YORK & ASSOCIATES ENGINEERING, INC.

ADDENDUM NO. 1

ELEVATED WATER STORAGE TANK AND WATER TREATMENT BUILDING - DRINKING WATER STATE REVOLVING FUND - DW2020013

PROJECT # 2020-09

December 4, 2021

Bid Date: Friday 12/10/2021

Bid Time: 11:00 A.M.

Bid Location: Town of Ochlocknee City Hall, 1044 E. Rail Road, Ochlocknee, Ga 31773

Owner: Town of Ochlocknee

I. CONTRACT DOCUMENTS

A. Section 00030 (Advertisement for Bid), replace page 00030-2 with attached revised page deleting the requirement that the contractor have completed four similar water treatment buildings in the last five years.

B. Section 00100 (Instructions to Bidders), replace page 00100-2 with an attached revised page to change the Time of Completion to 365 calendar days.

C. Section 00300 (Bid Form), replace Page 4 of 4 with an attached revised page to add Item 75, Galvanic Anode Cathodic Protection of Internal Submerged Steel Tank Surface.

D. Section 13210 (Elevated Water Storage Tank), replace entire section with attached section. The section was changed to include cathodic protection as a tank accessory item.

II. CONSTRUCTION PLANS

A. Sheet C6 of 19, replace with attached revised Sheet C6 of 19 with the revision date of 12/4/21. The notes in the Elevated Water Storage Tank Detail were revised to specify diameter and schedule of the inlet and outlet pipes.

END OF ADDENDUM NO. 1

bid to be enclosed with the bid at the time of bid opening. Cashier's check will be made payable to the **Town of Ochlocknee.**

The successful bidder will be required to furnish OWNER with Insurance, Workman's Compensation Insurance, and Performance and Payment Bonds* in the amount of one-hundred percent (100%) of the total bid.

Each bid must be submitted in a SEALED ENVELOPE, addressed to the OWNER. Each sealed envelope containing a Bid must be plainly marked on the outside as, "Bid for **ELEVATED WATER STORAGE TANK AND WATER TREATMENT BUILDING - DRINKING WATER STATE REVOLVING FUND - DW2020013 and be labeled with the BIDDER'S State of Georgia Utility Contractor License Number.** If the bid is forwarded by mail, the sealed envelope containing the Bid must be enclosed in a separate mailing envelope to the attention of the OWNER at the address previously given.

All Bids must be made out on the bid form of the type bound in the Contract Documents, in accordance with the instructions in the Information for Bidders. No interlineation, additions, or deletions shall be made in the proposal form by the BIDDER.

Any and all Bids received without the aforementioned qualification criteria enclosed, will be returned to the BIDDER.

CONTRACTORS and SUBCONTRACTORS bidding on this Project will be required to comply with all Federal, State, territorial, and local laws. The construction of this project is financed with a Georgia Environmental Finance Authority (GEFA) loan. The CONTRACTOR and SUBCONTRACTORS will comply with all of the requirements shown in GEFA's Supplemental General Conditions for Federally Assisted State Revolving Loan Fund Construction Requirements.

OWNER reserves the rights to waive any informalities or to reject any or all Bids, to evaluate Bids, and to accept any Bid which in its opinion may be in the best interest of the OWNER. No Bid will be rejected without just cause.

Successful Bidder will be required to perform WORK as the Prime Contractor. Qualified Contractor must have prior successful similar-type construction experience including the following:

a) Four similar elevated water storage tanks projects successfully completed in the last five years.

Qualified Contractor shall list these successful projects as referenced in the Bidder Experience Statement CONTRACT DOCUMENT 00420.

No BIDDER may withdraw his bid within the time limit specified in the Instruction to Bidders (Section 00100).

No Bid will be accepted from any CONTRACTOR who has not obtained plans and specifications from York & Associates Engineering, Inc., and whose name is not on the Bidders List.

*** Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.**

END OF SECTION

Contractor License Number, and name of the project for which the Bid is submitted. The OWNER has the right to reject any bid that does not contain the above information.

BID MODIFICATIONS WRITTEN ON THE OUTSIDE OF ENVELOPE WILL NOT BE ACCEPTED

3. CONTRACT DOCUMENTS, SPECIFICATIONS AND DRAWINGS

Bidders are advised to carefully examine the CONTRACT DOCUMENTS, Specifications, and Construction Drawings for the proposed WORK. Construction Drawings indicate the surface and underground structures likely to affect the prosecution of the WORK insofar as they have been determined, but the information indicated is not guaranteed as being correct and complete. Bidders are expected to examine the Construction Drawings and the location of the WORK, verify all information with authorities concerned, to inform themselves of all laws, ordinances and regulations of all authorities having jurisdiction, and to judge for themselves all the circumstances affecting the cost of the WORK and the time required for its completion.

