

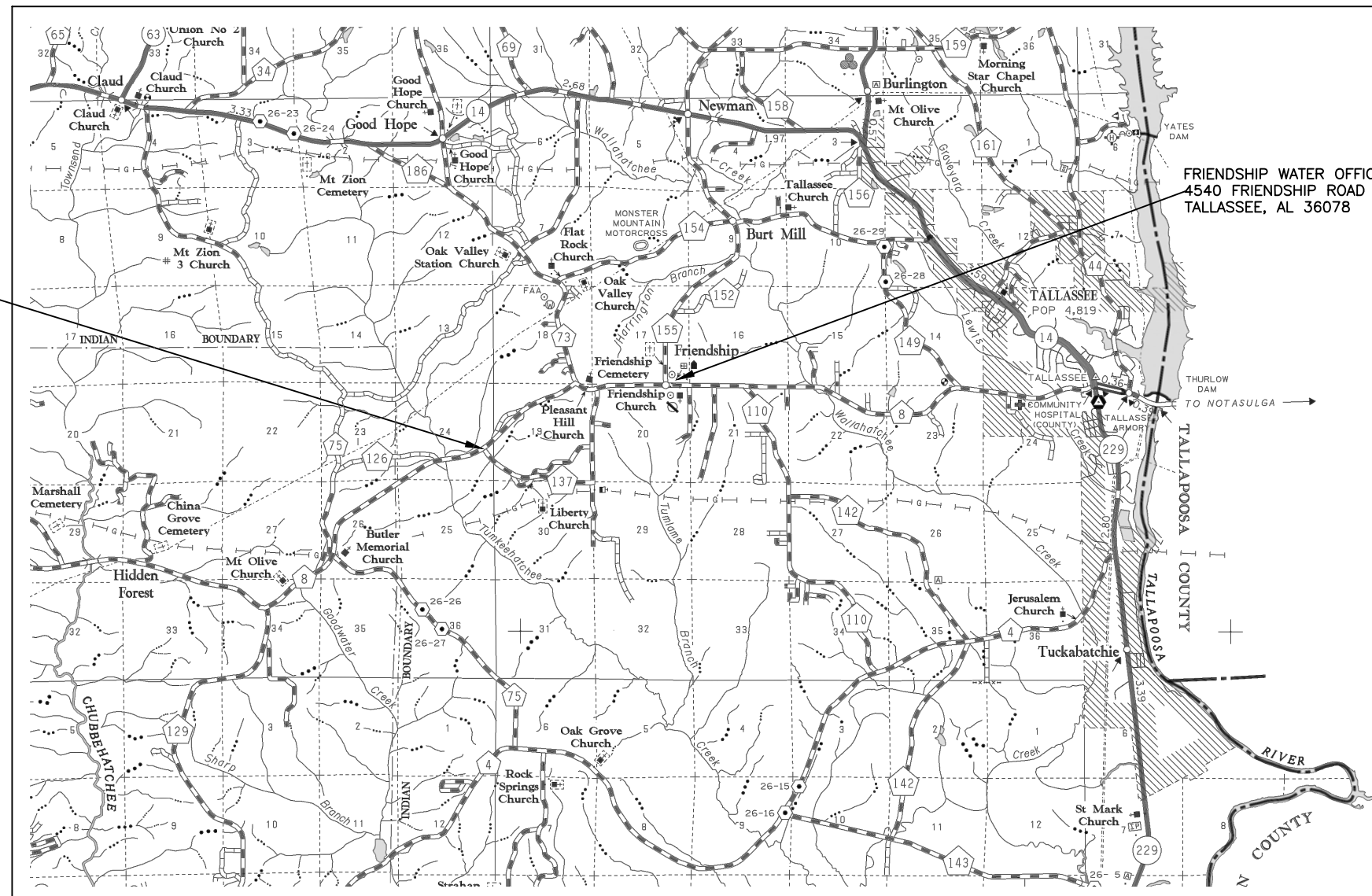
# CONSTRUCTION DRAWINGS FOR THE FRIENDSHIP WATER SYSTEM, INC. NOVEMBER 2024

## CONTRACT NO. 2-WATER BOOSTER PUMP STATION

PROJECT LOCATION  
INTERSECTION OF REDLAND ROAD AND LIBERTY ROAD  
NEAR 14150 REDLAND ROAD, TALLASSEE, AL 36078  
32° 31' 38.40"–N  
86° 00' 21.60"–W



PROJECT LOCATION



FRIENDSHIP WATER OFFICE  
4540 FRIENDSHIP ROAD  
TALLASSEE, AL 36078

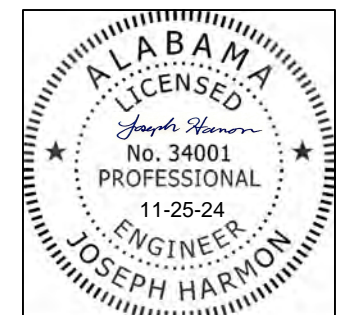
- BUILD AMERICA, BUY AMERICA REQUIRED: NO
- AMERICAN IRON & STEEL REQUIRED: YES
- IS PROJECT TAX EXEMPT: NO, INCLUDE TAXES.
- CERTIFIED PAYROLLS REQUIRED: YES
- DAVIS BACON WAGE RATES REQUIRED: YES
- DBE SOLICITATION REQUIRED FOR SUBS: YES

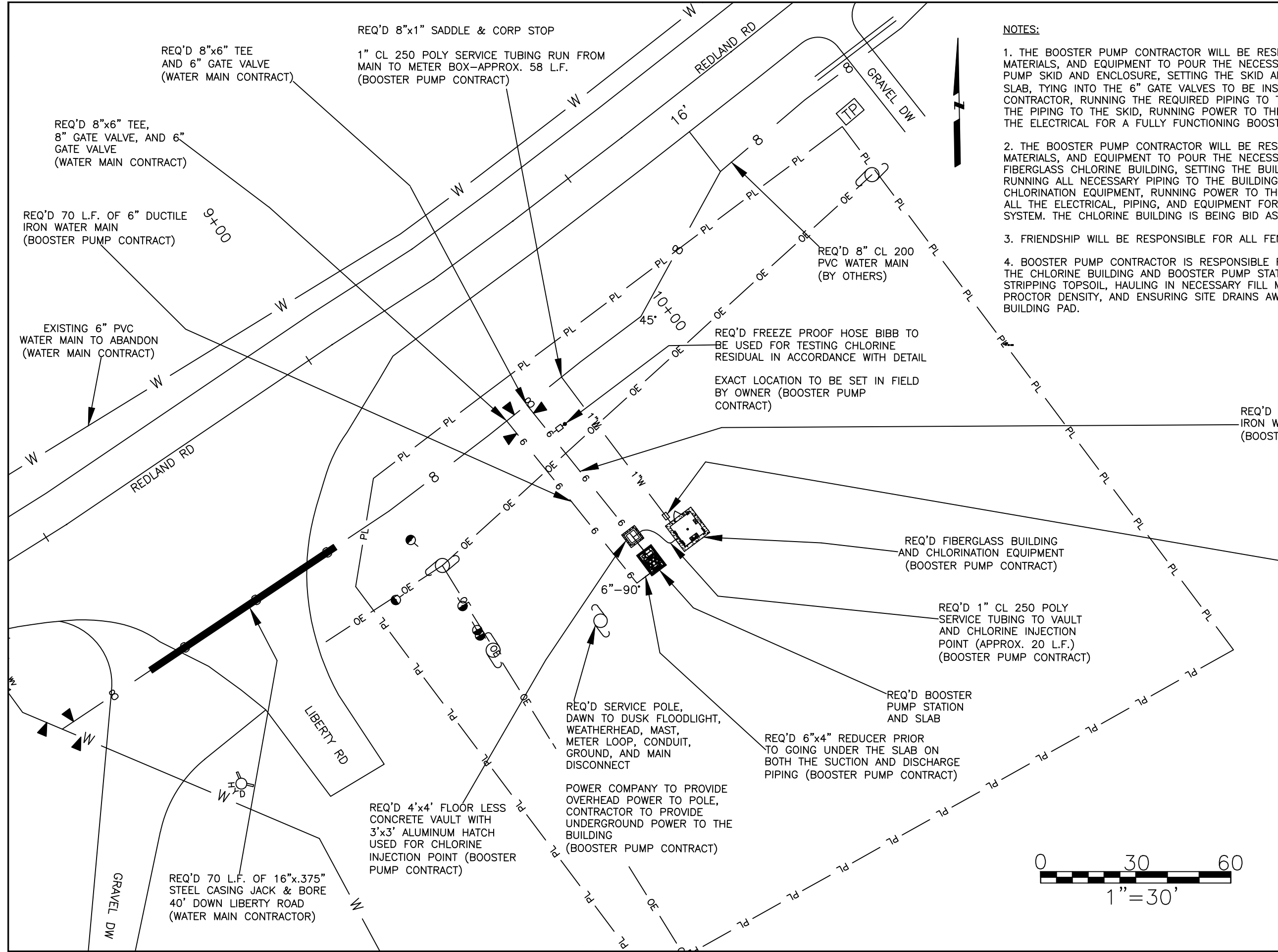
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DHA ENGINEERING, LLC.  
2323 W. MAIN ST, SUITE 227B  
DOTHAN, AL 36301  
PHONE: 334-585-5841  
EMAIL: HARMOJC@GMAIL.COM  
CA-4945-E





**NOTES:**

1. THE BOOSTER PUMP CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT TO POUR THE NECESSARY CONCRETE SLAB FOR THE BOOSTER PUMP SKID AND ENCLOSURE, SETTING THE SKID AND ENCLOSURE AND SECURING TO THE SLAB, TYING INTO THE 6" GATE VALVES TO BE INSTALLED BY THE WATER MAIN CONTRACTOR, RUNNING THE REQUIRED PIPING TO THE BOOSTER PUMP STATION, HOOKING THE PIPING TO THE SKID, RUNNING POWER TO THE PUMP STATION AND HOOKING UP ALL THE ELECTRICAL FOR A FULLY FUNCTIONING BOOSTER PUMP STATION.
2. THE BOOSTER PUMP CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT TO POUR THE NECESSARY CONCRETE SLAB FOR THE FIBERGLASS CHLORINE BUILDING, SETTING THE BUILDING AND SECURING TO THE SLAB, RUNNING ALL NECESSARY PIPING TO THE BUILDING, PROVIDING AND INSTALLING ALL CHLORINATION EQUIPMENT, RUNNING POWER TO THE CHLORINE BUILDING AND HOOKING UP ALL THE ELECTRICAL, PIPING, AND EQUIPMENT FOR A FULLY FUNCTIONING CHLORINATION SYSTEM. THE CHLORINE BUILDING IS BEING BID AS AN ADDITIVE ALTERNATE.
3. FRIENDSHIP WILL BE RESPONSIBLE FOR ALL FENCING.
4. BOOSTER PUMP CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING DIRT PAD FOR BOTH THE CHLORINE BUILDING AND BOOSTER PUMP STATION. CONTRACTOR RESPONSIBLE FOR STRIPPING TOPSOIL, HAULING IN NECESSARY FILL MATERIAL, COMPACTING TO 100% OF PROCTOR DENSITY, AND ENSURING SITE DRAINS AWAY FROM BOOSTER PUMP AND CHLORINE BUILDING PAD.

