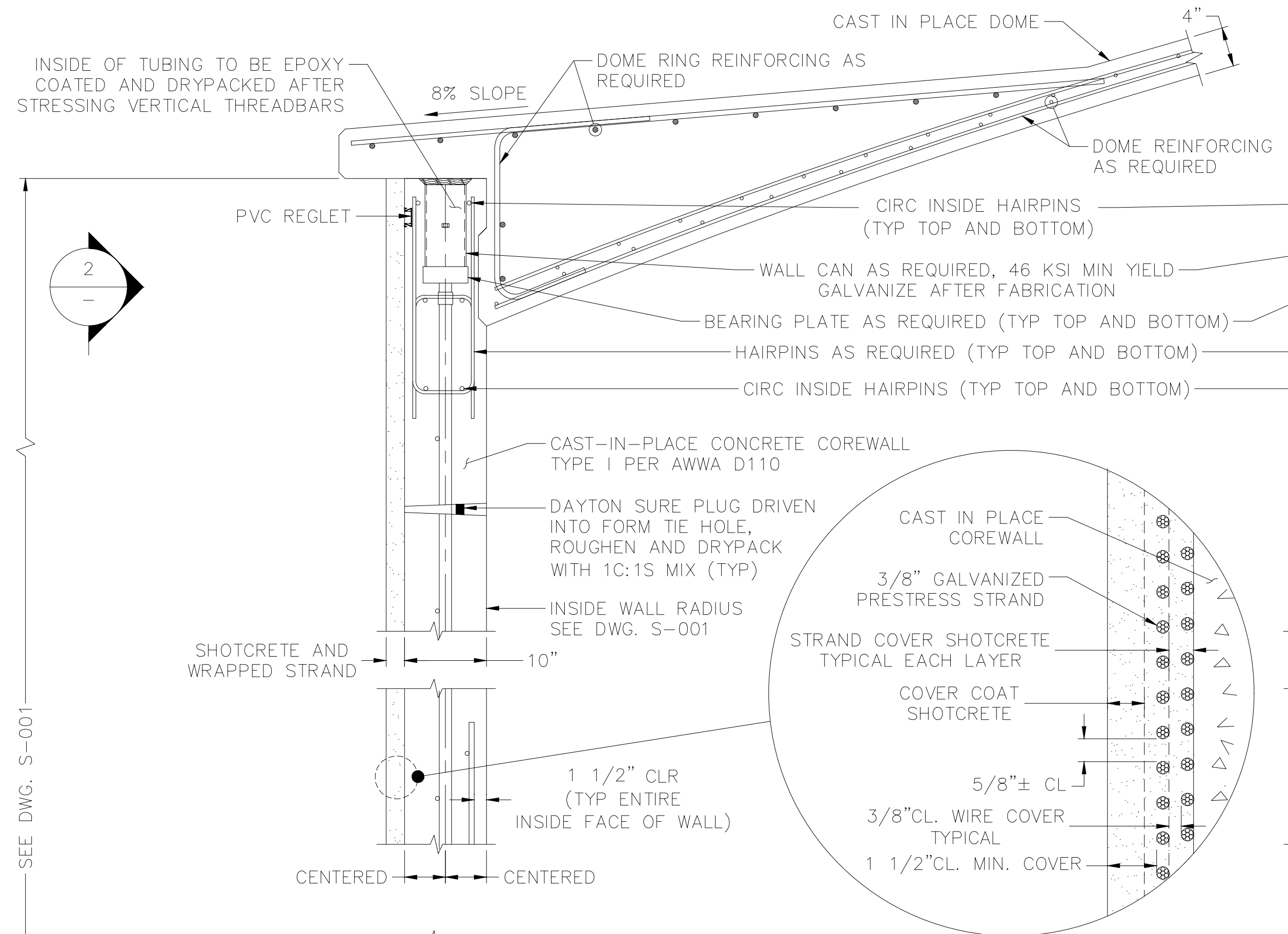
**AWWA D110  
TYPE I CAST  
IN PLACE  
CONCRETE  
STORAGE  
TANK**

TANK PLANS  
AND SECTION

DRAWING NUMBER  
S-001

**NOTES:**

- 1) FOOTING AND FLOOR TO BE FINISHED PER SPECIFICATIONS.
- 2) MAINTAIN CLEARANCE BETWEEN THE INDIVIDUAL STRANDS IN THE BASE RESTRAINT CABLE SETS (DO NOT BUNDLE). CABLES MAY TOUCH WITHIN 2' OF THE BOOT.
- 3) THE ROOF AND THE COMBINED FLOOR AND WALL FOOTING SHALL BE POURED MONOLITHICALLY UNLESS APPROVED BY THE ENGINEER.
- 4) BASE RESTRAINT CABLES MAY BE BENT PRIOR TO INSTALLATION.
- 5) BASE RESTRAINT CABLE DESIGN REQUIREMENTS TO BE DETERMINED BY TANK CONTRACTOR.



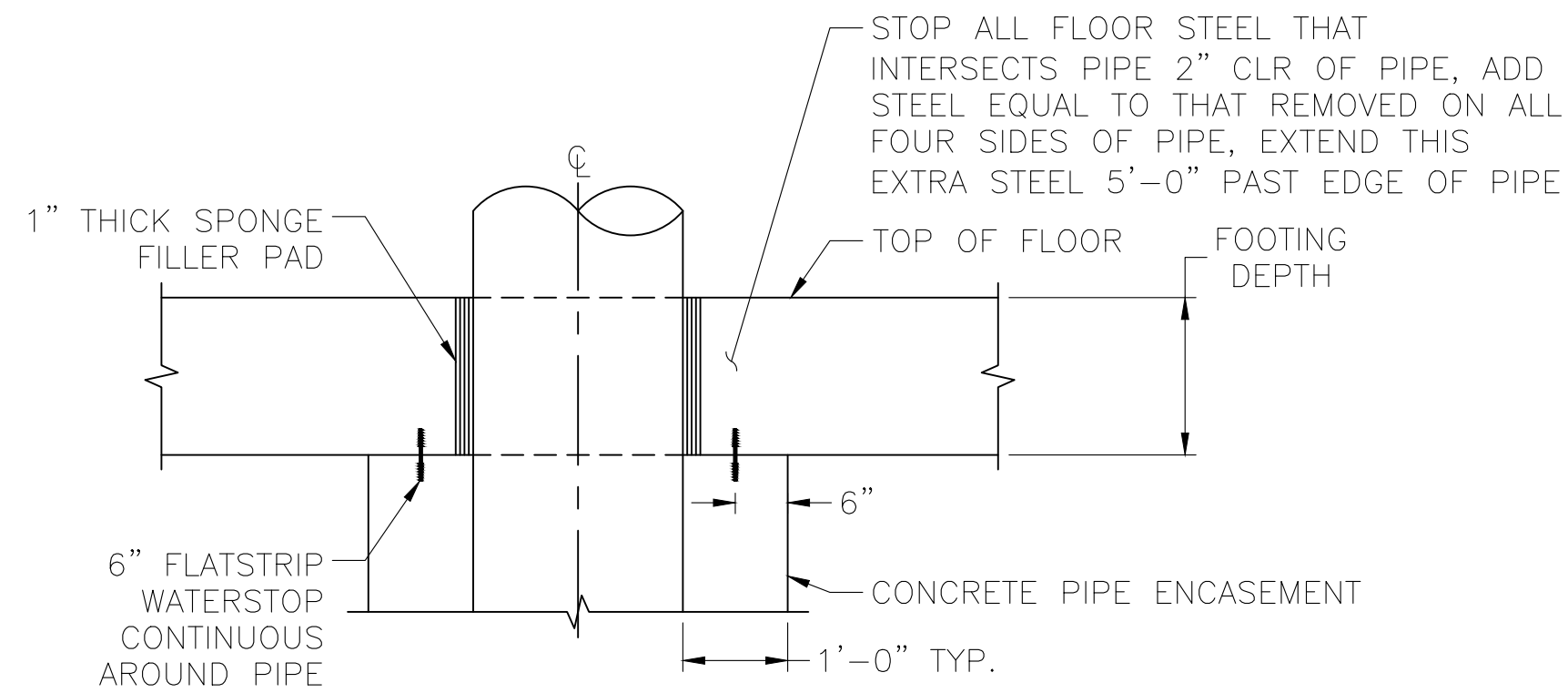
**0.55 MG WATER STORAGE TANK**  
**GARBERVILLE (SANATARY DITRICT), CA**  
 ENGR.: SHN ENGINEERING  
 EUREKA, CA

