To Bidders:

This Addendum #2 is hereby made part of the Bidding Documents on which the Contract will be based, and is issued to modify, explain and/or correct the original Bidding Documents. Please submit bids and be otherwise governed accordingly. **Receipt of this Addendum must be acknowledged on Page 00410-1 of the Section 00410 Bid Form.**

**QUESTIONS FROM BIDDERS:**

Note: the wording in some of the questions may have been modified from the original version to suit the format of this document.

**Question 21 (SC-M0101, Pressure Tanks)**
Please reference SC-M0101. Please provide size and material type of pressure tanks being demolished.

**Response**
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

**Question 22 (SC-M0101, Valves)**
Please reference SC-M0101. In the notes section, note #1 does not show on the drawings. Where are these valves located that are to be retained for reinstallation?

**Response**
Valve reinstallation is not required. Refer to the Changes to Bidding Documents below.

**Question 23 (SC-M0201, Froth Pump Box)**
Please reference SC-M0201. What are the dimensions of the Froth pump box being demolished? What is the material the box is made from?

**Response**
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

**Question 24 (SC-M0202, East and West Treatment Plant Equipment)**
Please reference SC-M0202. Note on drawing states, "demolish influent distribution piping, troughs and gates." Please provide a material type for the troughs being demolished along with size and type of gate being demolished. Is there a section view available that provides a clear view of this trough and piping?

**Response**
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.
Question 25 (SC-M0202, Piping)  
Please reference SC-M0202. There is a large pipe shown at the clarifier mechanism that appears to be marked for demolition; there is no section view of this pipe but we assume this is below slab. Is the intent for the contractor to cut the grout and slab to remove piping?

Response  
Piping to be demolished is not below slab. Contractor will not be required to cut the concrete slab or wall to complete demolition scope at the East and West Secondary Treatment Plants.

Question 26 (SC-M0205, Sodium Hydroxide Tanks)  
Please reference SC-M0205. Please provide size and material type of sodium hydroxide tanks being demolished.

Response  
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 27 (SC-M0205, Air Piping)  
Please reference SC-M0205. What size is the inlet and discharge piping within the blower building for Air blowers No. 1-4?

Response  
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 28 (SC-M0206, Piping Demolition)  
Please reference SC-M0206. Please confirm that, per detail D, the intent is to completely demolish the existing pipe to below slab and install caps on the (2) 24" PEF and (1) 10" ABD lines.

Response  
Yes, the Contractor will be required to demolish piping below slab, install caps, and close the floor opening in accordance with details on Drawing SC-S0004.

Question 29 (SC-M0801, Slide Gates)  
Please reference SC-M0801. Please provide sizes for slide gates being relocated.

Response  
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 30 (SC-M0901, Sodium Hypochlorite Tanks)  
Please reference SC-M0901. Please provide size and material type of sodium Hypochlorite tanks being demolished.

Response  
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 31 (SC-M2201, Lime Silo)  
Please reference SC-M2201. Please provide dimensions for the lime silo being demolished.

Response  
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.
**Question 32 (SC-M2201, Demolition)**
Please reference SC-M2201. Please confirm that the owner will have emptied and cleaned all tanks, including silo's being demolished, prior to contractor beginning demolition.

*Response*
The two lime silos to be demolished by the General Contractor (one at SCRWF, one at RBWWTP) will be emptied by the Owner prior to demolition. The Owner will not clean these silos, or any other facilities to be demolished, prior to Contractor's demolition.

**Question 33 (RB-M9101, Lime Silo)**
Please reference RB-M9101. Please provide dimensions for the lime silo being demolished.

*Response*
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

**Question 34 (Contractor Warranty)**
SC-7.17.A.6 provides that no repairs, adjustments, replacements or corrections by Owner will affect any warranties. Contractor requests the opportunity to discuss, as suppliers often treat modifications to their equipment or corrective work performed by third parties as voiding the warranties.

*Response*
Supplementary Conditions associated with Article 7.17.A will be removed, refer to the Changes to Bidding Documents below.

**Question 35 (List of Indemnitees)**
Is Owner willing to narrow the list of indemnitees in SC-8.04? The broad indemnity obligations extending to "agents, consultants and subcontractors" would include such parties as the Owner’s other contractors. Insurance coverage for these individuals and entities is difficult to secure.

*Response*
Yes, refer to the Changes to Bidding Documents below.

**Question 36 (Funding)**
Where is the funding coming from for this job?

*Response*
This project will be paid for by local funds.

**Question 37 (SC-M0703, NPW Piping)**

*Response*
The two NPW connection points at Effluent Filter No. 3 are not shown on SC-C0503. For the NPW service to the hose bib at the southeast side of the structure, the General Contractor shall provide a 1.5” PVC, NPW pipe from the 4” NPW pipe to the south. For the NPW service to the hose bib at the northeast side of the structure, the General Contractor shall provide a 1.5” PVC, NPW pipe from the NPW pipe to the north, which is approximately 8” in size. The hand mounted hose bibs shall be installed in accordance with Detail 10 on SC-M6005. Refer to Changes to Bidding Documents below.
Question 38 (Section 02980)
Please reference specification 02980. Spec 02980 Site Rehabilitation paragraph 1.01 A. mentions "landscape items such as trees, shrubs, hedges, saplings, vines, ground cover vegetation, gardens, etc." Drawings do not identify any existing landscape items that maybe removed or damaged during construction activities. Please provide.