REQ'D 8"x6" TEE AND 6" GATE VALVE (WATER MAIN CONTRACT)

REQ'D 8"x1" SADDLE & CORP STOP  
1" CL 250 POLY SERVICE TUBING RUN FROM MAIN TO METER BOX—APPROX. 58 L.F. (BOOSTER PUMP CONTRACT)

REQ'D 8"x6" TEE, 8" GATE VALVE, AND 6" GATE VALVE (WATER MAIN CONTRACT)

REQ'D 70 L.F. OF 6" DUCTILE IRON WATER MAIN (BOOSTER PUMP CONTRACT)

EXISTING 6" PVC WATER MAIN TO ABANDON (WATER MAIN CONTRACT)

REQ'D 8" CL 200 PVC WATER MAIN (BY OTHERS)

REQ'D FREEZE PROOF HOSE BIBB TO BE USED FOR TESTING CHLORINE RESIDUAL IN ACCORDANCE WITH DETAIL

EXACT LOCATION TO BE SET IN FIELD BY OWNER (BOOSTER PUMP CONTRACT)

REQ'D 59 L.F. OF 6" DUCTILE IRON WATER MAIN (BOOSTER PUMP CONTRACT)

REQ'D 1" CURB STOP AND A DUAL CHECK VALVE IN A JUMBO METER BOX

CHECK VALVE TO BE A COMPOSITE BODY SIMILAR TO A.R.I DC-501, OR EQUAL

1" TUBING TO BE CASED IN 2" TUBING UNDER SLAB AND INTO BUILDING (BOOSTER PUMP CONTRACT)

REQ'D FIBERGLASS BUILDING AND CHLORINATION EQUIPMENT (BOOSTER PUMP CONTRACT)

REQ'D 1" CL 250 POLY SERVICE TUBING TO VAULT AND CHLORINE INJECTION POINT (APPROX. 20 L.F.) (BOOSTER PUMP CONTRACT)

REQ'D BOOSTER PUMP STATION AND SLAB

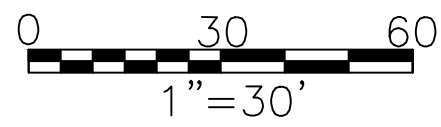
REQ'D 6"x4" REDUCER PRIOR TO GOING UNDER THE SLAB ON BOTH THE SUCTION AND DISCHARGE PIPING (BOOSTER PUMP CONTRACT)


REQ'D SERVICE POLE, DAWN TO DUSK FLOODLIGHT, WEATHERHEAD, MAST, METER LOOP, CONDUIT, GROUND, AND MAIN DISCONNECT

POWER COMPANY TO PROVIDE OVERHEAD POWER TO POLE, CONTRACTOR TO PROVIDE UNDERGROUND POWER TO THE BUILDING (BOOSTER PUMP CONTRACT)

REQ'D 4'x4' FLOOR LESS CONCRETE VAULT WITH 3'x3' ALUMINUM HATCH USED FOR CHLORINE INJECTION POINT (BOOSTER PUMP CONTRACT)


REQ'D 70 L.F. OF 16"x.375" STEEL CASING JACK & BORE 40' DOWN LIBERTY ROAD (WATER MAIN CONTRACTOR)



TITLE: SITE LAYOUT-PLAN SHEET	
PROJECT: CONTRACT NO. 2-BOOSTER PUMP STATION	
	
DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
DRAWN BY: EHA	DATE: NOVEMBER 2024
CHECKED BY: JCH	FILE NAME: BOOSTER_PUMP_SITE_LAYOUT (11-7-24)
JOB #: 2400	SHEET 2 OF 8



**LEGEND**

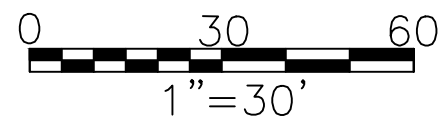
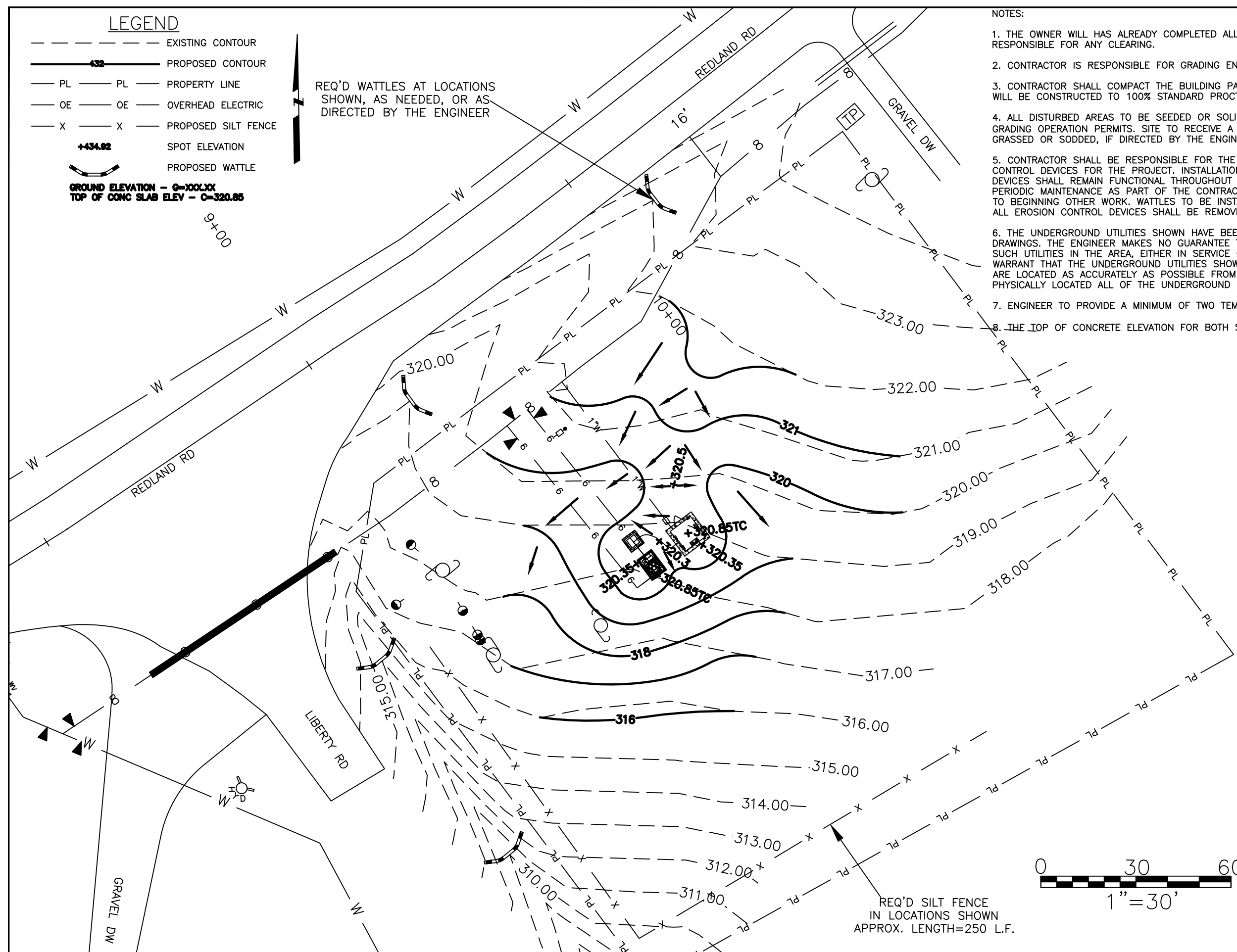
- EXISTING CONTOUR
- 432** --- PROPOSED CONTOUR
- PL — PL — PROPERTY LINE
- OE — OE — OVERHEAD ELECTRIC
- X — X — PROPOSED SILT FENCE
- +434.92** SPOT ELEVATION
-  PROPOSED WATTLE