REV	DATE	DESIGNER	DESCRIPTION
DWN:JMEZA			
CHK:WWINTERS	DATE: 09/19/23		

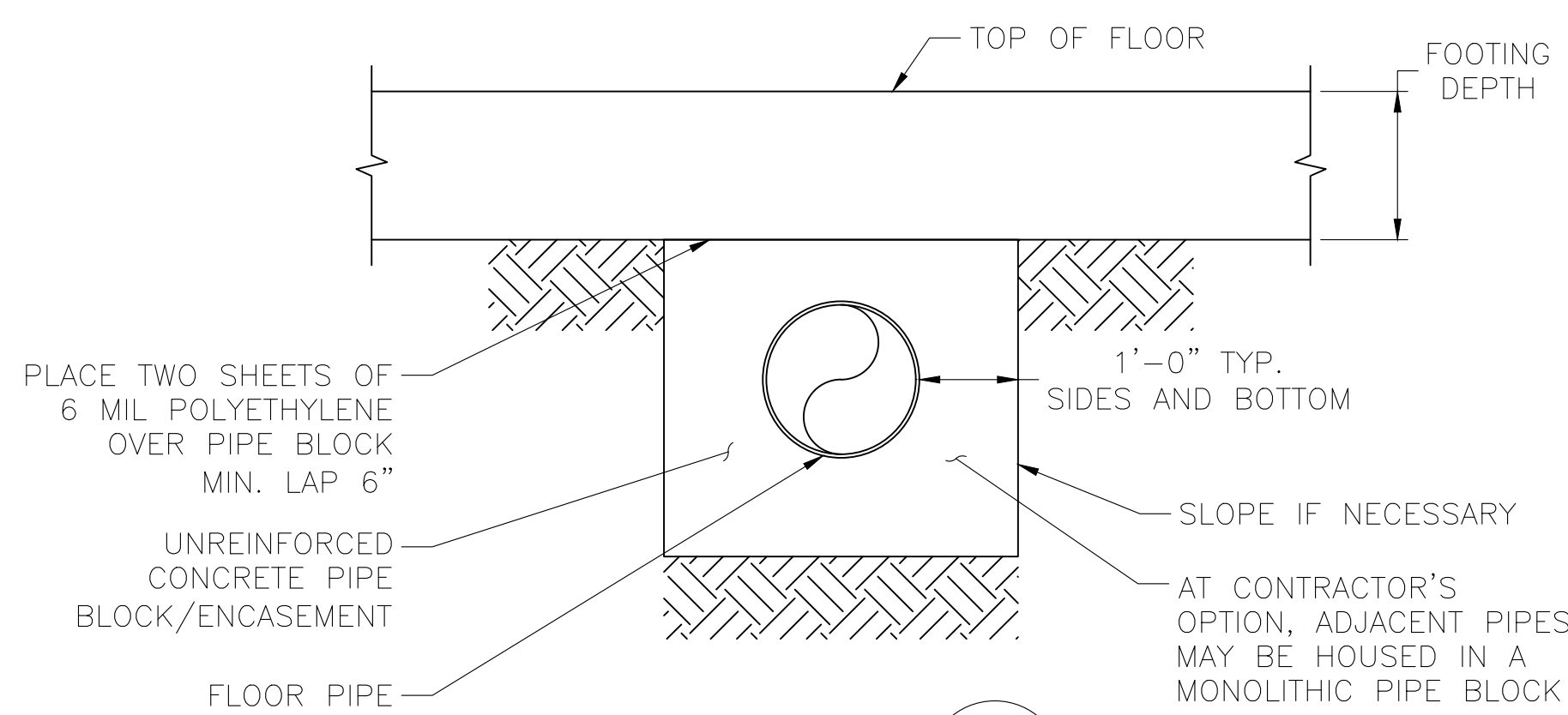
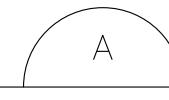
**AWWA D110 TYPE I CAST IN PLACE CONCRETE STORAGE TANK**