Response
There should not be any landscape items that need to be removed or could be damaged by the Contractor’s construction activities, provided reasonable effort to limit disturbance. Refer to the Changes to Bidding Documents below.

Question 39 (SC-C0104, Mechanical Building)
Please reference drawing SC-C0104. Please provide as-builts for the equipment bridge and associated piping to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 40 (SC-C0105, West Sludge Pump Building)
Please reference drawing SC-C0105. Please provide as-builts of West Sludge Pump Building to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 41 (SC-C0105, Emergency Generator)
Please reference drawing SC-C0105. Please provide as-builts of the Emergency Generator to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid. Note however, that the emergency generator is to be demolished by the Electrical Contractor, refer to the annotation and corresponding Note 4 on Drawing SC-C0103.

Question 42 (SC-C0105, East Sludge Pump Building)
Please reference drawing SC-C0105. Please provide as-builts of the East Sludge Pump Building to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 43 (SC-C0105, Filter No. 1 Pump Station)
Please reference drawing SC-C0105. Please provide as-builts of the Filter No. 1 Pump Station to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 44 (SC-C0105, Meter Vault)
Please reference drawing SC-C0105. Please provide as-builts of the Meter Vault to be demolished.
Addendum No. 2 to Contract Documents

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 45 (SC-C0106, Effluent Filter No. 2 Pump Station)
Please reference drawing SC-C0106. Please provide as-builts of the Effluent Filter No. 2 Pump Station to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 46 (SC-C0106, Vault and Flow Meter)
Please reference drawing SC-C0106. Please provide as-builts of the Vault and Flow Meter to be demolished.

Response
Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 47 (SC-M1001, Ball Valves)
Please reference drawing SC-M1001. Are the 20" and 16" Ball Valves on the effluent pumps discharge lines pump control valves?

Response
The 16” and 20” ball valves are for manual throttling service. The ball valves are not to be provided with motor driven actuators, and are not required to operate automatically as part of any control strategy.

Question 48 (SC-C0503, Piping)
Please reference drawing SC-C0503. Please label line between Mechanical building and East Flow Equalization Tank. Line is unlabeled and not shown in the Mechanical building.

Response
The unlabeled pipe between the Mechanical Building and East Flow Equalization Tank has a designation of 8” EQR as shown on SC-M0207. Refer to the Changes to Contract Documents below.

Question 49 (SC-C0503, Pipe Material)
Please reference drawing SC-C0503. Please provide the pipe material for existing 6” DRN line that ties into the south side of the Mechanical Building Pump Station.

Response
Record Drawings will be made available to the Low Bidders. Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.

Question 50 (SC-C0503, Connection Point)
Please reference drawing SC-C0503. Note 5 says "coordinate connection point with engineer". Please provide connection point location.

Response
The Owner is in the process of completing modifications to the influent force mains. These modifications are intended to be completed prior to Contractor mobilization. General Contractors should bid on the basis of an 8” valved and capped branch being available for the connection. Location of the connection point will be approximately as shown on SC-C0503. Final location will be coordinated in the field during construction, based on the final configuration of the modified force mains.
Question 51 (SC-C0503, Piping)
Please reference drawing SC-C0503. At the east side of the Converted West Flow Equalization Tank, please provide the type and size of the unmarked piping to be capped and demolished.

Response
The capped pipe on the east side of the Converted West Flow Equalization Tank has a designation of 12” ABD as shown on SC-C0105. The pipe label is located on the west side of the Converted East Flow Equalization Tank.

Question 52 (SC-C0503, Piping)
Please reference drawing SC-C0503. Note 2 says "Relocate Potable Water line". Are there operable valves on the PW line to allow relocation of this line?

Response
Yes, Contractor may assume that operable valves will be available to isolate a section of the potable water piping from the remainder of the system and all completion of the relocation while service is maintained to existing demands.

Question 53 (SC-C0504, Vault)
Please reference drawing SC-C0504. Drawing shows a 4" drain going into a structure which we believe to be scum pump valve vault. Please confirm and provide drawings for this structure.

Response
The structure is the Scum Pump Valve Vault. Contractor shall core drill a new opening in the precast structure and connect the new drain piping in accordance with Detail 4 on SC-M6004, such that drained liquid can discharge freely into the vault. Record Drawings will be made available to the Low Bidders.

Question 54 (SC-C0104, Lagoon Liner)
Please reference drawing SC-C0104. The drawing includes a note that reads, "Remove and replace existing HDPE lagoon liner, see lagoon drawing SC-C2002". Please provide drawing SC-C2002.

Response
Drawing SC-C2002 is included within the Bid Documents.

Question 55 (SC-C0503, Piping)
Please reference drawing SC-C0503. Note 5 indicates a 20" PIF line to tie in the 8" PD from the Mechanical Pumping Station. Only 24", 18", 12", and 10" PIF lines are shown. Where is the 20" line?

Response
Refer to the response to Question 50 above.

Question 56 (SC-C0502, Sample Wet Well)
Please reference SC-C0502. There is a 2" PVC, PD tag on the North side of the Sodium Hypochlorite Feed Building that connects to an existing sample pipe. Should this be a sample line? Is the existing sample line also PVC?

