SECTION 00 91 13
ADDENDA

ADDENDUM:	**No. 2**
ADDENDUM DATE:	**August 26, 2024**
BID DATE:	**August 29, 2024**

This **ADDENDUM** is issued to institute the included changes and/or deletions to the Plans and Specifications for the **IFB# 026-45 HALL COUNTY-SPOUT SPRINGS WATER RECLAMATION FACILITY EXPANSION TO 1.6 MGD** project and hereby becomes a part of said Plans and Specifications.

Where an item on the original Plans and Specifications is amended, voided, or superseded by a modification contained in the **ADDENDUM**, the provisions of such item not specifically amended, voided, or superseded shall remain in effect.

Questions are in normal text.

Answers to questions are in bold and italics.

CONTRACT TECHNICAL SPECIFICATIONS

1. **Specification 33 11 00 2.2 H. 1** calls out the Lining for the Buried Ductile Pipe to be P401 lined, and 33 11 00 2.2 H.2 calls out the Lining for Exposed Ductile Iron Pipe to be Cement Lined. Is this correct or should both locations be P401 lined or cement lined? Will the Ductile Iron Fittings lining match the pipelining as well?

   All ductile pipes with the exception of Potable Water shall be P401 lined (buried or exposed). The ductile fittings will match the pipe lining.

2. **Specification 33 11 00, 1.4, E. 2.** states "Mechanical joints may not be used as a restrained joint", however 2.2, B, 3 allows MJ joints to be restrained by Megalugs (or equal). Please confirm a MJ joint with wedge action restraint gland/accessories are considered a restrained joint.

   Wedge action restraint gland will be allowed as long as 3-16 inch gland has a pressure rating of 350 psi and for 18 inch and above the gland pressure rating must meet 250 psi.

3. **Specification 33 11 00, 2.2, B.** states "*Pipe joints shall be the type specified on the project plans*." The project plans don't appear to call out a pipe joint type for the various pipe lines. The only note found is "*ALL PROPOSED DUCTILE IRON FORCE MAINS AND WATER MAINS SHALL CONSIST OF RESTRAINED JOINT PIPES AND FITTING.*" Based on this information should all piping be provided as push joint pipe with MJ fittings (and MJ glands), unless it is a water main or called out on the drawings to be a "Force Main"? If not please provide a restraint schedule (indicating various services and locations and if restraint is required.

   Force mains and potable water mains are to be retained joint. Use of thrust blocking or mechanical restraint (preferred) is acceptable.

4. **Specification 31 23 33, 3.8** Backfilling Trenches states "Place #57 stone for pipe bedding and hunch to 1 foot above the pipe." However, the bedding details on drawing D-C-2 (Standard GS-12) conflict with this. Please clarify the bedding and haunching requirements.

   Unless noted otherwise on the plans, use Type 3 bedding for process piping. For force mains and potable water mains use Type 5 bedding. For piping installed in a rock trench use Type 4 bedding.

5. **Specification Section 32 31 00** - **Remove** and **Replace** with the attached.

6. **Specification Section 09 91 00** - **Remove** and **Replace** with the attached.

7. **Add Specification Section 00 62 76** - **Application for Payment.**

8. **Add Specification Section 00 65 16** – **Certificate of Substantial Completion.**

9. **Bid Form Section 00 41 43** - **Remove** and **Replace** with the attached.

10. **Appendix A** - **Remove** and **Replace** the Aqua Aerobics proposal with the attached.

11. **Specification Section 43 25 00** - Refer to 1.3A, **Add** Grundfos to the name of approved suppliers.

12. **Specification Section 43 26 00** - Refer to 1.3A, **Add** Grundfos as an approved supplier.

13. **Specification Section 46 21 13** - Refer to 2.1A, **Add** Aqualitec as an approved supplier.

CONTRACT DRAWINGS

1. **Drawing 9-E-1** – Lights are wall packs. **Change** fixture type "B" to "E" for all lights.

2. **Drawing 1-E-1** – On the lighting fixture schedule, fixtures type D, E, G, and H shall be furnished with integral photocells.

3. **Drawings 3-C-4 and #-C-5A** - **Remove** and **Replace** with the attached.

4. **Drawing 3-C-5C** - **Add** to the set.

5. **Drawing 3-C-6G** - **Add** to the set.

6. **Drawing 7-M-1** - **Remove** and **Replace** with the attached.

7. **Drawing 7-M-2** - **Remove** and **Replace** with the attached.

8. **Drawing 7-M-4** - **Remove** and **Replace** with the attached.

CONTRACTOR QUESTIONS

1. We are submitting CEM-KOTE™ CW PLUS Capillary/Crystalline Waterproofing for your consideration.

   Approved.

2. If existing cable length is going to the existing MCC is not long enough to reach the new MCC will splicing be permitted or will entire run have to be replaced?

   The entire cable run will need to be replaced if the existing cable lengths going to existing MCC are not long enough.

3. If the cable above will not work will there be a change order allowed for the cost of new cables and or splicing?

   No change order will be provided.

4. If cables will not come out of existing conduits to be rerouted to new MCC will splicing be permitted or will run have to be replaced?

   If cables do not come out of existing conduits or existing duct bank has failed, splicing will be allowed.

5. Wall packs on electrical building are as H fixtures. H is a pole mounted fixture. Is the correct fixture an E fixture? Please clarify.

   Yes, the electrical building lights should be Type E wall packs.

6. Duct Bank 12 is shown to go to gate. Can any detail be shown for gate equipment? Will a disconnect be required. Is there opener and or a pedestal?

   Please include a NEMA 4X disconnect for the gate.

7. Where is the Cat7 cable in duct bank 12 to be terminated. What panel and building?

   The Cat 7 cable will be terminated in a communication module provided by the gate manufacturer.

8. What DR rating should the 12" HDPE Plant Drain Pump Station Reroute be? Located on Drawing 6-C-6F. We couldn't find a specification for that.

   HDPE Pipe Specification, Add to sheet 6-C-6F.

   Pipe shall be made of HDPE material. The polyethylene compound shall be suitably protected against degradation by ultraviolet light using carbon black of not less than 2 percent. The manufacturer of the HDPE resin shall certify the cell classification indicated. Pipe sizes 3" and larger shall have a manufacturing standard of ASTM F 714, while pipe smaller than 3" shall be manufactured to the dimensional requirements listed in ASTM D 3035.

   Dimension Ratio (DR) shall be DR 11.

   Pipe shall be Ductile Iron Pipe Size (DIPS)

   Pipe shall meet AWWA C901 (1/2" to 3") or AWWA C906 (4" to 63").

   Pipe shall be color coded for the intended service. The color coding shall be permanently co-extruded stripes on the pipe outside surface as part of the pipe's manufacturing process. Color coding shall be green for sanitary sewer or force main.

   HDPE Fittings

   <u>Butt Fusion Fittings</u>: Fittings shall be PE3608 HDPE, minimum cell classification of 345464C as determined by ASTM D 3350 and approved for AWWA use. Butt Fusion Fittings shall have a manufacturing standard of ASTM D 3261. Molded & fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified in the plans. Fabricated fittings are to be manufactured using Data Loggers. Temperature, fusion pressure, and a graphic representation of the fusion cycle shall be part of the quality control records. All fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half times the Working Pressure Rating (WPR) of the fitting.

   <u>Electrofusion Fittings</u>: Fittings shall be PE 3608 HDPE, minimum cell classification of 345464C as determined by ASTM D 3350. Electrofusion Fittings shall have a manufacturing standard of ASTM F 1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. All electrofusion fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half times the Working Pressure Rating (WPR) of the fitting.

Flanged and Mechanical Joint Adapters: Flanged and Mechanical Joint Adapters shall be PE 3608 HDPE, minimum cell classification of 345464C as determined by ASTM D 3350. Flanged and Mechanical Joint Adapters shall have a manufacturing standard of ASTM D 3261. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans.

Fittings shall have the same pressure rating as HDPE Pipe.

9. We find no pipe bolt specifications.

    a. For flanged pipe will plain CS A307 Grd. B for non-submerged locations & 316 SST for submerged locations be acceptable?

    All flange bolts to be stainless steel grade 316.

    b. For buried MJ fittings will Corten be acceptable?

    Acceptable as long as the bolt meets the pressure rating of the pipe.

10. 43 25 00 - Submersible wastewater pumps, would you please review the attached Grundfos SE1 selection and consider it as an "approved equal" manufacturer?

    Approved.

11. 43 26 00 - Vertical multistage pumps, would you please review the attached Grundfos CR 5-9 selection and consider it as an "approved equal" manufacturer?

    Approved.

12. 46 21 13 - Chain and Rake bar screen, would you please review the Aqualitec proposal and consider it as an "approved equal" manufacturer?

    Approved.

13. 46 23 23 - Grit removal equipment, would you please review the Aqualitec proposal and consider it as an "approved equal" manufacturer?

    Not approved.

14. Drawing 7-M-2 between the Existing Blowers and SBR-2A & 3A there are approximately three sections of bold air piping with a callout “MODIFIED AIR PIPING”, but there are not any existing drawings showing how the existing piping is configured. Please provide existing drawings to determine the modification scope.

    See Exhibit 1 for the best available information. This exhibit is for information only and not considered part of the bid documents.

15. Drawing 7-M-2 calls out "AIR PIPING SHOWN FOR REFERENCE ONLY BY OTHERS" and points to the pipe penetration at SBR-2A. Please clarify and confirm the Air Piping is existing from outside of the tank wall to the inside. It also appears the modified air piping to SBR-2A is drawn as flat, but in the photo on the same drawing shows the air piping going through the wall above ground. If modified air piping needs to change elevation please provide revised drawings.

    The air piping exists outside the basin wall. The outside SBR riser and pipe penetration through the wall are to be reused. The piping inside the SBR will be provided by Aqua Aerobics for installation by the Contractor. Refer to Drawing 7-M-3 and Note 1 on 7-M-4.

16. Drawing 3-C-4 calls out "CONNECT TO EX. PLAN DRAIN PUMP STATION FORCE MAIN" (near match line on right side of drawing) but the piping is not bold and appears to be existing. A little farther down on the pipeline closer to the match line another call out states "ABANDON IN PLACE". Then on Drawing 3-C-5A the pipe is highlighted green and a note calls out "EX. 6" PLANT DRAIN TO PS", but the pipe is drawn as a much larger pipe. Towards the bottom a note states "PROPOSED 6" BEND" but there is nothing there. The scope of work is very unclear and appears a layer or more of the drawing file was left off/hidden when plotting to PDF. Please provide revised drawings showing the piping scope.

    Drawings 3-C-4 and 3-C-5A have been revised. See attached.

17. Drawing 3-C-4 appears to show new piping connecting to existing south/west of the Headworks (Headworks Effluent and Plant Drain PS Force Main), but there are no call outs, and nothing is shown on 6 series drawings. Please confirm the bold lines on the existing piping is not indicating any "new" work for this contract.

    This is not new work. This piping exists.

18. Drawing 3-C-4 calls out Prop. Reunion Force Main Re-Route and appears to show a dashed bold line connecting to a lighter line weight pipe outside an existing SS MH. The existing piping that will not be in service after the re-route is not shown. Please clarify scope (abandon or remove). If removal, please provide drawing showing routing.

    Connect the re-routed reunion force main to the existing force main (12-inch) just outside the existing manhole. A reconnect note is shown at the top of Drawing 3-C-5A.

19. Drawing 3-C-4 in plan view calls out "*EX. 28 LF 18" DIP*" between Doghouse MH2 and "Prop. M.H.", however the profile shows this as new piping. Please clarify if this piping is to be replaced or left as existing.

    The 28 LF section of 18-inch DIP to remain in place.

20. Drawing 3-C-4 "PROP. M.H." and "PROP. SSMH" call out Note 5 which is to remove and replace manholes and piping (and coat manholes with Spectra Shield). The piping between the two MH's is called out as 15" DIP, but 15" DIP is not an available size. Should 16" be provided?

    Provide 16-inch DIP.

21. Drawing 3-C-18 shows the proposed 8" Potable Water line (tapping from main in road R/W) and heading towards the plant with continuation on 3-C-5B, however the drawing says scale "NTS". There are no other drawings that are scaled that show this portion of the work. Please provide a distance/length of 8" Potable Water Line. Note there is no match line on 3-C-5B, so distance might be to a reference point on that drawing (to fence crossing or to 18" Gravity Sewer crossing).

    215 feet of 8-inch DIP from the street connection to the proposed fire hydrant located adjacent to the proposed vac truck station is required. Fittings are needed as required.

22. Drawing 3-C-5B & 3-C-6 show a 6" DIP Water Line heading towards the Dewatering Building, but there is a missing sheet to show the length between these drawings and drawing 3-C-5A when the pipe is shown again much farther away. Please provide the missing drawing.

    Refer to the new Drawing 3-C-5C.

23. Drawing 3-C-5A shows a 2-½" Potable Water to Dewatering Building, but there are no drawings showing what happens to the piping after it approaches the building envelope. Please provide additional drawings/details on where the pipe goes/connects.

    Connect the new piping to the existing piping outside the building footprint. Field locate the existing piping. See exhibit 2 for best available information. Also refer to Drawing 11-M-4. Exhibit 2 is for information only and not considered part of the Contract Documents.

24. Drawing 3-C-5A at top of page calls out "CONNECT RE-ROUTED FORCE MAIN TO EXISTING 12" DIP" and points to the Reunion Force Main. Just lower on the piping there is another note "SECTION OF REUNION FORCE MAIN TO BE ABANDONED IN PLACE". It seems the same Reunion Force Main also is shown on drawing 3-C-4 (called out as "PROP. REUNION FORCE MAIN RE-ROUTE") but there appears to be a missing page as not all of the piping is shown. Please provide missing drawing showing all of the Reunion Force Main.

    Refer to the response to Question 22. Refer to profile 10, Drawing 3-C-6E for total force main re-route length.

25. Drawing 3-C-5, shows an existing 8" Drainpipe West of MH 14A (see bottom right of drawing), but there are no drawings showing what happens to the existing 8" drain pipe? Does it get removed or plugged after MH14A (to East?), was there a MH there before? Please clarify scope.

    Refer to the attached Drawing 3-C-6G for information.

26. Drawing 6-C-6F shows Profile 12 which calls for HDPE piping. The bid specifications don't include HDPE piping. Please provide HDPE specification or revise piping material.

    Please see response to Question 8.

27. Drawing 3-C-5A, Note 1 only allows 2 hours of downtime (outage) for the Reunion Force Main and the Plant Drain Force Main. The Reunion FM tie-in will require plugging in the manhole to keep the other influent lines from back feeding, and draining of the pipe before cutting will take most if not all of the two hours not allowing for the two tie-in points to be done in the remaining time. Can the outage be extended longer if done during off peak hours (midnight to 5am)? Temporary piping/pumping will add extra cost.

    Off peak hour outage is possible. Another option is to provide temporary piping connections to the small existing reject pond for both the plant drain and the reunion force mains. The existing reject pond has three days of storage but coordination with the plant staff is essential for the plant staff to prepare for using the reject pond.

28. Please provide flow rates and working pressures for the Reunion Force Main, Plant Drain Force Main, and 18" SS that comes onsite from North/East of Admin Building.

    Reunion flow rate pump station has a duty point of 1591 gpm at 216'TDH. The plant drain pump station has a duty point of 275 gpm at 64'TDH. Assume the 18-inch flow is 700 gpm. The Friendship Road force main pump station is not in service at this time.

29. Drawing 11-M-5 calls out CL EL 976.00 for the buried 8" SS Air pipe, but 11-M-4 and 11-M-2 show CL EL 973.00. Please confirm correct elevation.

    The 11-M-5 CL elevation should READ "CL 973.00".

30. Drawing 11-M-4, Note 3 calls for stainless steel condensate drains on the buried air piping, but is shown in part on Section B 11-M-5 as PVC which calls to daylight the pipes. Which material condensate pipe is correct? With the buried 8" Air EL possibly being CL EL 973 (separate RFI) the drain lines would have to go far to daylight. Instead, would a draining into #57 stone option be considered (assuming condensation drain volume would be limited and infrequent)?

    Condensate drain line material shall be stainless steel. Instead of draining to daylight, pipe to discharge into a #57 stone sump.

31. Drawing 3-C-5, SBR-3 shows two "PROPOSED 16"x12" TEE" connecting to existing DIP (Decant), but the tie-in point is not clear. One location appears to show an existing 90* bend and the other location a bold bend (indicating new), however there are no drawings or callouts to confirm this. Please confirm existing vs proposed piping modifications for these items.

    Refer to Drawing 7-M-6, Detail 9 for piping connection near wall for proposed decanters.

32. Drawing 7-M-16, Section B is missing the CL EL of the buried 8" SS Air Piping. Please provide.

    CL elevation at the buried 90-degree bend is 793.00.

33. Drawing 7-M-3 and 7-M-8 show 8" SS Air Piping coming up out of the ground but with no section views, pipe elevations, or other details. Notes 2 & 3 on 7-M-7 state Aqua Aerobics will design the proposed air piping layout (after the bid, since it is not included with the bid). Aqua Aerobics is the pre-selected/sole sourced equipment provider for this system, so it seems most appropriate for the design of the piping system to be completed prior to bid. Note that the Aqua Aerobics scope included in Appendix A does not include any design. Does the additional design scope need to be negotiated with Aqua Aerobics by the Contractor in their bid, or will the Owner handle this? Please provide additional information on the air piping in the basin for contractors to base their bid on.

    The Contractor is to core the exterior SBR No. 4 basin wall for proposed air piping. Install proposed air piping with link seal and grout fill gap on both faces. Contractor to provide schedule 10S air piping riser with 90-degree bend, stainless steel spool with weld neck flange and flanged metal bellows expansion joint to match the pipe size.

    For SBR 2A and 2B the intent is to reuse the exterior air piping riser, wall penetration and flanged metal bellows. Contractor is responsible for connection of new interior manifold piping to existing wall penetration.

    Aqua Aerobics will provide interior stainless steel manifold piping. The Aqua Aerobics scope of work has been adjusted and included in this Addendum.

34. Specification 40 05 25, 3.2, A. Only allows field welding at wall penetrations and when approved by the Owner's PM or designee. However, drawing 3-C-4 shows several buried 8" SS Air pipes that exceed a pre-welded shipping length and will require buried joints. In addition, on the same page appears to show modifications to several existing buried 8" SS Air Pipes that will likely require field welding. Please see the following questions:

    a. Is it your intent to have buried flanged joints?

       No buried flange joints.

    b. Can Victaulic Couplings be used for buried field joints?

       Butt welding is preferred for buried field joints. For exposed air piping Victaulic bolted split sleeve coupling system, butt weld or flanged is acceptable.

    c. Is field welding allowed to join existing SS Air piping and proposed SS air piping? If not, please provide method and or products.

       Yes, field welding is acceptable.

d. What is the existing SS air piping material (type and wall thickness)?

Schedule 10S stainless steel.

35. Specification 40 05 25, 2.2, 3, A, calls for Gaskets to be "spiral wound, Type 316 stainless steel strip with flexible graphite filler, and carbon steel centering ring suitable for use with 150 pound raised face flange.". However, drawing 7-M-7, Note 7 calls for Viton Gaskets for all air piping is required. Please clarify which gasket should be used.

Use Viton gaskets for all air piping.

36. Drawing 7-M-16 and 3-C-4 show buried Stainless Air Piping and Spec 40 05 25, 2.2, D, 2 calls for Wall thickness to be Schedule 5S. Is this thin of a wall thickness appropriate for buried pipe under roadways? Also, what bedding detail should be used for buried Stainless piping as drawing D-C-2 "Pipe Bedding and Haunching Details" only mentions PVC and DIP.

Pipe shall be schedule 10S stainless steel, bury in native soil free of organics. Polywrap buried pipe as additional measure of corrosion protection.

37. Specification 33 11 00, 3.9 Backfilling, 2. Type 5 calls for 100% compaction for trench backfill. Please clarify where Type 5 Condition applies.

Refer to the response to Contract Specifications Question 4 of this addenda.

38. Regarding the modifications to existing Digesters 1 & 2 and note 2 on drawing 7-D-1. Of the 1' of remaining material, is there an anticipated amount of solids/grit remaining? Can the remaining 1' of wastewater, sludge, and grit be placed onsite so it is not hauled off (taken to the proposed onsite Vac Truck Station)?

The material removed from the existing digesters needs to be dewatered (on or off site) with the residual solids disposed of in a landfill. All water removed during the dewatering process can be returned to the treatment plant for re-processing thru the headworks.

39. Drawing 3-C-6A, Profile 4, shows a sloping 16" DIP between two existing structures. The details on the Mechanical drawings show core drilling and double link seals with the pipes penetrating the concrete level. Coring at an angle can be problematic, has using two fittings (bends) been considered instead?

Multiple fittings will be allowed.

40. Drawing 7-M-4, Detail 4 calls out "REPLACE EXISTING 3" DIP WAS LINE W/ 4" DIP." However, Drawing 3-C-5 does not show replacing the 3" WAS line with 4". Please clarify which drawing is correct, and if 7-M-4 provide limit.

Refer to Drawing 7-M-4 attached for clarification.

41. Drawing 3-C-5 calls out "CONNECT PROPOSED WAS TO EXISTING 3" DIP SLUDGE LINE" at SBR-1B. The existing WAS line isn't shown. Is there a plug/cap at this location, or is additional demolition work required?

    The WAS line from SBR-1B is an existing 3" DIP. Remove the existing 3" DIP and replace with 4-inch and connect to where shown on 7-M-1.

42. Accessing the quantity of rock blasting and removal can be difficult. Please consider adding unit prices to the bid form for mass and trench rock removal.

    All excavation is unclassified.

43. Are there any previous blasting or rock removal mapping/submittals from previous contract(s) to indicate rock removal limits previously done? There are several pipe and structure tie-ins that rock removal would be very challenging due to proximity to existing features if the rock was not previously removed far enough away from the existing features.

    Best available information regarding approximate rock removal limits would be to interview the plant operations staff in combination with an in-depth review of the Geotechnical Report provided in Appendix of the Specifications.

44. Specification 31 23 33, 3.15 Disposal of Excess Excavation states "*Transport excess excavated material, including unsatisfactory soil material, to any designated spoil areas, and spread as specified; otherwise remove from the Owner's property and construction site, and legally dispose of such material.*", however drawing 1-G-1, Note 7 states "*SPOIL ALL SOIL ON SITE*".

    1. Are there any specific areas where the material will be stockpiled?

       Locations are available on site near the lower pond. Coordinate the available locations with Hall County. Hall County cannot guarantee all material excavated can be stockpiled on site.