FOOTING, WALL AND ROOF

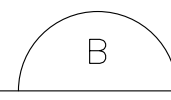
DRAWING NUMBER  
**S-002**



TYPICAL FLOOR PIPE ENTRANCE

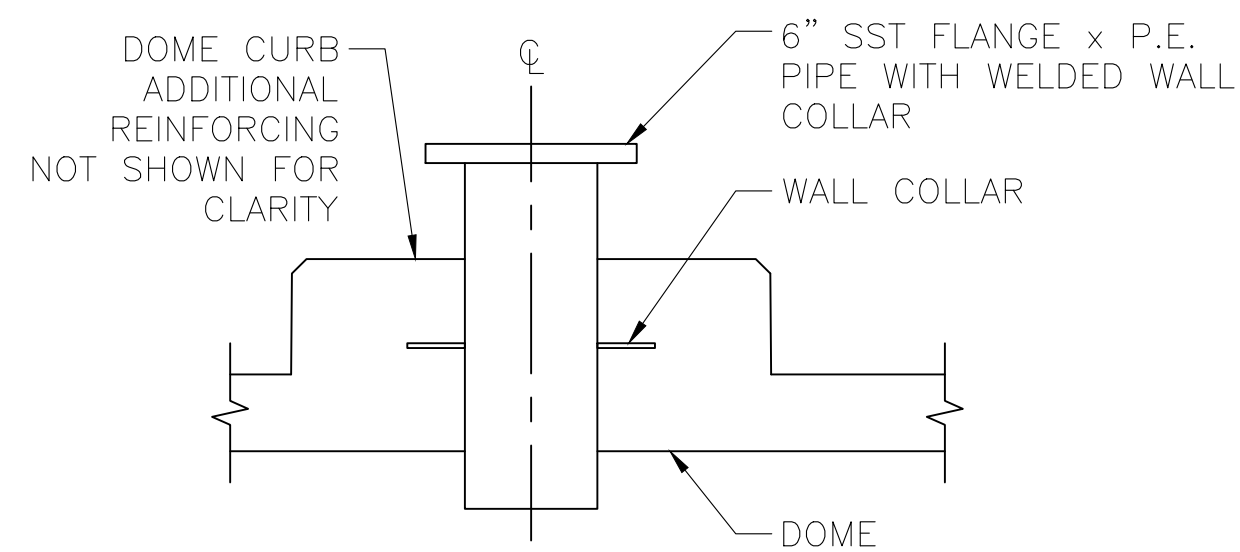


PIPE SECTION

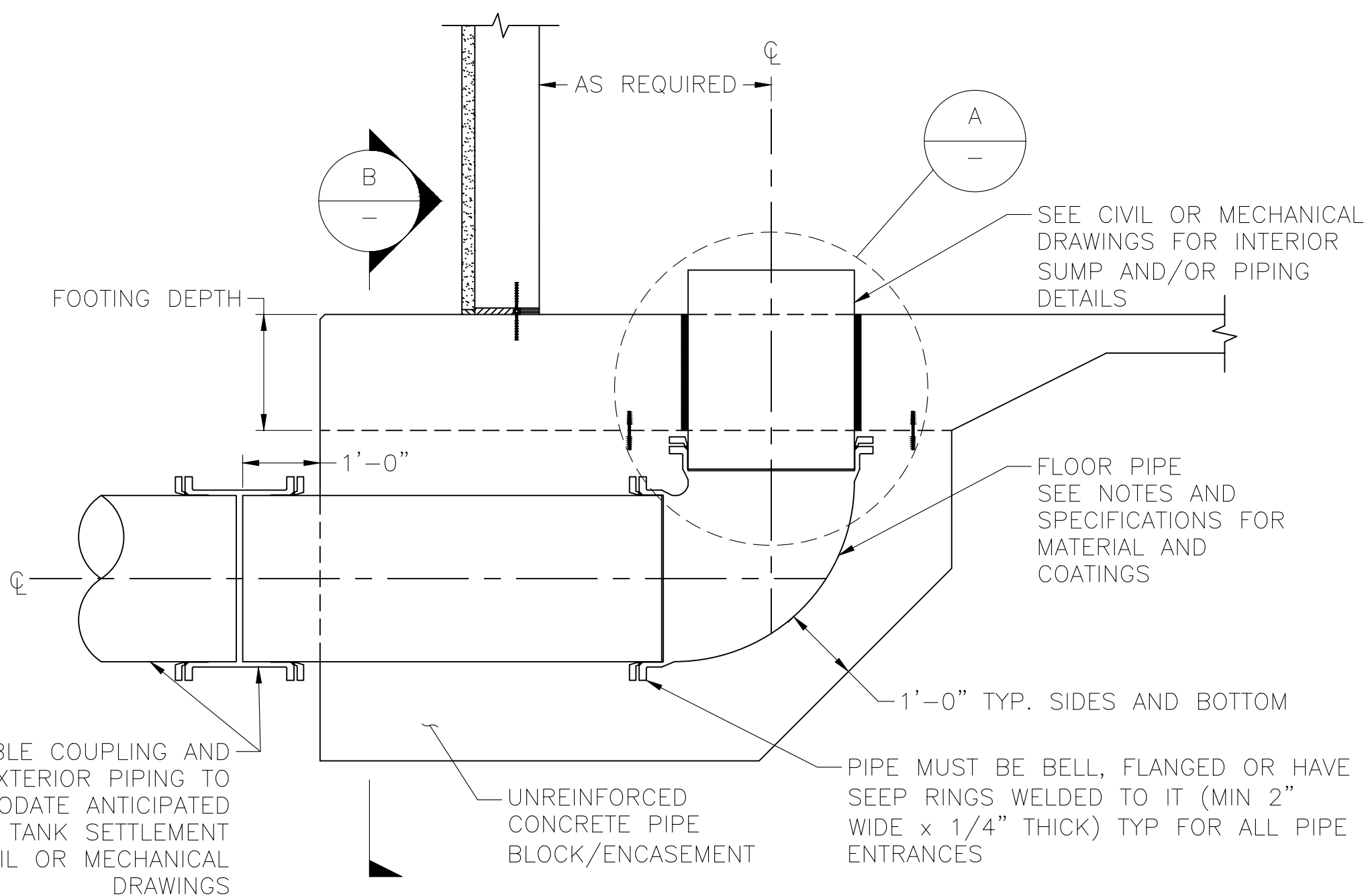
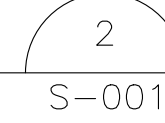


PIPING NOTES:

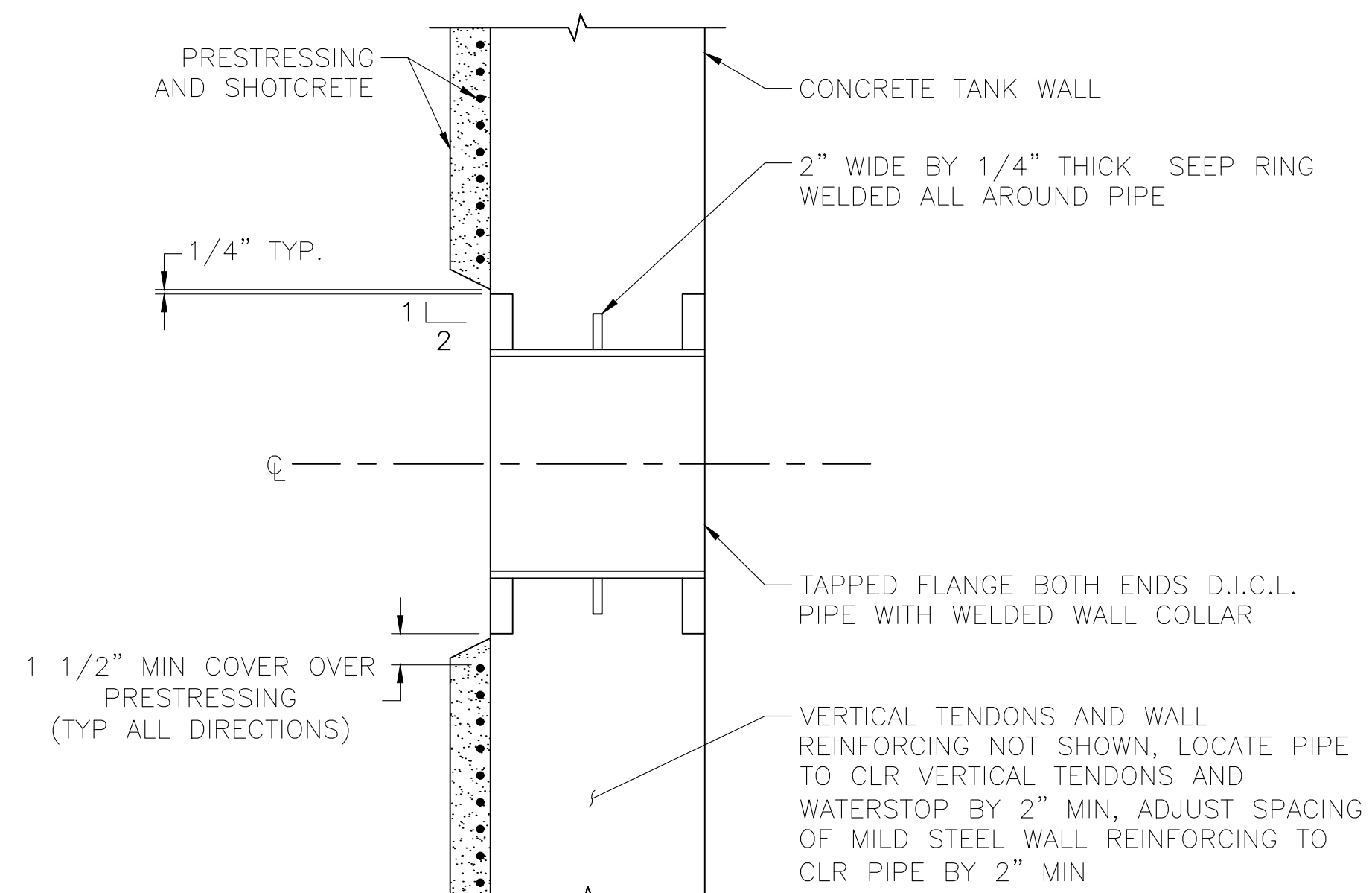
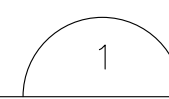
1. ALL PIPE MATERIAL TO BE D.I.C.L. UNLESS NOTED OTHERWISE.
2. EPOXY COAT EXTERIOR OF PIPING INSIDE TANK. NO COATING ON PIPE IN CONTACT WITH CONCRETE.
3. EXTERIOR PIPING CONNECTION TO BE DESIGNED TO TOLERATE EXPECTED TANK SETTLEMENT.