Response
The 2" PVC, PD line from the Sample Wet Well is correctly a sample line, designated PD as there is no separate pipe designation for sample lines used in the Bid Documents. Record Drawings will be made available to the Low Bidders. Contractor will need to visit the site to obtain any information regarding existing equipment or structures required to prepare its Bid.
Addendum No. 2 to Contract Documents

Question 57 (SC-C0503, Piping)
Please reference SC-C0503. Is the pipe represented with a single line between the Surge Tank and the Converted East Flow Equalization Tank a new 4" PW line?

Response
Yes, the new pipe between the Surge Tank and Converted East Flow Equalization Tank has a designation of 4" PVC, PW. Refer to the Changes to Bidding Documents below.

Question 58 (SC-C0503, Manhole)
Please reference SC-C0503. Note 4 indicates a new manhole to be constructed on the existing drain line. However, an existing manhole is already in place. Please confirm the scope of work entails demolishing an existing manhole and replacing it with new manhole

Response
Yes, the scope of work includes the demolition of the existing manhole and the construction of a new manhole as shown on SC-C0105 and SC-C0503.

Question 59 (SC-E007, Handholes)
Sheet 227, SC-E0007 – Please confirm that handholes HH12, 13, 14, 15, 16, 17, & 18 are existing.

Response
Confirmed. The referenced handholes HH12, 13, 14, 15, 16, 17 and 18 are existing, and are depicted as such on Drawing SC-E0007, and the text for HH18 indicates that it is existing. However, the text for the remaining six handholes HH12 through HH17 indicate that they are new, which is incorrect. Refer to the Changes to Bidding Documents below.

Question 60 (SC-E008, Handhole)
Sheet 228, SC-E0008 – Please confirm that handhole HH33 is existing.

Response
Confirmed. The referenced handhole HH33 is existing, and is depicted as such on Drawing SC-E0008. However, the corresponding text indicates that HH33 is new, which is incorrect. Refer to the Changes to Bidding Documents below.

Question 61 (RB-E9002, Duct Banks)
Sheet 407, RB-E9002 – Duct banks DB-PS1-4 & DP-PS1-3, do these duct banks tie to a new MHE or is this MHE existing? Sheet 406, RB-E9001, do not reference this MHE on the demo drawing either. Please advise.

Response
The manhole located to the south of PS-1 Activated Sludge PS, to which new duct banks DB-PS1-3 and DB-PS1-4 both connect, is a new manhole. This new manhole shall be designated MHE-15. Refer to the Changes to Bidding Documents below.

Question 62 (SC-E0007, Handhole)
Sheet 227 & 228, SC-E0007 and SC-E0008 – HH27 is referred on both drawings in different locations, please advise that these are two new HH and just mislabeled

Response
Confirmed; There are two new handholes, both currently with designations HH27. The handhole on SC-E0007 currently designated as HH27 has been assigned the new designation of HH39. Refer to the Changes to Bidding Documents below.
Addendum No. 2 to Contract Documents

Question 63 (SC-E0017, Electrical Service)
Sheet 237 & 238, SC-E0017 & SC-E0018 – Please verify that existing primary pad mounted service entrance switch (PF-PS3) to be replaced and not rebuilt with new bus, fuse holders and fuses. New switch gear lines are not bolded on one line drawing.

Response
On SC-E0017, PF-PS3 refers to the existing power feeder between the two existing service entrance switches. The two existing service entrance switches are intended to be demolished as shown. On SC-E0018, the two service entrance switches PSS-SE-A and PSS-SE-B are intended to be new as indicated by the straight, bold text and as described in the specifications. The outline of the switches on the drawing should have been bold. Refer to the Changes to Bidding Documents below.

Question 64 (Equipment Pads)
Please confirm that all electrical equipment pads are installed by the General Contractor bid pack.

Response
It is intended that concrete equipment pads (CEP) for electrical equipment such as the switchboard building, generators, transformers, medium voltage switches, switchboards, MCCs, control panels, PCS cabinets and other pad mounted electrical distribution and control equipment as indicated on the drawings be provided by the General Contractor, as described in the Contractor Coordination and Contract Scope Delineation section of the General Notes (Drawings G0005 and G0010), as well as General Note No. 1 on Drawing SC-E0001, and as delineated on the individual electrical drawings.

It is intended that concrete work required for the installation of electrical and instrumentation equipment supported by equipment mounting racks (EMRs) where no other concrete pad exists or will be made available for fastening of upright supports, be provided by the Electrical Contractor. This item, as it pertains to certain types of EMRs, is clarified in revisions to Drawing SC-E6003. Refer to the Changes to Bidding Documents below.

Question 65 (SC-E1002, VFD)
Cable/wire - Example - Drawing SC-E1002 note #2 indicates a VFD cable to be installed, however drawing SC-E0015 indicates this to be wire, not a vfd cable. Should this be VFD cable or single wires as on the cable matrix indicates? Can the VFD cables be identified on the cable matrix if so?

Response
It is intended that circuits designated on Drawing SC-E1002 with Drawing Note No. 2 be provided with VFD cables. This has been clarified by revisions to the corresponding circuit schedule on SC-E0015. Where similar situations occur on the drawings, the notes on the conduit riser diagrams requiring VFD cables take precedence. Corresponding circuit designations for these similar situations have also been clarified by revisions to the circuit schedules. Refer to the Changes to Bidding Documents below.

Question 66 (Rehoboth Beach Duct Bank Piles)
Please consider including construction of the duct bank piles at RBWWTP in the Electrical Contractor’s scope.

Response
Electrical Contractor shall be responsible for duct bank piles. Refer to the Changes to Bidding Documents below.