    2. Are there any stockpiling requirements?

       Finish grade and permanent grassing with appropriate erosion control measures at all times.

    3. Can rock (removed by blasting or other means) be also spoiled on site at areas designated by the Owner?

       Large rock and boulders to be disposed of off-site.

45. Drawing 3-C-5 states "*ALL PROPOSED DIP FOR USE AS A WAS FORCE MAIN TO BE COATED WITH PROTECTO 401, TYP.*" Which implies the other services that are not a WAS Force Main are not lined with Protector 401 coating. However, specification 33 11 00, 2.2, H., 1. calls for zinc coating and Protecto 401 lining for all buried pipe. Please confirm all buried ductile iron pipe and fittings (except Potable Water) should be lined with Protecto 401. Also please confirm exposed piping should have Protecto 401 where specifically called for on the drawings (WAS FM service, and other services/locations if called for).

    Except for Potable Water all ductile pipes shall be P401 lined (exposed or buried). The ductile fittings will match the pipe lining. Provide exterior zinc coating as specified Section 33 31 00 2.1C. on all buried pipes.

46. It is common/standard practice that the Process Instrumentation and Control supplier/contractor supply all the instrumentation (except items included in other equipment scopes of supply) however there appears to be some item(s) not included in Aqua Aerobics scope (Exhibit A) that are required on the project (10" Magnetic Flow Meter, Ultrasonic Level Transmitters, Digester Level Switch Floats/Transmitters, for example). Please consider having all the instrumentation supplied by one Process Instrumentation and Control supplier. This typically avoids additional costs (reduced trips for startup/issues) and coordination issues.

    Understood. The Contractor to supply instrumentation not in Aqua Aerobics or Trojan's Scope of Supply.

47. Specification 33 39 00, 2.5 Manhole Coatings states "Manholes requiring coating shall be…". Please clarify what manholes get the coating, as only a few manholes near the headworks (Drawing 3-C-6 for example) are called to receive a "Spectra Shield", which is a different product.

    Spectra Shield coating is required on proposed MH's 1,2,3 and the two replacement manholes near the existing headworks.

48. Drawing 1-G-5, Standard GN-7, Note 3 states "ALL WETWELLS, MANHOLES WITH FORCE MAINS ENTERING AND VALVES VAULT SHALL BE COATED WITH 2 DIFFERENT COLOR COATS OF COAL TAR EPOXY ON OUTSIDE. THE INSIDE SHALL BE COATED WITH SPECTRA SHIELD LINING SYSTEM". Please confirm the only structures that this note applies to are the two manholes on Drawing 3-C-6 that have "SEE NOTE 5". If there are any other structures that should receive the coating and lining please clarify, as we did not see any other noted.

    The post equalization meter vault requires outside coating. No interior coating for this vault is required. The manhole lining with Spectra Shield is required for proposed MH's 1, 2, 3 and the two replacement manholes near the existing headworks.

49. The backfill requirements under paving are unclear Drawing D-C-2, Standard P-4 provides a detail for pressure pipe that calls for Crushed Concrete, Limestone Base, or Compact GAB backfill for the 8" (base) below bottom of pavement.

    a. Can native soil be used for the material in between the 8" base and the bedding/haunch material?

       Yes

    b. What is the detail for non-pressure pipe (we believe pressure pipe = force main, please clarify if incorrect)?

       Correct, pressure pipe means force main.

50. What are the details (thickness, reinforcing) of the existing concrete pavement shown on 3-C-5 next to SBR-2B and 3B? The modifications to 6" Drain are too close to the pavement for it to remain, and a section will have to be removed and replaced.

    Existing concrete pavement include 6 inches of GAB under the pad. Concrete is 8 inch thick with # 3 rebar at 12" E.W.

51. What are the details (thickness, reinforcing) of the existing concrete pavement shown on 3-C-5A in front of Dewatering Building? The proposed 6" Water Main will require a section of the paving to be removed and replaced.

    Existing pavement has 8" GAB under concrete. Concrete pavement is 7" thick with W6x6 - W2.2.9 x W2.9 WWF.

52. During the site visit the work hours were stated to be from 8am to 6pm, Monday through Friday.

    a. Please consider allowing work to start at 7am (earlier start allows employees to better avoid peak rush hour traffic, and during summer months shifts the work into cooler temperatures). Noting that concrete pours and likely piping tie-ins will occur outside of these times as is standard practice within the industry.

       Hall County will consider the earlier start time.

    b. Also please consider allowing Saturday work as an allowed day for the Construction duration, as due to the scheduling constraints and limited project duration, it is anticipated that working Saturdays regularly will be required.

       Hall County will consider Saturday work to meet schedule obligations.

c. Please confirm that the Contractor will not be charged any Owner and/or Engineer costs for working beyond a 40-hour week.

Confirmed.

53. Please postpone the bid due date by two weeks to allow time to coordinate the changes from forthcoming addendum(s) with suppliers and subcontractors. Please also consider postponing the question deadline an additional two weeks as well.

Bid date has been postponed one week.

54. The Contract Time for Substantial Completion is only 510 calendar days (17 Months), however due to the sequencing and site conditions we do not believe this can be achieved, especially with limited work hours and not working Saturdays (unless specific requested needs arise). A considerable amount of utility reroutes need to occur prior to starting the Aerobic Digester structures, and the existing SBR changes cannot occur until the new Digesters and SBR is accepted and operating. There is also a significant amount of sequencing and maintenance of plant operations that must occur for the numerous pipe reroutes and tie ins; structural, process, and electrical modifications, and not to mention material lead times that extend the project duration beyond what is considered more typical. Please consider allowing 24 months for substantial completion.

Hall County will extend the Substantial Completion to 20 months with an interim milestone of 17 months to have both the New Digesters and SBR number four in service.

55. Electrical contractors are expressing concern on lead times for the major electrical components, and how to address potential liquidated damages (bid/don't bid, included LD's in pricing or not) arising from material shortages and longer than anticipated/industry standard lead times. Please confirm if material shortages or long lead times are documented and delay the project completion, liquidated damages will not be accessed for the documented delay(s).

Hall County will consider factors outside the contractor's control when it considers assessing liquidated damages.

56. Regarding a Building Permit:

a. Is a building permit required?

Yes

b. If a permit is required, is the Contractor required to pay building permit fees?

For Bidding purposes assume no building permit fees.

c. If a permit is required, who is the issuing authority, Hall County or City of Gainesville?

Hall County.

57. The Electrical drawings appear to be included twice (Example: Volume 2 page 58 of 121 and page 90 of 121), is there any significance in why added twice?

The reference to the pages does not reflect HVAC work.

58. Please note the HVAC drawings are shown to be sorted by structure on the Drawing Index (Drawing 1- G-2) but they are grouped together starting on Volume 2 page 51 of 121. There have been some HVAC contractors confused, so hoping to clarify for all.

HVAC details 16-H-1, 16-H-2 apply to the proposed electrical building. HVAC details in Area 17 apply to the Administration Building HVAC work.

59. Exhibit A, Aqua-Aerobic scope lists 1 EA Submersible pump assemblies, but Specification 46 53 53, 2.7 lists 7 EA required. Please update Appendix A to include the missing pumps.

6 new pumps are required and will be supplied by Aqua Aerobics. Aqua Aerobics scope of supply has been revised. Refer to the attached revised Aqua Aerobics Proposal.

60. Exhibit A, Aqua-Aerobic scope doesn't list an electric winch assembly (shown on 7-M-14). One is required per 46 53 53, 2.9, D. Please confirm if either Aqua-Aerobic is supplying this, or if they are not required.

Contractor to provide the electric winch assembly.

61. Exhibit A, Aqua-Aerobic scope lists "Post-Equalization" 3 EA Submersible Pumps (Flygt NP-3127 6" Pumps), however Specification 43 25 00, lists Xylem, Homa, or Approved, and lists 8" pumps, which matches Drawing 8-M-2.

a. Please clarify which pumps should be provided?

General Contractor to provide the EQ submersible pumps. Aqua Aerobics will provide the WAS submersible pumps located in the SBR's.

b. If Spec 43 25 00 is correct, will Aqua-Aerobic scope be revised to remove these pumps?

Yes. See revised Aqua Proposal attached.

62. Exhibit A, Aqua-Aerobic scope lists 14 days of onsite supervision for the Aqua SBR, however, Specification 46 53 53, 3.2 lists the following:

    a. Paragraph B. 1. 1 day per basin (3 Days), 3. 14 Man Days (4 trips), and then

    b. Paragraph C. implies additional time for Blowers and Pumps. This appears to be more than the 14 days in Exhibit A (+17 days).

    c. Paragraph D. and E sum to 8 hours per piece of equipment.

    d. Paragraph E. 3. Calls for technical representative during the 12 months following startup. Please respond to the following:

    e. Is the 14 days included in Appendix A of onsite supervision for the Aqua SBR scope meet the minimum requirements? If not, how many days total is the minimum requirement.

    f. Will Appendix A be revised to add per 46 53 53, 3.2, E. the 12 months after startup of technical assistance hot-line (and 24-hour certified plant operator assistance) and four visits at 8 hours each (at Owner discretion).

    Response to questions 64 (a-e): Provide the following for the SBR:

    - ***4 Day(s) On Site for INSTALLATION SUPERVISION***
    - ***1 Trip(s) for INSTALLATION SUPERVISION***
    - ***4 Day(s) On Site for MECHANICAL SUPERVISION***
    - ***1 Trip(s) for MECHANICAL SUPERVISION***
    - ***4 Day(s) On Site for ELECTRICAL SUPERVISION***
    - ***1 Trip(s) for ELECTRICAL SUPERVISION***

    Response to question 64 f:

    The 24 Hotline is for the life of the equipment and provided by Aqua Aerobics. Delete the four site visits at 8 hours each from the scope of Supply.

63. The specifications are calling for a 1,600-amp ATS under one section and 800-amp ATS under another section, and they're calling for a NEMA 1 enclosure. The plans call for a 2,000-amp ATS in N12 enclosure, which should be correct on the size. Please confirm whether this needs to be a NEMA 1 or NEMA 12 for the enclosure.

    The Automatic Transfer Switch should be 2000A in a NEMA 1 enclosure.

64. Do we need both a 45kVA transformer and a mini power zone as shown on 1-E-3? Refer to Panel HC, downstream to XFMR-TC, then down to LC. We should be able to either eliminate the 45kVA transformer or change the mini power zone to a regular panel. Please confirm.

    Panel LC will not be a mini power zone. Provide panel as shown on panel schedule.

65. The fixture schedule shows Type C and Type D1 fixtures. I could not locate any of these types. Please confirm if these fixtures are needed.

    Fixture Type C and D1 are not used.

66. The Type H fixture shown in the schedule is an area LED on a 10' pole. There are two Type H on sheet 7-E-2, and then six on 16-E-1 that are shown mounted to the walls of the electrical building. I would assume we do not need a 10' pole for these six fixtures and that they're supposed to be wall pack. Please confirm.

    Confirmed. The 6 type H fixtures on 16-E-1 should be type E wall packs.

67. Sheet 11-E-1 shows two Type H at the top of the page, but the symbol for these matches Type G. Please confirm if these should be G or H fixtures.

    Confirmed. The two type H fixtures on 11-E-1 should be type G.

68. Will you accept AMTECH VFD & SOFT STARTER as an equal?

    Amtech VFD and Soft Start is acceptable.

69. Would it be acceptable to close the road between the existing blowers and existing Dewatering Building (area in red) while constructing the new SBR 4? An additional GAB drive (area in green) to the existing Dewatering Building would be added so their trucks could still access the building as necessary during the construction. The road would be closed for up to 6 months. Please advise if this will be acceptable.

    This is acceptable.

70. Self-priming pumps can struggle with re-prime on long horizontal pipe runs. The new grit pump has about an 8' horizontal pipe run. Can we place it closer to the grit unit?

    During construction re-positioning of the pump location closer to the grit chamber to reduce pipe run length will be considered.

71. Please correct the listed scale on plan sheets 7-M-1 & 7-M-2.

    The scale on sheet 7-M-1 and 7-M-2 has been corrected. See reissued sheets.

72. Specification section 03 10 00 states "manufactured forms, shall not be used unless their use has been authorized by the engineer". Will manufactured forms with plywood faces be acceptable?

    This is acceptable.

73. Can the question deadline be extended one week?

    No.

74. Can the bid date be extended one week?

    The Bid date is August 29, 2024, at 2:00 p.m.

Please acknowledge receipt of **ADDENDUM NO. 2** by initialing and providing company name in the spaces provided below to **david@cecincga.com**.

Thank you.

YES, _____, of _____
(Individual Name) (Company Name)

has received **ADDENDUM NO. 2.**

NOTE:
ALL PROPOSED DUCTILE IRON FORCE MAINS AND WATER MAINS SHALL CONSIST OF RESTRAINED JOINT PIPES AND FITTING. REFERENCE HALL COUNTY CONSTRUCTION STANDARD DETAIL P-3 FOR PIPE LENGTH TO BE RESTRAINED IN EACH DIRECTION FROM FITTING. NO CONCRETE THRUST BLOCKS ALLOWED.

PAVEMENT LEGEND

- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- EXISTING ASPHALT PAVEMENT TO BE MILLED & RECEIVED NEW TOP COAT
- REPLACE ASPHALT PAVEMENT AND G.A.B. BASE COURSE
- PROPOSED CONCRETE SIDEWALK

PROP. 2 1/2" PLANT WATER
EX. WATER
EX. ODOR CONTROL SYSTEM
PROP. M.H. 3
PROP. SEWER, SEE SH. 3-C-6
PROP. DOGHOUSE M.H. 2
EX. SS
REPLACE EXISTING MANHOLES AND CONNECTING PIPE
PROP. SSMH TOP = 994.16
IN = 989.15 (15" DIP)
IN = 990.30 (12" DIP)
INV. = 989.05 (15" DIP)
SSMH TOP = 994.55
14" DIP
15" DIP
HEADWORKS MODS SEE DIVISION 6 DRAWINGS
20" DIP, SEE PROFILE 1, SH. 3-C-6A
PROP. M.H.
TOP = 996.20
INV. IN 18" DIP = 989.21
INV. OUT 18" DIP = 989.28
RE-ROUTE EXISTING WATER TO AVOID BLOWER PAD
EX. FRIENDSHIP RD FM MANHOLE
FRIENDSHIP RD PS FM (NIC)
PROP. REUNION FORCE MAIN RE-ROUTE
PROPOSED BLOWERS SEE 7-M-2
EXISTING BLOWERS
EX. 12" BY-PASS GRAVITY PIPE TO POND
℄ 980.00±
EX. PLANT DRAIN P.S. FORCE MAIN
EX. 12" BYPASS
℄ 974.00±
PROPOSED 8" AIR PIPE
PROPOSED CONDENSATE LINES
CONNECT TO EX. PLAN DRAIN PUMP STATION FORCE MAIN
EXISTING 14" SEWAGE PIPE
EXISTING CONDENSATE LINES
EXISTING 8" SS AIR PIPE
PROPOSED 8" AIR PIPE
ABANDON IN PLACE
EXISTING 12" BY-PASS PIPE
EXISTING AIR PIPE
EX. 2 1/2" SDR 21 PVC PLANT WATER
14" DIP
SEE PROFILE 2, SH. 3-C-6A
EX. 2 1/2" SDR 21 PVC PLANT WATER
PROP. 12" DIP RE-ROUTED DEWTERING BLDG DRAIN
SEE PROFILE, SH. 3-C-6B
EX. 12" BYPASS
℄ 972.50±
PROP. M.H. 16
TOP = 975.81
INV. IN 12" DIP = 966.00
INV. OUT 12" DIP = 965.00
PROP. 6" PLANT DRAIN FORCE MAIN
MATCH LINE B SH. 3-C-5A
EX. 12" BYPASS
℄ 972.00±
EX. 12" BY-PASS GRAVITY PIPE TO POND
SBR-1A
SBR-2A
SBR-3A
SBR-4
SBR-2B
SBR-1B
SBR-3B
MATCH LINE A SH. 3-C-5
CONDENSATE TO DISCHARGE TO ATMOSPHERE

SCALE IN FEET
0 10' 20'
SCALE: 1" = 10'-0"

2207S SPOUT SPRINGS WATER RECLAMATION FACILITY UPGRADE - PATRICK - 6/26/2024 8:17 PM

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APPROVAL STAMP

GEORGIA REGISTERED NO. 27817 PROFESSIONAL ENGINEER ANDREW ERIC LOVELESS

RELEASES

No	Date	Description
1	08/21/2024	ADDENDUM 2
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REVISIONS

No	Date	Description
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Designed By : DLG
Drawn By : PF
Checked By : DLG
Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

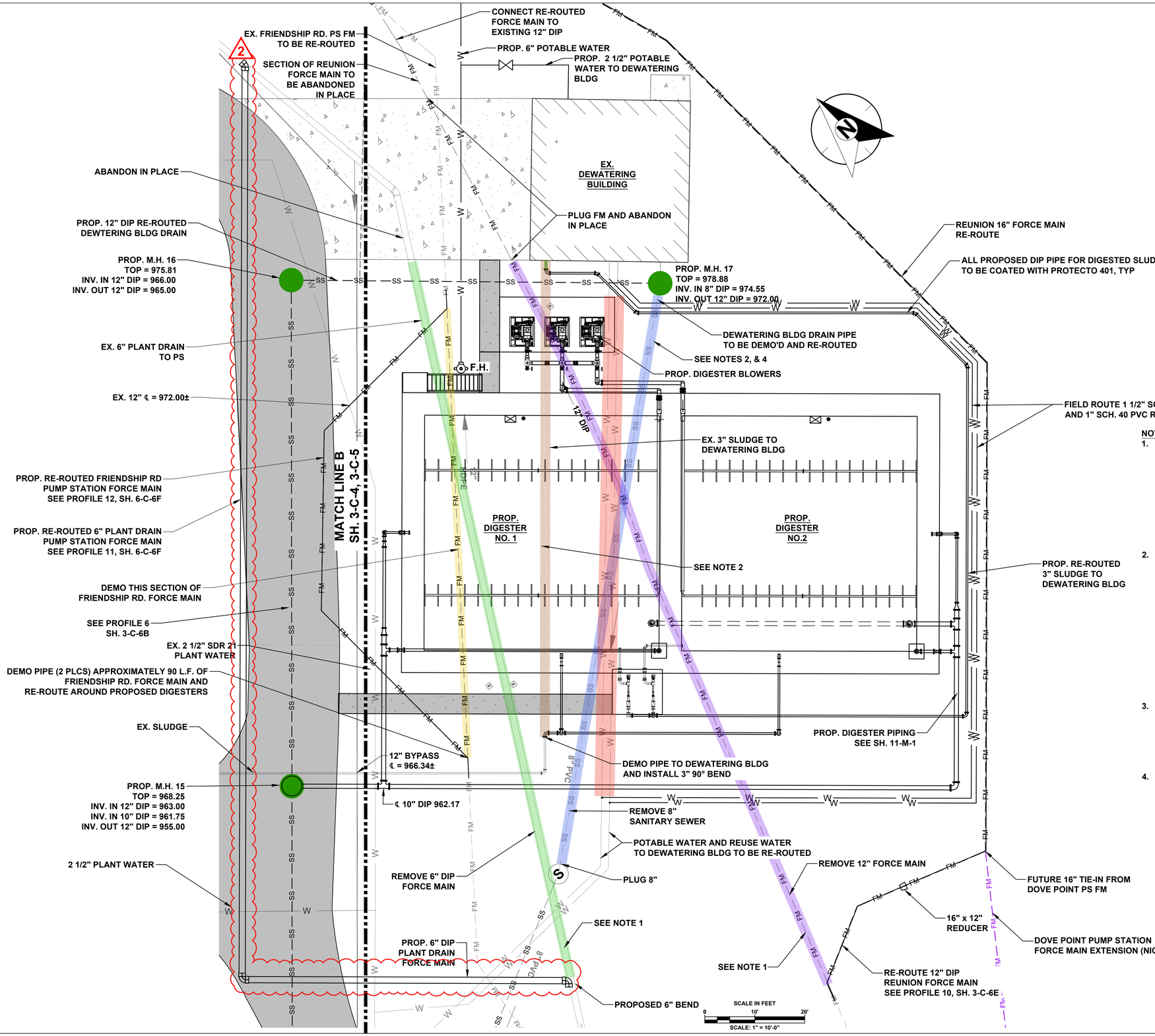
MONTH/DATE/YEAR

SHEET TITLE

ENLARGED PROPOSED YARD PIPING PLAN 1

DRAWING NUMBER

3-C-4
OF
212



NOTES:

1. THE REUNION FORCE MAIN AND THE PLANT DRAIN FORCE MAIN LINES ARE CRITICAL TO PLANT OPERATION WITH 2 HOURS OF DOWNTIME ALLOWED TO MAKE RE-ROUTING FINAL CONNECTIONS. CONTRACTOR TO PROVIDE 1 WEEK ADVANCE NOTICE TO OPERATIONS STAFF ON FORCE MAIN RE-ROUTING WORK. CONTRACTOR TO PROVIDE TEMPORARY PIPING DURING THE RE-ROUTE OF REUNION FORCE MAIN AND THE PLANT DRAIN FORCE MAIN RELOCATION AS REQUIRED.
2. CONTRACTOR TO COORDINATE WITH THE OPERATIONS STAFF AND PROVIDE 1 WEEK ADVANCE NOTICE OF PIPE RE-ROUTING FOR SLUDGE FEED TO THE DEWATERING BUILDING , RELOCATION OF THE POTABLE AND REUSE WATER AND DRAIN LINE FROM DEWATERING BUILDING TO ALLOW STAFF SUFFICIENT TIME TO DEWATER SLUDGE IN ADVANCE. ONLY 1 WEEK WILL BE ALLOWED FOR DOWNTIME OF THE DEWATERING BUILDING. IF THE WORK CANNOT BE COMPLETED IN ONE WEEK, CONTRACTOR TO PROVIDE TEMPORARY PIPING TO ALLOW DEWATERING OPERATIONS TO CONTINUE UNTIL SUFFICIENT VOLUME OF SLUDGE HAS BEEN DEWATERED TO ALLOW ANOTHER 1 WEEK DEWATERING BUILDING SHUTDOWN.
3. ALL PIPING IN THE AREA OF THE DIGESTER IS FROM BEST AVAILABLE SOURCES INCLUDING THE MOST RECENT PROJECT TITLED "HALL COUNTY SPOUT SPRINGS DEWATERING BUILDING", DATED 5/30/2018 AND DESIGNED BY TETRATECH. CONTRACTOR TO FIELD VERIFY LOCATIONS OF PIPING AND UTILITIES.
4. ALL PROPOSED DUCTILE IRON FORCE MAINS AND WATER MAINS SHALL CONSIST OF RESTRAINED JOINT PIPES AND FITTING. REFERENCE HALL COUNTY CONSTRUCTION STANDARD DETAIL P-3 FOR PIPE LENGTH TO BE RESTRAINED IN EACH DIRECTION FROM FITTING. NO CONCRETE THRUST BLOCKS ALLOWED.