GROUND ELEVATION - G=XXX.XX  
TOP OF CONC SLAB ELEV - C=320.85


REQ'D WATTLES AT LOCATIONS SHOWN, AS NEEDED, OR AS DIRECTED BY THE ENGINEER

**NOTES:**

1. THE OWNER WILL HAS ALREADY COMPLETED ALL OF THE NECESSARY CLEARING. CONTRACTOR IS NOT RESPONSIBLE FOR ANY CLEARING.
2. CONTRACTOR IS RESPONSIBLE FOR GRADING ENTIRE SITE TO THE CONTOURS SHOWN ON THE PLANS.
3. CONTRACTOR SHALL COMPACT THE BUILDING PAD WHERE THE BOOSTER PUMP AND CHLORINE BUILDING WILL BE CONSTRUCTED TO 100% STANDARD PROCTOR DENSITY.
4. ALL DISTURBED AREAS TO BE SEED OR SOLID SODDED, AS DIRECTED BY THE ENGINEER, AS SOON AS GRADING OPERATION PERMITS. SITE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL OVER ALL AREAS TO BE GRASSED OR SODDED, IF DIRECTED BY THE ENGINEER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION AND INSTALLATION OF THE EROSION CONTROL DEVICES FOR THE PROJECT. INSTALLATION SHALL BE THE FIRST ITEM OF CONSTRUCTION AND ALL DEVICES SHALL REMAIN FUNCTIONAL THROUGHOUT THE DURATION OF THE PROJECT. THEY WILL REQUIRE PERIODIC MAINTENANCE AS PART OF THE CONTRACT. SITE PERIMETER TO HAVE SILT FENCE INSTALLED PRIOR TO BEGINNING OTHER WORK. WATTLES TO BE INSTALLED AS NECESSARY AND DIRECTED BY THE ENGINEER. ALL EROSION CONTROL DEVICES SHALL BE REMOVED AT THE END OF THE PROJECT.
6. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED ALL OF THE UNDERGROUND UTILITIES AS TO SIZE, DEPTH, OR CONDITION.
7. ENGINEER TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS.
8. THE TOP OF CONCRETE ELEVATION FOR BOTH SLABS SHALL BE 320.85'.



REQ'D SILT FENCE IN LOCATIONS SHOWN APPROX. LENGTH=250 L.F.

TITLE: <b>SITE GRADING PLAN</b>	
PROJECT: <b>CONTRACT NO. 2-BOOSTER PUMP STATION</b>	
	
DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
DRAWN BY: EHA	DATE: NOVEMBER 2024
CHECKED BY: JCH	FILE NAME: BOOSTER_PUMP_GRADING PLAN (11-9-24)
JOB #: 2400	SHEET 3 OF 8

REQ'D 6" DUCTILE IRON WATER MAIN TO VALVE SET BY WATER MAIN CONTRACTOR (SUCTION LINE)

REQ'D 6" DUCTILE IRON WATER MAIN TO VALVE SET BY WATER MAIN CONTRACTOR (DISCHARGE LINE)

REQ'D 4'x4' FLOOR LESS CONCRETE VAULT WITH 3'x3" ALUMINUM HATCH USED AS CHLORINE INJECTION POINT

REQ'D CHLORINE INJECTION POINT

REQ'D 1" POLY SERVICE TUBING TO TO BE CASIED IN 2" POLY SERVICE TUBING UNDER SLAB AND INTO BUILDING  
ONCE IN BUILDING TRANSITION TO 1" SCH 80 PVC

1" CL 250 POLY-SERVICE TUBING CONNECTED TO 8" CL 200 PVC WATER MAIN WITH BRASS SADDLE AND CORPORATION STOP THEN RUN TO CURB STOP AND CHECK VALVE IN METER BOX

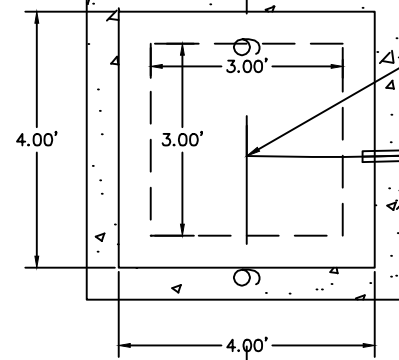
REQ'D FREEZE PROOF HOSE BIBB, IN ACCORDANCE WITH DETAIL, TO BE INSTALLED ON DISCHARGE MAIN IN A LOCATION DETERMINED IN THE FIELD BY THE OWNER. WILL BE USED TO TEST CHLORINE RESIDUAL

1" CURB STOP AND DUAL CHECK VALVE IN JUMBO METER BOX (CHECK VALVE TO BE EQUAL TO A.R.I DC-501)

TWO WEATHER PROOF SWITCHES ON OUTSIDE OF BUILDING ONE FOR EXHAUST FAN ONE FOR INSIDE LIGHT

40"x80" FRP DOOR, HINGES, STD LOCKSET, DOOR GASKET, AND CHAIN STOP

DOOR TO HAVE 12"x18" WINDOW TO COMPLY WITH ADEM REQUIREMENTS REGARDING CHLORINE



REQ'D 6"x4" MJxMJ REDUCER

REQ'D 4" DUCTILE IRON WATER MAIN

REQ'D 4" MJxMJ 90° BEND UP TO DISCHARGE FLANGE

4" PEXPE DUCTILE IRON SPOOL PIECE TO BE EXTENDED FROM BASE 90° TO A 4" MEGA FLANGE ADAPTER TYING TO DISCHARGE FLANGE

RESTRAINING RODS ARE TO BE RUN FROM THE BASE 90° TO THE MEGA FLANGE ADAPTER

REQ'D SERVICE POLE, FLOODLIGHT ON A SWITCH, WEATHERHEAD, MAST, METER LOOP, CONDUIT, GROUND, AND MAIN DISCONNECT

POWER COMPANY TO PROVIDE OVERHEAD POWER TO POLE, CONTRACTOR TO PROVIDE UNDERGROUND POWER TO THE BOOSTER PUMP AND CHLORINE BUILDING

REQ'D 4" DUCTILE IRON WATER MAIN

REQ'D 6"x4" MJxMJ REDUCER

REQ'D 4" MJxMJ 90° BEND UP TO SUCTION FLANGE

REQ'D 1" CL 250 POLY-SERVICE TUBING FROM VAULT TO CHLORINE INJECTION POINT (APPROX. 20 L.F.)

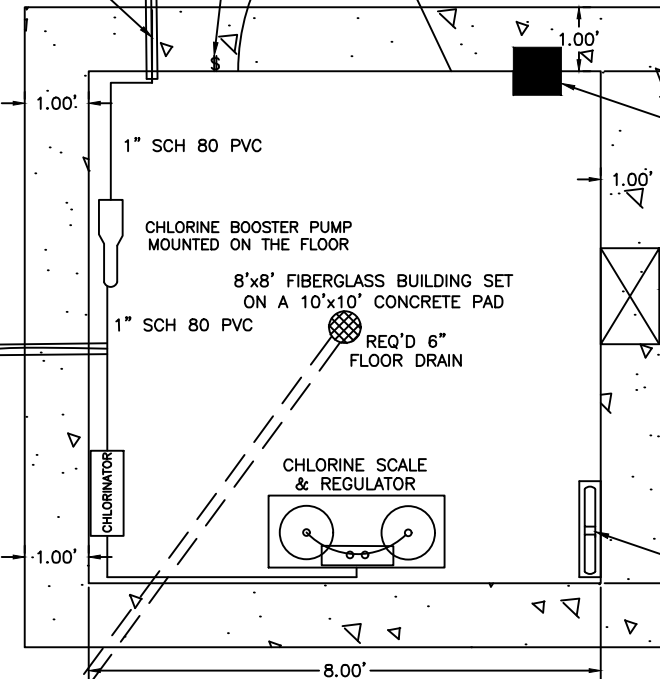
1" TUBING TO BE CASIED IN 2" POLY SERVICE TUBING UNDER SLAB AND INTO BUILDING AND ALSO THROUGH THE SIDE OF THE VAULT

REQ'D BOOSTER SKID AND FIBERGLASS ENCLOSURE INSTALLED ON CONCRETE SLAB

4" PEXPE DUCTILE IRON SPOOL PIECE TO BE EXTENDED FROM BASE 90° TO A 4" MEGA FLANGE ADAPTER TYING TO SUCTION FLANGE

RESTRAINING RODS ARE TO BE RUN FROM THE BASE 90° TO THE MEGA FLANGE ADAPTER

REQ'D 2" SCH 80 PVC FLOOR DRAIN TO BE DAY LIGHTED AT NEAREST POSSIBLE LOCATION



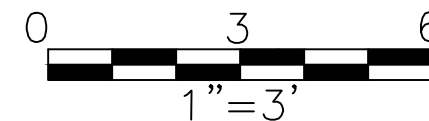
CHLORINE GAS DETECTOR AND ALARM LIGHT

WALL MOUNTED BREATHING APPARATUS PLACED ON BUILDING EXTERIOR MUST BE HOUSED IN WATER PROOF CASE

12"x12" MIN. ALUMINUM EXHAUST FAN/LOUVER WITH SCREEN NEAR BOTTOM

NOTES:

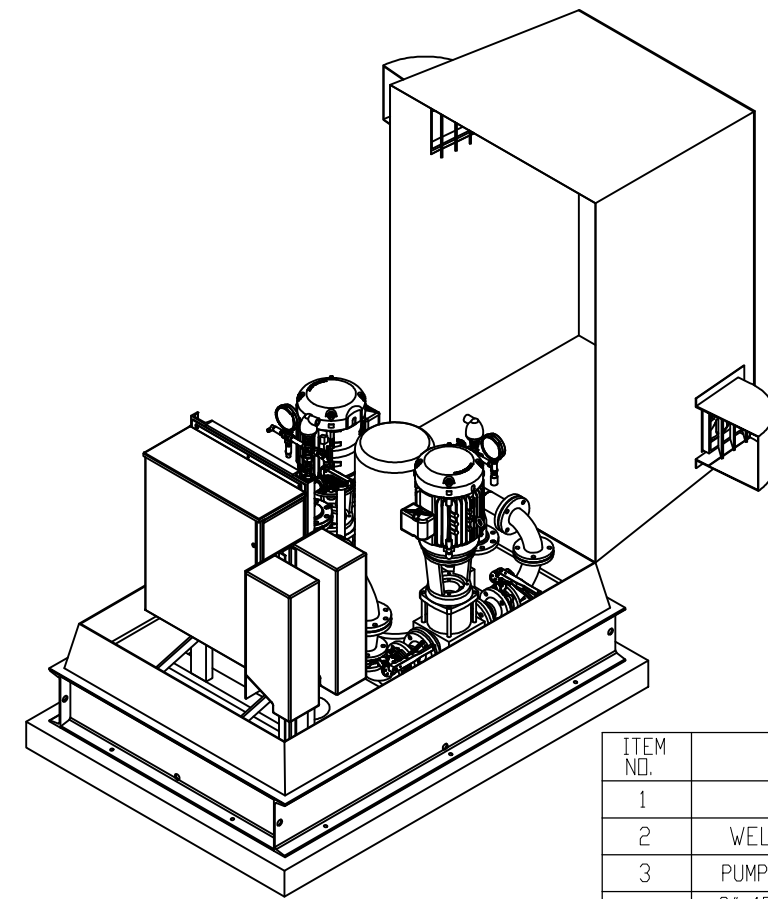
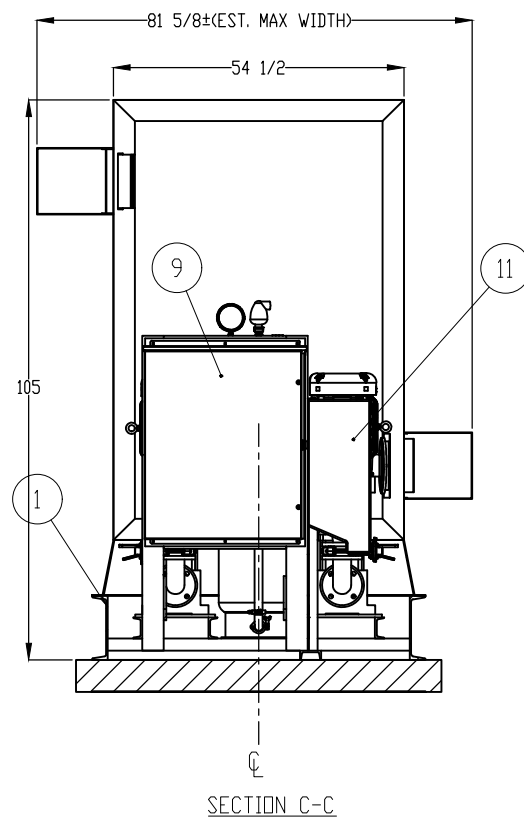
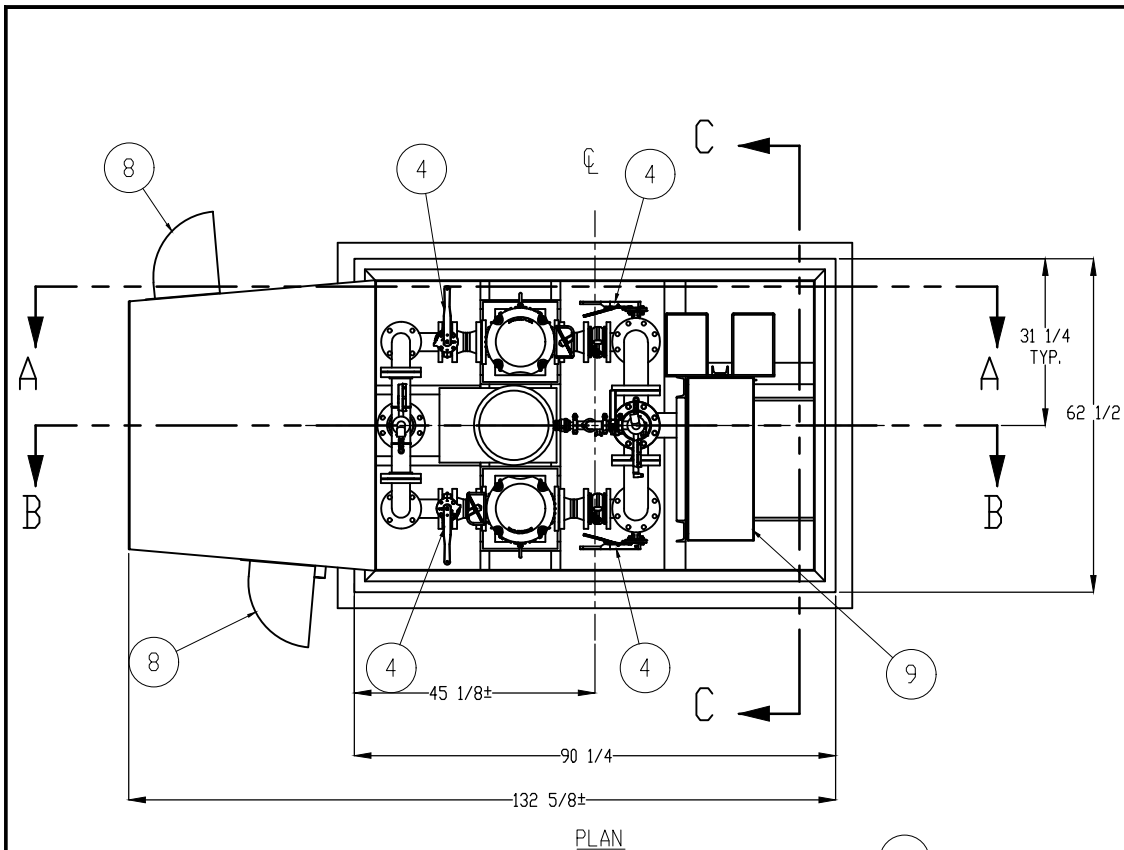
1. A SCADA COMPATIBLE FLOW METER IS REQUIRED TO BE INCLUDED ON THE SKID.
2. THE WEIGHT OF THE BOOSTER PUMP AND SKID IS APPROXIMATELY 3,875 LBS.
3. CONTRACTOR TO COORDINATE WITH HOUSE SUPPLIER TO ENSURE THE PROPER MOUNTING BOARD/CHANNEL IS INSTALLED IN THE WALLS TO MOUNT EQUIPMENT.
4. IF CONTRACTOR ELECTS, 2" PVC WITH LONG SWEEP ELBOWS COULD BE USED IN LIEU OF 2" POLY SERVICE TUBING CASING UNDER CONCRETE SLAB.
5. ALL DIMENSIONS SHOWN ARE APPROXIMATE, CONTRACTOR TO WORK OFF FINAL SUBMITTAL DRAWINGS FROM SELECTED BOOSTER PUMP MANUFACTURER.
6. CHLORINATOR EQUIPMENT TO BE WALLACE & TIERNAN BRAND, OR AN APPROVED EQUAL TO MATCH EXISTING SYSTEM INFRASTRUCTURE.



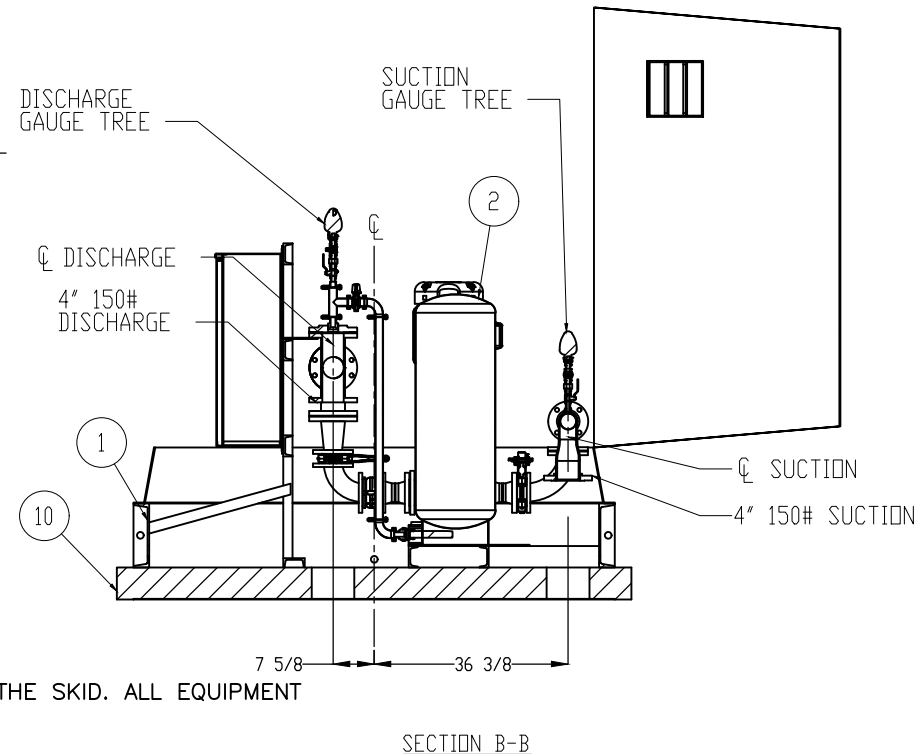
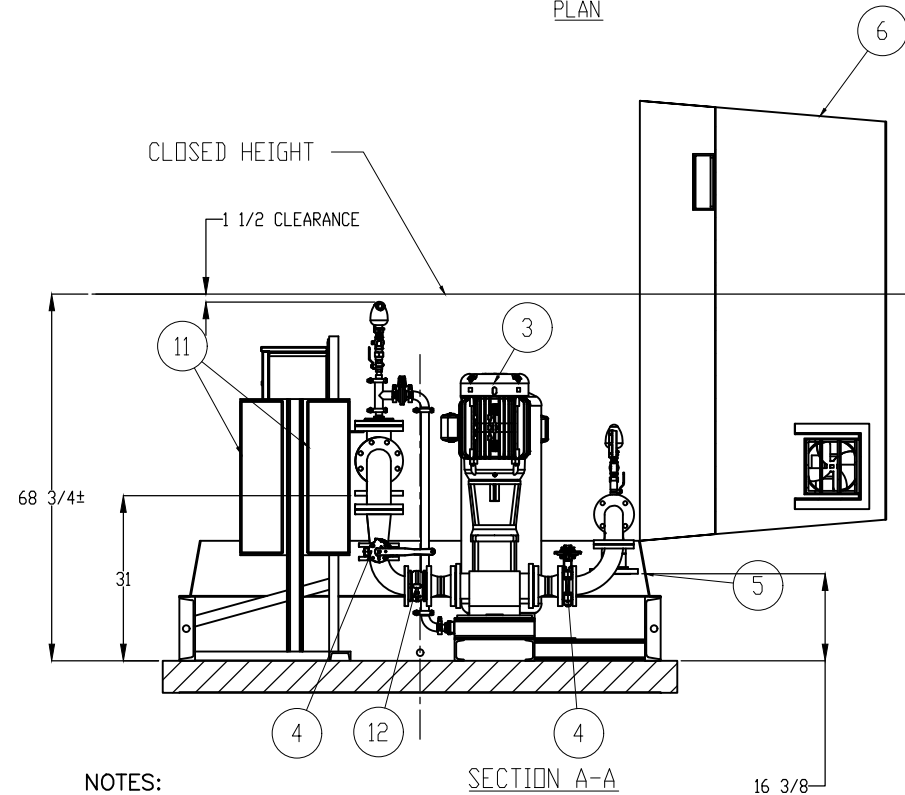
TITLE		PLAN VIEW	
PROJECT		CONTRACT NO. 2-BOOSTER PUMP STATION	
DRAWN BY:		EHA	
CHECKED BY:		JCH	
JOB #:		2400	
DATE:		NOVEMBER 2024	
FILE NAME:		BOOSTER_PUMP_DETAILS (11-7-24)	
SHEET:		4 OF 8	