General Contractor shall still be responsible for piles required for the Emergency Generator Pad, Electrical Building Pad, and Utility Transformer Pad as shown on Drawing RB-S9001.

Question 67 (SC-M0209, FRP Cover)
Detail C on SC-M0209 refers to FRP Cover Detail 4.G on S0007; however, I cannot located Detail 4.G on S0007?
Response
The detail was omitted from the Drawing. Refer to the Changes to Bidding Documents below.

CHANGES TO BIDDING DOCUMENTS:

1. Invitation to Bid, page 00050-1: REPLACE “until 2:00 p.m. local time on October 31, 2019” with “until 2:00 p.m. local time on November 19, 2019”.

2. Instructions to Bidders, Article 7.01, page 00100-4: REPLACE “Questions shall be submitted no later than October 11, 2019” with “Questions shall be submitted no later than November 5, 2019”.


4. Supplementary Conditions, Article SC-8.04.B, page 00800-20: DELETE “indemnify and hold harmless Owner, Engineer and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them”, and REPLACE with “indemnify and hold harmless Owner, Engineer and the officers, directors, partners, employees and consultant testing agencies of each and any of them”.

5. Supplementary Conditions, Article SC-8.04.C, page 00800-20: DELETE in its entirety, and REPLACE with the following:

C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Price or Contract Times attributable thereto, Contractor may make a Claim in accordance with Article 12. This paragraph does not prevent recovery from Owner or Engineer for activities that are their respective responsibilities.

6. Section 02980 (Site Rehabilitation), Article 1.01.A, page 02980-1: DELETE “, existing cultivated or landscape items such as trees, shrubs, hedges, saplings, vines, ground cover vegetation, gardens, etc.”

7. Section 11291 (Fabricated Stainless Steel Slide Gates), Article 1.06.A.1, page 11291-2: DELETE and REPLACE with “one spare electric actuator for slide gate WG-120”.

8. Section 01025 (Bid Item Descriptions):

a. Under Bid Item Description for Bid Item J-1, DELETE Paragraph B. WORK INCLUDED UNDER THIS ITEM and Paragraph C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM in their entirety and REPLACE with the following:

B. WORK INCLUDED UNDER THIS ITEM

Piles and excavation around piles for pile to duct bank tie-in. Duct Bank Piles shall be Type 1 (Single Row), as shown on Drawing RB-E9002, at 7'-0” spacing. Work shall be in accordance with the Duct Bank Supported on Auger-Cast Pile detail on SC-E6008, the applicable notes and details on Drawing RB-E9002, and Specification Section 02371 (Auger Cast Pressure Grouted Piles).

Excavation and trenching including dewatering, rock excavation, backfilling, rough grading, temporary supports for existing underground piping and utilities, formwork, concrete reinforcing, concrete, polyethylene sheeting, conduit, conduit supports, spacers and concrete support blocks, duct bank markers, underground warning tape, 4/0 AWG ground conductor, manholes and handholes.
C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM

Final grading.

b. Under Bid Item Description for Bid Item J-2, DELETE Paragraph B. WORK INCLUDED UNDER THIS ITEM and Paragraph C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM in their entirety and REPLACE with the following:

B. WORK INCLUDED UNDER THIS ITEM

Piles and excavation around piles for pile to duct bank tie-in. Duct Bank Piles shall be Type 1 (Single Row), as shown on Drawing RB-E9002, at 7'-0" spacing. Work shall be in accordance with the Duct Bank Supported on Auger-Cast Pile detail on SC-E6008, the applicable notes and details on Drawing RB-E9002, and Specification Section 02371 (Auger Cast Pressure Grouted Piles).

Excavation and trenching including dewatering, rock excavation, backfilling, rough grading, temporary supports for existing underground piping and utilities, formwork, concrete reinforcing, concrete, polyethylene sheeting, conduit, conduit supports, spacers and concrete support blocks, duct bank markers, underground warning tape, 4/0 AWG ground conductor, manholes and handholes.

C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM

Final grading.

c. Under Bid Item Description for Bid Item J-3, DELETE Paragraph C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM in its entirety and REPLACE with the following:

C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM

Piles and excavation around piles for pile-duct bank tie-in, which will already be included in the Electrical Contractor’s scope as part of Lump Sum Bid Item H-1, or Contingent Unit Price Work Items J-1 or J-2, and final grading.

9. Section 16110 (Raceways):

a. DELETE Paragraph 1.01.A.1.b in its entirety and REPLACE with the following:

b. At the RBWWTP:

1) Final grading will be provided by General Contractor.

2) Piles, excavation around piles for pile to duct bank tie-in, excavation and trenching including dewatering, rock excavation, backfilling, rough grading, temporary supports for existing underground piping and utilities, formwork, concrete reinforcing, concrete, polyethylene sheeting, conduit, conduit supports, spacers and concrete support blocks, duct bank markers, underground warning tape, 4/0 AWG ground conductor, manholes and handholes shall be provided by the Electrical Contractor. Work shall be provided as specified herein and as required by the Contract Documents.”
b. ADD the following immediately after paragraph 1.03.E:

F. Submit pile shop drawings, test results and record documents in accordance with Section 02371 (Auger Cast Pressure Grouted Piles).

c. DELETE Paragraph 1.05.A in its entirety and REPLACE with the following:

A. Trenching (including temporary plating), backfilling, concrete and piles shall be provided by the Electrical Contractor in accordance with the applicable Sections of the Contract Specifications.

d. DELETE Paragraph 3.01.A in its entirety and REPLACE with the following:

A. Excavation, trenching (including temporary plating), backfill, pile installation and general site work required for underground duct banks shall comply with the requirements of the Division 2 – Site Work specifications.