PAVEMENT LEGEND

- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT
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RELEASES

No	Date	Description
1	08/21/2024	ADDENDUM 2
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REVISIONS

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Designed By : DLG

Drawn By : PF

Checked By : DLG

Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

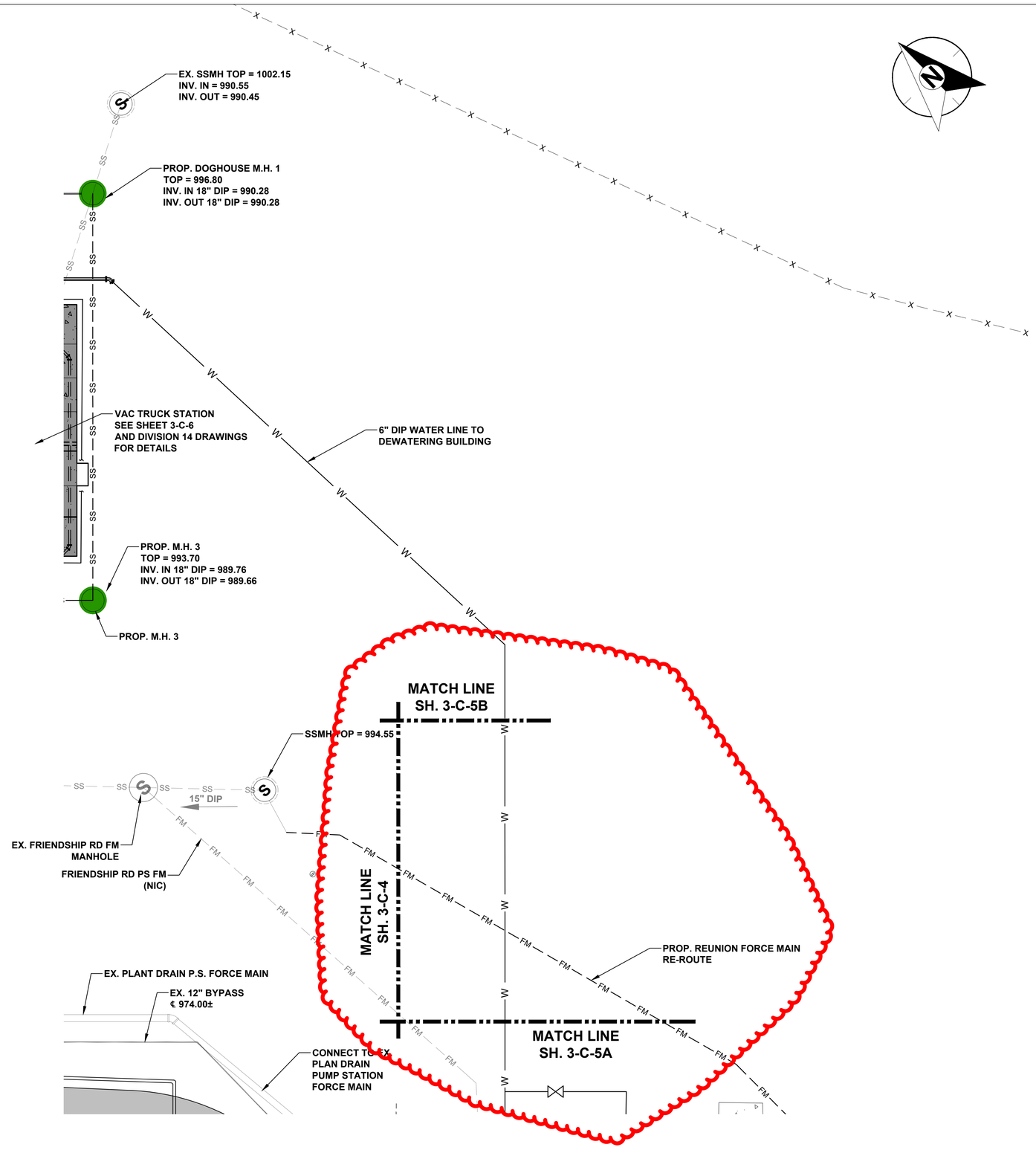
MONTH/DATE/YEAR

SHEET TITLE

ENLARGED PROPOSED YARD PIPING PLAN 3

DRAWING NUMBER

3-C-5A
OF
212



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RELEASES

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Drawn By : PF

Checked By : DLG

Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

MONTH/DATE/YEAR

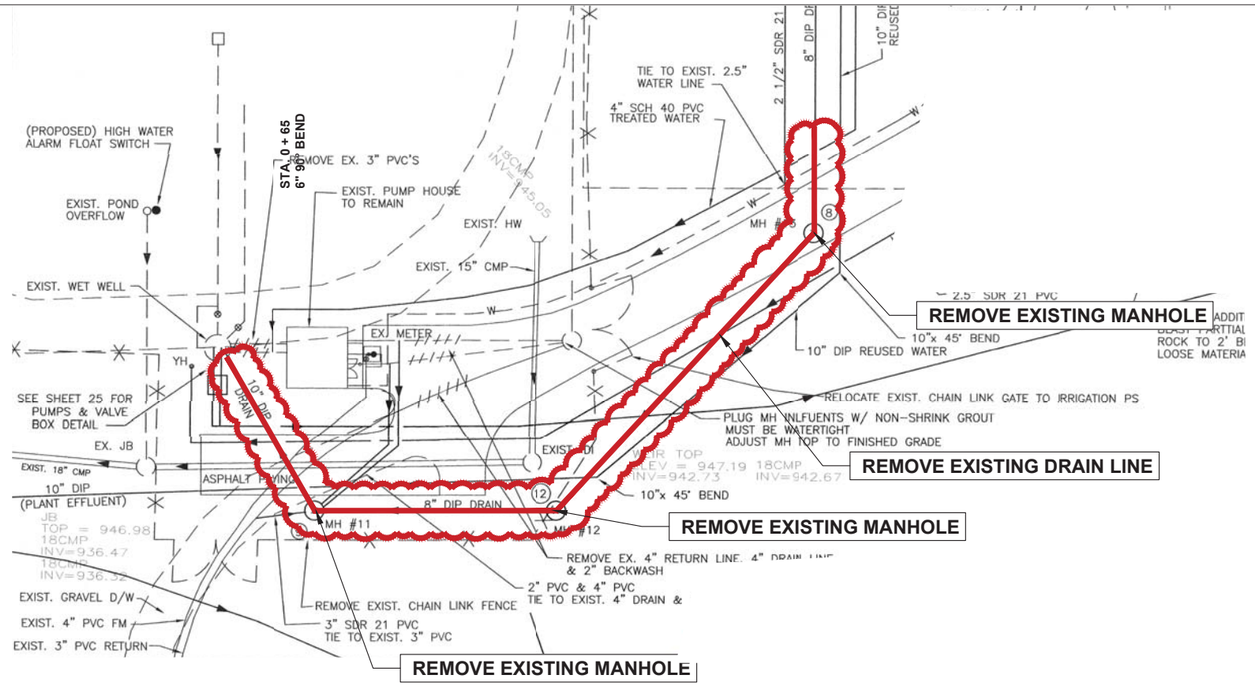
SHEET TITLE

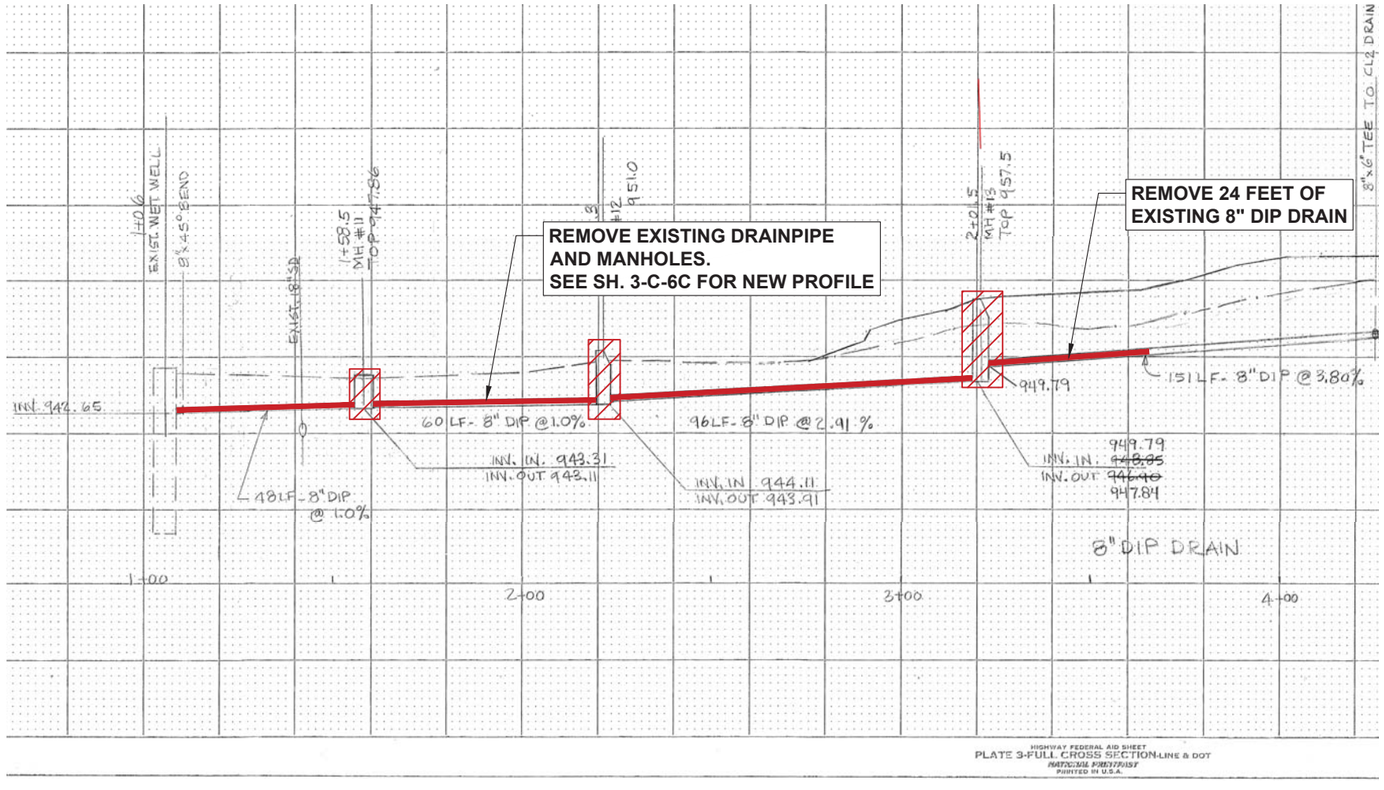
ENLARGED PROPOSED YARD PIPING PLAN 5

DRAWING NUMBER

3-C-5C
OF
212

22075 SPOUT SPRINGS WATER RECLAMATION FACILITY UPGRADE - PATRICK - 6/26/2024 8:17 PM





NOTE:
INFORMATION REGARDING UNDERGROUND UTILITIES ON THESE PLANS IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL REQUEST A FIELD LOCATION THROUGH THE UTILITY PROTECTION CENTER, HALL COUNTY, AND ANY UTILITY OWNERS SUSPECTED TO HAVE FACILITIES IN THE AREA. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY ANTICIPATED PROBLEMS OR NEED FOR CONTRACT CHANGES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE OR PROMPT THE UTILITY OWNER TO EXCAVATE FOR THE PURPOSE OF DETERMINING THE EXACT ELEVATIONS OR LOCATIONS AT UTILITY CROSSINGS IN ADVANCE OF THE WORK STATED UNDER THIS CONTRACT.

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Drawn By : PF

Checked By : DLG

Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

MONTH/DATE/YEAR

SHEET TITLE

PLANT DRAIN DEMOLITION PLAN AND PROFILE

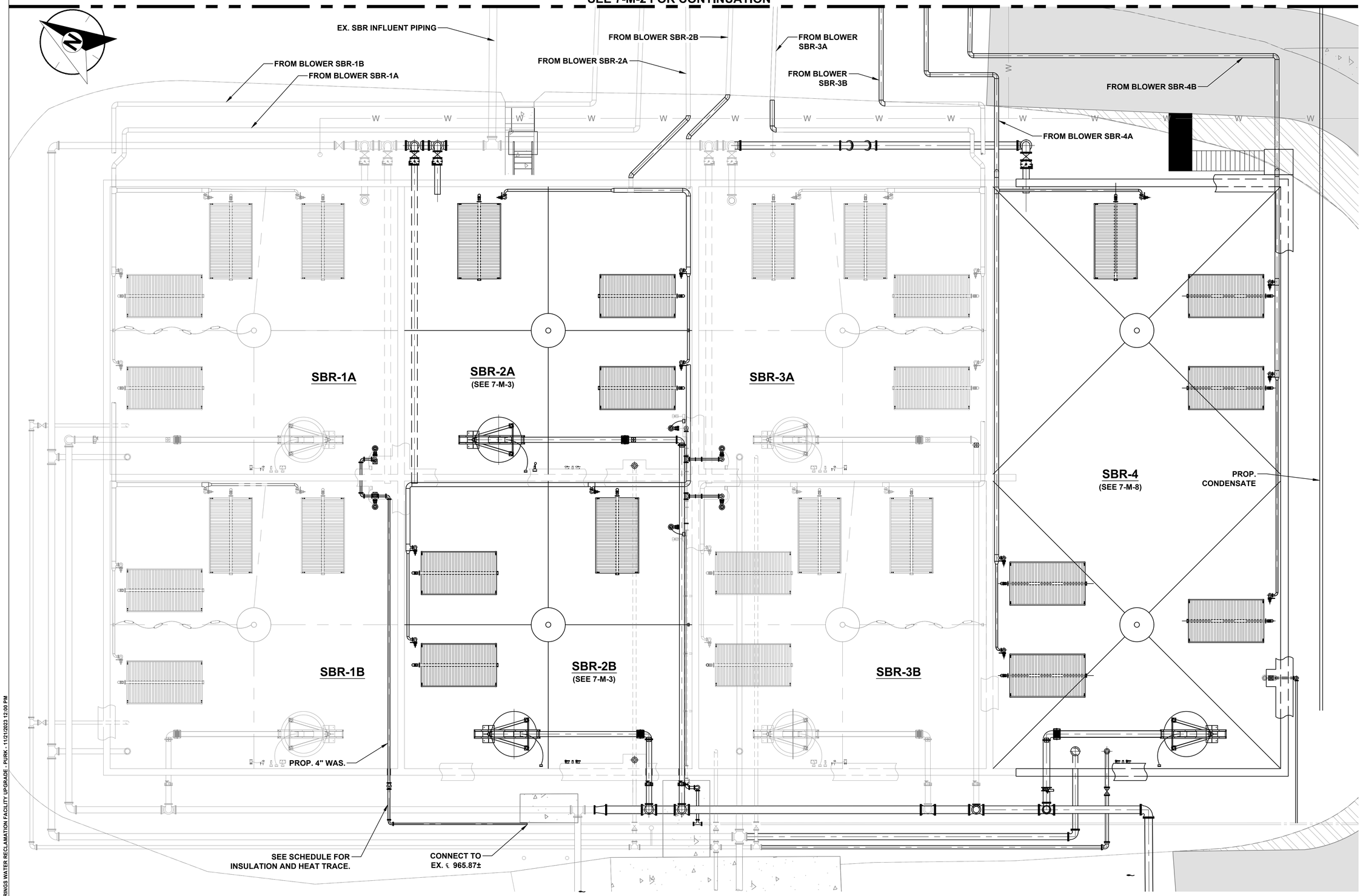
DRAWING NUMBER

3-C-6G

OF

212

SEE 7-M-2 FOR CONTINUATION



1 OVERALL SBR PLAN 1
Scale: 1/8" = 1'-0"

22075 SPOUT SPRINGS WATER RECLAMATION FACILITY UPGRADE - PURK - 11/21/2023 12:00 PM

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Drawn By : PF

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PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

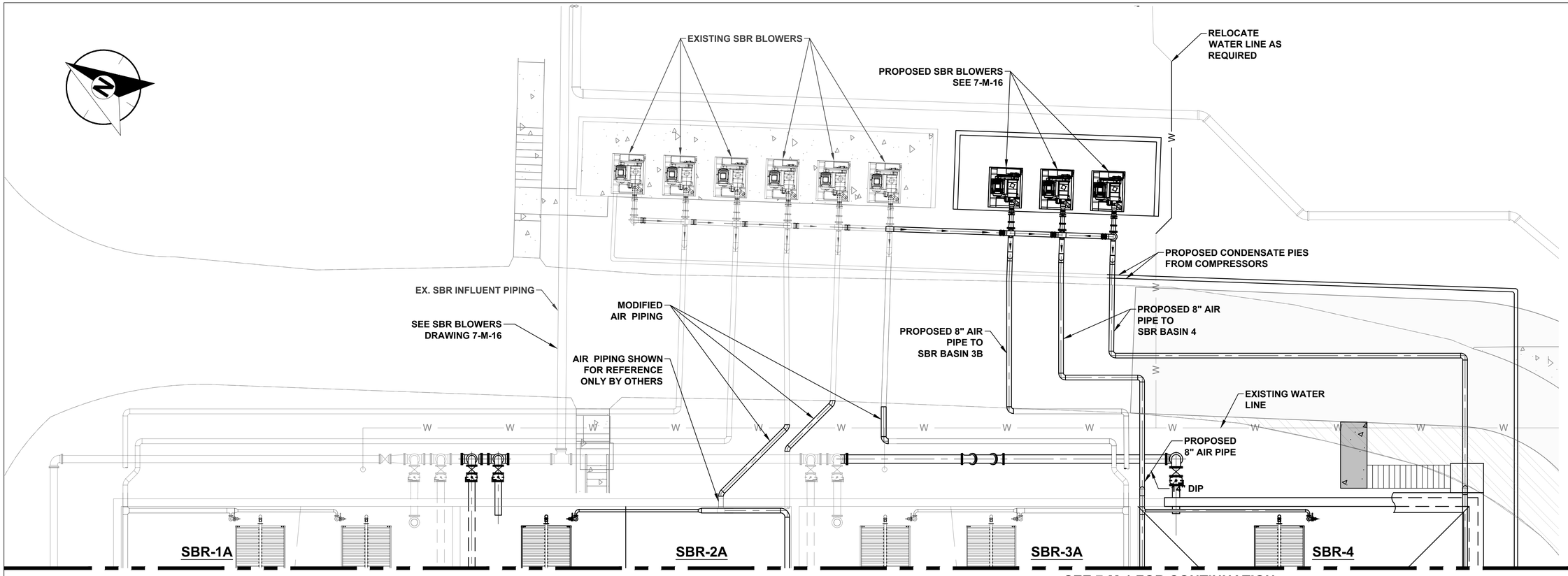
MONTH/DATE/YEAR

SHEET TITLE

OVERALL SBR PLAN 1 OF 1

DRAWING NUMBER

7-M-1
OF
212



SEE 7-M-1 FOR CONTINUATION

2 OVERALL SBR PLAN 2
Scale: 1/8" = 1'-0"

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RELEASES

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Designed By : DLG

Drawn By : PF

Checked By : DLG

Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

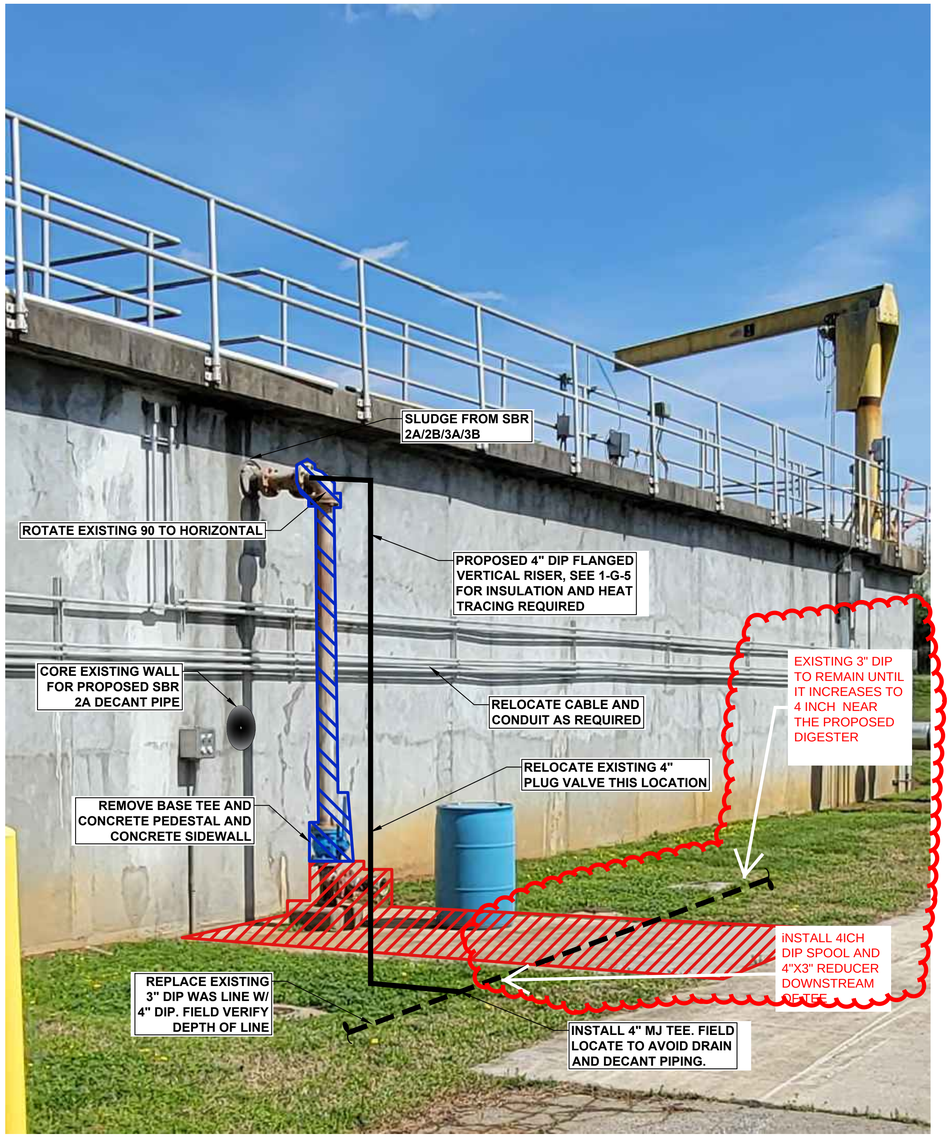
MONTH/DATE/YEAR

SHEET TITLE

OVERALL SBR PLAN 1 OF 2

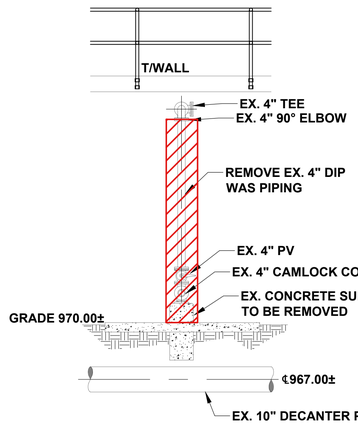
DRAWING NUMBER

7-M-2
OF
212



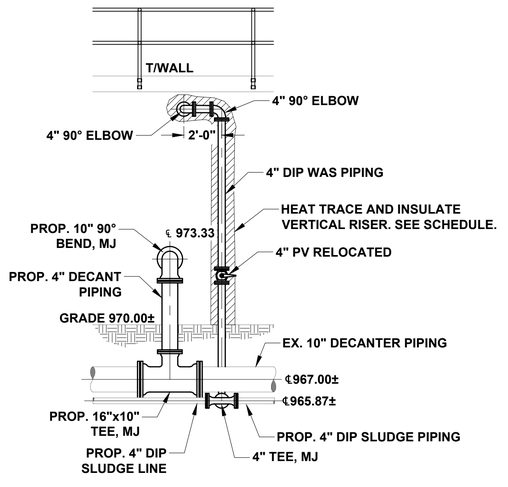
4 WAS PIPING MODIFICATIONS AT SBR-2A, SBR-2B DETAIL

Scale: N.T.S.