DHA ENGINEERING, LLC.  
CONSULTING ENGINEERS  
DOTHAN, ALABAMA



ITEM NO.	DESCRIPTION	QTY.
1	STRUCTURAL SKID	1
2	WELL-X-TROL WX-203 TANK	1
3	PUMP; GOULDS 46SV21GK4F60	2
4	3" 150# LUG STYLE BUTTERFLY VALVE	4
5	Fiberglass Enclosure Base	1
6	Fiberglass Enclosure Top	1
7	VENT	1
8	EXHAUST FAN	2
9	CONTROL PANEL; 36" x 30" x 12"	1
10	SLAB (BY OTHERS)	1
11	ABB ACQ580 R5 VFD	2
12	CHECK VALVE; 3", 150#, WAFER STYLE, FLOWMATIC	2

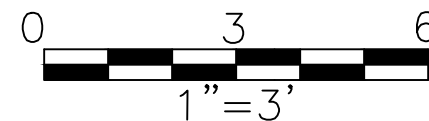



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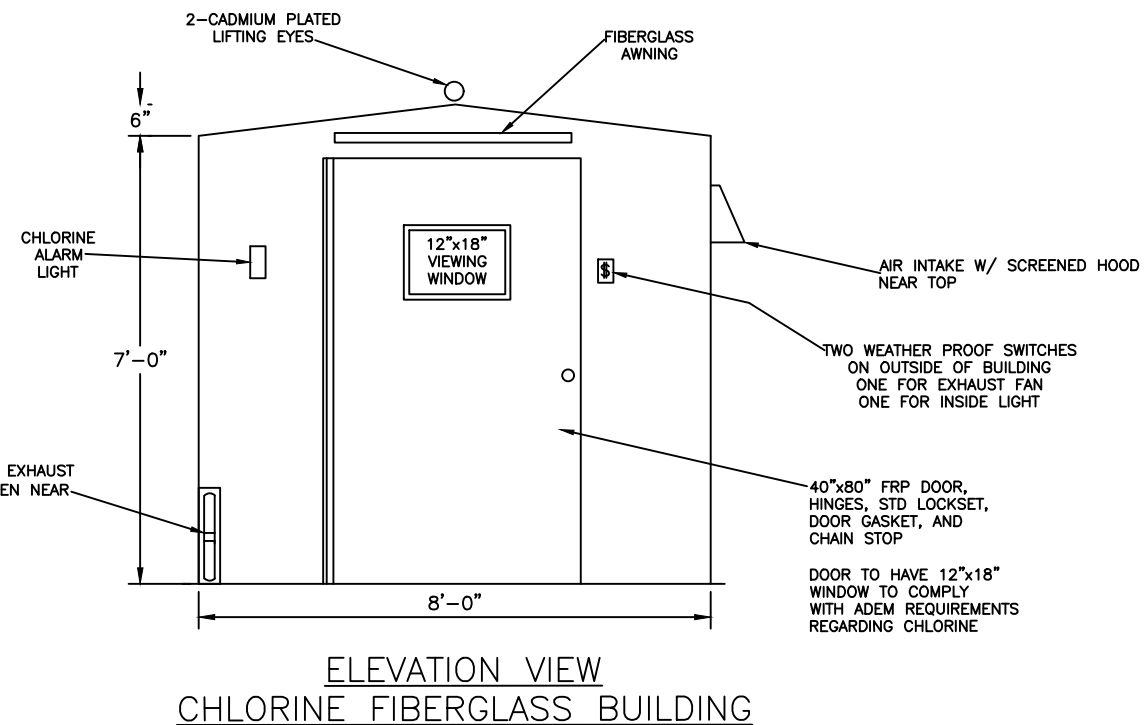
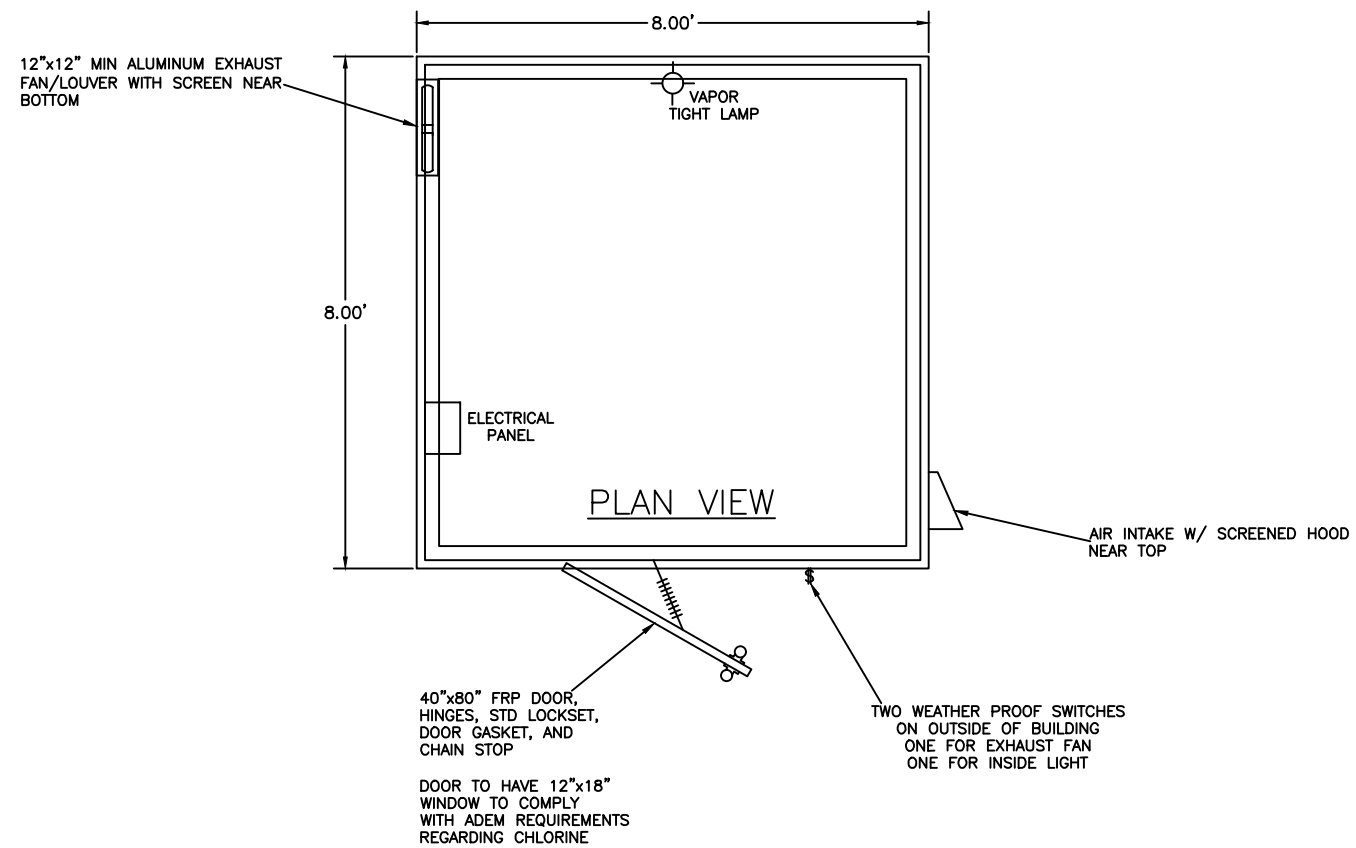
1. A SCADA COMPATIBLE FLOW METER IS REQUIRED TO BE INCLUDED ON THE SKID. ALL EQUIPMENT MUST BE SCADA COMPATIBLE.
2. THE WEIGHT OF THE BOOSTER PUMP AND SKID IS APPROXIMATELY 3,875 LBS.
3. CONTRACTOR TO PULL ALL EQUIPMENT MEASUREMENTS, SLAB PENETRATION MEASUREMENTS, ETC. FROM THE APPROVED SUBMITTAL DRAWINGS PROVIDED BY THE SELECTED MANUFACTURER. MEASUREMENTS SHOWN ABOVE COULD CHANGE AND FOR ILLUSTRATION PURPOSES ONLY.
4. THE PROPOSED PUMPS SHALL BE CAPABLE OF DELIVERING 250 GPM AT 111 FT OF HEAD. PUMPS SHALL HAVE VFD'S WHERE THEY CAN BE OPERATED IN A RANGE OF 150-250 GPM. THE PROPOSED PUMPS SHALL BE 15 HORSEPOWER.