10. Section 16950 (Testing and Inspection):

a. DELETE Paragraph 3.11.A in its entirety and REPLACE with the following:

A. An instrumental scan test shall be performed by an independent firm hired and paid for by the Contractor on all electrical equipment, control panels and components furnished under this contract; all electrical equipment and components relocated under this contract; and all OEM control panels furnished by the General Contractor powered from source voltages rated 208 VAC and higher.

b. DELETE Paragraph 3.11.B in its entirety and REPLACE with the following:

B. Infrared scans shall be performed on the following:

1. All feeder terminations
2. Feeder splices
3. Transformers and corresponding feeder terminations
4. Switchboard compartments and corresponding terminations
5. Generator circuit breakers and corresponding feeder terminations
6. Automatic transfer switches and corresponding feeder terminations
7. MCC compartments and corresponding feeder and branch circuit terminations
8. Modified electrical distribution equipment, and where new feeders terminate at existing distribution equipment
9. VFD control panels and corresponding feeder and branch circuit terminations
10. Branch circuit terminations at motors rated 5 HP and larger.
11. OEM control panels, including terminations, with source voltages rated 208 VAC and higher
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12. Medium voltage distribution and service entrance equipment, including all feeder terminations

11. Drawing G0005: DELETE Note 1 under “Contractor Coordination and Contract Scope Delineation” in its entirety and REPLACE with:

   1. Electrical Contractor is responsible for providing all equipment, materials and labor for all duct bank construction, except for final grading. Final grading shall be completed by the General Contractor. Refer to Specification Section 16110.

12. Drawing G0010: DELETE Note 1 under “Contractor Coordination and Contract Scope Delineation” in its entirety and REPLACE with:

   1. Electrical Contractor is responsible for providing all equipment, materials and labor for all duct bank construction, except for final grading. Final grading shall be completed by the General Contractor. Refer to Specification Section 16110.

13. Drawing SC-C0105: ADD “(SEE NOTE 8)” to the annotation “DEMOLISH EMERGENCY GENERATOR”, and ADD a new Note 8 to the drawing as follows:

   8. By Electrical Contractor.


15. Drawing SC-C0503: ADD pipe label “4” PVC, PD” to pipe connecting the existing 4’ PW pipes.

16. Drawing SC-C0504: ADD 1-1/2” PVC, NPW pipe between 4” NPW pipe and Effluent Filter No. 3 hose bib.

17. Drawing SC-C0504: ADD 1-1/2” PVC, NPW pipe between 8” NPW pipe and Effluent Filter No. 3 hose bib.

18. Drawing RB-C9003:

   a. DELETE the pile markings and corresponding annotations (e.g. “Piles for DB-PR-1”) and REPLACE with light, electrical utility markings to show duct bank locations (i.e. “-E-”).

   b. DELETE the Pile Layout Details

   c. DELETE the Duct Bank Pile Spacing Schedule

   d. DELETE the Duct Bank Pile Notes

   e. DELETE Note 7

   f. DELETE Note 8

   g. DELETE duct bank piles from the legend


20. Drawing SC-M0004: DELETE the 2” line between Effluent Filter No. 3 and the 8” line. ADD a 1-1/2” line between Effluent Filter No. 3 and the adjacent 4” line. ADD a second 1-1/2” line between Effluent Filter No. 3 and the adjacent 8” line.

22. Drawing SC-M0703: DELETE pipe label “6” PVC, NPW” and REPLACE with pipe label “1-1/2" PVC, NPW”.

23. Drawing SC-E0007:
   
   a. With reference to existing handholes HH12, HH13, HH14, HH15, HH16 and HH17, DELETE the bold, straight text designations for each handhole and REPLACE with same numbered designations using light, italic text.
   
   b. DELETE the handhole designation “HH27” for the new handhole located just south of the Effluent Pumping Station, and REPLACE with the designation “HH39.”
   
   c. With reference to existing handhole HH23, DELETE the bold, straight text designation for this handhole and REPLACE with the same numbered designation using light, italic text.
   
   d. For the new handhole located between duct banks DB-HW1 and DB-HW4, provide a new handhole designation of “HH40” in straight, bold text.

24. Drawing SC-E0008: DELETE the bold, straight text designation for existing handhole HH33 and replace with same numbered designation in light, italic text.

25. Drawing SC-E0009: On the Enlarged Electrical Plan – Effluent Pumping Station, DELETE the handhole designation “HH27” and REPLACE with “HH39”.

26. Drawing SC-E0015:
   
   a. For CKT ID PF-1801, under the “CONDUCTORS” column, DELETE “3-#8, 1#10G” and REPLACE with “3-#8, 1#10G (VFD CABLE).”
   
   b. For CKT ID PF-901, under the “CONDUCTORS” column, DELETE “3-#1/0, 1#6G” and REPLACE with “3-#1/0, 1#6G (VFD CABLE).”
   
   c. For CKT ID PF-904, under the “CONDUCTORS” column, DELETE “(2 SETS) 3-#250kcmil, 1#2G” and REPLACE with “(2 SETS) 3-#250kcmil, 1#2G (VFD CABLES).”