5 EXISTING WAS PIPING AT SBR-2A, -2B DETAIL

Scale: 1/4" = 1'-0"



6 PROPOSED WAS PIPING AT SBR-2A, -2B DETAIL

Scale: 1/4" = 1'-0"

NOTES:

1. COUPLE THE NEW SCHEDULE 10S STAINLESS STEEL PIPE TO THE EXISTING TEE USING A VICTAULIC STYLE 231S NON RESTRAINED FLEXIBLE PIPE COUPLING. INSTALL A PIPE SUPPORT ON EACH SIDE OF THE COUPLING. THE MAXIMUM DISTANCE BETWEEN THE SUPPORTS AT THIS LOCATION CANNOT EXCEED 5 FEET.
2. GENERAL CONTRACTOR TO PROVIDE NEW STAINLESS STEEL SCHEDULE 5 S PIPE. SEGMENTS OF PIPE TO BE FABRICATED OFF SITE AND DELIVERED TO THE SITE FOR INSTALLATION. THE SIZE AND LOCATION OF FITTINGS, VALVES, RISERS TO BE COORDINATED WITH THE SBR MANUFACTURER EQUIPMENT.
3. COUPLE THE WELDED STAINLESS STEEL PIPE SEGMENTS TOGETHER WITH A VICTAULIC STYLE 231S NON RESTRAINED FLEXIBLE PIPE COUPLING. INSTALL A PIPE SUPPORT ON EACH SIDE OF THE COUPLING. DISTANCE BETWEEN SUPPORTS AT COUPLING LOCATIONS CANNOT EXCEED 10 FEET FOR A 4-INCH PIPE AND 12 FEET FOR THE 8-INCH PIPE.
4. LOCATE THE CENTERLINE OF AIR SUPPLY PIPE APPROXIMATELY 9-INCHES FROM FACE OF WALL.

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GEORGIA REGISTERED NO. 27817 PROFESSIONAL ENGINEER ANDREW ERIC LOVEJOY

RELEASES

No	Date	Description
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REVISIONS

No	Date	Description
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Designed By : DLG

Drawn By : PF

Checked By : DLG

Scale : SEE DETAIL

PROJECT NAME

SPOUT SPRINGS WRF EXPANSION TO 1.6 MGD

PROJECT INCEPTION DATE

MONTH/DATE/YEAR

SHEET TITLE

WAS PIPING MODIFICATIONS AT SBR-2A & SBR-2B

DRAWING NUMBER

7-M-4

OF

210

SECTION 00 41 43
BID FORM

BID SUBMITTED BY: _____
(Typed or printed name of organization)

BID ADDRESSED TO: **Hall County, Georgia**
Purchasing Department
2875 Browns Bridge Road, 4th Floor.
Gainesville, Georgia 30504

1. The undersigned BIDDER proposes and agrees, if this BID is accepted, to enter into an agreement with the OWNER in the form included in the Contract Documents to perform and furnish all WORK as specified or indicated in the contract Documents for the TOTAL BID AMOUNT and within the BID times indicated in this BID and in accordance with the other terms and conditions of the Contract Documents. The Project will be awarded based on the Lowest Responsive TOTAL BID AMOUNT.

2. BIDDER accepts all of the terms and conditions of the Advertisement for Bids and Information for Bidders, including without limitation those dealing with the disposition of the BID security. This BID will remain subject to acceptance for ninety (90) days after the day of BID opening, or for such longer period of time that BIDDER may agree to in writing upon request of the OWNER. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds, Certifications of Insurance, and other documents required by the Bidding Requirements within ten (10) days after the date of the OWNER's Notice of Award.

3. In submitting this BID, BIDDER represents, as more fully set forth in the Agreement, that:

   (a) BIDDER has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda receipt of all which is hereby acknowledged (list Addenda by Addendum Number and Date):

Addendum No.	Date Received	Addendum No.	Date Received

   (b) BIDDER has visited the site and attended the mandatory pre-bid meeting and are familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the WORK, and BIDDER has not relied upon any oral representations by employees or agents of OWNER or ENGINEER.

   (c) BIDDER is familiar with and is satisfied to all federal, state, and local Laws and Regulations that may affect cost, progress, performance and furnishing of the WORK.

(d) BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or continuous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for BIDDER's purposes. BIDDER acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site.

(e) BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the WORK or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto.

(f) BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this BID for performance and furnishing of the WORK in accordance with the times, price and other terms and conditions of the Contract Documents.

(g) BIDDER is aware of the general nature of WORK to be performed by OWNER and OTHERS at the site that relates to WORK for which this BID is submitted as indicated in the Contract documents.

(h) BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

(i) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the WORK for which this BID is submitted.

(j) This BID is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, associates, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other BIDDER to submit a false or sham BID; BIDDER has not

solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.

4. UNIT PRICES have been computed in accordance with the General Conditions. All specific cash allowances are included in the price(s) and have been computed in accordance with the General Conditions.

   BIDDER acknowledges that quantities are not guaranteed and are solely for the purpose of comparison of BIDS, and final payment for all Unit Price BID items will be based on actual quantities provided, determined as provided in the Contract Documents.

5. BIDDER declares that he understands that the quantities shown on the bid are subject to adjustment by either increase or decrease, and that should the quantities of any of the items or WORK be increased, the undersigned proposes to do the additional work at the Unit Prices stated herein; and should the quantities be decreased, BIDDER also understands that payment will be made on actual quantities at the Unit Price bid and will make no claim for anticipated profits for any decrease in the quantities and that actual quantities will be determined upon completion of WORK, at which time adjustment will be made to the Contract Amount by direct increase or decrease.

6. BIDDER will complete the WORK in accordance with the Contract Documents for the prices listed in the following Bid Schedule.

SPOUT SPRINGS WATER RECLAMATION FACILITY,
EXPANSION TO 1.6 MGD

BID SCHEDULE

All bid items shall include all costs for furnishing all labor, materials, equipment, supplies, allowances, and all other costs, including permit fees, taxes, insurance, miscellaneous costs, overhead, and profit incurred for the Work complete in place and ready for continuous service.

The Bids shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern. In the event of a discrepancy between the unit price bid and the extension, the unit price will be deemed intended by the bidder and the extensions adjusted. In the event of a discrepancy between the sum of the extended amounts and the bid total, the sum of the extended amounts shall govern.

Total Bid Amount: Bidder will complete the Work in accordance with the Contract Documents for the following lump sum prices, together with Allowances and Unit Prices.

PART 1 - BASE BID: SPOUT SPRINGS EXPANSION TO 1.60 MGD					
Item	Description	Unit	Qty.	Unit Price(figures)	Total Unit Price (figures)
1a.	General Construction of the Spouts Springs WRF Expansion to 1.6 MGD per Contract Documents including all work shown on the Drawings and as specified, exclusive of those items listed below in 1b and 1c, and Allowances	LS	1	$_____	$_____
1b.	For furnishing the SBR, filter, controls and equipment identified in Appendix A equipment. Installation included in item 1a.	LS	1	$_____	$_____

1c.	For furnishing the UV disinfection equipment identified in Appendix B. Installation included in item 1a.	LS	1	$_____	$_____
Total Price Part 1 – Items (1a +1b + 1c): **$_____(figures)**					
Total Price Part 1 – Cost in Words: **$_____** **_____** **_____(words)**					

PART 2 - ALLOWANCE COSTS

The Bidder shall include in the Total Bid price the lump sum allowances identified below. Payment will be in accordance with the General Conditions. Any unused balance of the allowances shall revert to the Owner upon completion of the project. Contractor is entitled to overhead and profit on any unused balance.

Item	Description	Unit	Approx. Qty.	Unit Price	Total Price
1.	Allowance for correction of unforeseen utility conflicts and utility relocation	LS	1	$ 50,000.00	$ 50,000.00
2.	Owner Contingency	LS	1	$ 300,000.00	$ 300,000.00
3.	Landscape Allowance	LS	1	$ 40,000.00	$ 40,000.00
4.	Pista Grit Equipment Inspection	LS	1	$ 15,000.00	$ 15,000.00
5.	Electrical Service	LS	1	$ 100,000.00	$ 100,000.00
6.	Spare Parts	LS	1	$ 20,000.00	$ 20.000.00

7.	Metal Canopy Allowance	LS	1	$ 400,000.00	$ 400,000.00
8.	Plant Reuse System Upgrade	LS	1	$ 75,000.00	$ 75,000.00

Total Price Part 2 – Items (1-8): $ 1,000,000.00

Total Price Part 2 – Cost in Words: One Millon dollars

PART 3- UNIT PRICE BIDS

Bidder will provide the following Work at the indicated installed unit prices.

Item	Description	Unit	Approx. Qty.	Unit Price	Total Price
1.	DIP Pipe	Ton	1	$_____	$_____
2.	DIP Fittings	Ton	1	$_____	$_____
3.	Stone Stabilization	Tons	10	$_____	$_____
4.	Silt Fence Type Sd-1	LF	500	$_____	$_____
5.	Silt Fence Type Sd-1 Removal	LF	500	$_____	$_____
6.	Construction Exits	EA	1	$_____	$_____
7.	Permanent Grassing	AC	1	$_____	$_____
8.	Riprap	SY	500	$_____	$_____
9.	Erosion Control Monitoring	LS	1	$_____	$_____
10.	Concrete Wash Out	LS	1	$ _____	$ _____

Total Price Part 3 – Items (1 - 10, inclusive): $

Total Price Part 3 – Cost in Words:

The amount of Total Price for Part 3 shall be shown in both figures and words. In case of a discrepancy, the amount shown in words shall govern. In the event of a discrepancy between the Unit Price bid and the extension, the Unit Price will be deemed intended by the Bidder and the extension adjusted. In the event of a discrepancy between the sum of the extended amounts and the Bid total, the sum of the extended amounts shall govern.

PART 4- BID SUMMARY

All work shown and specified in the Contract Documents

Description	Amount in Figures
Part 1 - Base Bid	$
Part 2 - Allowance Items	$ 1,000,000.00
Part 3 – Unit Pricing	$
Total Bid Amount	**$**

Total Bid Amount in Words: **(Parts 1+2+3)** _____

_____

_____

In case of a discrepancy, the amount shown in words shall govern. In the event of a discrepancy between the sum of the extended amounts and the bid total, the sum of the extended amounts shall govern.

1. ***BIDDER agrees that the WORK will be Substantially Completed within 600 consecutive calendar days, from the date when the Contract Time commences to run as provided in the General Conditions or 30 days after delivery of all materials and major equipment and will be completed and ready for final payment in accordance with the General Conditions.***

   BIDDER accepts the provisions of the Agreement as to Liquidated Damages in the event of failure to complete the WORK within the time(s) specified in the Agreement.

2. The following documents are attached and made a condition of this BID:

   a. Required Bid Security in the form of Bid Bond.

   b. The address of BIDDER is indicated below.

_____

BIDDER'S NAME: _____

Primary Contact Person: _____

Secondary Contact Person: _____

Bidder's Street Address: _____

_____

Bidder's Mailing Address (if different from above): _____

_____

Bidder's Telephone Number: _____

Bidder's Fax Number: _____

3. Terms used in this BID which are defined in the General Conditions will have the meanings indicated in the General Conditions.

THIS BID SUBMITTED on _____, 20___.

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature)

Title: _____

Attest: _____ (CORPORATE SEAL)
(Signature)

Business Address: _____

Telephone Number: _____

Fax Number: _____

Date of Qualification to do business is: _____

PART 5–BASE BID MAJOR EQUIPMENT SCHEDULE

The Base Bid shall include the costs for the circled Manufacturers/Suppliers listed in this Major Equipment Schedule, exclusive of any additive or deductive Alternate Bid Items. Should a Bidder fail to indicate which manufacturer or supplier its Bid is based on, or circle more than one listed manufacturer/supplier per equipment item, the Bidder shall provide the first listed manufacturer/supplier

(A) for its Bid for the amount included in the Total Bid at no increase in the Contract amount. The Contractor shall submit working drawings in accordance with the General Conditions for any modifications to the Contract Drawings required due to the submittal of the base bid manufacturers/suppliers. The Bidder is aware that the Owner will award the Contract without consideration of Alternate manufacturers/suppliers.

The Major Equipment Schedule lists the base bid equipment manufacturer/supplier as applicable for major equipment items and key suppliers for the Project. The Bidder must indicate which named manufacturer/supplier it intends to provide by circling one of the manufacturers/suppliers listed.

Specification Section	Equipment Description	Manufacturer/Supplier
43 11 33	Rotary Positive Displacement Blowers	A. Aerzen
43 23 13	Self-Priming Centrifugal Pump	A. Gorman-Rupp B. Pentair Water
43 23 15	Duplex Skid Mounted Self-Priming Centrifugal Pump	A. Gorman-Rupp
43 24 00	Centrifugal Chopper Pump	A. Hayward Gordon B. Trillium Flow Technologies
43 25 00	Submersible Wastewater Pumps	A. Flygt B. Homa C. Grundfos
43 26 00	Vertical Mult-Stage Water Pumps	A. Gould B. Grundfos
46 21 12	Vac Truck Receiving Station	A. JWC
46 21 13	Chain and Rake Bar Screen	A. JWC B. Vulcan C. Headworks D. Aqualitec
46 23 23	Grit Removal Equipment	A. Smith and Loveless

Specification Section	Equipment Description	Manufacturer/Supplier
46 51 21	Coarse Bubble Diffused Aeration System	A. Sanitaire B. Aquarius Technologies C. EDI
46 53 53	Sequential Batch Reactor System	A. Aqua Aerobics
46 61 41	Disk Filters	A. Aqua Aerobics
46 66 56	Ultraviolet Disinfection Equipment	A. Trojan
46 73 19	Floating Supernate Decanter	A. Parkson

PART 6– MAJOR EQUIPMENT MANUFACTURERS SUBSTITUTION AS AN ADDITIVE OR DEDUCTIVE ALTERNATE

Any Manufacturer, including those not listed as an acceptable manufacturer, may be listed as an additive or deductive alternate substitution. However, the base bid will be evaluated on the major equipment listed in Part 5.

The Bidder understands that **after a Contract is awarded**, the Owner may, at its sole discretion, select items of any Manufacturer listed in the following additive or deductive substitute tabulation. The Bidder agrees to furnish and install any additive or deductive alternative substitutions for the price indicated. The BID will be adjusted accordingly.

The Engineer may require detailed information to be submitted for preliminary evaluation of a substitute Manufacturer. This information could include technical and performance details of the equipment and other information deemed necessary by the Engineer and/or described in the Contract Documents.

If an offered substitution included items of equipment of any Manufacturer that may require any modification to or deviation from the Drawings, the undersigned agrees to prepare and submit detailed Drawings to the Engineer showing all modifications to structures, piping, electrical, mechanical, and instrumentation work, required to adapt the plans to the equipment selected. The Bidder further understands that the Engineer will review said detailed drawings of modifications and either approve them or indicate changes necessary to comply with the project requirements. Detailed drawings that are not approved will be revised and resubmitted to the Engineer for approval. If the Engineer determines that the substitute equipment cannot be approved, the original Base Bid equipment shall be provided. The prices listed in the following additive or deductive substitute tabulation are “installed” prices and take into consideration any changes that may be required to the original design.

Specification Section	List Equipment Vendor	Circle to Indicate Additive or Deductive Substitution	Add (Deduct) Price From Base Bid (in words)
43 25 00 Submersible Wastewater Pumps		**Add** **Deduct**	**$**
46 21 12 Vac Truck Receiving Station		**Add** **Deduct**	**$**
43 24 00 Centrifugal Chopper Pump		**Add** **Deduct**	**$**
43 26 00 Vertical Multi-Stage Water Pumps		**Add** **Deduct**	**$**
*		**Add** **Deduct**	**$**
*		**Add** **Deduct**	**$**

*Contractor write in

All BID Items shall include all costs for furnishing all labor, materials, equipment, supplies, allowances, and all other costs including permit fees, taxes, insurance, miscellaneous costs, overhead and profit incurred for the WORK, complete in place and ready for continuous service.

END

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

SECTION 00 62 76

APPLICATION FOR PAYMENT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

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www.nspe.org

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www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
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NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

GUIDELINES FOR THE INTENDED USE OF EJCDC C-620, APPLICATION FOR PAYMENT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

The Application for Payment is used to facilitate periodic progress payments to the Contractor for Work completed and for stored materials and equipment (referred to in this document as "Stored Materials").

For additional information regarding the Application for Payment, see EJCDC® C–700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.01, and EJCDC® C–001, Commentary on the 2018 EJCDC Construction Documents (2018).

2.0 APPLICATION FOR PAYMENT OVERVIEW

This document was prepared in Microsoft Excel due to the number of calculations involved in the preparation of the Application for Payment. The application consists of a Summary worksheet, and 3 supporting worksheets: Lump Sum worksheet, Unit Price worksheet, and Stored Materials worksheet.

2.1 *Summary Worksheet* — calculates the amount to be paid to the Contractor at the end of each Application for Payment period. This calculation imports numbers from the supporting worksheets to determine the value of the Work completed and Stored Materials, calculate retainage, and deduct amounts previously paid to determine the amount the Contractor should be paid for the current application period. Application periods are typically one month; however these periods may be extended when Contractor's efforts do not result in the billable completion of Work or storage of materials and equipment during the payment period.

2.2 *Lump Sum Worksheet* — calculates the total value for completed Work for which compensation is paid on a Lump Sum basis. The schedule of values included in this worksheet reflects a breakdown of lump sum Work items to which Contractor and Engineer have agreed, pursuant to Article 2 of the General Conditions. Costs for Stored Materials associated with lump sum items are included on this worksheet to calculate the total value for completed lump sum Work and associated Stored Materials. This total is exported to the Summary worksheet. Separate totals for Work Completed and for materials currently stored are also exported to the Summary worksheet for use in calculating the amount of retainage to be held for each.

2.3 *Unit Price Worksheet* — calculates the total value for completed Work for which compensation is paid on a Unit Price basis. The schedule of values included in this spreadsheet is typically a tabulation of Unit Price items from the Agreement. Costs for Stored Materials associated with unit price items are included in this worksheet to calculate the total value for completed Unit Price Work and associated Stored Materials. This total is exported to the Summary worksheet. Separate totals for Work Completed and for Materials Currently Stored are also exported to the Summary worksheet for use in calculating the amount of retainage to be held for each.

2.4 *Stored Materials Worksheet* — calculates the total value for materials and equipment that have been purchased and are being stored until they are incorporated into the Work. This worksheet adds materials and equipment to the worksheet as they are brought to the site and stored; such Stored Materials are then deducted from the Stored Materials worksheet total as they are incorporated into the Work, providing a running net value for the materials and equipment remaining in storage. The values of Stored Materials must be manually added to the Lump Sum or Unit Price line items. These do not automatically update when changes are made. The amount of materials remaining in storage is eligible for payment but must be tracked separately from Work completed since different retainage rates may apply to Work completed and Stored Materials.

3.0 Instructions for filling out the Payment Application form

3.1 Project-specific information is to be entered in the top portion (header) of the Summary worksheet. This same information will automatically be copied to the other worksheets to complete the headers on all other worksheets.

3.2 Outside of the header, data can be entered in non-shaded cells when the sheet is protected. Cells shaded light blue contain equations that will automatically transfer data from other cells or make calculations to complete the worksheet. Altering any of these cells can result in errors in the Application for Payment. It is recommended that the worksheets be protected at all times unless alterations are deliberately being made to the Application for Payment form other than to enter data. See Paragraph 4.0 below for information on Protection of Worksheets.

3.3 Enter information regarding each item in the Lump Sum and/or Unit Price worksheets. For Lump Sum projects, each item should represent an item in the schedule of values prepared by the Contractor and approved by the Engineer/Owner, breaking down the Lump Sum amount into measurable components. For Unit Price contracts, use numbers from the Agreement as the schedule of values. Specific information on the data to be entered into each column may be seen by clicking on the header description for that column. Similar comments may be seen for cells in the "Totals" row that indicates how the number is calculated and where this number is exported to another part of the spreadsheet. See the Commentary for additional information.

3.4 The equations in the Summary worksheet use numbers imported from both the Lump Sum and Unit Price worksheets. Projects will typically either use the Lump Sum or the Unit Price worksheet, but some projects may use both. If one of the worksheets is not used, it should be hidden and not deleted. If it is deleted, Users will need to correct the equations in the Summary worksheet by unprotecting the worksheet and editing the equations. To hide a worksheet, right click on the worksheet tab at the bottom of the worksheet and select "Hide." To unhide a worksheet, right click on any worksheet tab and select "Unhide," and then select the worksheet to unhide and click "Okay." This same process may be used to hide these Guidelines for Use.