The Bidder shall assume all risks concerning latent physical conditions at the site that may affect his costs, progress or performance of the work.

4. SUBCONTRACTS

Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract, must be acceptable to the OWNER. All Subcontractors must submit a Non-Collusion Affidavit.

5. TELEGRAPHIC MODIFICATIONS

BID MODIFICATION BY TELEGRAPHIC COMMUNICATION WILL NOT BE ALLOWED.

6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful Bidder, upon his failure or refusal to execute and deliver the Contract and required Bonds within fifteen (15) days after he has received the "Notice of Award", shall forfeit to OWNER as liquidated damages the security deposit submitted with his Bid.

7. TIME OF COMPLETION, START OF WORK AND LIQUIDATED DAMAGES

Bidder must agree to commence work within ten (10) days after a date to be specified in a written "Notice to Proceed" from the Owner and to fully complete the Project within **365** calendar days thereafter. The bidder must agree also to pay as liquidated damages, the sum of $500.00 for each and every consecutive calendar day thereafter the completion date, for which the completion of the project is delayed, as hereinafter provided in the General Conditions.

8. METHOD OF BIDDING

Unit prices for each Bid item in the proposal shall include its pro rata share of overhead and profit so that the Base Bid price given on Bid Summary Sheet represents the total bid. Any bid not

64	Painting the Exterior of Cleaned Ground Water Tank, Complete.	SY	178		
65	Replacement of Aeration Tower, Complete.	LS	1		
66	Installation of Transducer in Ground Tank, Complete.	LS	1		
67	Removal of Existing Elevated Tank, Complete.	LS	1		
68	Removal of Existing Elevated Tank Footings, Complete	LS	1		
69	Removal of Existing Fiberglass Treatment Building and Equipment, Complete.	LS	1		
70	Removal of Existing Chain Link Fencing	LS	1		
71	Site Grading, Complete.	LS	1		
72	6' High Vinyl Coated Chain Link Fence with 3 Strands Barb Wire, Complete	LF	510		
73	4' Wide vinyl Coated Chain Link Gate, Complete	EA	1		
74	12' Wide Vinyl Coated Chain Link Gate, Complete.	EA	1		
75	Galvonic Anode Cathodic Protection of Internal Submerged Steel Tank Surface, Complete	LS	1		
	TOTAL BID AMOUNT=				

Note on Unit Abbreviations: EA = Each
LF = Linear Feet
LS = Lump Sum
SY = Square Yards

SECTION 13210

ELEVATED WATER STORAGE TANK

PART 1 GENERAL REQUIREMENTS

1.01 SCOPE

A. The Contractor shall be responsible for all labor, materials and equipment necessary for the design, fabrication, delivery and erection, the foundation, construction, piping, fittings, accessories, painting, disinfection and testing of an elevated welded steel water storage tank supported by a series of supporting columns and cross bracing. This style of tank is commonly referred to as a "Multi-Column" Tank. Design and construction of the Elevated Tank shall conform to all requirements of AWWA D100 Standard for Welded Steel Tanks for Water Storage. The location is as shown in the drawings contained in the Appendix to these Contract Documents.

1.02 RELATED WORK

A. Section 09870 - Tank Coatings and Finishes

1.03 REFERENCED - Latest Published editions of the following Standards:

A. Standard for Welded Steel Tanks for Water Storage (AWWA D100).
B. Standard for Painting Steel Water Storage Tanks (AWWA D102).
C. Standard for Disinfection of Water Storage Facilities (AWWA C652)
D. American Welding Society (AWS)
E. Materials in contact with Potable Water -61 National Sanitation Foundation(NSF).
F. Good Painting Practice- Steel Structurals Painting Council Manual- Volume 1 .
G. Systems and Specifications - Steel Structurals Painting Council Manual- Volume 2.
H. Building Code Requirements for Reinforced Concrete - ACI 318.
I. Standard Specification for Structural Concrete - ACI 301.
J. NACE Standard RP0196 for Galvanic Anode Cathodic Protection

1.04 QUALIFICATION OF MANUFACTURER

A. The design and construction of the "Multi-Column" elevated water storage tank shall only be undertaken by a Contractor with a minimum of five years experience with elevated tank construction. The Contractor must be able to demonstrate experience through the design and construction of at least five "Multi-Column" elevated water tanks. The Contractor shall not subcontract either the design or erection of the steel tank and supporting tower.