⊙ INDICATES THE CENTER OF MASS  
 NOTES:

- ALL WELDING PER AWS D1.1 UNLESS NOTED
- ALL MATERIAL TO BE CLEANED AND COATED PER QUALITY CONTROL MANUAL UNLESS SPECIFIED OTHERWISE
- ALL COMPONENTS SHALL BE ACCEPTABLE FOR POTABLE WATER USE PER AWWA SPECS.
- ALL CARBON STEEL AND DUCTILE IRON COMPONENTS TO BE COATED WITH AMERLOCK 2IN SAFETY BLUE PER MANUFACTURER'S SPECS AND PROJECT DATA SHEET UNLESS NOTED.
- 3"-24" DUCTILE IRON FITTINGS ARE TO BE CEMENT-LINED
- 1" TO 2.5" DUCTILE IRON FITTINGS TO BE PAINTED/COATED WITH TMEC PAINT BY MORROW-WATER TECHNOLOGIES
- SLAB TO BE SUPPLIED BY OTHER.
- ALL PIPING TO BE CEMENT-LINED DUCTILE IRON AND 304SS
- CEMENT-LINE DUCTILE IRON FITTINGS TO BE FLANGED AND 304SS TO BE THREADED.
- ALL FABRICATED SPool PIECES TO BE 304SS MATERIAL WELDED TO ASME B31.1
- ALL FASTENERS TO BE 304 STAINLESS STEEL UNLESS NOTED
- DIMENSIONAL TOLERANCE  $\pm 1/8"$  UNLESS NOTED



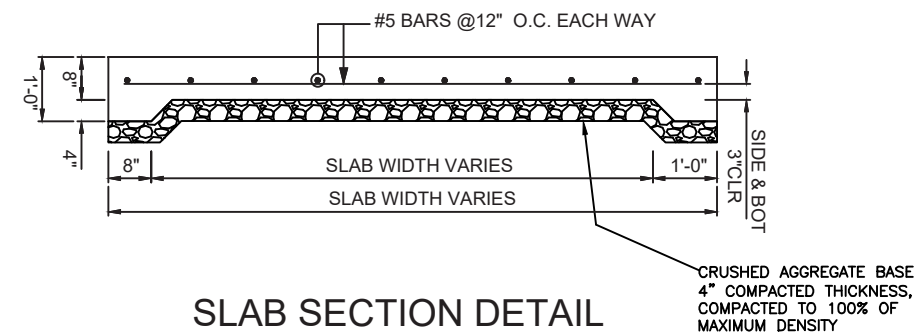
<b>SKID DETAILS</b>	
PROJECT: <b>CONTRACT NO. 2-BOOSTER PUMP STATION</b>	
	
DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
DRAWN BY: EHA	DATE: NOVEMBER 2024
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JOB #: 2400	SHEET 5 OF 8



ELEVATION VIEW  
CHLORINE FIBERGLASS BUILDING

NOTES:

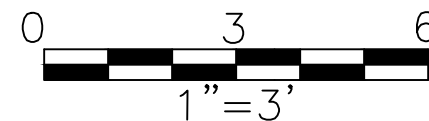
1. THE BUILDING SHALL BE MOLDED FIBERGLASS CONSTRUCTION, FACTORY PRE-ASSEMBLED TO MAKE A BONDED UNIT WITH NO EXTERNAL SEAMS OR JOINT COVERS. THE WALLS AND ROOF SHALL BE INTEGRAL.
2. THERE SHALL BE A 3" WIDE MOUNTING FLANGE AROUND THE ENTIRE LOWER PERIMETER.
3. THE WALLS AND ROOF SHALL BE OF SANDWICH CONSTRUCTION CONSISTING OF 1/8TH INCH THICK FIBERGLASS SKINS AND ONE INCH THICK RIGID POLYISOCYANURATE FOAM CORE (R VALUE=6.7).
4. THE BUILDING SHALL BE DESIGNED TO WITHSTAND WIND AND SNOW LOADS IN ACCORDANCE WITH THE UNIVERSAL BUILDING CODE (UBC).
5. BOTH THE EXTERIOR AND INTERIOR OF THE SHELTER SHALL BE FINISHED IN WHITE POLYESTER GEL COAT.
6. THE BUILDING SHALL BE FURNISHED WITH THE FOLLOWING STANDARD EQUIPMENT AND ACCESSORIES:
  - A. PRE-WIRE USING 12 GA. WIRING IN UL LISTED NON-METALLIC FLEXIBLE, LIQUID TIGHT CONDUIT
  - B. 125A, MAIN LUG, 8 BRANCH CIRCUIT PANEL IN NEMA 3R THERMOPLASTIC ENCLOSURE
  - C. A MINIMUM OF THREE DUPLEX OUTLETS
  - D. INTERIOR VAPOR RESISTANT LIGHT
  - E. NON-METALLIC INTAKE WITH SCREENED HOOD
  - F. OUTSIDE WEATHERPROOF SWITCHES FOR FAN AND LIGHT
  - G. FIXED VENTILATION LOUVER WITH EXHAUST FAN
  - H. FRP DOOR WITH 12"x18" VIEWING WINDOW
  - I. CADMIUM PLATED LIFTING EYES
  - J. DOOR GASKET
  - K. SPRING CUSHIONED CRASH STOP ON DOOR
  - L. FIBERGLASS AWNING ABOVE DOOR
  - M. EQUIPMENT MOUNTING BOARD LAMINATED IN WALL AS NEEDED
  - N. 1" POLYISOCYANURATE FOAM INSULATION CORE
7. SUPPLIER SHALL SUBMIT ENGINEERED DRAWINGS FOR APPROVAL. DRAWINGS SHALL SHOW AT A MINIMUM THE OVERALL DIMENSIONS, LOCATION OF THE DOOR, LOUVER, FAN, EQUIPMENT BOARD, AND ELECTRICAL COMPONENTS INCLUDING WIRING SCHEMATIC.
8. A CHLORINE ALARM LIGHT SHALL BE MOUNTED ON THE BUILDING EXTERIOR.




SLAB SECTION DETAIL

NOTES:

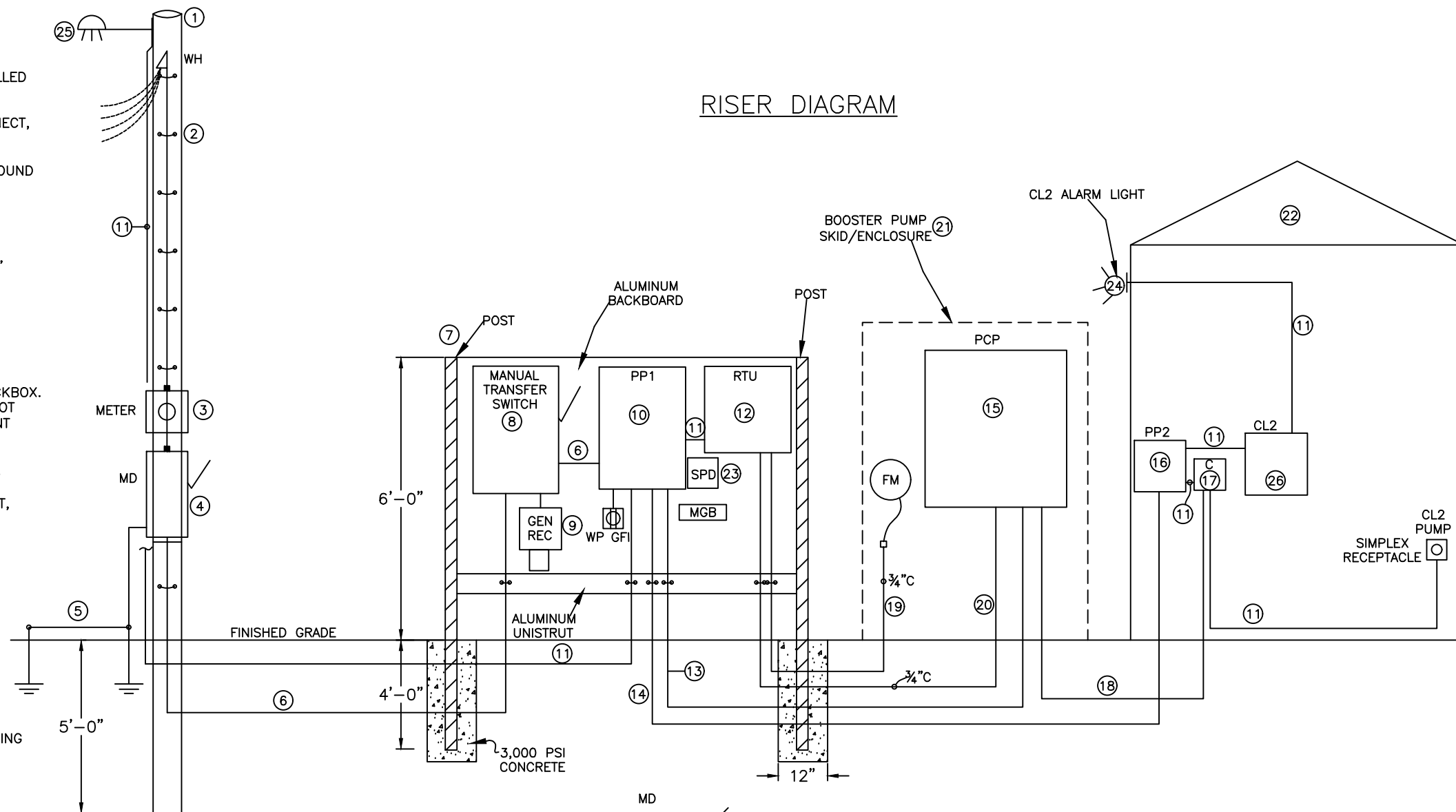
1. THE BOOSTER PUMP SLAB SHALL BE A MINIMUM OF 6" WIDER THAN THE SKID AND ENCLOSURE ON ALL SIDES
2. THE CHLORINE BUILDING SLAB SHALL BE A MINIMUM OF 12" WIDER THAN THE BUILDING ON ALL SIDES, THEREFORE THE BUILDING SLAB SHALL BE 10'x10'.