4.0 Protection of Worksheets

4.1 The cells in this Workbook that create the forms or contain equations have been coded to "lock" the cells that should not be altered. It is recommended that the Workbook be Protected (cells locked) at all times unless it is necessary to add or delete rows. Directions for adding and deleting rows are provided in the next section. Passwords can be used to lock the Protect / Unprotect settings on spreadsheets, however the worksheets in this workbook do not require a password.

4.2 To unprotect a worksheet, click on the "Review" menu tab at the top of Excel, then click "Unprotect Sheet." To protect a worksheet, click on the "Review" menu tab at the top of Excel, then click "Protect Sheet." This will open a dialog box in which the User is allowed to select protection options. It is recommended that only the top two checkboxes for "Select Locked Cells" and "Select Unlocked Cells" be checked. This will reset the protection for the Worksheet.

5.0 Adding and Deleting Rows

5.1 A limited number of blank rows are provided in the Lump Sum, Unit Price, and Stored Material worksheets. Additional rows may be added to these worksheets by the User. The first step in this process is to unprotect the worksheet as previously discussed. After the sheet is unprotected, move with caution to prevent inadvertently deleting any cells that contain equations. To insert a row, right click in the row heading at the left of the spreadsheet and select "Insert." A new row will be inserted at the location where the cursor was placed in the row heading. If more than one new row is desired, left click and drag the cursor to include the desired number of rows, right click in the selected row headings and then select "Insert." It is important that the line immediately above the "Totals" row not be included in the rows selected. Doing so will require that equations in the "Totals" row be adjusted. When rows are inserted, Excel automatically adjusts the equations to include the new rows, unless the row directly above the "Totals" row is also selected.

5.2 After new rows are inserted, it is important to copy a line from one of the original rows so correct formatting and equations are copied into each new row. To do this, select the row to be copied by clicking the cell in Column A and dragging the cursor to the last column in the table. Then select "Copy" from the menu or type CTRL+C to copy the cells. Excel will show that this row has been copied by showing a moving dashed line around the cells that are to be copied. Then select the new rows into which the information is to be copied as before and select Paste from the menu or type CTRL+V.

5.3 To delete an unused row, right click in the row heading on the left of the spreadsheet for the row to be deleted and select "Delete." The selected row will be deleted. If more than one row is to be deleted, left click and drag the cursor to the desired number of rows to be deleted and then right click to open the menu and select "Delete." Unlike the admonition on adding new rows, it is okay to delete the row just above the "Totals" row.

5.4 After rows have been added or deleted, it is important reset the worksheet protection.

6.0 Saving Files

This file is provided as a Microsoft ® Excel Open XML workbook template (.xltx) to prevent this file from being inadvertently changed. When an application for payment is created for a specific project it should be saved as an Excel workbook (.xlxs) file. To do this, select Save As (F12), type in a new file name and select Excel Workbook (.xlxs) from the drop down Save As Type menu.

7.0 License Agreement

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price					$ -
2. Net change by Change Orders					$ -
3. Current Contract Price (Line 1 + Line 2)					$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)					$ -
5. Retainage					
a.		X	$ -	Work Completed	$ -
b.		X	$ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)					$ -
6. Amount eligible to date (Line 4 - Line 5.c)					$ -
7. Less previous payments (Line 6 from prior application)					
8. Amount due this application					$ -
9. Balance to finish, including retainage (Line 3 - Line 4)					$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:
(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and
(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:			
Signature:		**Date:**	

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

Progress Estimate - Unit Price Work | **Contractor's Application for Payment**

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: ______ **Application Period:** From ______ to ______ **Application Date:** ______

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
					Original Contract						
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
				Original Contract Totals	$ -		$ -	$ -	$ -		$ -

Progress Estimate - Unit Price Work **Contractor's Application for Payment**

Owner: ____________________ **Owner's Project No.:** ________
Engineer: ____________________ **Engineer's Project No.:** ________
Contractor: ____________________ **Contractor's Project No.:** ________
Project: ____________________
Contract: ____________________

Application No.: ________ **Application Period:** From ________ to ________ **Application Date:** ________

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
					Change Orders						
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
				Change Order Totals	$ -		$ -	$ -	$ -		$ -
					Original Contract and Change Orders						
				Project Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment

Stored Materials Summary **Contractor's Application for Payment**

Owner:
Engineer:
Contractor:
Project:
Contract:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

Application No.: Application Period: From to Application Date:

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
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					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

SECTION 00 65 16
CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	Hall County
Engineer:	Civil Engineering Consultants, Inc.
Contractor:	
Project:	Spout Springs WRF Expansion to 1.6 MGD
Engineer's Project No.:	22075

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion:

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate:

(Contractor) Substantial Completion Letter dated XXXX

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer: Civil Engineering Consultants, Inc.

By *(signature)*: _____

Name *(printed)*: Andrew E. Lovejoy, P.E.

Title: President

SECTION 09 91 00
PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Work included under this Section shall consist of furnishing all materials and equipment and performance of all labor necessary to paint and waterproof exterior and interior surfaces as outlined in this Section.

1.2 RELATED SECTIONS

A. Section 01 33 00 Submittal Procedures

B. Section 03 30 00 Cast in Place Concrete

C. Section 04 22 00 Concrete Masonry Unit

D. Section 06 10 00 Carpentry

E. Section 26 00 00 General Electrical Provisions

F. Section 33 35 00 Process Valves and Appurtenances

G. Division 40, 43, and 46

1.3 PAINTING INCLUDED

A. The work includes painting and finishing of interior and exterior exposed items and surfaces throughout the project, except as otherwise specified. Surface preparation, priming and coats of paint specified under this Section are in addition to shop-priming and surface treatment specified under other Sections, except as otherwise specified.

B. The work includes field painting of all bare and covered pipes and ducts (including color coding), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the mechanical and electrical work, except as otherwise specified.

C. "Paint", as used herein, means all coating systems materials, including primers, emulsions, enamels, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.

D. Paint all exposed surfaces whether or not colors are designated in "schedules", except where the natural finish of the material is obviously intended or specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated,

the Engineer will select these from standard colors available for the materials systems as specified.

1.4 PAINTING NOT INCLUDED

A. The following categories of work are not included as part of the painter-applied finish work, or are included in other Sections of these Specifications, unless otherwise shown or specified.

1. Shop Priming: Unless otherwise specified, shop priming of ferrous and other metal items is included under the various Sections for structural steel, miscellaneous metal, hollow metal work, and similar items. Also, for fabricated components such as wood casework, and shop-fabricated or factory-built mechanical and electrical equipment or accessories.

2. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer-finishing is specified for such items as (but not limited to) metal toilet enclosures, acoustic materials, pre-finished woodwork, and casework, finished mechanical and electrical equipment including light fixtures, switchgear and distribution cabinets, doors, and equipment.

3. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and inaccessible areas, foundation spaces, furred areas, utility tunnels, pipe spaces, and duct shafts. Paint all piping, equipment, and other such items in concealed spaces, unless otherwise indicated.

4. Finished Metal Surfaces: Metal surfaces of aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials will not require finish painting, except as otherwise indicated.

5. Operating Parts and Labels: Do not paint any moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor, and fan shafts, unless otherwise indicated. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

6. Existing Piping, existing valves, existing equipment, unless otherwise noted:

1.5 SURFACE PREPARATION

A. Surface preparation shall be in accordance with the specification and manufacturer’s recommendations. All surfaces must be clean, dry, and free of oil, grease, and other contaminants prior to coating.

1. Ferrous Metals – Immersion & Severe Exposure: SSPC-SP10 Near-White Blast Cleaning

2. Ferrous Metals – Non-Immersion: SSPC-SP6 Commercial Blast Cleaning

3. Non-Ferrous Metals: SSPC-SP16 Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals

4. Concrete: Prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines

5. Concrete Block (CMU) – Non-Submerged: Allow mortar to cure for 14 days. Level protrusions and mortar spatter.

6. Wood: Sand rough areas. Seal knots and pitch pockets. Fill cracks and nail holes after primer has cured.

PART 2 PRODUCTS

2.1 MATERIAL

A. Material shall be delivered in unbroken original containers bearing the manufacturer's name, trade name, mixing instructions, and application instructions.

B. The Owner will select the colors from manufacturer's standard color chart.

C. Provide the best quality grade of the various types of coatings as regularly manufactured by approved paint materials manufacturers. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable.

D. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer and use only within recommended limits.

E. Acceptable manufacturers include Induron, Carboline, Tnemec, PPG, and Sherwin-Williams according to the following schedules.

F. Concrete coating for cast in place concrete shall be Thoroseal.

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Surface	Induron Coatings, Inc.	Induron Application
1. Structural Steel and Miscellaneous Iron and Steel	PermaClean II Primer	Shop Primer One (1) Coat 3.0 to 5.0 mils dft
A. All interior miscellaneous iron and steel	PermaClean II	Finish Coat Two (2) Coats 3.0 to 5.0 mils dft per coat
B. All exterior miscellaneous iron and steel	PermaClean II	Intermediate Coat 3.0 to 5.0 mils dft per coat
	Indurethane 6600 Plus	Finish Coat 2.0 to 3.0 mils dft per coat
C. All miscellaneous iron and steel in vaults, pits, galleries and in areas exposed to extreme humidity and condensation	PermaClean II	Finish Coat Two (2) Coats 3.0 to 5.0 mils dft per coat
D. All structural Steel	PermaClean II	Finish Coat Two (2) Coats 3.0 to 5.0 mils dft per coat
E. All equipment, iron and steel in areas covered with sewage	PermaClean II Primer	Primer Coat One (1) Coat 0.3 to 5.0 mils dft per coat
	Ruff Stuff 2100 Coal Tar Epoxy	Finish Coat One (1) Coat 16.0 to 18.0 mils dft per coat
2. Exposed Cast Iron Piping System (primed in shop)	PermaClean II Primer	Prime Coat 3.0 to 5.0 mils dft per coat
	PermaClean II	Intermediate Coat 3.0 to 5.0 mils dft per coat
	Indurethane 6600 Plus	Finish Coat 2.0 to 3.0 mils dft per coat
3. Galvanized Iron	Vinyl Wash Primer	Prime Coat 0.5 mils dft
	PermaClean II	Intermediate Coat 3.0 to 5.0 mils dft per coat

		Indurethane 6600 Plus	Finish Coat 2.0 to 3.0 mils dft per coat
4.	Exposed Electrical Work	Vinyl Wash Primer	Prime Coat 0.5 mils dft
		PermaClean II	Intermediate Coat 3.0 to 5.0 mils dft per coat
		Indurethane 6600 Plus	Finish Coat 2.0 to 3.0 mils dft per coat
5.	Interior & Exterior Concrete Block, non-submerged	Polyfill Epoxy Block filler (Interior) AC403 Elastomeric Block Filler (Exterior)	Prime Coat Fill Porous Surface (Interior) 0.5 to 1.0 mils dft (Exterior)
		Induraguard Epoxy (Interior) AC403 Elastomeric (Exterior)	Finish Coat Two (2) coats (Interior) 3.0 to 5.0 mils dft each coat Two (2) coats (Exterior) 6.0 to 12.0 mils dft each coat
6.	Ferrous metal Doors and Frames	PermaClean II Epoxy Primer	Prime Coat 3.0 to 5.0 mils dft per coat
		PermaClean II	Finish Coat Two (2) coats 3.0 to 5.0 mils dft per coat
7.	Equipment	E-Bond 100	Field Prime Coat 1.0 to 2.0 mils dft per coat
		Indurethane 6600 Plus	Finish Coat 2.0 to 3.0 mils dft per coat
8.	Interior and Exterior Wood Surface	Aquanaut Primer	Prime Coat 2.0 to 3.0 mils dft per coat
		Aquanaut II	Finish Coat Two (2) Coats 2.0 to 4.0 mils dft per coat
9.	Galvanized Steel Trusses and Roof Deck	Vinyl Wash Primer	Prime Coat 0.5 mils dft
		PermaClean II	Finish Coat Two (2) Coats 3.0 to 5.0 mils dft per coat

10. Concrete Wet Well and manholes (as called out)	PermaClean II Primer	Prime Coat One (1) Coat 3.0 to 5.0 mils dft per coat
	Ruff Stuff 2100 Coal Tar Epoxy	Finish Coat One (1) Coat 16.0 to 18.0 mils dft per coat

Surface	Carboline Company	Carboline Application
1. Structural Steel and Miscellaneous Iron and Steel	Carboguard 60	Shop Primer One (1) Coat 4.0 to 6.0 mils dft
A. All interior miscellaneous iron and steel	Carboguard 890	Finish Coat Two (2) Coats 4.0 to 6.0 mils dft per coat
B. All exterior miscellaneous iron and steel	Carboguard 890	Finish Coat One (1) Coat 4.0 to 6.0 mils dft
	Carbothane 134 HG	Finish Coat One (1) Coat 2.0 to 3.0 mils dft
C. All miscellaneous iron and steel in vaults, pits, galleries and in areas exposed to extreme humidity and condensation	Carboguard 890	Finish Two (2) Coats 4.0 to 6.0 mils dft per coat
D. All structural Steel	Carbocoat 60	Finish Two (2) Coats 4.0 to 6.0 mils dft per coat
E. All equipment, iron and steel in areas covered with sewage	Carboguard 60	Shop Primer One (1) Coat 4.0 to 6.0 mils dft
	Carboline Bitumastic 300 M Coal tar Epoxy	Finish Two (2) Coats 8.0 mils dft per coat
2. Exposed Cast Iron Piping System (primed in shop)	Carboguard 890	Prime Coat One (1) Coat 4.0 to 6.0 mils dft per coat
	Carbothane 134 HG	Finish Coat

			One (1) Coat 2.0 to 3.0 mils dft
3.	Galvanized Iron	Sanitile 120	Prime Coat One (1) Coat 1.0 to 2.0 mils dft
		Carbocrylic 3359	Finish Coat Two (2) Coats 2.0 to 3.0 mils dft per coat
4.	Exposed Electrical Work	Sanitile 120	Prime Coat One (1) Coat 0.5 mils dft
		Carbocrylic 3359	Finish Coat One (1) Coat 2.0 to 3.0 mils dft per coat
5.	Interior & Exterior Concrete Block, non-submerged	Sanitile 100	Prime Coat One (1) Coat 12.0 to 14.0 mils dft
		Sanitile 155 WB (Exterior) Carboguard 890 (Interior)	Finish Coat 2.0 to 3.0 mils dft (Exterior), 4.0 to 6.0 mils dft (Interior)
6.	Ferrous Metal Doors and Frames	Sanitile 120	Prime Coat 1.0 to 2.0 mils dft
		Carbocrylic 3359	Finish Coat One (1) Coat 2.0 to 3.0 mils dft
7.	Equipment	Carbocrylic 3359	Finish Coat One (1) Coat 2.0 to 3.0 mils dft
8.	Interior and Exterior Wood Surface	Sanitile 120	Prime Coat 1.0 to 2.0 mils dft
		Carbocrylic 3359	Finish Coat One (1) Coat 2.0 to 3.0 mils dft
9.	Galvanized Steel Trusses and Roof Deck	Carboline Rustbond Penetrating Sealer	Prime Coat One (1) Coat 1.0 to 2.0 mils dft
		Carboguard 890	Finish Coat Two (2) Coats

		4.0 to 6.0 mils dft per coat
10. Concrete Wet Well and manholes (as called out)	Carboguard 510 SG	Resurfacer Up to ¼" as needed in single coat
	Plasite 4500S	Finish Two (2) Coats 830.0 to 40.0 mils dft per coat

Surface	Tnemec Company, Inc.	Tnemec Application
1. Structural Steel and Miscellaneous Iron and Steel	Series N69F	Shop Primer One (1) Coat 3.0 to 5.0 mils dft
A. All interior miscellaneous iron and steel	Series N69	Finish Coat Two (2) Coats 3.0 to 5.0 mils dft per coat
B. All exterior miscellaneous iron and steel	Series N69	Intermediate Coat One (1) Coat 3.0 to 5.0 mils dft
	Series 72	Finish Coat One (1) Coat 2.0 to 3.0 mils dft
C. All miscellaneous iron and steel in vaults, pits, galleries and in areas exposed to extreme humidity and condensation	Series N69	Finish Two (2) Coats 4.0 to 6.0 mils dft per coat
D. All structural Steel	Series N69	Finish Two (2) Coats 3.0 to 5.0 mils dft per coat
E. All equipment, iron and steel in areas covered with sewage	Series N69-1211	Prime Coat One (1) Coat 3.0 to 5.0 mils dft
	Series 46H-413	Finish Coat One (1) Coat 16.0 to 20.0 mils dft
2. Exposed Cast Iron Piping System (primed in shop)	Series N140-1255 (shop primer)	Shop Prime Coat One (1) Coat 3.0 to 5.0 mils dft

	Series N69 Series 72	Intermediate Coat One (1) Coat 3.0 to 5.0 mils dft Finish Coat One (1) Coat 2.0 to 3.0 mils dft
3. Galvanized Iron	Series 115 Direct to Galvanized Series 1029	Prime Coat One (1) Coat 2.0 to 3.0 mils dft Finish Coat One (1) Coat 2.0 to 3.0 mils dft
4. Exposed Electrical Work	Series 1029	Finish Coat Two (2) Coats 2.0 to 3.0 mils dft per coat

Surface	**Tnemec Company, Inc.**	**Tnemec Application**
5. Interior & Exterior Concrete Block, non-submerged	Series 130 (Interior and Exterior) Series 113 (interior) Series 156 (exterior)	Prime Coat 80-100 sf per gallon (Interior and Exterior) Finish Coat Two (2) Coats 4.0 to 6.0 mils dft per coat (Interior and Exterior)
6. Ferrous Metal Doors and Frames	Series 151 Series 1029	Prime Coat One (1) Coat 1.0 to 1.5 mils dft Finish Coat Two (2) Coats 2.0 to 3.0 mils dft
7. Equipment	Series 1029	Finish Coat Two (2) Coats 2.0 to 3.0 mils dft
8. Interior and Exterior Wood Surface	Series 151 Series 1029	Prime Coat One (1) Coat 1.0 to 1.5 mils dft Finish Coat

		Two (2) Coats 1.5 to 2.5 mils dft
9. Galvanized Steel Trusses and Roof Deck	Series 115 Direct	Finish Coat Two (2) Coats 2.0 to 3.0 mils dft per coat
10. Concrete Wet Well and manholes (as called out)	Series 218 Series G435	Resurfacer One (1) Coat 1/8” Nominal Thickness Finish Coat Two (2) Coats 30.0 to 40.0 mils dft

Surface	PPG	PPG Application
1. Structural Steel and Miscellaneous Iron and Steel	Amerlock 2/400/600	Shop Primer One (1) Coat 1.1 to 6.0 mils dft
A. All interior miscellaneous iron and steel	Amerlock 2/400/600	Finish Coat Two (2) Coats 4.0 to 8.0 mils dft per coat
B. All exterior miscellaneous iron and steel	Amerlock 2/400/600 Pitthane Ultra 95-812	Prime Coat One (1) Coat 5.0 to 10.0 mils dft Finish Coat One (1) Coat 2.0 to 3.0 mils dft
C. All miscellaneous iron and steel in vaults, pits, galleries and in areas exposed to extreme humidity and condensation	Amerlock 2/400/600	Finish Two (2) Coats 4.0 to 8.0 mils dft per coat
D. All structural Steel	Amerlock 2/400/600	Finish Two (2) Coats 4.0 to 8.0 mils dft per coat
E. All equipment, iron and steel in areas covered with sewage	NovaGuard 840	One (1) Coat 16-20 mils dft

2. Exposed Cast Iron Piping System (primed in shop)	Amerlock 2/400/600 Pitthane Ultra 95-812	Shop Primer One (1) Coat 4.0 to 6.0 mils dft Finish Two (2) Coats (Direct to metal if blasted in the field) 8.0 to 20.0 mils dft per coat
3. Galvanized Iron	Pitt-tech plus EP DTM Acrylic Satin	Prime Coat One (1) Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
4. Exposed Electrical Work	Pitt-tech plus EP DTM Acrylic Satin	Prime Coat One (1) Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
5. Interior & Exterior Concrete Block, non-submerged	Amerlock 400 BF Interior Pitt-tech Plus EP DTM Satin Acrylic Satin Amerlock 2/400/600	Fill Coat One (1) Coat 12.0 to 14.0 mils dft Finish Coat 6.5 to 8.5 mils dft (Exterior), 2.0 to 5.0 mils dft (Interior)
6. Ferrous Metal Doors and Frames	Amerlock sealer Pitt-Tech Plus EP DTM Acrylic Satin	Prime Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
7. Equipment	Pitt-tech Plus EP DTM Acrylic Satin	Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
8. Interior and Exterior Wood Surface	Pitt-tech Plus EP DTM Acrylic Satin	Prime Coat 1.4 min mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
9. Galvanized Steel Trusses and Roof Deck	Amerlock 2/400/600	Finish Coat Two (2) Coats 4.0 to 8.0 mils dft per coat
10. Concrete Wet Well and manholes (as called out)	Raven 760 Nova Guard 840/890 or Raven 405	Finish Two (2) Coats at 8-16 mils DFT Or one (1) at 16.0 to 18.0 mils Total dft

Surface	Sherwin-Williams	S-W Application
1. Structural Steel and Miscellaneous Iron and Steel	Macropoxt 646 FC Epoxy	Shop Primer One (1) Coat 1.2 to 6.0 mils dft
A. All interior miscellaneous iron and steel	Macropoxy 646 FC Epoxy	Finish Coat Two (2) Coats 4.0 to 8.0 mils dft per coat
B. All exterior miscellaneous iron and steel	Macropoxy 646 FC Epoxy Acrolon 218	Prime Coat One (1) Coat 5.0 to 10.0 mils dft Finish Coat One (1) Coat 2.0 to 3.0 mils dft
C. All miscellaneous iron and steel in vaults, pits, galleries and in areas exposed to extreme humidity and condensation	Macropoxy 646	Finish Two (2) Coats 4.0 to 8.0 mils dft per coat
D. All structural Steel	Macropoxy 646 FC Epoxy	Finish Two (2) Coats 4.0 to 8.0 mils dft per coat
E. All equipment, iron and steel in areas covered with sewage	Macropoxy 240 Sher-Glass FF Epoxy	Shop Primer One (1) Coat 4.0 to 6.0 mils dft Finish Two (2) Coats (Direct to metal if blasted in the field) 8.0 to 20.0 mils dft per coat

2. Exposed Cast Iron Piping System (primed in shop)	Macropoxy 240 Sher-Glass FF Epoxy	Shop Primer One (1) Coat 4.0 to 6.0 mils dft Finish Two (2) Coats (Direct to metal if blasted in the field) 8.0 to 20.0 mils dft per coat
3. Galvanized Iron	Pro-Cryl Primer Pro Industrial DTM Acrylic	Prime Coat One (1) Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
4. Exposed Electrical Work	Pro-Cryl Primer Pro Industrial DTM Acrylic	Prime Coat One (1) Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
5. Interior & Exterior Concrete Block, non-submerged	Pro Industrial Block Filler Loxon XP (Exterior), Pro Industrial WB Epoxy, B73-300 series (Interior)	Fill Coat One (1) Coat 12.0 to 14.0 mils dft Finish Coat 6.5 to 8.5 mils dft (Exterior), 2.0 to 5.0 mils dft (Interior)
6. Ferrous Metal Doors and Frames	Pro-Cryl Primer Pro Industrial DTM Acrylic	Prime Coat 1.8 to 3.6 mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
7. Equipment	Pro Industrial DTM Acrylic	Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
8. Interior and Exterior Wood Surface	Pro Block Latex Primer Pro Industrial DTM Acrylic	Prime Coat 1.4 min mils dft Finish Coat Two (2) Coats 2.4 to 4.0 mils dft per coat
9. Galvanized Steel Trusses and Roof Deck	Macropoxy 646 FC Epoxy	Finish Coat Two (2) Coats 4.0 to 8.0 mils dft per coat
10. Concrete Wet Well and manholes (as called out)	Hi Mil SherTar	Finish Two (2) Coats at 8-16 mils DFT Or one (1) at 16.0 to 18.0 mils Total dft

2.2 CONCRETE COATING

A. Exterior - Above Grade – Cement Based Waterproof System

1. Surface Preparation

a. Surfaces must be dry, clean, and free of oil, grease and other contaminants.

b. Allow concrete to cure 28 days.