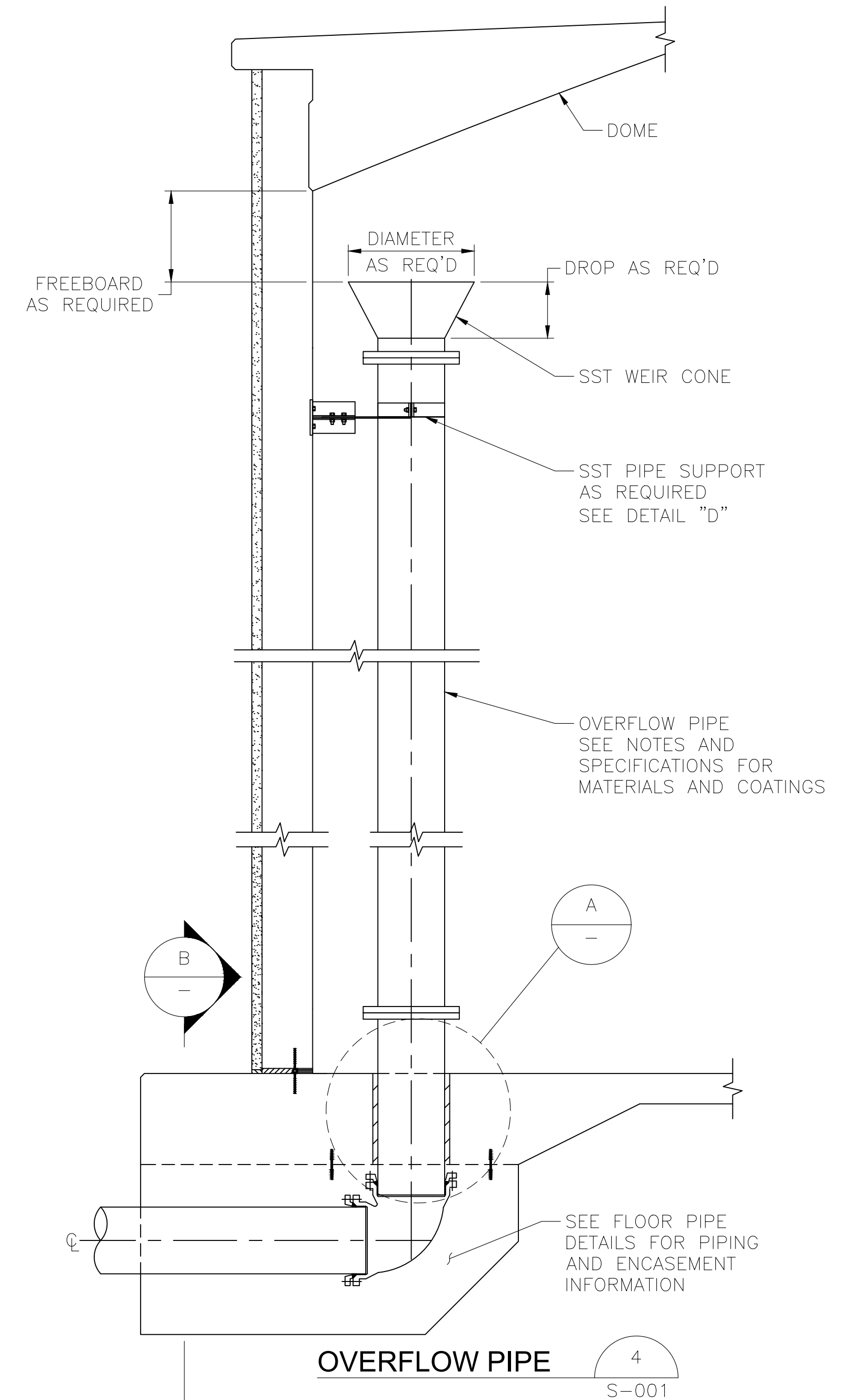
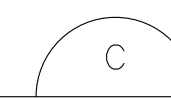
ROOF SLEEVE  
2 REQ'D



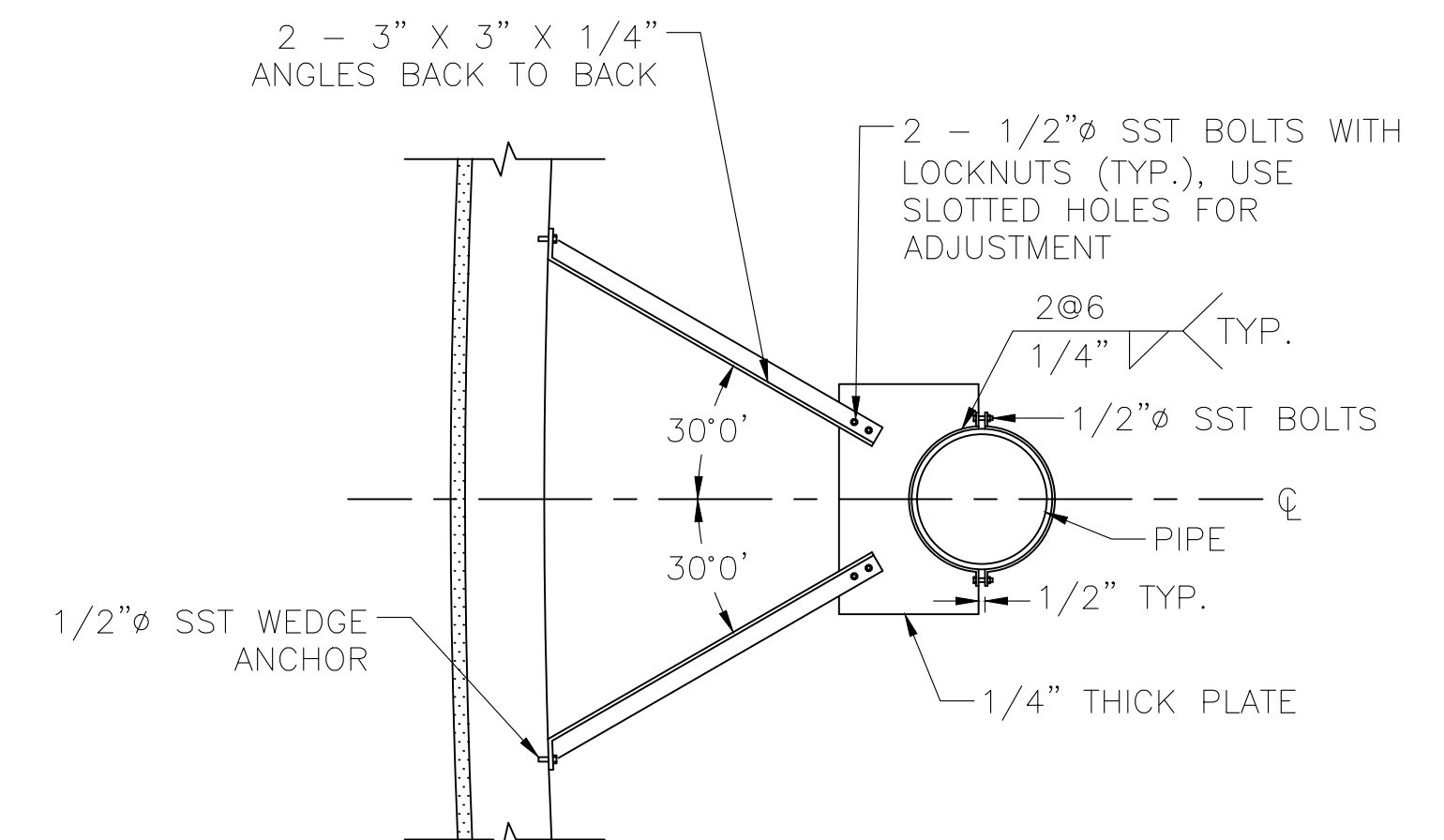
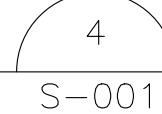
TYPICAL FLOOR PIPE