1.05 BID SUBMITTALS

No bid will be considered unless this information is provided with the Bid Package:

A. A list of five elevated tanks constructed within the last five years including the Owner, tank capacity and the Engineer.

B. A preliminary drawing of the tank showing major dimensions and plate thickness upon which his bid is based, the high and low water levels and the dimensions of the supporting tower.

C. A foundation design drawing showing preliminary dimensions and approximate quantities of concrete and reinforcing steel.

1.06 WORKING DRAWINGS

A. After contract award and prior to construction, the Contractor shall provide working drawings and design calculations for the elevated steel tank and the foundation. Drawings shall show the size and location of all structural components and reinforcement, the required strength and grade of all materials, and the size and arrangement of principle piping and equipment. The drawings and calculations shall bear the certification of a professional Engineer licensed in the State of Georgia. The design coefficients and resultant loads for snow, wind and seismic forces, and the methods of analysis shall be documented.

1.07 CONSTRUCTION SUBMITTALS

A. Prior to shipment of any materials, detailed information on the coating system to be used shall be submitted to ENGINEER for approval. Such information shall include: coating specifications, handling procedures, surface preparation, coating application, and methods of application.

B. At the conclusion of the work, CONTRACTOR shall submit a written report to OWNER certifying that the work conforms to all applicable conditions of this Specification..

1.08 DELIVERY, STORAGE AND HANDLING

A. All materials shall be unloaded and stored in a manner to avoid physical damage to detrimental effects of exposure to weather. Where applicable, materials shall be stored in accordance with recommendations of the manufacturer.

1.09 SITE CONDITIONS

A. CONTRACTOR shall provide all utilities necessary for construction of the tank. OWNER will provide water for testing and disinfection, at prevailing user rates.

PART 2 PRODUCTS

2.01 TANK CAPACITY

A. The net storage capacity of the tank shall be 200,000 gallons. This capacity shall be measured as the water stored between the elevation of the overflow line and the low water line of the tank.

2.02 TANK CHARACTERISTICS

A.	Capacity	=200,000 gallons
B.	Height to High Water Level (HWL)	=143.4 ft
C.	Maximum Head Range (Approximate)	=28.3 ft
D.	Tank Diameter (Approximate)	=36.0 ft

2.03 TANK ACCESSORIES

A. The following accessories shall be provided by the manufacturer in accordance with these specifications. All items shall be in full conformity with the current applicable OSHA safety regulations and the operating requirements of the structure.

1. 6-inch diameter, wrought steel Overflow to Discharge at column base with flap valve and splash block.

2. 36-inch diameter steel riser with a manhole near the base. Minimum size of Manhole shall be 24" diameter.

3. 3-inch washout valve at base or riser.

4. 6-inch Cast Inlet/Outlet Connection with base Elbow (flanged).

5. 24" Wide Balcony as minimum with 42" minimum Handrail.

6. Safety Grating at Top of Riser.

7. 24" Diameter steel Roof Hatch, easily accessible from roof ladder.

8. Four-mesh non-corrodible screen for venting (24" diameter).

9. Grounding as detailed.

10. Level Indicator with Float.

11. Pressure Gauge Tap - Provide a 3/4" tap and nipple with 3/4" Ball Valve at bottom of riser.

12. Sample Tap - Provide 3/4" tap and nipple with 3/4" hose bibb at bottom of riser.

13. Level Probe Nozzle - Provide one 4" diameter flanged nozzle in top of tank adjacent to ladder for electrical level device. Cap nozzle with bolted blind flange.

14. Ladders
    a. From 10' above ground up on tower leg to balcony with safety device.
    b. Revolving ladder from balcony to apex of tank with safety device.
    c. Inside tank ladder from roof hatch to bottom of tank.
    d. Ladder inside riser with safety device.
    e. From bottom of tank to side shell access manhole.
    f. provide 10' portable ladder from 0' to 10' above ground.

15. Galvanic anode cathodic protection of internal submerged surface of tank in accordance with NACE Standard RP0196.

2.04 FOUNDATIONS

A. Foundations and foundation design will be provided by tank CONTRACTOR. Foundation design procedures shall be as outlined in AWWA D100, Section 12, except the soils tests. A Geotechnical investigation has been carried out at the site and a copy of the report is provided in the Appendix of the Contract Specifications. Allowable bearing capacities are defined in this report. The Owner will retain the services of the Geotechnical consultant to verify the adequacy of the bearing stratum after the Contractor has carried out the excavation and before any concrete or reinforcement is placed. The concrete foundation shall be designed by the Contractor based upon the recommendations in the Geotechnical report.

2.05 TANK DESIGN DATA

A. Tank will be designed, fabricated and erected in accordance with AWWA Standard D100 latest revision for "Welded Steel Elevated Tanks, Standpipes, and Reservoirs for Water Storage".