2. 1st Coat

a. THOROSEAL, mixed per manufacturer recommendation.

b. Maximum Coverage: 2-lb./sq. yd

3. 2nd Coat

a. THOROSEAL, mixed per manufacturer recommendation.

b. Maximum Coverage: 1-lb./sq. yd

B. Exterior - Below Grade – Coal Tar System

1. Surface Preparation

a. Surfaces must be clean and dry.

2. 1st Coat

a. TNEMEC Series 46-465 H.B. Tnemecol or equal.

b. Maximum Coverage: 94 sf/gal

3. 2nd Coat:

a. TNEMEC Series 46-465 H.B. Tnemecol or equal.

b. Maximum Coverage: 94 sf/gal

C. Interior Exposure (Non-Submerged) – Epoxy System

1. Surface Preparation

a. Brush-Off Blast Cleaning

2. 1st Coat

a. TNEMEC Series 66 Hi-Build Epoxoline or equal.

b. 4 – 5 mils dft.

3. 2nd Coat

a. TNEMEC Series 66 Hi-Build Epoxoline or equal.

b. 4 – 5 mils dft.

PART 3 EXECUTION

3.1 PAINTING

A. Paint shall not be applied on damp or frosty surfaces, nor during wet, foggy, or weather below 50º F, or above 85% relative humidity. Comply with manufacturer's product data as to environmental conditions. Surfaces to be painted shall be made free of dust and other foreign matter before paint is applied; surfaces shall be completely dry before paint is applied. Iron and steel which have been shop primed, shall have all abrasions in the priming coat cleaned to bright metal to remove all scale, ridges, rust, and faults in the prime coat. Weld splatter shall be removed and that area re-primed. Voids and open and hollow places shall be repaired with a material compatible with the surface to be repaired.

B. Paint shall be spread and brushed out so that there shall be no drops, runs, or sags in the coating. Where runs, sags, and drops do occur, they shall be removed, and the surface shall be re-coated. Paint shall be dry before additional coats are applied. Drop cloths shall be used to protect surfaces of the structure and equipment in place, and upon completion of work, paint spots shall be removed from surfaces and defaced surfaces shall be re-finished. Painting found to be defective, and that applied under adverse conditions, shall be removed and new paint shall be applied. Where more than one coat is required, undercoats shall be job-tinted.

3.2 CONCRETE COATING

A. Mix and apply all products per the manufacturer recommendation. The substrate to be coated must be clean, dry.free of oil and grease. On exposed concrete, rub concrete with a carborundum brick to remove scale and ridges prior to application. Repair/patch honeycombing as needed, then apply coating. After first application allow time for coating to cure and re-apply a second coat.

B. For Thoroseal application to exposed concrete, coat only the area that will be exposed and down to 12 inches below finish grade. Coat top of exposed wall. Area on the inside of a process basin to be rubbed smooth to a level 12 inches below top of water surface.

END OF SECTION

SECTION 32 31 00
CANTILIEVERD ENTRANCE GATE

PART 1 GENERAL

1.1 SCOPE

A. The existing entrance gate is to be removed and replaced. The cantilevered entrance gate shall be installed in the location shown on the Contract Drawings and shall be furnished complete with electric operator, as shown on the Contract Drawings.

1.2 RELATED SECTIONS

A. Section 01 33 00 Submittal Procedures

B. Section 31 10 00 Site Clearing

PART 2 PRODUCTS

2.1 GENERAL

A. The SafeGlide® single track cantilever gate system shall be manufactured by Pro Access Systems Inc., 116 Paul Street, Elburn, Illinois 60119 800-800-3356, or equal.

B. Gate manufacturer or supplier must certify that gate is manufactured in accordance and compliance with ASTM F 2200 Standard Specification for Automated Vehicular Gate Construction.

C. Upon request, gate manufacturer must furnish independent certification that it followed a documented Welding Procedure Specification and appropriate Procedure Qualification Record ensuring conformance to the AWS D2.1 welding code and/or Individual Certificates of Welder Qualification documenting the completion of the requirements of the AWS D1.2 code.

D. Electric operator for the gate provided by gate supplier.

2.2 GATE DIMENSIONS:

A. SafeGlide® Single Track Cantilever Slide Gate dimensions shall be as specified on the detailed drawings.

2.3 GATE FABRICATION DETAILS:

A. Materials:

1. Gate frame shall be fabricated from 6063-T6 grade aluminum alloy tubing and extrusions and shall meet the *ASTM B 221-14 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.* Hardware components

are fabricated from ½" hot dipped galvanized steel per *ASTM A 153 Standard Specification for Zinc Coating (Hot Dipped) On Iron And Steel Hardware.*

B. Gate Frame:

1. Gate frame shall be fabricated from a minimum of 2" x 3" 6063-T6 grade aluminum alloy tubing weighing a minimum of 1.43 pounds per foot on gate openings of 24' or less in length. Gate frames for openings greater than 24' in length are fabricated with 2" x 4" 6063 -T6 grade aluminum alloy weighing 1.72 pounds per linear foot. Frame shall be welded at all corners so as to form a rigid unit. Gate shall be fabricated as a single weldment up to a gate opening size of 30' or overall length of 48' 6".

2. Gate frame shall have diagonal bracing of 2" x 2"-inch, 6063-T6 grade aluminum alloy tube, weighing a minimum of 1.1 pounds per lineal foot. Combined with tubular aluminum, installed in the vertical plane throughout the gate proper and the counterbalance to add further rigidity to the gate and eliminate the need for vertical chord adjustment.

C. Vertical Components:

1. Internal vertical members shall be no less than 2" x 2", 6063-T6 grade aluminum alloy, weighing a minimum of 1.1 pounds per lineal foot on gate openings less of 24' or less. Gates with openings greater than 24'are fabricated with 2" x 3" 6063-T6 grade aluminum alloy tubing weighing a minimum of 1.43 pounds per linear foot. Internal verticals shall be spaced no more than six (6) feet on center.

D. Gate Track:

1. Enclosed track shall be a one-piece extrusion of 6063-T6 structural-grade aluminum alloy, weighing a minimum of 4.74 pounds per foot for gate openings up to 30 feet. Track shall be formed to enclose the internal-roller truck assemblies and structurally adequate to serve as the load-bearing surface for the gate panel. Reaction load rating of the track shall be a minimum of 2,000 pounds.

E. Welding Standards:

1. All welding on the gate conforms to the Welding Procedure Specification and Procedure Qualification Record to the AWS D2.1 welding code and all welders are certified under the AWS 2.1 welding code.

F. Gate Mounting:

1. The gate frame is suspended and supported by two (2) self-aligning trolley assemblies each equipped with four (4) vertical wheel bearings and two horizontal guide rollers. See 1.03 (F) Each of these trolley assemblies is mounted with a gusseted ½" Trolley hanger assembly shall consist of minimum ½" thick steel plate, gusseted, which is to be affixed to a 4-inch O.D. post by means of 1/2-inch diameter U-bolts. Optional 6 5/8-inch round; 4- and 6-inch square are also available. All mounting hardware shall be hot

dipped galvanized or if specified, optional corrosion resistant colors are available for the gate and any hardware components.

2. Bottom guide assembly shall consist of a ½" galvanized steel mounting bracket with two 3" diameter phenolic roller wheel bearings mounted in such a way as to limit or contain gate lateral movement without binding. These are furnished with wheel covers to comply with UL 325, Roller wheels shall be braced top and bottom by the essential construction of the bottom guide in such a fashion as to prevent lateral gate movement which could deform the axles of the wheels and defeat the bottom guide assembly. Bottom guide roller assembly is mounted to a 4-inch O.D. post by means of 1/2-inch diameter U-bolts. Optional 6 5/8" round; 4" and 6" square are also available.

3. Any gaps between the gate frame and the posts must be filled with the provided baffle kits in accordance with ASTM F2200-05 regulations.

G. Diagonal Components:

1. Gate frame shall have diagonal bracing of 2" x 2"-inch, 6063-T6 grade aluminum alloy, weighing a minimum of 1.1 pounds per lineal foot. Combined with tubular aluminum, installed in the vertical plane throughout the gate proper and the counterbalance to add further rigidity to the gate and eliminate the need for vertical chord adjustment.

H. Gate Infill:

1. Chain link fabric provided and installed by others to fill the entire length of the gate (mechanically operated gates require the counter balance to have fabric to prevent reach through and comply with ASTM F 2200, see 1.03C.1) Fabric shall be attached at each end of the gate frame with standard fence industry tension bars and tied at each 2' x 3" or 2" x 4" leading or trailing vertical member with standard fence industry tension bands provided with the gate. Per ASTM F 2200 the means of attachment must eliminate any protrusions from the leading or bottom edge exceeding ½".

2.4 GATE POSTS:

A. A 4-inch O.D. post (provided by others) is the minimum requirement. Optional 6 5/8- inch round; 4- and 6-inch square hardware components are available if required.

2.5 FINISH:

A. Standard gate finish is mill finish aluminum. Standard finish of the hardware components is hot dipped galvanized if specified, optional corrosion resistant colors are available for the gate and any hardware components.

2.6 WARRANTY:

A. System components manufactured and supplied by Pro Access Systems shall have a three-year limited warranty against defects in materials and workmanship.

2.7 ELECTRIC GATE OPERATOR

A. Gate operator system to consist of the following:

1. Provide commercial grade slide gate operator w/ battery backup.
2. Power supply: 120 Volt
3. Concrete operator pad.
4. Gooseneck pedestal, black.
5. Safety beam.
6. Wireless edge kit.
7. Safety loops 6' x 20'
8. Free exit loop 6' x 20'
9. Loop detectors
10. Keypad station with call box.
11. Doorking 8040-090 Wiegand wireless receiver or equal.
12. Ground rods w/ clamps.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify areas to receive fencing are completed to final grades and elevations.

B. Ensure property lines and legal boundaries of work are clearly established.

3.2 INSTALLATION

A. The equipment and related accessories of this specification section are to be installed in accordance to the equipment provider's written instructions unless otherwise specified or depicted on the project drawings.

B. If the gate system includes any mechanical or automatically divides for opening or closing of the gate, the installation must comply with ASTM F 2200 and UL 325 standards.

C. The gate and gate functions must adhere to ASTM F 1184 standards for aluminum cantilever slide gates, Type II, Class 2.

3.3 SYSTEM VALIDATION:

A. The entire system, including any automated or mechanical operators shall be calibrated to assure proper functionality.

B. The entire system shall be operated and tested for a enough time to ascertain that the system is functioning dependably.

C. Training on Gate systems that include automated operators is required.

1. Provide written instructions for all mechanical, electrical, automated operator and safety components for everyone who will be operating the gate system.

2. Install all warning placards (provided by others) in unobscured positions on each side of the gate.

3. Discuss the safety features and operational functionality of the gate system with the end user or owner to verify their understanding.

END OF SECTION

AQUA-AEROBIC SYSTEMS, INC.
A Metawater Company

Proposal#: 169972-R1

TO: All Bidding Contractors

PROJECT: SPOUT SPRINGS WRF EXP GA

BID DATE: August 29, 2024
PROPOSAL DATE: August 23, 2024

ATN: Cost Estimator
CC: Templeton & Associates / ph#: 770/614-8550 / fx#: 770/614-5992
Jon Baker

Aqua-Aerobic Systems, Inc.
Paul Nelson / PNelson@aqua-aerobic.com

The following Notes apply to Aqua-Aerobic Systems' proposal:

- We are pleased to quote, for acceptance within 120 days of the bid date, prices and terms on equipment listed below.
- Equipment will be furnished by Aqua-Aerobic Systems, Inc. with unloading of goods, civil work, and installation by the Buyer.
- Reference: Specification Section 25 00 20 - Process Instrumentation and Control Supplier
- Reference: Specification Section 46 53 53 - Sequential Batch Reactor System
- Reference: Specification Section 46 61 41- Disk Filters

AquaSBR

Influent Valves

2 Influent Valve(s) for SBR #2A/2B will be provided as follows:

- 12 inch diameter Milliken 601 electrically operated eccentric plug valve(s) with 125# flanged end connection, ASTM A-126 Class B cast iron body with welded in nickel seat, EPDM coated ductile iron plug, assembled and tested with an Auma, 115 VAC, 60 hertz, single phase open/close service electric actuator. Valve actuator includes compartment heater.

1 Influent Valve(s) for SBR #4 will be provided as follows:

- 16 inch diameter Milliken 601 electrically operated eccentric plug valve(s) with 125# flanged end connection, ASTM A-126 Class B cast iron body with welded in nickel seat, EPDM coated ductile iron plug, assembled and tested with an Auma, three phase, open/close service electric actuator. Valve actuator includes compartment heater.

Mixers

4 AquaDDM Direct Drive Mixer(s) will be provided as follows:

- 7.5 HP Model FSS Endura® Series AquaDDM® Mixer. Motor base and intake volute assemblies will be of 304 stainless steel. Float is fiber reinforced polyester skin (FRP), filled with closed cell polyurethane foam. Propeller is cast stainless steel. Motor will be premium efficient, TEFC, 460 volt, 3 phase, 60 hertz, 1200 RPM with 1.15 service factor and Class F nonhygroscopic insulation. Motor shaft is one-piece 17-4 PH stainless steel.

Mixer Mooring

4 Mixer Cable Mooring System(s) consisting of:

- #12 AWG-four conductor electrical service cable(s).
- Aerial support tie(s).
- Electrical cable strain relief grip(s), 2 eye, wire mesh.
- 304 stainless steel mooring cable(s).
- Maintenance mooring cable loop(s).
- Stainless steel mooring spring(s).
- 1/2" stainless steel eyebolt assembly(s).
- 1/4" 316 stainless steel wire rope thimble(s).
- 3/8" diameter 316 stainless steel quick disconnect snaphook(s).

Decanters

2 Decanter assembly(ies) for SBR #2A/2B consisting of:

- 8x7 Aqua-Aerobics decanter(s) with fiberglass float, 304 stainless steel weir, galvanized restrained mooring frame, and painted steel power section with #14-10 conductor power cable wired into a NEMA 4X stainless steel junction box with terminal strips for the single phase, 60 hertz actuator and limit switches.
- Aluminum band clamp heater integral to the decanter power section(s).
- Decant pipe(s) with integral elbow, 304L stainless steel.
- 10 inch gasket kit(s).
- 10 inch diameter stainless steel flanged flexible joints.
- Stainless steel anchors.
- 4" schedule 40 galvanized restrained mooring post(s) with base plate.
- Galvanized steel dewatering support posts.
- 10 inch Milliken Fig. 511A AWWA C-504 Class 150B electrically operated butterfly valve(s) with ANSI Class 125# flanged end ASTM A-536 ductile iron body, ductile iron disk with a 316 stainless steel edge, fully lined EPDM seat vulcanized in the body, 304 stainless steel shaft assembled and tested with an Auma, 115 VAC, 60 hertz, single phase open/close service electric actuator. Valve actuator includes compartment heater.

6 10" Decanter Orifice Plate to restrict the decant flow rate to plus or minus 10%:

- 304 stainless steel orifice plate.
- Four (4) for existing decanters 1a/1b/3a/3b and two (2) for new decanters 2a/2b.

1 Decanter assembly(ies) for SBR #4 consisting of:

- 8x7 Aqua-Aerobics decanter(s) with fiberglass float, 304 stainless steel weir, galvanized restrained mooring frame, and painted steel power section with #14-10 conductor power cable wired into a NEMA 4X stainless steel junction box with terminal strips for the single phase, 60 hertz actuator and limit switches.
- Aluminum band clamp heater integral to the decanter power section(s).
- Decant pipe(s) with integral elbow, 304L stainless steel.
- 14 inch gasket kit(s).
- 14 inch diameter stainless steel flanged flexible joints.
- Stainless steel anchors.
- 4" schedule 40 galvanized restrained mooring post(s) with base plate.
- Galvanized steel dewatering support posts.
- 14 inch Milliken Fig. 511A AWWA C-504 Class 150B electrically operated butterfly valve(s) with ANSI Class 125# flanged end ASTM A-536 ductile iron body, ductile iron disk with a 316 stainless steel edge, fully lined EPDM seat vulcanized in the body, 304 stainless steel shaft assembled and tested with an Auma, 115 VAC, 60 hertz, single phase open/close service electric actuator. Valve actuator includes compartment heater.

1 14" Decanter Orifice Plate to restrict the decant flow rate to plus or minus 10%:

- 304 stainless steel orifice plate.

Transfer Pumps/Valves

6 Submersible pump assembly(ies) consisting of the following items:

- Flygt Model NP-3085, 3 HP, 3 phase, 60 cycle submersible pump(s) with painted cast iron pump housing, discharge elbow and multi-conductor electrical cable.
- 4 inch diameter Milliken 601 manual eccentric plug valve(s) with cast iron body, welded nickel seat, flanged end style, EPDM coated ductile iron plug, stainless steel bearings, and manual operator.
- 4 inch diameter Nibco cast iron swing check valve.
- Galvanized guide bar(s).
- Stainless steel lifting chain(s).
- Stainless steel upper guide bar bracket(s).

Retrievable Fine Bubble Diffusers

12 Retrievable Fine Bubble Diffuser Assembly(ies) consisting of:

- 25 diffuser tubes consisting of two flexible EPDM porous membrane sheaths mounted on a rigid support pipe with 304 stainless steel band clamps.
- 304 stainless steel manifold weldment.
- 304 stainless steel leveling angles.
- 304 stainless steel leveling studs.
- Galvanized vertical support beam.
- Galvanized vertical air column assembly.
- Galvanized upper vertical beam and pulley assembly.
- Galvanized top support bracket.
- 3" EPDM flexible air line with stainless steel quick disconnect end fittings.
- Galvanized threaded flange.
- 3" manual isolation butterfly valve with cast iron body, EPDM seat, aluminum bronze disk and one-piece stainless steel shaft.
- Ny-glass quick disconnect cam lock adapter.
- 304 stainless steel adhesive anchors.
- Galvanized steel brace angles.

2 Set(s) of In-Basin Air Distribution piping (for Basins 2a/2b and 4) consisting of:

- Stainless steel air distribution piping from the northwest side of basin 4 and the northeast side of basins 2a/2b as indicated on 7-M-1. Piping design to be similar to what is shown on the layout but final design shall be by AASI. Flange connections and piping supports will be provided as necessary. Piping will be designed in reasonable shipping lengths and sizes, no welding will be done in the field and assembly and installation onsite will be by the contractor.

Positive Displacement Blowers

3 Positive displacement Blower Package(s), with each package consisting of:

- Aerzen Rotary Positive Displacement Blower(s) with 50HP, 460 volt, three phase, 60 hertz motor will be provided by Aqua. Each blower will include base frame with integrated type silencer, V-belt drive, and guard. Blower accessories provided by Aqua will include intake filter-silencer with maintenance indicator, pressure relief valve, check valve, pressure gauge, and rubber expansion joint. Electrical wiring, junction box/disconnect, air manifolds, gaskets, and hardware to be supplied by the installing contractor.
- Acoustic hood made of galvanized steel with oil drip pan and powder coated finish.
- 6" wafer style butterfly valve(s) with lever operator as manufacturer by Nibco or equal.
- Stainless steel anchors.

Level Sensor Assemblies

3 Pressure Transducer Assembly(ies) each consisting of:

- Pressure transducer(s).
- 304 stainless steel mounting bracket weldment(s).
- 304 stainless steel transducer mounting pipe weldment(s).

- Stainless steel anchors.

3 Level Sensor Assembly(ies) will be provided as follows:

- Float switch(es).
- 316 stainless steel float switch mounting bracket(s).
- Stainless steel anchors.

3 Junction Box(es) for Level Controls with Intrinsically Safe Relays consisting of:

- NEMA 4X 304 stainless steel junction box(es).
- Relay(s).

Instrumentation

3 Dissolved Oxygen Assembly(ies) consisting of:

- Hach LDO dissolved oxygen sensing probe. Sensor constructed of stainless steel. Probe includes electric cable.
- 304 stainless steel mounting bracket weldment(s).
- 304 stainless steel transducer mounting pipe weldment(s).
- Stainless steel anchors.

3 Process Controller(s) consisting of:

- Hach SC4500 controller and display module(s).
- Sun shield(s).