27. Drawing SC-E0016:
   
   a. For CKT ID PF-3501, under the “CONDUCTORS” column, DELETE “3-#8, 1#10G” and REPLACE with “3-#8, 1#10G (VFD CABLE).”
   
   b. For CKT ID PF-1201, under the “CONDUCTORS” column, DELETE “3-#2, 1#8G” and REPLACE with “3-#2, 1#8G (VFD CABLE).”

28. Drawing SC-E0018: DELETE the light line type on the outline of the service entrance switches PSS-SE-A and PSS-SE-B and REPLACE with bold line type to indicate that the switches are new.

29. Drawing SC-E0029:
   
   a. ADD Drawing Note Designation No. 12 to the existing 1800AT/2000AF MCB.
   
   b. ADD Drawing Note 12 as follows:
12. CHANGE TRIP SETTING ON EXISTING MAIN CIRCUIT BREAKER SENSOR TO 1.0 TO CORRESPOND TO 2000A. REMOVE EXISTING NAMEPLATE AND PROVIDE NEW, STANDARD MANUFACTURER’S NAMEPLATE FOR CIRCUIT BREAKER TO REPLACE EXISTING.

30. Drawing SC-E4201, Drawing Note 4: DELETE “EAST SLUDGE BUILDING” and REPLACE with “EAST SLUDGE PUMP BUILDING.”


33. Drawing SC-E4216: REPLACE with the attached revised SC-E4216 (Rev 2, dated 10/2019).

34. Drawing SC-E4217: REPLACE with the attached revised SC-E4217 (Rev 2, dated 10/2019).


37. Drawing SC-E4220: DELETE light, italic text for MWTS and REPLACE with straight, bold text to indicate that MWTS is new.


42. Drawing SC-E4227: REPLACE with the attached revised SC-E4227 (Rev 2, dated 10/2019).


[Signature]
Thor Young, PE
ATTACHMENTS:

1. SC-S0007
2. SC-E4209
3. SC-E4212
4. SC-E4216
5. SC-E4217
6. SC-E4218
7. SC-E4219
8. SC-E4221
9. SC-E4222
10. SC-E4223
11. SC-E4225
12. SC-E4227
13. SC-E4228
14. SC-E4229
15. SC-E6002
16. SC-E6003
17. SC-E6008
18. RB-E9002
**MECHANICAL SCREEN SCN-101 CONTROL PANEL**

**DRAWING NOTES:**

1. SYSTEM COMPONENTS: REFER TO SPECIFICATIONS FOR ADDITIONAL CONTROL COMPONENTS AND ACCESSORIES REQUIRED FOR EACH STARTER/VFD UNIT OR CONTROL PANEL.

2. NP1: MECHANICAL SCREEN SCN-101 CONTROL PANEL


4. NP3: RUN

5. NP4: E-STOP

6. NP5: MOTOR WINDING TEMPERATURE HIGH

7. NP6: VFD FAILURE

8. NP7: PANEL BUILDER/SUPPLIER NAMEPLATE

9. NP8: CONTROL POWER

10. NP9: ALARM-ESTOP

11. NP10: UPS ALARM

**NOTES:**

1. EQUIPMENT SHOWN IN THE ENCLOSURE IS FOR CONTRACTOR SHALL COORDINATE FINAL SIZE AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

2. ENCLOSURE SHALL MAINTAIN THE NEMA RATING OF THE ENCLOSURE AFTER FABRICATION AND INSTALLATION.

3. ACCESSORIES AND MODIFICATIONS TO THE ENCLOSURE MAY NOT BE SHOWN FOR BREVITY. CONTRACTOR SHALL COORDINATE FINAL SIZE AND ARRANGEMENT OF THE CONTROL STATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**SCALE:**

- SHEET S, TYP FOR MECHANICAL SCREEN SCN-101
- SHEET T, TYP FOR MECHANICAL SCREEN SCN-103

**SCALE:**

- SHEET S, TYP FOR MECHANICAL SCREEN SCN-101 LOCAL CONTROL STATION ELEVATION
- SHEET T, TYP FOR MECHANICAL SCREEN SCN-103 LOCAL CONTROL STATION ELEVATION

**OR 2 B I D T A Y 08/2019**

**ISSUED PER  ADDENDUM  NO. 2**

**GHD Inc.**

**DESIGNER:**

- J. MERINO
- R. CARDINAL

**DRAWN:**

- GHD Inc.

**CHECK:**

- T. YOUNG

**DATE:**

- 08/2019

**SCALE:**

- NTS, TYP FOR MECHANICAL SCREEN SCN-103

**PROJECT NO.:**

- 16701 Melford Boulevard, Suite 330

**FOR O R 2 B I D T A Y 08/2019**

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**CONSTRUCTION COPY:**

- Sheet 3 of 4

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**SUSSEX COUNTY, DELAWARE**

**SCRWF NO. 3 AND REWATP GP PHASE 2 UPGRADES**

**PROJECT:**

- PROCESS CONTROL ELEMENTS 7

**DRAWING NO.:**

- SC-E4212

**DATE:**

- Plot Date: Filename:17 October 2019  - 8:33 AM G:\111\11121182 South Coastal Expansion\CADD\Drawings\Electrical\111-11121182-E4212.dwg
SURGE TANK BLOWER BL-501
VFD CONTROL PANEL ELEVATION - MODIFICATIONS