Bidder is to complete Section 00430 and submit said form with bid package.

B. Tank shall be designed to safely withstand the following loads and forces:
   1. The weight of the structure
   2. The weight of the water in tank.
   3. A horizontal wind pressure equivalent to a wind velocity of 110 mph.
   4. Seismic Zone (Design in accordance with AWWA D-100, Section 13).

C. No plates used in the tank or tower will be less than 1/4" thick.

D. Proper allowances shall be made for members carrying combined loads.

E. The steel riser shall be designed to withstand stress caused by the weights or pressure of the tank and riser contents as well as any load imposed upon the top of the riser pipe by the tank bottom or by members supporting the tank bottom.

F. The tower for supporting each tank shall consist of four columns depending on manufacturer, constructed of tubular shapes. It shall be braced by horizontal struts, diagonal ties and by horizontal ties at the panel points.

2.06 LADDER SAFETY SYSTEM

A. Ladders shall be equipped with a flexible cable type safety system (This includes all interior ladders).

B. Safety belts shall be constructed of polyester webbing (provide two (2) belts..

C. Equipment shall be as manufactured by DBI/SALA, or equivalent.

PART 3 EXECUTION

3.01 INSPECTION

A. Prior to construction, CONTRACTOR shall inspect the foundation excavation and verify the soil bearing capacity.

B. Weld inspection will be by radiography and a written report shall be furnished in accordance with AWWA D-100, Section 11.

3.02 PREPARATION

A. Provide leg foundation and anchor bolts in conformance with tank manufacturer's approved shop drawings.

B. Shop surface preparation and Painting

1. Clean all rust, mill scale, dust and other interference materials from all metal surfaces to Near White Metal Finish prior to shop priming. Cleaning shall be accomplished by blasting in accordance with SSPC Specification No. 10 or by pickling in accordance with SSPC Specification No. 8.

2. Provide shop prime coat(s) per Specifications 09870 (Tank Coatings and Finishes).

3.03 INSTALLATION AND ERECTION

A. Welding shall be done and tested in accordance with Section 8 of AWWA Specification D100.

B. All tank, walkway and handrail plates, bars and angles shall be seal welded. This includes all seams in the tank above the water line to the top of the tank.

3.04. DISINFECTION

A. All cleaning and disinfection shall be in accordance with AWWA C-652, latest revision.

B. Prior to disinfection, the Contractor shall thoroughly clean the interior of the tank of all paint chips, dirt or other debris.

C. All interior surfaces of the tank which will ultimately be in contact with stored water shall be thoroughly sprayed to run off with water containing 200 part per million of chlorine. This solution can be obtained by adding one ounce of calcium hypochlorite (HTH) to each twenty-six (26) gallons of water.

D. After two (2) hours, the surfaces shall be thoroughly rinsed with clean potable water. Disposal of chlorinated water shall be in accordance with AWWA Standard C652, latest edition.

E. Personnel working inside the tank during sterilization shall be equipped with respiratory protective devices approved by the U.S. Bureau of Mines and conforming to U.S. Bureau of Labor Standards Part 1518 of the Safety and Health Regulations for construction 1518.103.

F. Personnel working inside the tank during sterilization shall be equipped with safety belts, lifelines, and lanyards conforming to the U.S. Bureau of Labor Standards Part 1518 of the Safety and Health Regulations for construction 1518.104.

3.05 CERTIFICATIONS

A. The CONTRACTOR shall certify that the tank welds have been inspected by radiographic methods in accordance with AWWA D100 and test results shall be submitted to the Engineer.

B. The CONTRACTOR shall provide laboratory test results for concrete strengths of the cylinders formed during concrete foundation installation. Test results shall be submitted to the Engineer.

C. The CONTRACTOR shall certify in writing that paint work has been tested in accordance with the specification for Painting and that dry film thicknesses are as specified.

D. The CONTRACTOR shall provide the Owner with certification from an EPD approved and qualified testing laboratory that water samples taken from the tank after disinfection and flushing meet health and safety standards and that the tank is acceptable for service.

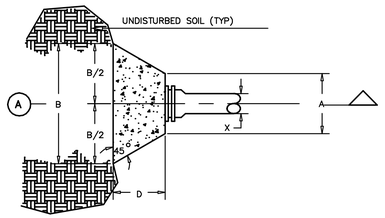
3.06 CLEANING UP

Contractor, after the completion of work, shall remove all surplus material, broken and damaged fittings, and pipe brought to the premises for use in his work. He shall also remove all debris caused by his work and shall leave the premises clean to the satisfaction of the Owner and Engineer. The site shall be landscaped as required by Contract Documents.