1 P.C. Based Control and Monitoring System will be provided as follows:

- Dell OptiPlex Tower 7090, Intel Core i7-10700 (8C, 10MB), 32GB 2400MHz DDR4 RDIMM ECC memory, 512GB Hard Drives, 1TB SATA Backup Hard Drive, Integrated Graphics Card, Integrated NIC, USB Laser mouse, USB Keyboard, 63 month ProSupport 7x24, 24" Dell Monitor.
- Microsoft Windows 10 Operating System
- Malware/Antivirus software
- Wonderware SCADA PC Software consisting of: Development/Runtime software, AquaSBR System Monitor, Communication driver, proprietary control graphic screens consisting of System graphic monitor, Event Log/Alarm, and Timer display and adjustment screens.
- Two (2) cable ends will be provided for installation by the purchaser onto the PC□s serial communication cable provided by the purchaser.
- RS Logix 5000 Lite Edition software.

Misc/Spare Parts

1 Set(s), Spare Parts will be provided as follows:

- Shelf Spare WAS Pump.
- (1) Decanter linear actuator.
- (1) Decanter linear actuator capacitor.
- Limit switch(es).
- (1) Limit switch arm.
- Input card(s)
- Output card(s).
- Analog input card(s).
- Analog output card(s).
- Corrosion inhibitor(s).
- Uninterrupted power supply.
- Power supply(s).
- Power supply(s).
- Control relay(s).

- ATC time delay relay(s).
- Selector switch(es).
- Pilot light(s).
- Pushbutton(s).
- Variable input NEMA 4X process meter, Precision Digital

AquaSBR: Post-Equalization

Level Sensor Assemblies

1 Sensor installation(s) consisting of:

- Pressure transducer(s).
- Stainless steel sensor guide rail weldment(s).
- PVC sensor mounting pipe(s).
- 1 1/2" Flexible hose.
- Top support(s).
- Stainless steel anchor kit(s).

1 Level Sensor Assembly(ies) will be provided as follows:

- Float switch(es).
- 316 stainless steel float switch mounting bracket(s).
- Stainless steel anchors.

1 Junction Box(es) for Level Controls with Intrinsically Safe Relays consisting of:

- NEMA 4X 304 stainless steel junction box(es).
- Relay(s).

Controls

Controls wo/Starters

1 Controls Package(s) will be provided as follows:

- NEMA 12 panel enclosure suitable for indoor installation and constructed of painted steel.
- Pushbutton(s).
- Variable input NEMA 4X process meter, Precision Digital
- Uninterrupted power supply.
- Surge arrester(s).
- PanelView Plus 7 10" color touch screen display(s).
- Fuse(s) and fuse block(s).
- Compactlogix Processor.
- Input card(s)
- Output card(s).
- Analog input card(s).
- Analog output card(s).
- Power supply(s).
- Fiber optic patch panel(s).
- Control relay(s).
- Ethernet / Fiber Optic switch(es).
- Power supply(s).
- 115 V power line filter(s).
- Selector switch(es).
- Pilot light(s).
- GFI convenience outlet(s).

- Remote access Ethernet modem(s).
- Panel will be UL listed and labeled.

2 Remote I/O Panel(s) consisting of:

- NEMA 12 panel enclosure suitable for indoor installation and constructed of painted steel.
- Uninterrupted power supply.
- Surge arrester(s).
- Isolation circuit breaker(s).
- CompactLogix remote I/O module(s).
- End cap(s).
- Power supply(s).
- Input card(s)
- Output card(s).
- Analog input card(s).
- Analog output card(s).
- Ethernet / Fiber Optic switch(es).
- 115 V power line filter(s).
- Selector switch(es).
- Pilot light(s).
- Control relay(s).
- GFI convenience outlet(s).
- Panel will be UL listed and labeled.

1 Remote I/O Panel(s) consisting of:

- NEMA 4X 304 stainless steel enclosure.
- Uninterrupted power supply.
- Surge arrester(s).
- Air conditioner(s).
- Isolation circuit breaker(s).
- CompactLogix remote I/O module(s).
- End cap(s).
- Power supply(s).
- Input card(s)
- Output card(s).
- Analog input card(s).
- Analog output card(s).
- Ethernet switch(es).
- 115 V power line filter(s).
- Selector switch(es).
- Pilot light(s).
- Control relay(s).
- GFI convenience outlet(s).
- Panel will be UL listed and labeled.

Engineering: AquaSBR

Engineering

1 Set(s) Documentation will be provided as described:

- Operation & Maintenance Manuals (English language) in electronic format.

1 Set(s) Documentation will be provided as described:

- Engineer's Approval Data (English language) in electronic format.

Supervision/Freight

Supervison/Freight Domestic

1 Supervision Services and Freight Package(s) will be provided as follows:

- 4 Day(s) On Site for INSTALLATION SUPERVISION
- 1 Trip(s) for INSTALLATION SUPERVISION
- 4 Day(s) On Site for MECHANICAL SUPERVISION
- 1 Trip(s) for MECHANICAL SUPERVISION
- 4 Day(s) On Site for ELECTRICAL SUPERVISION
- 1 Trip(s) for ELECTRICAL SUPERVISION
- Day(s) On Site for PROCESS SUPERVISION
- Travel Day(s) for PROCESS SUPERVISION
- Trip(s) for PROCESS SUPERVISION
- FREIGHT TO JOBSITE

Cloth Media Filters

AquaDisk Tanks/Basins

4 Maintenance Platform(s)

-Internal filter platform consisting of; stainless steel frame with fiberglass grating.

2 AquaDisk model # ADFC-54x4I-PC concrete filter basin accessories consisting of:

- Concrete basin (by others).
- Overall footprint will be dependent on influent, effluent, and overflow chamber configurations.
- 304 stainless steel centertube support beam wall brackets.
- 304 stainless steel backwash manifold wall brackets.
- 304 stainless steel effluent seal plate weldment(s).
- 304 stainless steel anchors.
- 6 inch diameter Milliken manual eccentric plug valve(s) with cast iron body, mechanical joint end style, neoprene resilient plug facing, and stainless steel extension with square nut.

2 Influent Flow Assembly(ies) consisting of:

- 304 stainless steel level weir / flow separation baffle(s).
- 304 stainless steel weir and separation baffle stiffening angle(s).
- 304 stainless steel anchors.

AquaDisk Centertube Assemblies

2 Centertube Assembly(ies) consisting of:

- 304 stainless steel centertube weldment(s).
- U.H.M.W. polyethylene multi-segment driven sprocket(s).
- Dual wheel carrier assembly(ies).
- Single wheel rider assembly(ies).
- Centertube end support bearing kit(s).
- Viton V-ring effluent port\centertube seal(s).
- Disk segment 304 stainless steel support rods.
- Media sealing gaskets.
- Pile cloth media and non-corrosive support frame assemblies.

2 Cloth set(s) will have the following feature:

- Cloth will be OptiFiber PES-14.

AquaDisk Drive Assemblies

2 Drive System Assembly(ies) consisting of:
- Gearbox(es) with three phase 1/2 HP drive motor(s).
- Acetal drive chain(s) with 304 stainless steel link pins.
- Chain guard weldment(s).
- Warning label(s).
- Adjustable drive bracket weldment(s).
- Stationary drive bracket weldment(s).
- Nylon drive sprocket(s).

AquaDisk Backwash/Sludge Assemblies

2 Backwash/Sludge Pump Assemblies consisting of:
- Hidrostal model # A2QS2, 2.9 HP, three phase submersible pumps.
- Nibco bronze swing check valve(s).
- 304 stainless steel combination nipple(s).
- 304 stainless steel quick coupling(s).

2 Backwash Discharge System Assembly(ies) consisting of:
- 304 SS backwash and sludge discharge manifold(s).
- Backwash discharge hose assemblies.
- Anti-siphon vacuum breaker(s).
- 3" threaded brass ball valve(s).

2 Backwash System Suction Assembly(ies) consisting of:
- 304 stainless steel backwash nozzles.
- Backwash suction hose assemblies.
- 304 stainless steel quick couplings.
- 304 stainless steel threaded flanges.
- Stainless steel backwash nozzle springs.
- PVC sludge collection manifold assembly(ies).
- Nylon combination nipple(s).
- Stainless steel hose clamps.
- 304 stainless steel backwash collection manifold(s).

2 Backwash Support Assembly(ies) consisting of:
- 304 stainless steel backwash support weldment(s).

AquaDisk Instrumentation

2 Pressure Transducer Assembly(ies) consisting of:
- Pressure transducer(s).
- 304 stainless steel probe mounting bracket(s).
- Float switch(es).

AquaDisk Valves

2 Influent Valve(s) consisting of:
- 10 inch Milliken 511A-AG AWWA C-504 Class 150B manual butterfly valve(s) with ANSI Class 125# flanged end ASTM A-536 ductile iron body, ductile iron disk with a 316 stainless steel edge, fully lined EPDM seat vulcanized in the body, and 304 stainless steel shaft with gear operator.

AquaDisk Controls w/Starters

1 Control Panel(s) consisting of:
- NEMA 4X 304 stainless steel enclosure.

- Air conditioner(s).
- Operator interface sun shield(s).
- Uninterrupted power supply.
- Surge arrester(s).
- Corrosion inhibitor(s).
- Circuit breaker with handle.
- 2 KVA Transformer(s).
- Fuses and fuse blocks.
- Single phase circuit breaker(s).
- Line filter(s).
- GFI convenience outlet(s).
- Control relay(s).
- Selector switch(es).
- Indicating pilot light(s).
- Compactlogix Processor.
- Power supply(s).
- Input card(s)
- Output card(s).
- Analog input card(s).
- Ethernet switch(es).
- Power supply(ies).
- PanelView Plus 7 7" color touch screen display(s).
- Operator interface sun shield(s).
- Motor starter(s).
- Terminal blocks.
- UL label(s).

AquaDisk Engineering

1 Set(s) Documentation for the AquaDisk will be provided as described:

- Engineer's Approval Data (English language) in electronic format.

1 Set(s) Documentation for the AquaDisk will be provided as described:

- Operation & Maintenance Manuals (English language) in electronic format.

AquaDisk Supervision/Freight Domestic

1 Supervision Services and Freight Package(s) for the AquaDisk will be provided as follows:

- 8 Day(s) On Site for INSTALLATION SUPERVISION
- 2 Trip(s) for INSTALLATION SUPERVISION
- 6 Day(s) On Site for MECHANICAL SUPERVISION
- 2 Trip(s) for MECHANICAL SUPERVISION
- FREIGHT TO JOBSITE

The Following General Notes apply to Aqua-Aerobic Systems' Proposal:

- SCHEDULE: We expect submittals to be completed and in transit to you within 8-10* weeks after receipt of order with acceptable terms and conditions and guarantee of payment. We expect receipt of approved engineer's submittal with release for manufacture within 4-8 weeks of our transmittal of submittal data. We expect shipment of equipment (transit time excluded) to be approximately 16-22* weeks (or control panel lead times, whichever is more) from our receipt of approved engineer's submittal data and release for manufacture. Schedules may be adjusted at time of order placement, depending upon existing order backlog. *Weeks quoted are actual working weeks.
- We expect shipment of control panels (transit time excluded) to be approximately 24-30 weeks* from our receipt of approved engineer's submittal data and release for manufacture. The extended delivery on control

panels is based on unprecedented supply chain delays associated with the COVID-19 pandemic. Schedules will be updated as new information becomes available.
- Schedule changes due to supply chain disruption may impact the above quoted times. Aqua-Aerobic Systems will advise if/when any such disruption applies.
- Aqua-Aerobic Systems will be closed for the Christmas Holidays beginning approximately December 24, through approximately January 2nd.
- PRICE ESCALATION INDEX: Aqua-Aerobic Systems, Inc. reserves the right to re-evaluate the pricing quoted prior to order acceptance if; 1) a purchase order is received after the validity date stated in this proposal or, 2) the lead times stated in this proposal are exceeded. Any pricing adjustments required shall be based on a published materials cost index specific to the materials proposed.
- CONTROLS NON-DISCLOSURE / CONFIDENTIALITY AGREEMENT: If applicable, Aqua-Aerobic Systems will provide information relating to software documentation to control the treatment system supplied using Aqua-Aerobic Systems' proprietary and/or trade secret information subject to execution of an Aqua-Aerobic "Controls Non-Disclosure / Confidentiality Agreement".
- Additional supervision services can be provided for an additional charge of $1750/day plus travel and living expenses.

The Following Mechanical and/or Electrical Notes apply to Aqua-Aerobic Systems' Proposal:

- Individual blowers are sized with a free air intake. Blowers attached to a common intake manifold or provided with inlet extensions must be evaluated for possible additional pressure and horsepower requirements. Blowers positioned inside a building must be provided with adequate louvered free air intake to prevent negative pressures which may cause poor performance and overheating.
- Blower discharge manifold and piping losses are assumed at 0.3 PSI for coarse bubble and 0.5 PSI for fine bubble from the blower termination flange to the diffuser assembly termination flange. Engineer to verify actual piping losses do not exceed the above. Inlet losses are assumed at 0.25 PSI for inlet silencer and a clean filter. No inlet losses have been assumed for inlet filter piping, and it is assumed that the filter is located on each blower package.
- Valve and line sizes are to be verified by the engineer based on actual line losses.
- Electrical cables provided by Aqua-Aerobic Systems, as stated in our proposal, will terminate at the basin wall at the termination point as shown on the drawings or (if undefined) at the point nearest the powered equipment.
- Three phase motors will be 460 volt.
- Single phase motors will be 115 volt.
- Filter flow hydraulics and plant's capability to handle the intermittent backwash flow is to be confirmed by the purchaser/purchaser's consulting engineer.
- Pumps and valves ship loose, unless otherwise specified.

The Following Scope Exclusion Notes apply to Aqua-Aerobic Systems' Proposal:

- Materials and Services not specifically described/itemized in this proposal are not included in the quoted total price, and are to be supplied by the installing contractor/purchaser.
- Freeze protection may be required for outdoor installation in cold weather climates. All such protection, including but not limited to, heat tracing and insulation of pumps and piping, as well as protection against internal tank freezing, shall be provided and installed by the installing contractor.
- Equipment vault(s) must be supplied with drain and/or sump.

SCOPE BY PURCHASER/CONTRACTOR:
*Note this is not intended as a complete listing and is provided as a courtesy.
- Unloading and storage.
- Provisions for equipment access.
- Concrete, handrail and all civil works.
- All air and process piping, spool pieces, supports, gaskets and hardware beyond Aqua-Aerobic's equipment terminations.

- Interconnecting piping and reducers, wiring and installation.
- All flanges and/or unions in the piping to service the equipment.
- Motor starters and MCC (Motor Control Center).
- Electrical conduit, hardware, supports, attachment of cables, wiring and j-boxes (if any) between motors, electrical valves, instruments and the control panel.
- Installation/field wiring of the control panel(s) that ship loose.
- Electrical wiring and supply power.
- Concrete, volumes as required, to fill mooring posts.

The Following Commercial Notes apply to Aqua-Aerobic Systems' Proposal:

- The following Exceptions/Clarifications are an integral part of this proposal:

- Peak hourly flow in section 46 53 53 is discrepant from section 46 61 41. Please clarify if the PHF is 4.08 MGD or 4.00 MGD. Note that either works without issue, but the intent is to show the same peak flow on future shop drawings.
- A specification section have been referenced, but not provided for review. It is assumed that this section does not affect the Aqua-Aerobic Systems scope of supply: 46 66 56.
- Per the direction of David Gauker from CEC, LCP-D and LCP-E do not exist in the scope of this project and therefore are not included in the Aqua-Aerobic Systems scope of supply.
- Per David Gauker, the existing Main SBR control panel will be removed and replaced entirely by a new main SBR control panel. Aqua Aerobic Systems' scope of supply for this panel matches the intent as described in the contract drawings and not the description in SBR spec section 46 53 53. This control panel is assumed to be inside a climate controlled building.
- Aqua-Aerobic Systems' scope of supply for the main SBR control panel meets the general requirements given in section 25 00 20 with the intent of matching the LCP panels A and B for indoor use.
- F.O.B. JOBSITE; TITLE AND RISK OF LOSS: All prices and all shipments of goods are F.O.B. Jobsite City Location. It is the responsibility of the Buyer to unload shipments and utilizing the packing list and bill of lading provided with the shipment notate shortages/damages upon receipt of the shipments and notify Aqua-Aerobic Systems in writing within 7 days of the shortages/damages to facilitate filing of a freight claim. Delivery of the goods sold hereunder by the carrier shall be deemed delivered to Buyer, and upon such delivery, title to such goods and risk of loss or damage shall be upon Buyer.
- TAXES: State and/or local taxes are not included in the price but will be charged unless we receive a valid sales exemption certificate, direct pay permit, or other documentation required specifically by the taxing entity prior to shipment.
- PAYMENT TERMS: Subject to credit approval and guarantee of payment, we request the following progress payments due Net 45 days from invoice issued for the designated event:

25% of total purchase price at order execution.
25% of total purchase price at our receipt of approved engineer's submittal data or Net 45 from transmittal of submittals.
40% of total purchase price at shipment of goods.
10 % of total purchase price at Owner Acceptance following Start-up or 6 months from shipment whichever occurs first.

-SCOPE OF SUPPLY NOTE: Aqua-Aerobic Systems' scope of supply (and pricing) is as described in this proposal, including the listed Integral Documents and the terms and conditions of sale. Please refer to the proposal notes and notated drawings for equipment terminations and items not included in the proposal which are to be provided by the Buyer. Engineer’s submittal data will be prepared using these proposed goods and services, and the submittal approved by the Consulting Engineer will become an integral part of the scope of supply under the contract resulting from this offer. Any additions or deletions to the scope of supply will be presented as change orders.

- TRADEMARKS: Aqua-Jet® Surface Mechanical Aerator, Aqua-Jet II® Contained Flow Aerator, AquaDDM®

GOODS QUOTED ABOVE WILL BE SOLD SUBJECT ONLY TO THE TERMS AND CONDITIONS OF SALE SET FORTH HEREIN. ANY DIFFERENT OR ADDITIONAL TERMS ARE HEREBY OBJECTED TO.

Total Price: **$2,391,200**

TERMS AND CONDITIONS OF AQUA-AEROBIC SYSTEMS, INC. (A Metawater Company)

This offer and all of the goods and sales of Aqua-Aerobic Systems, Inc. are subject only to the following terms and conditions. The acceptance of any order resulting from this proposal is based on the express condition that the Buyer agrees to all the terms and conditions herein contained. Any terms and conditions in any order, which are in addition to or inconsistent with the following, shall not be binding upon Aqua-Aerobic Systems, Inc. This proposal and any contract resulting therefrom, shall be governed by and construed in accordance with the laws of the State of Illinois, without regard to conflicts of laws principles. Resale of any products purchased from - Aqua-Aerobic Systems, Inc, is not permitted without prior written agreement with Aqua-Aerobic Systems, Inc expressly consenting to such resale. Any party who sells a product purchased from Aqua-Aerobic Systems, Inc, is subject to the terms and conditions includedherein.

DURATION OF QUOTATION
This proposal of Aqua-Aerobic Systems, Inc. shall in no event be effective more than 30 days from date thereof, unless specifically stated otherwise, and is subject to change at any time prior to acceptance.

PROPRIETARY INFORMATION
This proposal, including all descriptive data, drawings, material, information and know-how disclosed by Aqua-Aerobic Systems, Inc. to Buyer in relation hereto is confidential information intended solely for the confidential use of Buyer, shall remain the property of Aqua-Aerobic Systems, Inc. and shall not be disclosed or otherwise used to the disadvantage or detriment of Aqua-Aerobic Systems, Inc. in any manner.

PAYMENT TERMS; ORDERS;
Unless specifically stated otherwise, quoted terms are Net 30 Days from invoice date. Past-due charges are 1.5% per month and will apply only on any past-due balance. Aqua-Aerobic Systems, Inc. does not allow retainage of any invoice amount, unless authorized in writing by an authorized representative of our Loves Park, Illinois office. Terms of payment are within Aqua-Aerobic Systems, Inc's sole discretion, and unless otherwise agreed to by Aqua-Aerobic Systems, Inc, payment terms must be accepted by Aqua-Aerobic Systems, Inc prior to Aqua-Aerobic Systems' acceptance of an order. Payment for the products must be made by approved credit card, check, wire transfer, or some other prearranged payment method unless credit terms have been agreed to by Aqua-Aerobic Systems, Inc. Invoices are due and payable within the time period noted on the invoice, measured from the date of the invoice. Orders are not binding until accepted by Aqua-Aerobic Systems, Inc.

SECURITY
If at any time the financial responsibility of the Buyer becomes unsatisfactory to Aqua-Aerobic Systems, Inc., or Aqua-Aerobic Systems, Inc. otherwise deems itself insecure as to receipt of full payment of the purchase price from Buyer hereunder, Aqua-Aerobic Systems, Inc. reserves the right to require payment in advance or security or guarantee satisfactory to Aqua-Aerobic Systems, Inc. of payment in full of the purchase price.

SHIPMENT
Shipping dates are not a guarantee of a particular day of shipment and are approximate, being based upon present production information, and are subject to change per the production schedules existing at time of receipt of purchase order. Aqua-Aerobic Systems, Inc. shall not be responsible for any delay in shipment for causes beyond its control including, but not limited to, war, riots, strikes, labor trouble causing interruption of work, fires, other casualties, transportation delays, modification of order, any act of governmental authorities or acts of God. Quoted shipment dates in this proposal are approximate dates goods will be shipped and, unless agreed to in writing by Aqua-Aerobic Systems, Inc., Buyer may not postpone or delay the dates of shipment of goods from our plant or from our supplier's plants beyond the dates set forth in this proposal. Buyer is required to notify Aqua- Aerobic Systems, Inc within 7-days of any discrepancies with shipment.

SHIPPING CHARGES; TAXES and OTHER RELATED FEES. Separate fees for shipping and handling will be charged on all purchases unless specifically stated otherwise. Prices quoted do not include any taxes, customs duties, or import fees. The Buyer is responsible for sales use and all other taxes and fees associated with the purchase. If aqua-Aerobic Systems, Inc. is required by any taxing authority to collect or to pay any such tax, duty or fee, the Buyer shall be separately billed at such time for the amounts Aqua-Aerobic Systems, Inc is required to pay

TITLE AND RISK OF LOSS
F.O.B. Destination - Delivery of goods to the destination shall be deemed delivery to the Buyer, and upon such delivery, title to such goods and risk of loss or damage shall be upon Buyer.

F.O.B. Aqua-Aerobic Systems, Inc's plant at Loves Park, Illinois - Delivery of the goods sold hereunder to the carrier shall be deemed delivery to the Buyer, and upon such delivery, title to such goods and risk of loss or damage shall be upon Buyer.