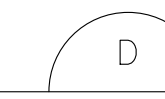
TYPICAL WALL PIPE ENTRANCE



OVERFLOW PIPE



PIPE BRACKET



0.55 MG WATER STORAGE TANK

GARBERVILLE (SANATARY  
DITRICT), CA  
ENGR.: SHN ENGINEERING  
EUREKA, CA

DATE: 09/19/23

CHK:WINTERS

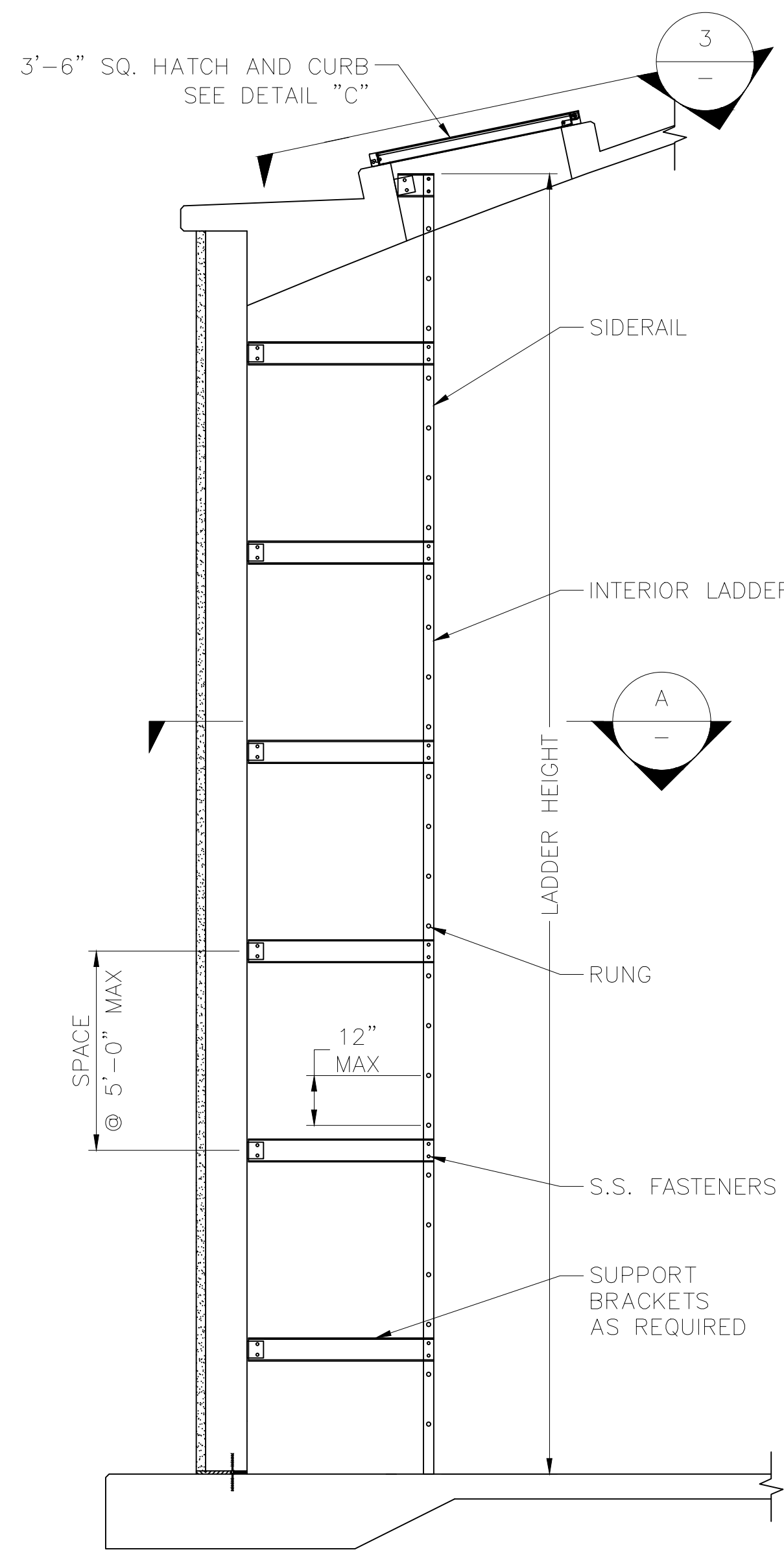
DESIGNER

DESCRIPTION

AWWA D110  
TYPE I CAST  
IN PLACE  
CONCRETE  
STORAGE  
TANK

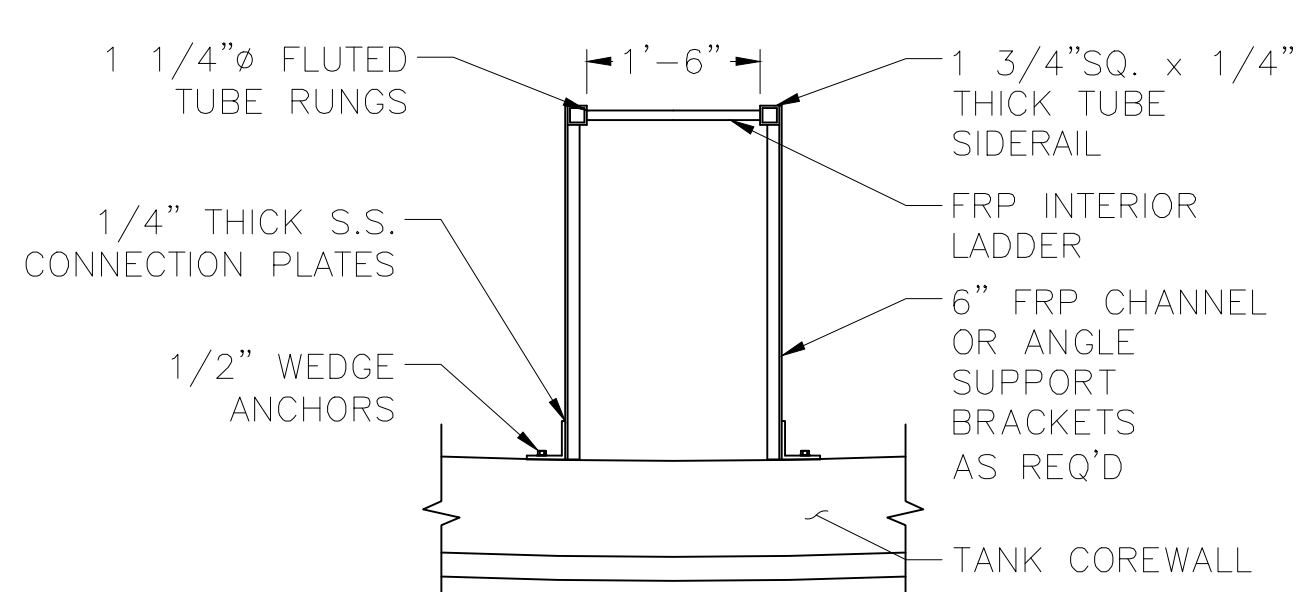
TANK PIPING

DRAWING NUMBER  
S-003

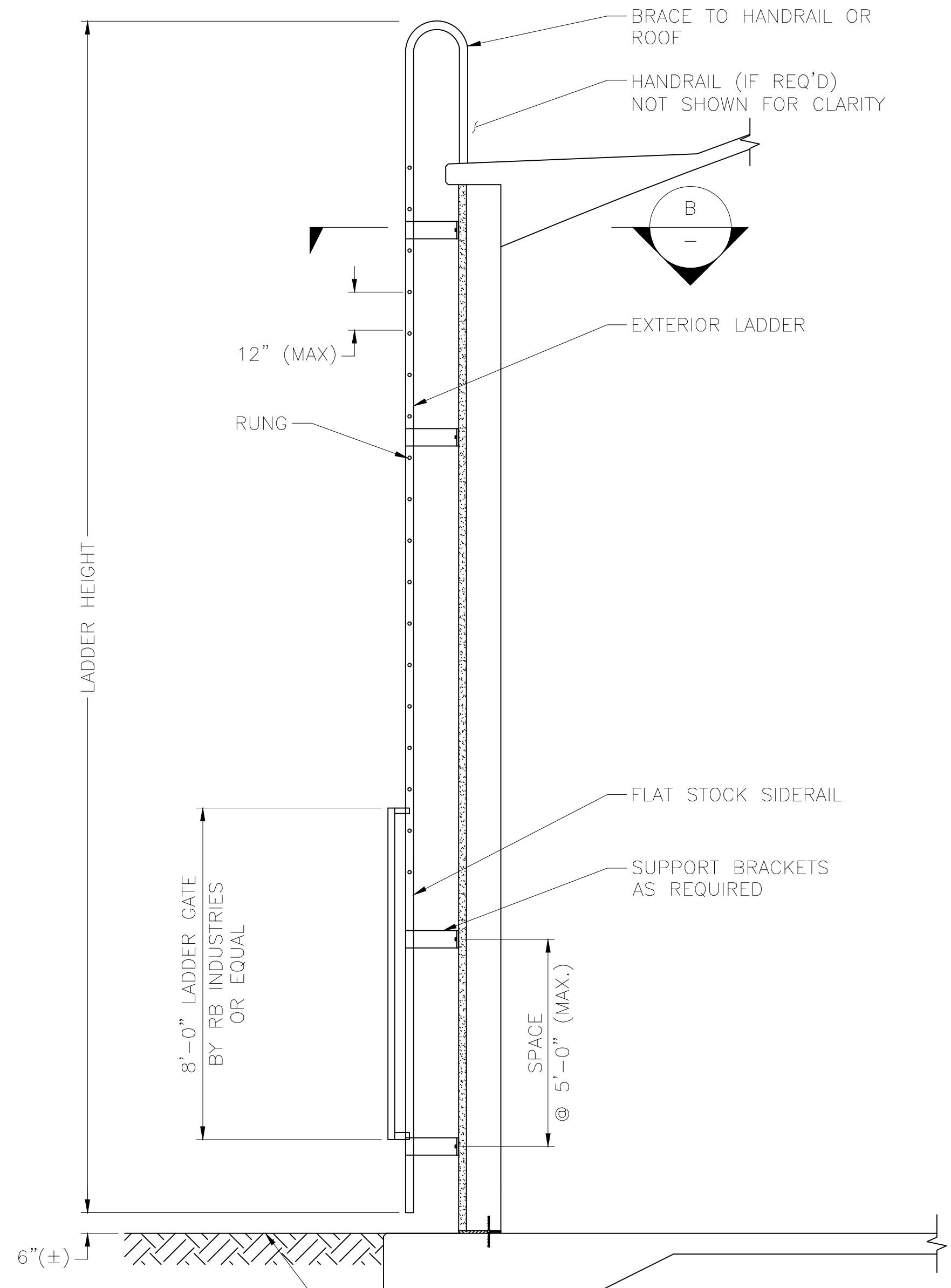


**INTERIOR LADDER**  
1 REQ'D  
S-001

- INTERIOR LADDER NOTES:**
- 1) LADDER MATERIAL SHALL BE FRP.
  - 2) OSHA COMPLIANT FALL PREVENTION DEVICE SHALL BE INSTALLED (SST).
  - 3) LADDER RUNGS TO BE SOLID BARS AND FLUTED.
  - 4) USE SST WEDGE ANCHORS FOR ALL CONNECTIONS TO CONCRETE UNLESS NOTED OTHERWISE.