TITLE: FIBERGLASS BUILDING DETAILS	
PROJECT: CONTRACT NO. 2-BOOSTER PUMP STATION	
 DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
DRAWN BY: EHA	DATE: NOVEMBER 2024
CHECKED BY: JCH	FILE NAME: BOOSTER PUMP_DETAILS (11-7-24)
JOB #: 2400	SHEET 6 OF 8

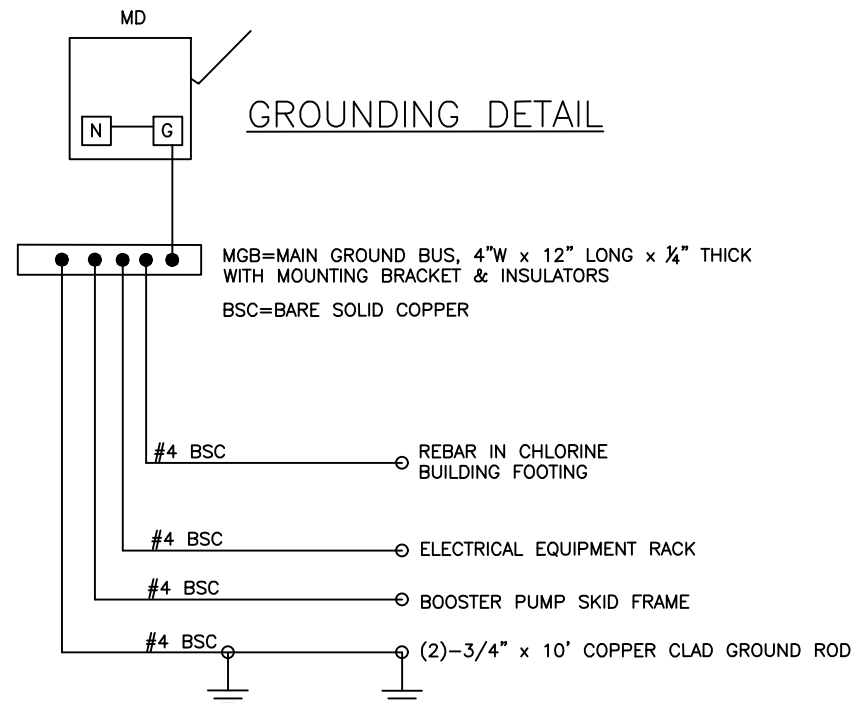
RISER DIAGRAM NOTES:

1. 25' CLASS 7 WOOD POLE OR BETTER.
2. 4-1/0, 2" ARC, 2-HOLE STRAPS @ 2'-6" ON CENTERS
3. METER, 200A SELF-CONTAINED, FURNISHED BY POWER COMPANY AND INSTALLED BY ELECTRICAL CONTRACTOR
4. MAIN DISCONNECT, 200A, 120/240V, 3-POLE, FUSIBLE, S.E. RATED DISCONNECT, NEMA 3R, NEUTRAL & GROUND KIT. 200A T.D. FUSES
5. #4 BARE SOLID COPPER GEC CONNECTED TO (2) 3/4"x10' COOPER CLAD GROUND RODS BY EXOTHERMIC WELD. SPACE RODS 10' APART MINIMUM.
6. 4-1/0, 1-#6, 2"C
7. ELECTRICAL EQUIPMENT RACK. POSTS TO BE ALUMINUM I-BEAM, 6061-T6, 6"x4"x0.190". BACKBOARD TO BE 1/2" THICK ALUMINUM PLATE. USE 3/8" S.S. HARDWARE & LOCKING NUTS TO ATTACH BACKBOARD TO POST. MAXIMUM SPACING OF POSTS TO BE 5'-0". ADD ADDITIONAL POSTS, IF REQUIRED.
8. MANUAL TRANSFER SWITCH, 200A, 3P, 4W, NON-FUSED, 600V, NEMA 4X SS ENCLOSURE. EQUAL TO SQ. D #82344DS. INCLUDE NEUTRAL KIT.
9. GENERATOR RECEPTACLE & BACKBOX. APPLETON #ADJA20044-200-RS OR EQUAL. 200A, 4W, 4P, REVERSE-SERVICE PIN & SLEEVE RECEPTACLE WITH BACKBOX. CONFIRM WITH OWNER THIS MATCHES THEIR GENERATOR PLUG. IF THIS DOES NOT MATCH, NOTIFY ENGINEER AND PROVIDE PLUG THAT WILL RUN OWNER'S CURRENT GENERATOR.
10. PANEL "PP1", 200A, 120/240V, 3 PHASE, 4 WIRE, HI-LEG, M.L.O., 22KAIC, NEMA 3R ENCLOSURE, 1-125/3 (BOOSTER PUMP CONTROL PANEL/VFD'S), 1-30/3 (SPD), 1-60/2 (CHLORINE BUILDING PANEL), 6-20/1 (SECURITY LIGHT, RECEPTACLE ON RACK, RTU, SPARES)
11. 3-#12, 3/4"C
12. SCADA RTU, FURNISHED BY SCADA CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
13. 3-#1, 1-#6, 2"C
14. 3-#6, 1-#10, 1.25"C
15. PUMP CONTROL PANEL, FURNISHED BY PUMP SUPPLIER, PRE-WIRED TO VFD'S & PUMPS.
16. CHLORINE BUILDING PANEL, FURNISHED AND INSTALLED BY CHLORINE BUILDING MANUFACTURER.
17. CHLORINE BOOSTER PUMP CONTACTOR, 30 AMP, 120V COIL, 8"x8"x6" PVC J. BOX. CONTACTOR TO ENERGIZE WHEN EITHER BOOSTER PUMP IS RUNNING.
18. 2-#14, 3/4"C
19. FLOW METER CABLE, 3/4"C
20. 3/4"C FOR SCADA
21. PACKAGED BOOSTER PUMP SKID/ENCLOSURE
22. FIBERGLASS CHLORINE BUILDING, PRE-WIRED WITH LIGHTS, RECEPTACLES, EXHAUST FAN, ETC.
23. SURGE PROTECTION DEVICE, 120/240V, 3 PHASE + N + G, 200KA PER PHASE, NEMA 4, INDICATOR LIGHTS
24. CHLORINE ALARM LIGHT, FURNISHED BY CHLORINE EQUIPMENT SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.
25. LED FLOODLIGHT, ROUND WOOD POLE BRACKET, PHOTOCELL, EQUAL TO RAB#X17XFU140SF
26. CHLORINE LEAK PANEL PANEL FURNISHED BY OTHERS INSTALLED BY ELECTRICAL CONTRACTOR.
27. CONTRACTOR TO PROVIDE A NEW SERVICE POLE AS SHOWN IN DETAIL. POWER COMPANY WILL PROVIDE OVERHEAD POWER TO THE POLE.
28. THE SCADA EQUIPMENT ITSELF IS NOT INCLUDED IN THE IN THE BOOSTER PUMP CONTRACT. HOWEVER, BOOSTER PUMP CONTRACTOR WILL BE RESPONSIBLE FOR MOUNTING THE SCADA RTU ON THE EQUIPMENT RACK AND RUNNING THE NECESSARY CONDUITS AND WIRES FROM THE CONTROL PANEL TO THE SCADA RTU. DEXTER FORTSON WILL TERMINATE WIRES AND MAKE SURE EVERYTHING IS OPERATIONAL.



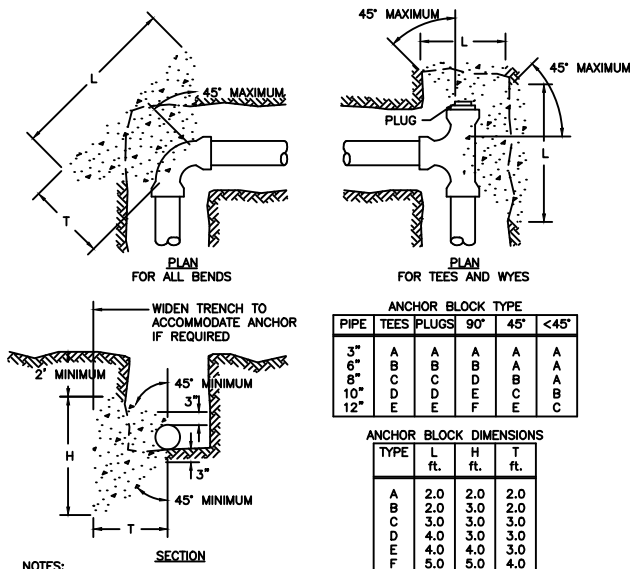
RISER DIAGRAM

GROUNDING DETAIL



TITLE: ELECTRICAL NOTES AND DETAILS	
PROJECT: CONTRACT NO. 2-BOOSTER PUMP STATION	
DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
DRAWN BY: EHA	DATE: NOVEMBER 2024
CHECKED BY: DP	FILE NAME: BOOSTER_PUMP_DETAILS (11-7-24)
JOB #: 2300	SHEET 7 OF 8

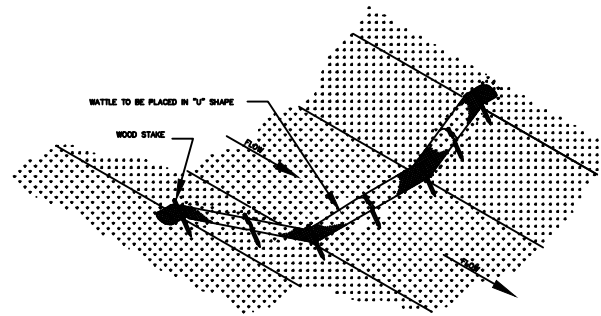




- NOTES:**
- ANCHOR BLOCKS SHALL BEAR ON UNDISTURBED EARTH.
  - ALL FITTINGS SHALL BE WRAPPED IN 6 MIL PLASTIC TO PREVENT THE CONCRETE FROM BONDING TO THE FITTING.
  - IN NO CASE SHALL THE PIPE BE ENCASED WITH CONCRETE. CONCRETE SHALL NOT BE PLACED SO AS TO RENDER THE PIPE AND FITTING INACCESSIBLE.
  - CONCRETE SHALL BE 3000 PSI OR STRONGER.
  - ALL FITTINGS SHALL BE DOMESTIC.