INSURANCE
Unless the goods are sold on a CIF basis, the Buyer shall provide marine insurance for all risks, including war and general coverage. Aqua-Aerobic Systems, Inc will provide evidence of coverage upon request. At no time will Aqua-Aerobic Systems, Inc issue a certificate of insurance listing Buyer as additional insured unless under fully executed contract and Aqua-Aerobic Systems, Inc is providing start-up services.

LIMITATION OF ACTION
No action shall be brought against Aqua-Aerobic Systems, Inc. for any breach of its contract of sale more than two years after the accrual of the cause of action thereof, and, in no event, unless the Buyer shall first have given written notice to Aqua-Aerobic Systems, Inc., of any claim of breach of contract within 30 days after the discovery thereof.

CANCELLATION CLAUSE
No acceptance of this proposal, by purchase order or otherwise, may be modified except by written consent of Aqua-Aerobic Systems, Inc. nor may it be canceled except by prior payment to Aqua-Aerobic Systems, Inc. the following sums as liquidated damages therefore: 1) If cancellation is prior to commencement of production and prior to the assumption of any obligations by Aqua-Aerobic Systems, Inc. for any materials or component parts, a sum equal to 15% of the total purchase price; 2) If cancellation is after the commencement of production or after the assumption of any obligations by Aqua-Aerobic Systems, Inc. for any materials or component parts, a sum equal to the total of the direct, out-of-pocket expenses incurred to the date of cancellation for labor, machine time, materials and any charges made to us by suppliers for cancellation, plus 30% of the total purchase price. All charges and expenses shall be as determined by Aqua-Aerobic Systems, Inc. In the event any items are used by Aqua-Aerobic Systems, Inc. to fill a subsequent order, then upon receipt of payment for such order, Aqua-Aerobic Systems, Inc. shall pay the Buyer a sum equal to the direct out-of-pocket expenses previously charged and received from Buyer.

TERMS AND CONDITIONS OF AQUA-AEROBIC SYSTEMS, INC. (A Metawater Company)

QUALIFIED ACCEPTANCE AND INDEMNITY

In the event the acceptance of this proposal by Buyer either is contingent upon or subject to the approval by any third party such as, but not limited to, a consulting engineer, with respect to goods, parts, materials, descriptive data, drawings, calculations, or any other matter, then upon such approval by any third party, Aqua-Aerobic Systems, Inc. shall have no liability to Buyer or to any third party so long as the goods sold and delivered by Aqua- Aerobic Systems, Inc. conform to this proposal. In the event any such third party requires modifications in the proposal prior to the approval thereof, Aqua-Aerobic Systems, Inc. may at its sole option and without liability to any party elect to cancel this proposal or return the purchase order to Buyer. In the event Aqua-Aerobic Systems, Inc. elects to modify this proposal to conform to the requirements for approval by any third party, Aqua- Aerobic Systems, Inc. in such event shall have no liability to Buyer or to any third party so long as the goods sold and delivered by Aqua-Aerobic Systems, Inc. conform to this proposal as modified.

Buyer agrees to indemnify and save harmless Aqua-Aerobic Systems, Inc. from and against all costs and expenses and liability of any kind whatsoever arising out of or in connection with claims by third parties so long as the goods sold hereunder conform to the requirements of this proposal as approved by any third party.

WARRANTY; LIMITATION OF LIABILITY; AND DISCLAIMER

In return for purchase and full payment for Aqua-Aerobic Systems, Inc. goods, we warrant new goods provided by us to be free from defects in materials and workmanship under normal conditions and use for a period of one year from the date the goods are put into service, or eighteen months from date of shipment (whichever first occurs). If the goods include an "Endura Series" motor, the complete Endura Series unit shall be warranted by Aqua-Aerobic Systems, Inc to be free from defects in materials and workmanship under normal conditions and use for three years from the date the product is put into service or 42 months from the date of shipment (whichever occurs first).

OUR OBLIGATION UNDER THIS WARRANTY IS EXPRESSLY AND EXCLUSIVELY LIMITED to replacing or repairing (at our factory at Loves Park, Illinois) any part or parts returned to our factory with transportation charges prepaid, and which our examination shall show to have been defective. Prior to return of any goods or its parts to our factory, Buyer shall notify Aqua-Aerobic Systems, Inc. of claimed defect, and Aqua-Aerobic Systems, Inc. shall have the privilege of examining the goods at Buyer's place of business or where the goods have otherwise been placed in service. In the event this examination discloses no defect, Buyer shall have no authority to return the goods or parts to our factory for the further examination or repair. All goods or parts shall be returned to Buyer, F.O.B. Loves Park, Illinois. This warranty shall not apply to any goods or part which has been repaired or altered outside our factory, or applied, operated or installed contrary to our instruction, or subjected to misuse, chemical attack/degradation, negligence or accident. This warranty and any warranty and guaranty of process or performance shall no longer be applicable or valid if any product, including any software program, supplied by Aqua-Aerobic Systems, Inc., is modified or altered without the written approval of Aqua-Aerobic Systems, Inc. Our warranty on accessories and component parts not manufactured by us is expressly limited to that of the manufacturer thereof.

THE FOREGOING WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND OF ALL OTHER LIABILITIES AND OBLIGATIONS ON OUR PART, INCLUDING ANY LIABILITY FOR NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE; AND ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY DISCLAIMED; AND WE EXPRESSLY DENY THE RIGHT OF ANY OTHER PERSON TO INCUR OR ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ANY GOODS PROVIDED BY US. THERE ARE NO WARRANTIES OR GUARANTEES OF PERFORMANCE UNLESS SPECIFICALLY STATED OTHERWISE.

UNDER NO CIRCUMSTANCES, INCLUDING ANY CLAIM OF NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL AQUA-AEROBIC SYSTEMS, INC. BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, COSTS OF CONNECTING, DISCONNECTING, OR ANY LOSS OR DAMAGE RESULTING FROM A DEFECT IN THE GOODS. LIMIT OF LIABILITY: AQUA-AEROBIC SYSTEMS, INC.'S TOTAL LIABILITY UNDER THE ABOVE WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF ANY DEFECTIVE PART. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE, AND OUR LIABILITY WITH RESPECT TO ANY CONTRACT OR SALE, OR ANYTHING DONE IN CONNECTION THEREWITH, WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, OR OTHERWISE, SHALL NOT, IN ANY CASE, EXCEED THE PRICE OF THE GOODS UPON WHICH SUCH LIABILITY IS BASED.

Final acceptance of this proposal must be given to Aqua-Aerobic Systems, Inc. at their office in Loves Park, Illinois. Please acknowledge acceptance by signing the proposal and returning it to Aqua-Aerobic Systems, Inc.

Accepted by:

Company: _____

By: _____ **Date:** _____

Offer Respectfully Submitted,

Harry DeBruler

Harry DeBruler, Project Application Engineer
Aqua-Aerobic Systems, Inc.

ALUM STORAGE

PW–PVC

8" AIR SSTL (TYP)

ALUM FEED LINE
1/2" x 3/4" PVC TU
IN 2" SCH 40 PVC

12" PLUG VALVE

12" DIP BY--PASS

14" DIP
SEWAGE

NEW
(TYP

PLANT WATER

6" DIP EM

RELOCAT
DIP FOR

SBR MODIFACATION

BLOWER CONDENSATE
DISCHARGE

LAYDOWN AREA

EX. 12" DI
TO REMAIN

2 1/
(2 R

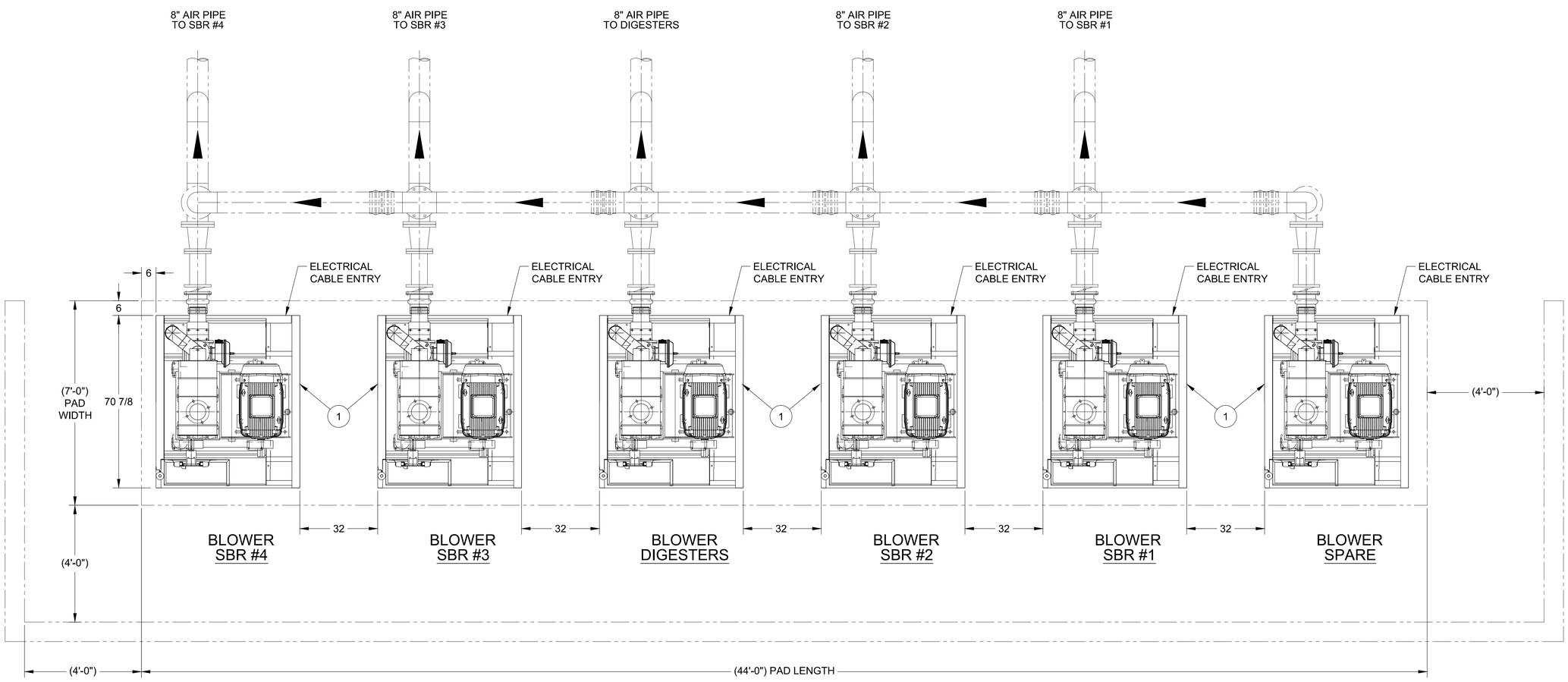
6" x 45

22.5° BEND

976 977 978 979 980 981 982 983 984 985 986

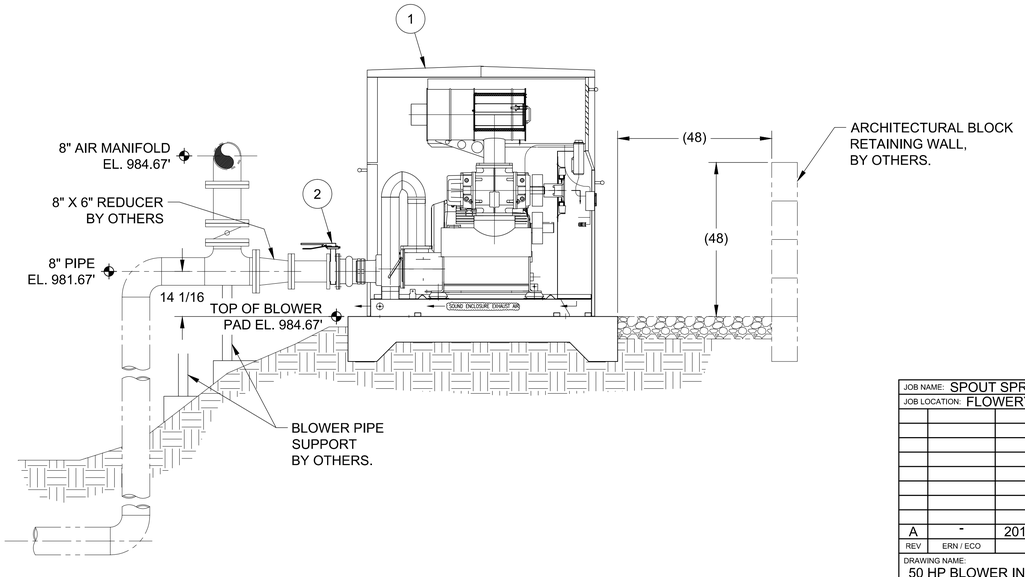
FES #12

SPOUT SPRINGS WRF
ADDENDUM 2
EXHIBIT 1-SBR BLOWER PIPING



BLOWER PACKAGE INSTALLATION NOTES:

1. PLEASE REVIEW ALL INSTALLATION DRAWINGS AND ASSEMBLY INSTRUCTIONS IN THE OPERATION AND MAINTENANCE MANUAL PRIOR TO INSTALLING THE EQUIPMENT.
2. ALL THREADED FASTENERS MUST BE SECURED WITH A FULL NUT AND A JAM NUT.
3. ANTI-SEIZE LUBRICANT IS RECOMMENDED ON ALL STAINLESS STEEL FASTENERS.
4. ALL LOCAL ELECTRICAL DISCONNECT BOXES HAVE BEEN OMITTED FROM THIS DRAWING, AND ARE TO BE SUPPLIED AND LOCATED BY OTHERS.
5. ALL AIR MANIFOLD PIPING AND BRANCH AIR PIPING SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
6. 32 INCHES CLEARANCE BETWEEN BLOWER PACKAGES IS RECOMMENDED AS A MINIMUM FOR MAINTENANCE AND SERVICING UNITS.
7. AIR MANIFOLD PIPING MUST BE PROPERLY SUPPORTED TO PREVENT DAMAGE TO THE BLOWER ASSEMBLY. BLOWER DISCHARGE PIPING MAY NOT BE USED TO SUPPORT THE AIR MANIFOLD PIPING.
8. UNLESS OTHERWISE NOTED, ELECTRIC VALVE ACTUATORS SHALL BE SUPPLIED WITH A 6 FT. LONG CORD SET FACTORY WIRED TO THE ACTUATOR. ELECTRICAL DISCONNECT / JUNCTION BOXES (PROVIDED BY OTHERS) MUST BE LOCATED WITHIN REACH OF THE PROVIDED CORD.



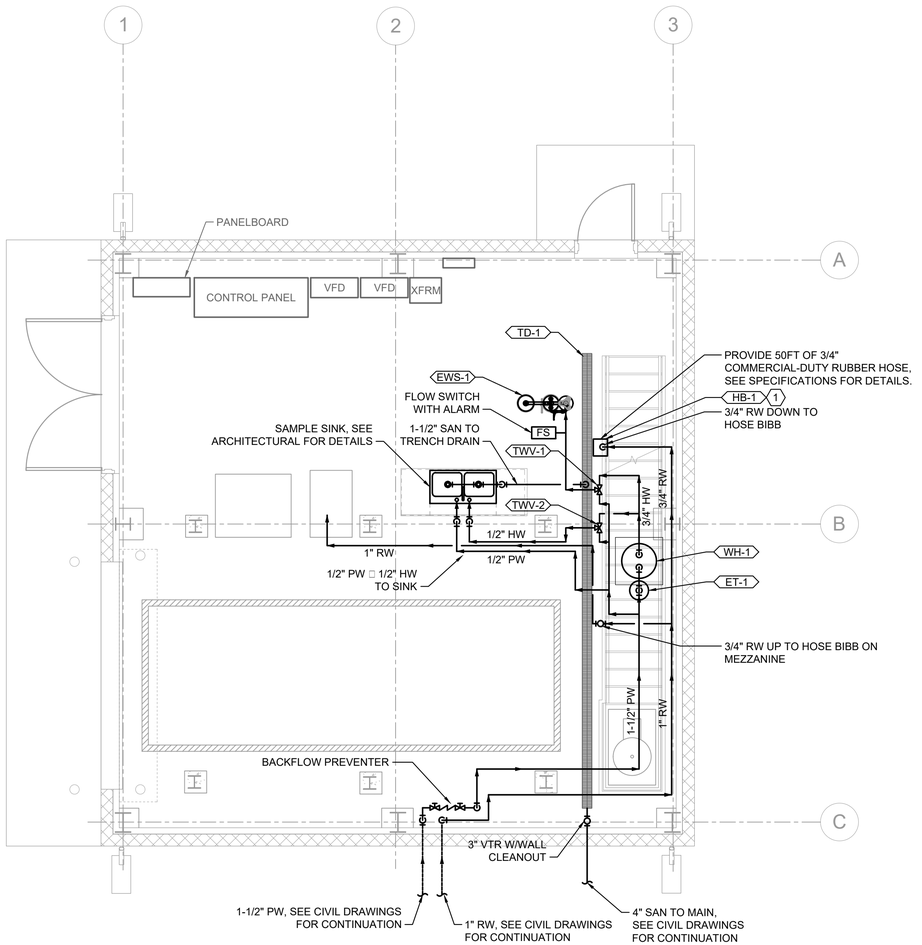
CONTRACTOR NOTES:

1. CONTRACTOR MUST RUN 2-WIRE 4-20 mA. FROM INLET PRESSURE AND DISCHARGE PRESSURE TRANSMITTER'S TO MAIN CONTROL PANEL.

SPOUT SPRINGS WRF
ADDENDUM 2
EXHIBIT 1-SBR BLOWER PIPING

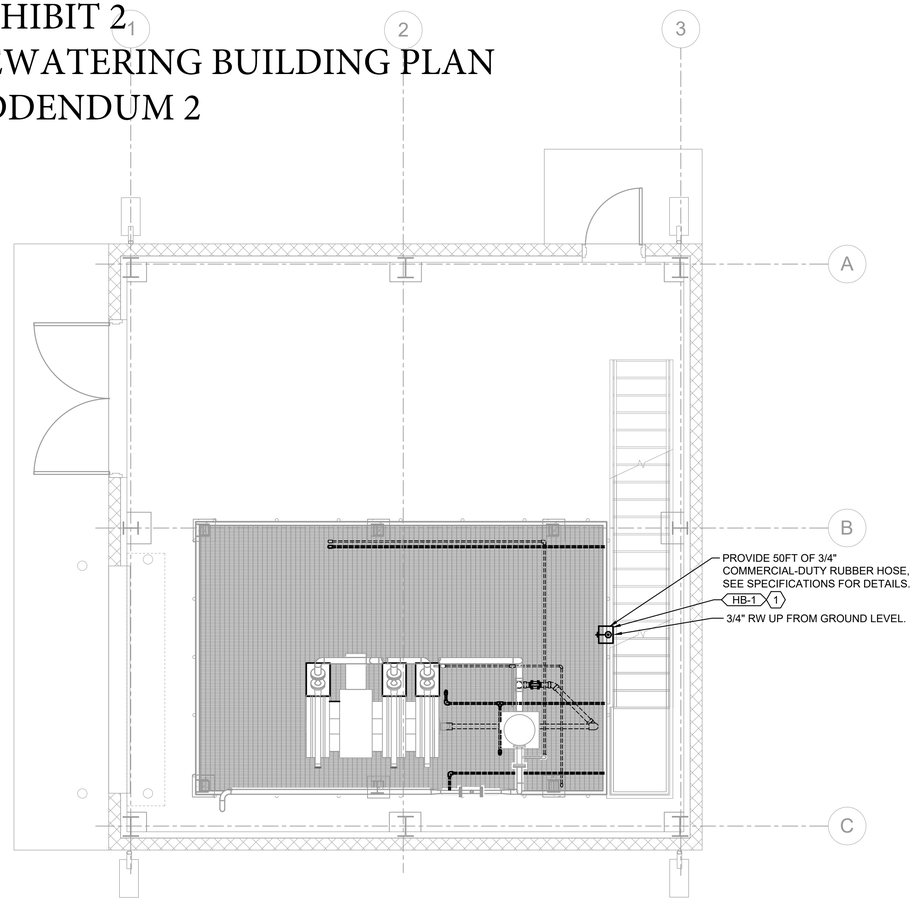
JOB NAME: SPOUT SPRINGS ROAD WWTP EXP					AQUA-AEROBIC SYSTEMS, INC.
JOB LOCATION: FLOWERY BRANCH, GA					
					DO NOT SCALE DRAWING
					UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES FRACTIONAL DIMENSIONS +/- 1/16 ALL TWO PLACE DECIMALS +/- 0.010 ALL THREE PLACE DECIMALS +/- 0.005 ALL ANGLES +/- 1/2° ANSI
					MATERIAL:
					SIMILAR TO:
					TYPE:
A	-	2013-01-29	BAB	SUBMITTAL	DRAWN BY: BAB — DATE: 2013-01-29
REV	ERN / ECO	DATE	BY	REVISION DESCRIPTION	WEIGHT: — SHEET: 2 OF 2
DRAWING NAME: 50 HP BLOWER INSTALLATION					DRAWING NUMBER: 9106129F3003 — SCALE: 1:24 — SIZE: D

SPOUT SPRINGS WRF
EXHIBIT 2
DEWATERING BUILDING PLAN
ADDENDUM 2



GROUND LEVEL PLAN

SCALE: 1/4" □ 1□0"



MEZZANINE LEVEL PLAN

SCALE: 1/4" □ 1□0"

KEY NOTES:

(#)

1. CONTRACTOR SHALL PROVIDE SIGN AT HOSE BIBB STATION THAT READS "DO NOT DRINK. WATER IS NOT SAFE FOR DRINKING."

As-Built

ISSUED FOR CONSTRUCTION
5/30/2018

0 2□0" 4□0" 8□0"
SCALE: 1/4" □ 1□0"

TETRA TECH
www.tetratech.com
1899 POWERS FERRY RD SE, SUITE 400
ATLANTA, GA 30339
TEL: (770) 850-0949 FAX: (770) 850-0950

GEORGIA REGISTERED NO. PE035639 ENGINEER
Jill Whitney Hoffman
1-24-2017

HALL COUNTY GEORGIA

MARK	DATE	DESCRIPTION	BY
0	04/03/17	ISSUED FOR BID	JH
1	03/16/18	ISSUED FOR RE-BID	JH

HALL COUNTY GEORGIA
SSWRF DEWATERING BUILDING

DEWATERING BUILDING
DOMESTIC PLUMBING
AND SANITARY PLANS

Project No.:	200-101790-16002
Designed By:	D. WILSON
Drawn By:	S. ULREY
Checked By:	W. KRAMER

P-101