1. NAMEPLATE LEGEND
   - NP1: SURGE TANK BLOWER BL-501 VFD CONTROL PANEL
   - NP2: SPEED CONTROL
   - NP3: MOTOR WINDING TEMPERATURE HIGH
   - NP4: VFD FAILURE
   - NP5: WARNING: EQUIPMENT IS POWERED BY MULTIPLE SOURCES

2. DOOR ELEVATION DETAIL

3. DOOR ELEVATION DETAIL

SURGE TANK BLOWER BL-501 VFD CONTROL PANEL
ELEMENTARY DIAGRAM - PARTIAL - MODIFICATIONS

- CONNNECT NEW WIRING TO EXISTING WITH NEW TERMINAL BLOCKS.
- ADD NEW INDICATING LIGHT AND RESET PUSHBUTTON IN EXISTING PANEL DOOR.
- ADD NEW NAMEPLATES PER NAMEPLATE LEGEND.
- PROVIDE NEW CONTACT BLOCKS ON EXISTING HOA FOR REMOTE MONITORING OF "AUTO" STATUS.
- Coordinate with County for integration into VFD shutdown circuit.
- Field device: Equipment or component located remote from Starter, VFD, or panel.

NOTATIONS:
- All existing components are not shown for brevity.
- Connect wiring to existing with new terminal blocks.
- Add new indicating light and reset pushbutton in existing panel door.
- Add new nameplates per nameplate legend.
- Provide new contact blocks on existing HOA for remote monitoring of "Auto" status.
- Coordinate with county for integration into VFD shutdown circuit.
- Field device: Equipment or component located remote from starter, VFD, or panel.
1. **SLUDGE PUMP SP-1501 VFD CONTROL PANEL ELEVATION**
   - PANEL 10" X 10" MOUNTED
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

2. **SLUDGE PUMP SP-1501 VFD CONTROL PANEL ELEMENTARY DIAGRAM**
   - PANEL BRAND: PANEL BUILDER/SUPPLIER
   - PANEL DESCRIPTION: PANEL BUILDER/SUPPLIER CONTROL PANEL NAMEPLATE (REFER TO DETAIL)
   - PANEL SIZE: 10" X 10"
   - PANEL MATERIAL: PVC
   - PANEL COLOR: BLACK

3. **DOOR ELEVATION DETAIL**
   - Door material: Steel
   - Door size: 30" X 80"
   - Door color: Black

4. **SYSTEM COMPONENTS**
   - PROCESS CONTROL ELEMENTARIES 20
   - NAMEPLATE LEGEND
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

5. **NOTES**
   - PANEL SIZE: 10" X 10"
   - PANEL MATERIAL: PVC
   - PANEL COLOR: BLACK

6. **PLATE LEGEND**
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

7. **REFERENCES**
   - PANEL 10" X 10" MOUNTED
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

8. **WARNING**
   - EQUIPMENT IS POWERED BY MULTIPLE SOURCES
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

9. **MOTOR WINDING TEMPERATURE SWITCH**
   - PANEL MATERIAL: PVC
   - PANEL SIZE: 10" X 10"
   - PANEL COLOR: BLACK

10. **LOW SUCTION FLOW**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

11. **HIGH SUCTION FLOW**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

12. **SLUDGE PUMP SP-1501 VFD CONTROL PANEL**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

13. **PANEL BUILDER/SUPPLIER**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

14. **DRAWINGS**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

15. **CONTRACTOR**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

16. **SUPPLIER**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

17. **INPUT FLC**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

18. **PHASE**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

19. **INPUT**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK

20. **OUTPUT**
    - PANEL MATERIAL: PVC
    - PANEL SIZE: 10" X 10"
    - PANEL COLOR: BLACK
1/2" X 12" X 8" ALUM BASE PL.

LIGHT FIXTURE TYPE: WELD TO BASE PL.

REFER TO PLANS FOR FIXTURE LOCATIONS.

LIGHT FIXTURE PANELS: REFER TO "PROCESS CONTROL SYSTEM POLE BASE SCHEMATIC FOR QUANTITY AND SIZE.

NOTE 1: FIXTURE LOCATIONS

±5/8"Ø SS ADHESIVE ANCHOR: 5" EMBED (TYP) FOR POLE BASE UP TO 6" (TYP).

ANCHOR BOLT (3'-0" MIN) OR EQUAL (REFER TO MFR'S REQUIREMENTS) FOR POLE BASE ABOVE 6" (SEE NOTE 4).

LAYERS OF INTRINSICALLY SAFE CIRCUITS. PROVIDE NAMEPLATE.

3'-6" MIN (SEE NOTE 3) BOTTOM OF ALL TERMINAL BOXES SHALL BE MOUNTED MINIMUM 3'-6" ABOVE SURFACE OF CONCRETE PAD OR WALKWAY.

TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION. PROVIDE SS SUPPORT STRUTS ANCHORED TO PAD OR WALKWAY.

POWER CONDUIT: PROVIDE CLASS I, DIV 1 RATED LIQUID RESIN BARRIER TYPE CABLE CONNECTOR (APPLETON MODEL PX2KX, OR EQUAL) FOR EACH CABLE ENTERING ANY OF THE TERMINAL BOXES. PROVIDE 2 SPARE FITTINGS OF TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

RAW WASTEWATER PUMP TERMINAL BOX.

RAW WASTEWATER TERMINAL BOX.

RAWWASTEWATER FLOAT SWITCH LEVEL TRANSDUCER.