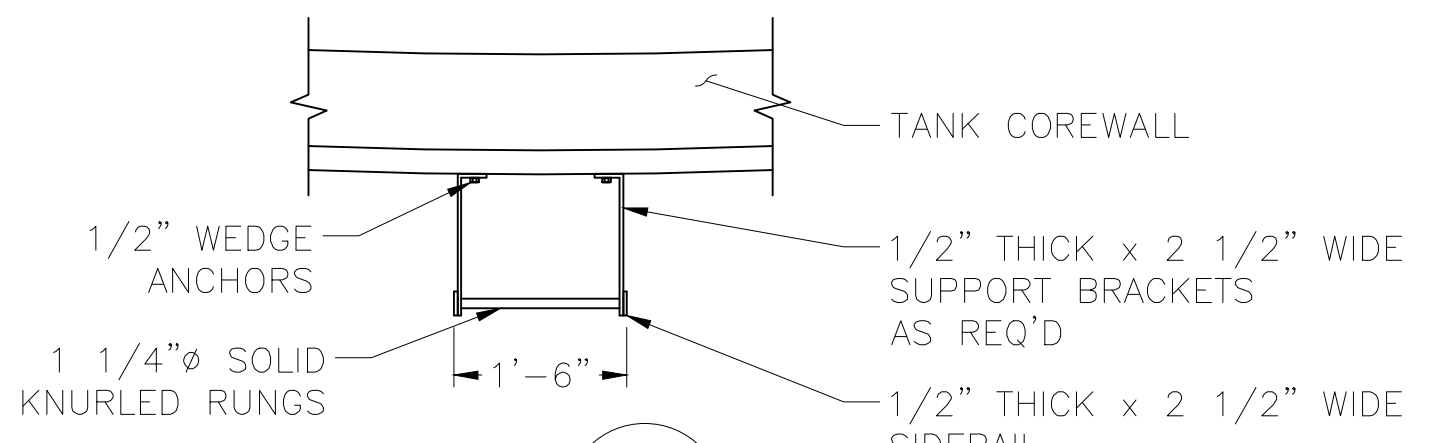


**SECTION A**

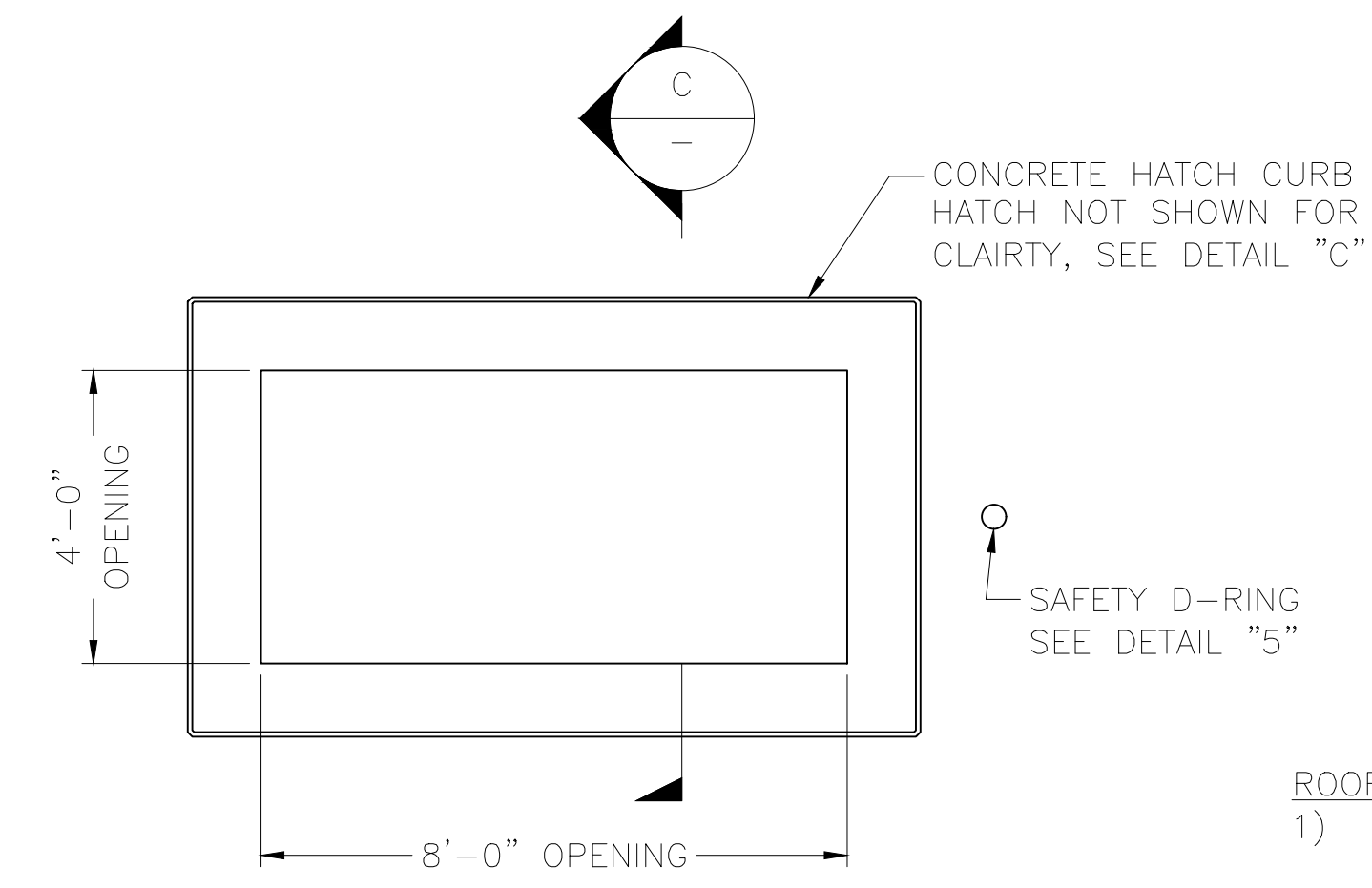


**EXTERIOR LADDER**  
1 REQ'D  
S-001

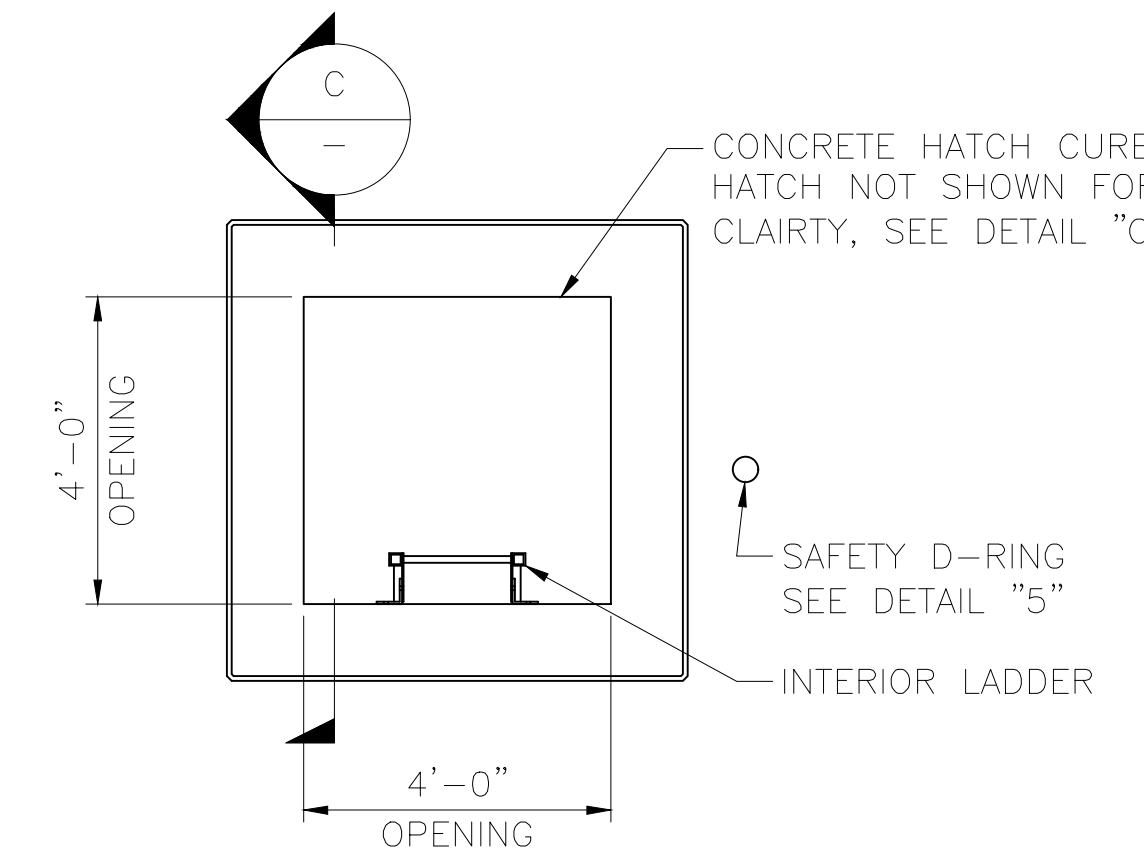
- EXTERIOR LADDER NOTES:**
- 1) ALL MATERIAL FOR EXTERIOR LADDER, SIDERAILS, RUNGS AND BRACKETS TO BE 6061-T6 ALUMINUM.
  - 2) OSHA COMPLIANT FALL PREVENTION DEVICE SHALL BE INSTALLED (SST).
  - 3) LADDER RUNGS TO BE SOLID BARS AND KNURLED.
  - 4) ALL WELDS TO BE 3/16" MINIMUM.
  - 5) ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH A HEAVY BITUMASTIC COATING, EPOXY PAINT OR SHIMMED USING PVC.
  - 6) USE SST WEDGE ANCHORS FOR ALL CONNECTIONS TO CONCRETE UNLESS NOTED OTHERWISE.
  - 7) WHERE SST BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.