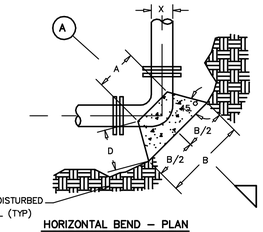
3.07 PAYMENT

Payment for the elevated tank shall be at the unit prices established in the Bid Schedule for the appropriate bid item. No separate payment will be made for work under this section except as set forth in the Bid Schedule.

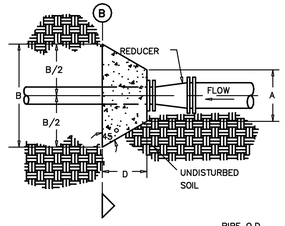
END OF SECTION



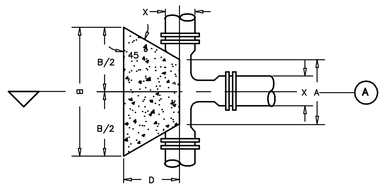
UNBALANCED TEE OR PLUG – PLAN



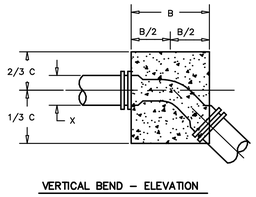
HORIZONTAL BEND – PLAN



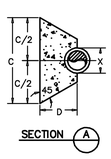
REDUCER – PLAN



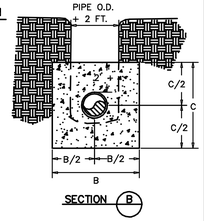
TEE – PLAN



VERTICAL BEND – ELEVATION



SECTION A



SECTION B

Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
90 DEGREE BEND				
24"	2'-7"	7'-0"	7'-0"	4'-6"
20"	2'-1"	6'-0"	6'-0"	3'-9"
18"	1'-11"	5'-6"	5'-6"	3'-6"
16"	1'-9"	5'-0"	5'-0"	3'-3"
14"	1'-7"	4'-0"	4'-0"	2'-6"
12"	1'-4"	3'-6"	3'-6"	2'-3"
10"	1'-3"	3'-0"	3'-0"	2'-0"
8"	1'-0"	2'-6"	2'-6"	1'-9"
6"	0'-11"	1'-9"	1'-9"	1'-6"
4"	0'-9"	1'-3"	1'-3"	1'-3"
45 DEGREE BEND				
24"	2'-4"	5'-6"	5'-0"	3'-9"
20"	1'-11"	4'-6"	4'-0"	3'-0"
18"	1'-9"	4'-0"	4'-0"	2'-9"
16"	1'-7"	3'-6"	3'-6"	2'-3"
14"	1'-3"	3'-0"	3'-0"	2'-0"
12"	1'-3"	3'-0"	2'-6"	2'-0"
10"	1'-3"	2'-6"	2'-0"	1'-9"
8"	1'-0"	1'-9"	1'-9"	1'-3"
6"	0'-11"	1'-6"	1'-6"	1'-0"
4"	0'-9"	1'-0"	1'-0"	1'-0"

Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
11 1/4 DEGREE BEND				
24"	1'-9"	2'-9"	2'-9"	1'-0"
20"	1'-6"	2'-3"	2'-3"	1'-0"
18"	1'-4"	2'-0"	2'-0"	1'-0"
16"	1'-3"	1'-9"	1'-9"	1'-0"
14"	1'-2"	1'-6"	1'-6"	1'-0"
12"	1'-2"	1'-6"	1'-6"	1'-0"
10"	1'-0"	1'-3"	1'-3"	1'-0"
8"	0'-10"	1'-0"	1'-0"	1'-0"
6"	0'-9"	1'-0"	1'-0"	1'-0"
4"	0'-7"	1'-0"	1'-0"	1'-0"
22 1/2 DEGREE BEND				
24"	2'-0"	3'-6"	3'-6"	2'-6"
20"	1'-8"	3'-0"	3'-0"	1'-9"
18"	1'-6"	2'-9"	2'-9"	1'-6"
16"	1'-5"	2'-6"	2'-6"	1'-3"
14"	1'-4"	2'-3"	2'-3"	1'-0"
12"	1'-2"	2'-0"	2'-0"	1'-0"
10"	1'-0"	1'-9"	1'-9"	1'-0"
8"	0'-10"	1'-6"	1'-6"	1'-0"
6"	0'-9"	1'-3"	1'-3"	1'-0"
4"	0'-7"	1'-0"	1'-0"	1'-0"

Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
Unbalanced Tee & Plug				
24"	2'-10"	6'-0"	6'-0"	2'-9"
20"	2'-5"	5'-0"	5'-0"	2'-3"
18"	2'-3"	4'-6"	4'-6"	2'-0"
16"	2'-1"	4'-0"	4'-0"	1'-9"
14"	1'-11"	3'-6"	3'-6"	1'-6"
12"	1'-8"	3'-0"	3'-0"	1'-3"
10"	1'-6"	2'-6"	2'-6"	1'-0"
8"	1'-4"	2'-0"	2'-0"	1'-0"
6"	1'-2"	1'-6"	1'-6"	1'-0"
4"	1'-0"	1'-0"	1'-0"	1'-0"
Tee				
24"	2'-6"	6'-0"	6'-0"	3'-6"
20"	2'-4"	5'-0"	5'-0"	3'-0"
18"	1'-2"	4'-6"	4'-6"	2'-9"
16"	1'-6"	4'-0"	4'-0"	2'-6"
14"	1'-6"	3'-6"	3'-6"	2'-3"
12"	1'-3"	3'-0"	3'-0"	2'-0"
10"	1'-3"	2'-6"	2'-6"	1'-6"
8"	1'-0"	2'-0"	2'-0"	1'-6"
6"	0'-11"	1'-6"	1'-6"	1'-3"
4"	0'-10"	1'-0"	1'-0"	1'-0"

NOTES :
1. BLOCKING SHALL BE CLASS "C" CONCRETE ; "SACKCRETE" WILL NOT BE ALLOWED.
2. THE WATER LINE MUST BE LOWERED IN ORDER TO HAVE FIVE FEET (5') OF COVER AT THE BEND, TEE, REDUCER OR PLUG AT ALL LOCATIONS WHERE THESE FITTINGS MAY BE UTILIZED.
3. THE CONTRACTOR HAS THE OPTION TO USE RESTRAINED JOINTS IN LIEU OF OR IN ADDITION TO CONCRETE BLOCKING AS SPECIFIED IN SECTION 02660 OF THE SPECIFICATIONS.

Line Pressure = 200 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
90 DEGREE BEND				
* 12"	1'-4"	4'-6"	3'-6"	2'-2"
* 10"	1'-3"	3'-4"	3'-4"	1'-4"
8"	1'-0"	3'-4"	2'-3"	1'-8"
6"	0'-11"	3'-4"	2'-3"	1'-6"
45 DEGREE BEND				
* 12"	1'-4"	3'-9"	3'-6"	1'-8"
10"	1'-3"	4'-0"	2'-3"	1'-11"
8"	1'-0"	3'-4"	2'-3"	1'-8"
6"	0'-11"	2'-8"	2'-0"	1'-0"

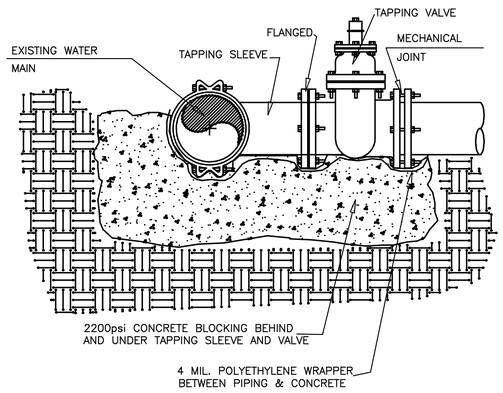
Line Pressure = 200 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
11 1/4 DEGREE BEND				
12"	1'-2"	2'-0"	2'-0"	1'-0"
10"	1'-0"	1'-8"	1'-8"	1'-0"
8"	0'-10"	1'-5"	1'-5"	1'-0"
6"	0'-9"	1'-0"	1'-0"	1'-0"
22 1/2 DEGREE BEND				
12"	1'-2"	3'-7"	2'-3"	1'-3"
10"	1'-0"	2'-7"	2'-3"	1'-0"
8"	0'-10"	1'-8"	2'-3"	1'-0"
6"	0'-9"	1'-9"	1'-3"	1'-0"

Line Pressure = 200 PSI Soil Pressure = 2000 PSF				
Pipe Size X	A	B	C	D
Unbalanced Tee & Plug				
* 12"	1'-8"	6'-0"	3'-6"	2'-4"
* 10"	1'-6"	4'-8"	3'-6"	1'-9"
8"	1'-4"	4'-4"	2'-3"	1'-8"
6"	1'-2"	2'-3"	2'-7"	1'-0"
Tee				
* 12"	1'-4"	6'-0"	3'-6"	2'-4"
* 10"	1'-3"	4'-8"	3'-6"	1'-9"
8"	1'-0"	4'-4"	2'-3"	1'-8"
6"	0'-11"	2'-3"	2'-7"	1'-3"