**CONCRETE ANCHOR BLOCK**

Not to scale

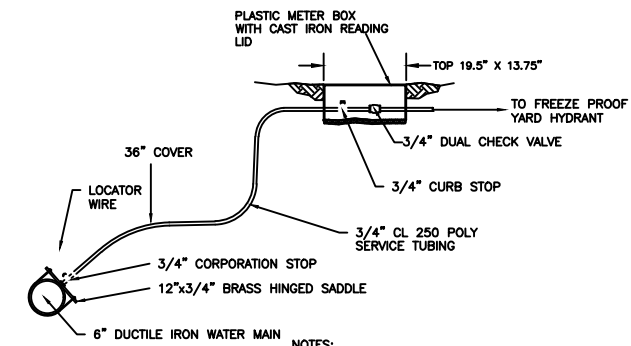


**NOTES:**

- WATTLE SHOULD BE PLACED IN A "U" SHAPE FACING UPHILL.
- STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.

**WATTLE DITCH CHECK**

Not to scale

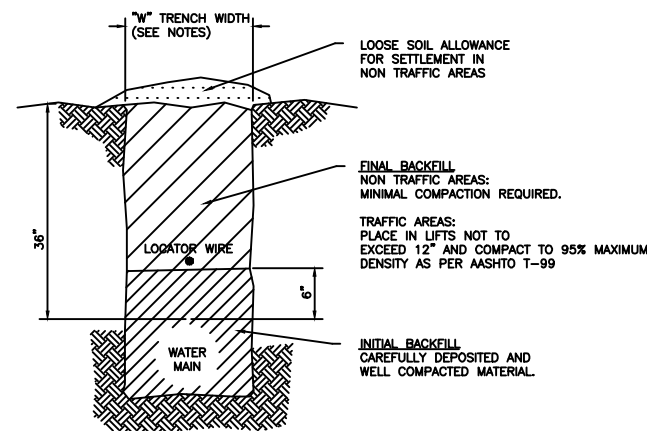
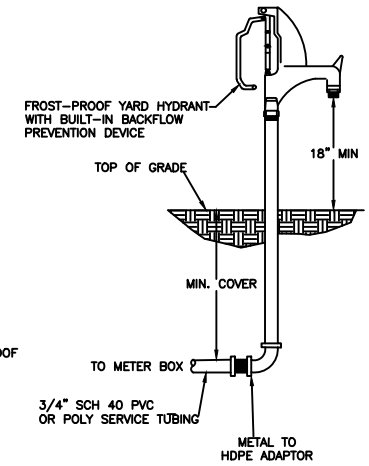


**NOTES:**

- THE FREEZE PROOF YARD HYDRANT SHALL CONSIST OF A NEW SADDLE, CORPORATION STOP, CURB STOP, DUAL CHECK VALVE, METER BOX, YARD HYDRANT, AND ANY NECESSARY FITTINGS OR INCIDENTALS NECESSARY FOR A FULLY FUNCTIONAL YARD HYDRANT.
- LOCATOR WIRE SHALL BE INSTALLED FROM THE WATER MAIN TO THE METER BOX.
- FRIENDSHIP REQUIRES THAT SADDLES ARE THE BRASS HINGED TYPE AND THAT 3/4" CHECK VALVES ARE CARTRIDGE STYLE.
- CONTRACTOR TO USE CLASS 250 POLY-SERVICE TUBING.
- YARD HYDRANT TO BE SECURED TO A SHORT 4"x4" POST TO ENSURE STABILITY.
- YARD HYDRANT TO HAVE A 12"x12" MINIMUM STEPPING STONE USED AS A SPLASH PAD
- ADEM IS REQUIRES A SMOOTH HOSE BIB WITH NO THREADS.

**3/4" SERVICE LINE TO FREEZE PROOF YARD HYDRANT**

Not to scale

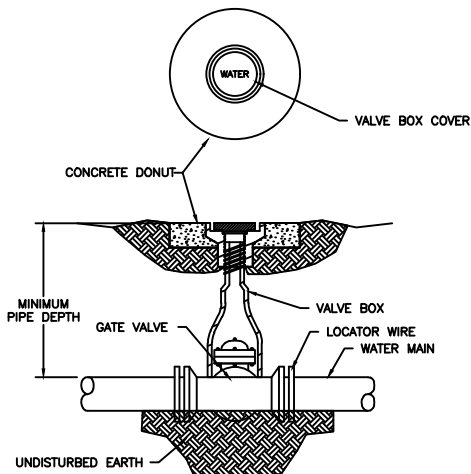


**NOTES:**

- WIDTH OF THE TRENCH AT ANY POINT BELOW 6" ABOVE THE TOP OF THE PIPE SHALL BE SUFFICIENT TO PROVIDE ADEQUATE ROOM FOR JOINING THE PIPE AND FILLING AND COMPACTING THE SIDE FILLS. HOWEVER, IN NO CASE SHALL THIS WIDTH EXCEED THE OUTSIDE PIPE DIAMETER PLUS 2'-0".
- TRENCH EXCAVATION FROM 6" ABOVE THE TOP OF THE PIPE MAY BE AS WIDE AS NECESSARY EXCEPT AS RESTRICTED BY THE LIMITS OF THE RIGHT-OF-WAY OR EASEMENT AND AS REQUIRED TO PROTECT EXISTING STRUCTURES AND CONDUITS.
- INITIAL BACKFILL - GENERALLY, MATERIAL OBTAINED FROM THE TRENCH EXCAVATION. SOIL TYPES OF HIGHLY ORGANIC SOILS OR HIGHLY PLASTIC EXPANSIVE CLAYS SHALL NOT BE USED. INITIAL BACKFILL SHALL BE COMPACTED TO UNIFORMLY DEVELOP LATERAL SOIL FORCES DURING THE BACKFILL OPERATION.
- FINAL BACKFILL - GENERALLY, MATERIAL OBTAINED FROM THE TRENCH EXCAVATION WITH MAXIMUM SIZE OF STONE NOT TO EXCEED SIX (6") INCHES.
- ALL PIPES SHALL HAVE AN INSULATED 12 GAUGE COPPER CLAD LOCATOR WIRE INSTALLED ABOVE THE WATER MAIN.

**TRENCH DETAIL**

Not to scale

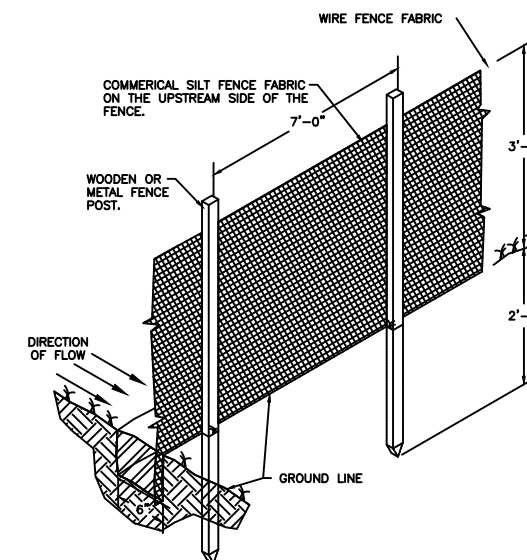


**NOTES:**

- THE LOCATOR WIRE SHALL BE WITHIN 3" OF THE TOP OF THE VALVE BOX.
- A CONCRETE VALVE MARKER SHALL BE PLACED AT EACH NEW VALVE LOCATION AT THE BACK OF THE RIGHT OF WAY.
- ALL VALVE BOXES SHALL BE MOUNTED FLUSH WITH EXISTING GROUND.
- OWNER REQUIRE THAT ALL VALVES HAVE A MINIMUM DISTANCE OF 8" BETWEEN THEM. ATTACHING VALVES TO THE SAME TEE WILL NOT BE ALLOWED. ANY DEVIATION MUST BE APPROVED BY OWNER PERSONNEL.
- ALL IRON AND STEEL MUST BE DOMESTIC AS REQUIRED BY THE FUNDING AGENCY.

**GATE VALVE and BOX**

Not to scale




**NOTES:**

- EXCAVATE THE TRENCH 6" BELOW THE EXISTING GROUND LINE.
- INSTALL THE FABRIC TO THE BOTTOM OF THE TRENCH
- BACKFILL AND COMPACT THE TRENCH, COVERING THE FABRIC.

**SILT FENCE CONSTRUCTION**

ISOMETRIC, Not to scale

<b>TITLE</b>		MISCELLANEOUS-DETAILS	
<b>PROJECT</b>		CONTRACT NO. 2-BOOSTER PUMP STATION	
		DHA ENGINEERING, LLC. CONSULTING ENGINEERS DOTHAN, ALABAMA	
<b>DRAWN BY:</b>	EHA	<b>DATE:</b>	NOVEMBER 2024
<b>CHECKED BY:</b>	JCH	<b>FILE NAME:</b>	BOOSTER PUMP DETAILS (11-7-24)
<b>JOB #:</b>	2400	<b>SHEET</b>	8 OF 8