RAWWASTEWATER TERMINAL BOX.

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

GAS DETECTION.

EXPLOSION PROOF UNION CORD GRIP (TYP).

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

TERMINAL BOXES (SEE NOTE 1). PROVIDE TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

MANUFACTURER'S CABLES FROM WET WALKWAY.

RIGID CONDUIT FROM JUNCTION BOXES TO TERMINAL BOXES.

TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

MANUFACTURER'S CABLES FROM WET WALKWAY.

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

GAS DETECTION.

EXPLOSION PROOF UNION CORD GRIP (TYP).

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

TERMINAL BOXES (SEE NOTE 1). PROVIDE TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

MANUFACTURER'S CABLES FROM WET WALKWAY.

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

GAS DETECTION.

EXPLOSION PROOF UNION CORD GRIP (TYP).

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.

TERMINAL BOXES (SEE NOTE 1). PROVIDE TYPE 316 SS WIRE MESH CAGE WITH 10 GAUGE SS ANGLE SUPPORT STRUTS FOR CABLE PROTECTION.

MANUFACTURER'S CABLES FROM WET WALKWAY.

INSTRUMENTATION POWER CONDUIT (TYP) SHOWN.
1. ELECTRIC ACTUATORS ARE TYPICAL FOR INSTALLATION IN BURNT OR FLAME PLUS USE-VALUES, HAZARD AREA, AND THEIR ACTUATOR MOUNTING PLATES MUST BE LISTED FOR APPROPRIATE USE-VALUES.

2. PROVIDE SEPARATELY MOUNTED ENCLOSURE FOR MOTOR CONTROLLER FOR INSTALLATION IN CLASS I, DIVISION 1 ELECTRICAL HAZARDOUS LOCATION. PROVIDE REDUCERS AS REQUIRED.

3. ELECTRIC ACTUATORS UNLESS SPECIFIED TO BE MOUNTED ON WALL.

4. PROVIDE DISCONNECTING SWITCHES LOCATED ADJACENT TO EACH ACTUATOR. DISCONNECTING SWITCHESS FOR ACTUATORS INSTALLED IN HAZARDOUS LOCATIONS MUST BE PULL-OUT TYPE OR MAY NOT BE COUNTERBALANCED OR BEING USED ON THE PLAN FOR OTHER PROJECTS.

5. ELECTRIC ACTUATOR DETAILS ARE TYPICAL FOR INSTALLATION IN BURNT OR FLAME PLUS USE-VALUES, HAZARD AREA. ACTUATOR MOUNTING PLATES MUST BE LISTED FOR APPROPRIATE USE-VALUES.

6. PROVIDE TWO SUPPORTS FOR ENCLOSURES/EQUIPMENT WIDER THAN 8".

7. ALUMINUM MOUNTING PLATES SHALL BE 2" GREATER ON EACH SIDE THAN DIMENSION OF THE SIDE FRAME ASSEMBLY, 10" MINIMUM, SHALL BE APPROXIMATELY 2/3rds THE SIZE OF THE ENCLOSURE DEPTH.

8. CROSS BRACING SHALL BE PROVIDED ON THE REAR FRAME ASSEMBLY FOR EQUIPMENT MOUNTING RACKS 24" WIDE AND LARGER. CROSS BRACING SHALL BE PROVIDED ON THE SIDE FRAME FOR EQUIPMENT MOUNTING RACKS 18" DEEP OR LARGER.

9. ENCLOSURES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.

10. FOR ENCLOSURES WITH INTERNAL EMBEDMENT, CONCRETE SUPPORT BASE 12" X 12" X 12" FOR EACH UPRIGHT MOUNTING SUPPORT.

11. REFER TO STRUCTURAL SPECIFICATIONS FOR ADDITIONAL INFORMATION (TYP).

12. THE SIDE FRAME ASSEMBLY, 10" MINIMUM, SHALL BE APPROXIMATELY 2/3rds THE SIZE OF THE ENCLOSURE DEPTH.

13. CROSS BRACING SHALL BE PROVIDED ON THE REAR FRAME ASSEMBLY FOR EQUIPMENT MOUNTING RACKS 24" WIDE AND LARGER. CROSS BRACING SHALL BE PROVIDED ON THE SIDE FRAME FOR EQUIPMENT MOUNTING RACKS 18" DEEP OR LARGER.

14. ENCLOSURES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.

15. PROVIDE TWO SUPPORTS FOR ENCLOSURES/EQUIPMENT WIDER THAN 8".

16. ALUMINUM MOUNTING PLATES SHALL BE 2" GREATER ON EACH SIDE THAN DIMENSION OF THE SIDE FRAME ASSEMBLY, 10" MINIMUM, SHALL BE APPROXIMATELY 2/3rds THE SIZE OF THE ENCLOSURE DEPTH.

17. CROSS BRACING SHALL BE PROVIDED ON THE REAR FRAME ASSEMBLY FOR EQUIPMENT MOUNTING RACKS 24" WIDE AND LARGER. CROSS BRACING SHALL BE PROVIDED ON THE SIDE FRAME FOR EQUIPMENT MOUNTING RACKS 18" DEEP OR LARGER.

18. ENCLOSURES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.

19. FOR ENCLOSURES WITH INTERNAL EMBEDMENT, CONCRETE SUPPORT BASE 12" X 12" X 12" FOR EACH UPRIGHT MOUNTING SUPPORT.