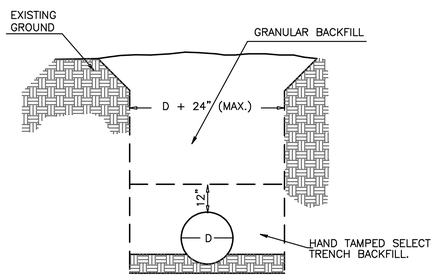
Line Pressure = 200 PSI Soil Pressure = 2000 PSF				
REDUCER SIZE	A	B	C	D
REDUCER				
12"X10"	1'-4"	4'-0"	3'-9"	0'-11"
12"X8"	1'-0"	4'-0"	4'-0"	2'-0"
* 12"X6"	1'-0"	4'-9"	4'-0"	2'-0"

NOTES :
1. BLOCKING SHALL BE CLASS "C" CONCRETE; "SACKCRETE" WILL NOT BE ALLOWED.
2. * THE WATER LINE MUST BE LOWERED IN ORDER TO HAVE FIVE FEET (5') OF COVER AT THE BEND, TEE, REDUCER OR PLUG AT ALL LOCATIONS WHERE THESE FITTINGS MAY BE UTILIZED.
3. THE CONTRACTOR HAS THE OPTION TO USE RESTRAINED JOINTS IN LIEU OF OR IN ADDITION TO CONCRETE BLOCKING AS SPECIFIED IN SECTION 02660 OF THE SPECIFICATIONS.

THRUST BLOCKING DETAILS

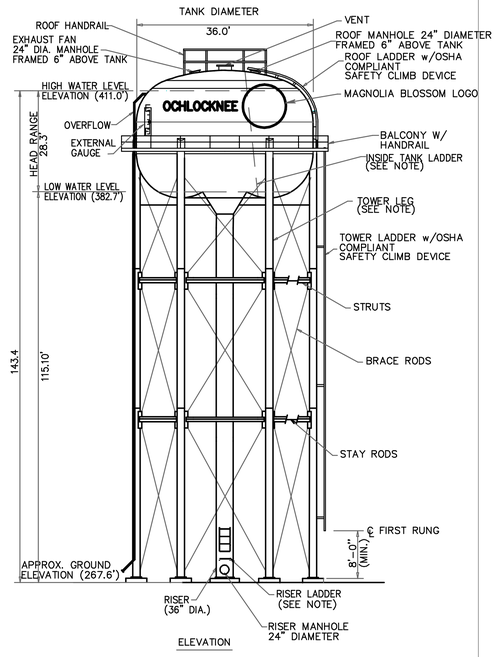


WATER TAPPING SLEEVE & VALVE



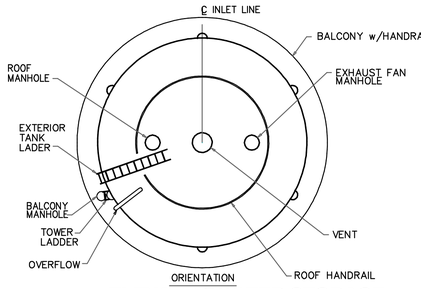
NOTES:
1. SEE SPECIFICATIONS SECTION 02225(EARTHWORK FOR UTILITIES) FOR TRENCH BACKFILLING METHODS.
2. SEE SPECIFICATIONS SECTION 02200(EARTHWORK) FOR TRENCH BACKFILLING MATERIALS.
3. ALL BACKFILL FROM TOP OF BEDDING SHALL BE SUFFICIENTLY COMPACTED TO PREVENT FUTURE SETTLEMENT.