  - 8) WHERE SST BOLTS ARE PLACED IN THE WALL EXTERIOR, DRILL AND PLACE AFTER WRAPPING AND BEFORE FINAL SHOTCRETING.



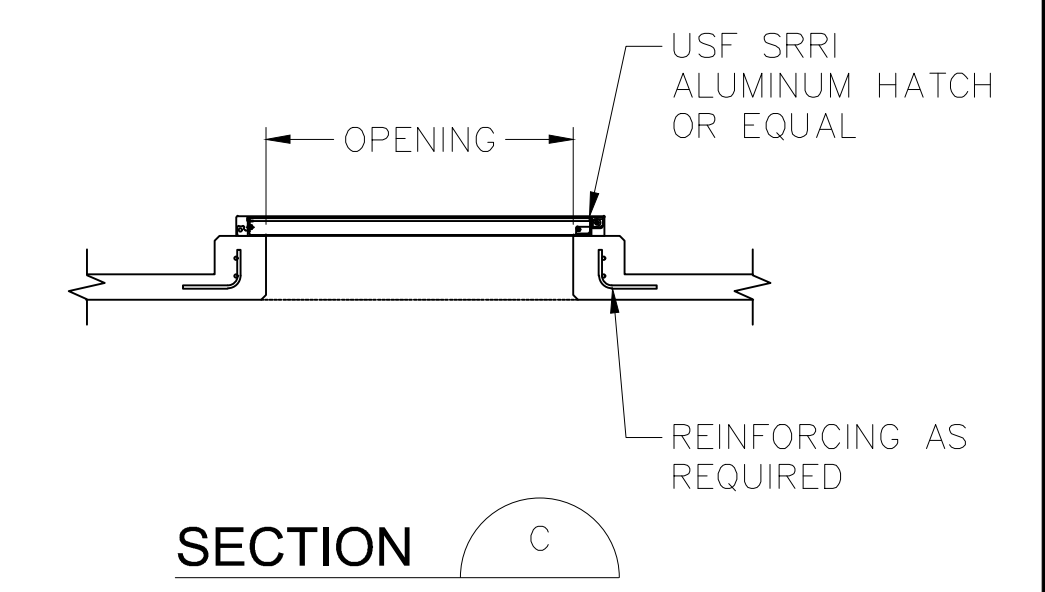
**SECTION B**



**4'-0"x8'-0" EQUIPMENT HATCH**  
1 REQ'D  
S-001

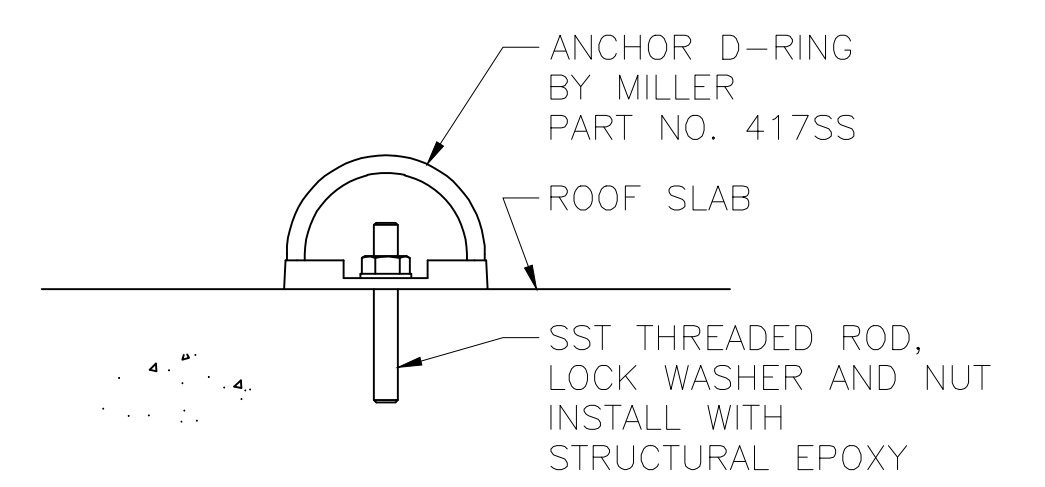


**4'-0" SQ. ACCESS HATCH**  
1 REQ'D  
S-001



**SECTION C**

- ROOF HATCHES NOTES:**
- 1) HATCHES TO BE SINGLE LEAF USF SRRI ALUMINUM HATCHES OR EQUAL.
  - 2) ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH A HEAVY BITUMASTIC COATING, EPOXY PAINT OR SHIMMED USING PVC.
  - 3) USE SST WEDGE ANCHORS FOR ALL CONNECTIONS TO CONCRETE UNLESS NOTED OTHERWISE.
  - 4) WHERE SST BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.



**SAFETY D-RING**  
1 REQ'D @ EACH HATCH

**0.55 MG WATER STORAGE TANK**

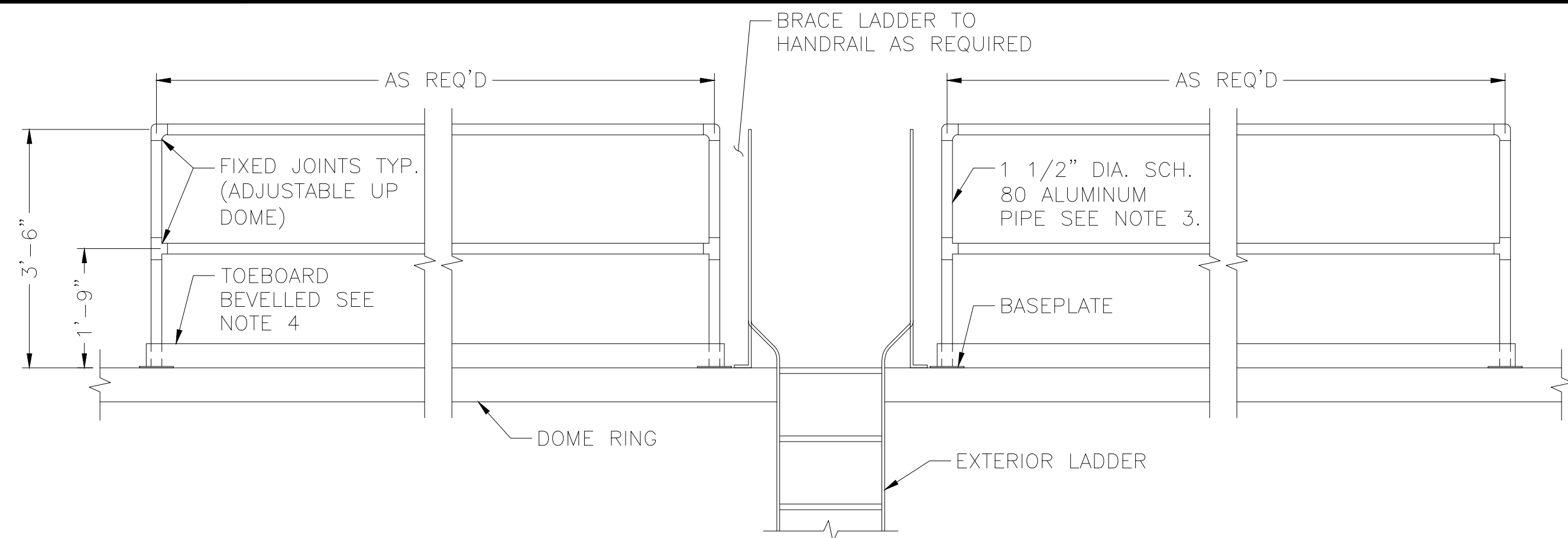
**GARBVILLE (SANATARY DITRICT), CA**  
ENGR.: SHN ENGINEERING  
EUREKA, CA

DATE	DESCRIPTION
09/19/23	DESIGNER

**AWWA D110 TYPE I CAST IN PLACE CONCRETE STORAGE TANK**

TANK LADDERS AND HATCHES

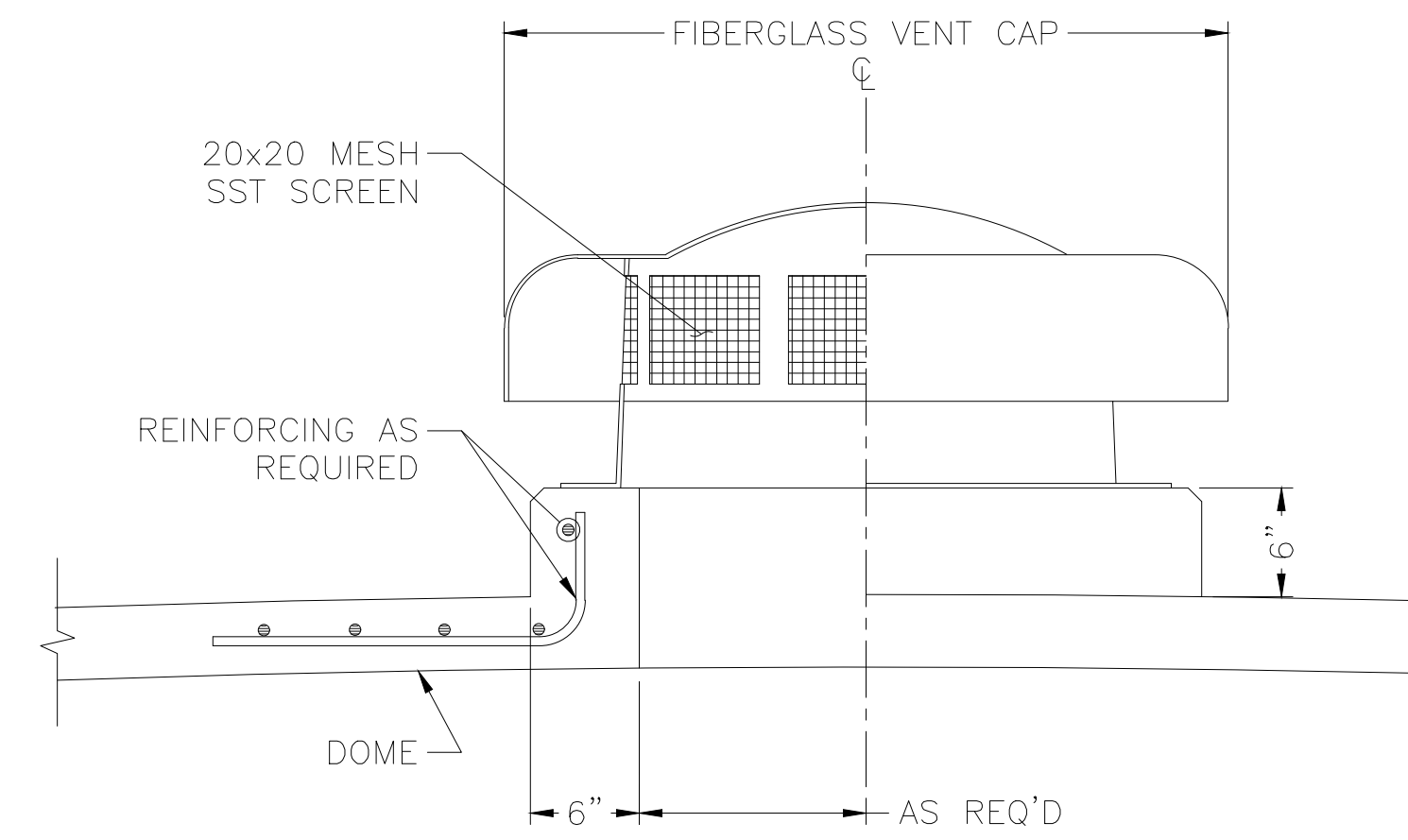
DRAWING NUMBER  
**S-004**



**GUARDRAIL ELEVATION**  
1 REQ'D

GUARDRAIL NOTES:

- 1) ALL MATERIAL FOR RAILS AND POSTS TO BE 6061-T6 ALUMINUM.
- 2) HANDRAIL FITTINGS SHALL BE SPEEDRAIL BY HOLLAENDER, INC OR EQUAL.
- 3) HORIZONTAL RAILS AND POSTS TO BE 1 1/2" SCH 80 PIPE.
- 4) HOLLAENDER BEVELED TOE BOARD SHALL BE ATTACHED TO FRONT RAIL.
- 5) USE SST FOR ALL BOLTS UNLESS NOTED OTHERWISE.
- 6) USE SST WEDGE ANCHORS FOR ALL CONNECTIONS TO CONCRETE UNLESS NOTED OTHERWISE.



**ROOF VENT**  
# AS REQ'D

ROOF VENT NOTES:

- 1) VENT TO BE FIBERGLASS REINFORCED POLYMER.
- 2) SIZE PER PROJECT VENTING RATES.
- 3) USE SST WEDGE ANCHORS FOR ALL CONNECTIONS TO CONCRETE UNLESS NOTED OTHERWISE.

**0.55 MG WATER STORAGE TANK**

**GARBERVILLE (SANATARY  
DITRICT), CA**  
ENGR.: SHN ENGINEERING  
EUREKA, CA

DWN:JMEZA    CHK:WWINTERS    DATE: 09/19/23

REV	DATE	DESIGNER	DESCRIPTION

**AWWA D110  
TYPE I CAST  
IN PLACE  
CONCRETE  
STORAGE  
TANK**

MISCELLANEOUS  
APPURTENANCES

DRAWING NUMBER  
S-005