WATER MAIN BEDDING

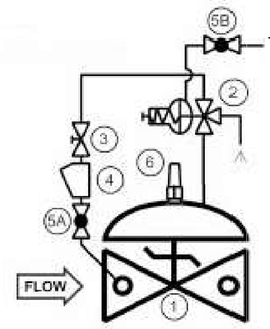


ELEVATION

NOTES:
DESIGN:
TANK AND TOWER SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH AWWA D100–96 AND PROJECT SPECIFICATIONS.
WIND LOAD: 101 MPH
SEISMIC ZONE: 1
MATERIALS:
STEEL PLATE: ASTM A283 GR. C / A36
STRUCTURAL STEEL SHAPES: ASTM A36
BRACE RODS AND STAY RODS: ASTM A36
LADDER RUNGS: ASTM A706
GENERAL:
- ACCESSORIES SHOWN ON ELEVATION DRAWING ARE ROTATED FOR CLARITY.
- ALL HANDRAILS, PLATFORM LANDINGS, WALKWAYS, LADDERS, AND SAFETY CLIMB DEVICES SHALL CONFORM WITH CURRENT OSHA STANDARDS.
- SEE PROJECT SPECIFICATIONS FOR SHOP AND FIELD PAINT REQUIREMENTS.
- STERILIZE TANK IN ACCORDANCE WITH AWWA C652–92 AND PROJECT SPECIFICATIONS.
- NUMBER OF TOWER LEGS PER MANUFACTURER'S STANDARD DESIGN.
- TANK TO BE PAINTED WITH LETTERED MESSAGE IN TWO (2) PLACES, ORIENTATION TO BE SPECIFIED BY THE CITY.
- INLET AND OUTLET PIPES ARE TO BE SEPARATED. OUTLET LOCATION TO BE DETERMINED BY TANK MANUFACTURER AFTER MODELING FOR WATER MIXING. MODEL TO BE SUBMITTED TO ENGINEER FOR OUTLET LOCATION APPROVAL.
- INLET PIPE TO BE A 4" PIPE THAT IS REDUCED TO A 2" CONICAL ORIFICE ORIENTED IN A VERTICAL DIRECTION.
- INLET PIPE TO BE 4" DIAMETER SCH 40 STEEL AND OUTLET PIPE TO BE AN 8" DIAMETER SCH 40 STEEL PIPE. STEEL PIPE WILL TRANSITION TO DUCTILE IRON PIPE AT GROUND SURFACE.



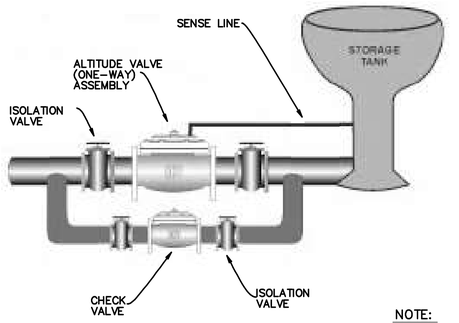
ELEVATED WATER STORAGE TANK



NOTE: ON 10" OR LARGER VALVES, THE ALTITUDE PILOT OPERATES THE MAIN VALVE THROUGH A HIGH–CAPACITY THREE WAY AUXILIARY PILOT. THIS COMPONENT SHOULD BE LOCATED BETWEEN THE ALTITUDE PILOT AND THE NEEDLE VALVE.

COMPONENTS
1. BASIN CONTROL VALVE
2. ALTITUDE PIVOT
3. NEEDLE VALVE
4. Y–STRAINER
5. ISOLATION BALL VALVES
6. VISUAL INDICATOR

ALTITUDE VALVE (ONE-WAY FLOW) TYPICAL SCHEMATIC



NOTE:
1. SENSE LINE TO BE 1/2"OD OR 3/8" PIPE AND TO BE CONNECTED WITHIN 40 PIPE DIA. OF TANK WALL OR RISER.
2. SENSE LINE SHOULD SLOPE UPWARDS TO THE TANK TO PREVENT ACCUMULATION OF AIR.
3. FINISH GRADE TO SLOPE AWAY FROM VALVE ASSEMBLY.
4. INSTALLATION PER MANUFACTURER.

ALTITUDE VALVE (ONE-WAY FLOW) PROFILE VIEW CONNECTION

N.T.S.

GEORGIA811 Utilities Protection Center, Inc.

UTILITY DISCLAIMER

EXISTING UTILITY LINES SHOWN ARE APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATIONS SHALL BE REPORTED TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. DAMAGE TO EXISTING UTILITY LINES RESULTING FROM CONTRACTOR NEGLIGENCE SHALL BE REPAIRED AT CONTRACTOR EXPENSE.

GEORGIA REGISTERED No. PE044795 PROFESSIONAL ENGINEER THERESA P. YORK

YORK & ASSOCIATES ENGINEERING, INC.
308 E. Water Street, Bainbridge, Ga 39817
Tel 229.248.0141 Email: info@yorkassociates.net

ELEVATED WATER STORAGE TANK &WATER TREATMENT BUILDING– DWG– DW2020013

City of Ochlocknee

DETAILS

Revisions		Date
1	LAST NOTE ON ELEVATE WATER STORAGE TANK ADDED	12/4/21

Drawn: TPY
Designed:TPY
Checked: JDY
Job No.: 2020-009
Scale: NOTED
Date: 09/16/2021

Sheet C6 of 19

Project Desc.: Path: G:\PROJECT\2020\2020-09\09062021STE.pro Plot Date/Time: Sat Dec 4,2021 / 13:30:48