

## ADDENDUM 4

December 6, 2018

### WET WEATHER COMBINED SEWER STORAGE – PHASE 1

CONTRACT NO. W-17-004-101

CITY OF CHATTANOOGA, TENNESSEE

The following changes shall be made to the Contract Documents, Specifications, and Drawings:

#### Project Manual – Volume I

1. Section 01 11 00, Summary of Work, Part 1.06

**Delete:** D. Charges for additional Owner's expenses shall be in addition to any liquidated damages assessed in accordance with the Contract.

#### Project Manual – Volume II

2. Section 31 63 33, Micropiles, Part 1.09

**Replace:** D. The existing structures and utilities in the work area shall be protected during minipile installation. Due to the close proximity of the structures and utilities and sensitive nature of the soil strata, drilling and installation of steel pipe shall be done using duplex drilling methods only. No impact, percussion, auger or vibratory drilling equipment will be allowed. Should the Engineer determine the construction operation may cause distress to the structures or utilities, the Contractor shall modify his operations as directed by the Engineer.

**With:** D. The existing structures and utilities in the work area and within close proximity to the site shall be protected during minipile installation. Drilling shall be done with duplex rotary drills or other acceptable methods. Should the Engineer determine the construction operation may cause distress to the structures or utilities, the Contractor shall modify his operations as directed by the Engineer.

3. Section 33 16 32, Prestressed Concrete Tank Part 2.02

**Replace:** E. All concrete for the tank walls and domes shall contain a crystalline admixture at a minimum dosage rate of 3% by weight of cementitious content. Acceptable producers are “Xypex Admin C-500” by Xypex Chemical Corporation or approved equal.

**With:** E. All concrete or shotcrete for the inside face of the tank walls (from the diaphragm to the inside face, full height) shall contain a crystalline admixture at a minimum dosage rate of 3% by weight of cementitious content. Acceptable producers are “Xypex Admin C-500” by Xypex Chemical Corporation or approved equal.

**4. Section 40 05 61, Gate Valves Part 2.03**

**Replace:** B.1. Whey Valve, Model VL

**With:** B.1. DSS Valves, Model SSKGV

**5. Section 40 05 70, Miscellaneous Valves, Part 2.02**

**Replace:** Paragraph D in it's entirety.

**With:** D. The air and vacuum valves and pressure air release valves shall be similar to the following types and models as manufactured by VAL-MATIC, APCO , or approved equal. Air/Vacuum valves installed in the CSSPS Valve Vault and at the CSSPS Meter Vault shall include a discharge throttling device to control the air relief during pump startup

Location	Size	Min. Discharge Capacity @ 2 psi	Min. Intake Capacity @ 5 psi	ARV/PRV Model #	Connection
CSSPS Valve Vault	3"	500 scfm	1200 scfm	Val-Matic 303AS APCO ASU	Threaded
CSSPS Meter Vault	3"	500 scfm	1200 scfm	Val-Matic 303AS APCO ASU	Threaded
Storage Tank Drain Meter Vault	2"	1 scfm	N/A	Val-Matic 48AS APCO 400 SARV	Threaded

**6. Section 40 06 20, Process Equipment Schedule**

Stop Log Schedule

**Add:** Insert the following line to the table.

	West Bank Outfall	6.83 <sup>3</sup>	2 <sup>4</sup>	3	2.04 <sup>5</sup>	2	2
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**Add:** Insert the following notes to the table.

3. Manufacturer shall verify proper stop log width based on over West Bank Outfall weir structure dimensions.
4. Provide 6" high stop log planks.
5. Distance from weir structure invert to top of wall of weir structure.

Electrically Operated Valve Schedule

**Replace:** TAG NO. MOV-2080, 2081, 2082, and 2083 with the following

MOV 2080 <sup>3</sup>	BUTTERFLY	OPEN/CLOSE	36	22,000 CFM	10" W.C.	NA	FOUL AIR	COMBINED SEWER STORAGE PUMP STATION ODOR CONTROL HEADER
MOV 2081 <sup>3</sup> , 2082 <sup>3</sup> , and 2083 <sup>3</sup>	BUTTERFLY	OPEN/CLOSE	24	5,570 CFM	10" W.C.	NA	FOUL AIR	TANK 1, 2, AND 3 ODOR CONTROL HEADERS

## Additional Information

a.

## Drawings (attached)

1. Replace: S100 Rev 3 Bid Set sheet  
With: S100 Rev 4 Addendum 4 sheet
2. Replace: S102 Rev 3 Bid Set sheet  
With: S102 Rev 4 Addendum 4 sheet

## Questions/Responses

Deadline to submit questions is midnight Sunday, December 2. Any received after that will not be answered.

1. **Question:** On Sheet C405, the structure at station 8+51.19 is depicted to be an 8' manhole. On Sheet M050 (Bottom Plan) this structure is identified as a "Doghouse 6' Dia. MH". Please clarify the correct details for this manhole.

**Answer:** Provide a 6' diameter "doghouse" manhole for ARV depicted on C405 Sta. 8+51.19.

2. **Question:** Sheet C200 indicates the existing 84" and 60" RS lines are concrete pipe. Please identify more specifically the pipe type (Prestressed Concrete, Reinforced Concrete Class III, or ??), if known.

**Answer:** The pipe material and type for the 84" and 60" RS lines is not known. Each are thought to be concrete.

3. **Question:** Specification 331632 paragraph 3.02 A requires 0.8% reinforcing in the tank floor. Typically, this is 0.5%. Can the minimum percent be reduced to 0.5%? The cost increase for the higher percent is substantial.

**Answer:** Yes, change will be made by addendum.

4. **Question:** Drawing M302 has a note for an aluminum ladder per detail 0551500. Typically we would provide an aluminum ladder with cage and TS rail safety climb. Please confirm this is the desired system. The detail does not specify these items.

**Answer:** DRAWING M302, Section A (Grid E1) and Section B (Grid E6): DELETE "AL LADDER" detail callout and standard detail number.

5. **Question:** Is an interior ladder required? Typical material for an interior ladder is fiberglass with a SS TS Rail safety climb.

**Answer:** Interior ladders are not specified to be provided.

6. **Question:** In review, it appears that no interior coatings are required. Please confirm.

**Answer:** No interior coatings are required for the tanks.

7. **Question:** Tank plan details on sheets M301 and M310 depict what appears to be perimeter handrail located only near the hatches. Typically when a 48” tank dome sidewalk is provided the handrail extends around the full perimeter of the tank. Please inform us of the desired length.

**Answer:** Handrail is only required where shown on the drawings, approximately 215’ per tank.

8. **Question:** Specification 331632 paragraph 2.02 E requires Xypex at 3% for the tank walls and dome. Regarding the walls, can the Xypex be included in the interior shotcrete only (1” cover over the inside diaphragm)? It’s our opinion that the Xypex on the exterior of the diaphragm is not beneficial. Again, the price implications are substantial.

**Answer:** Incorporate Xypex additive into mixture of final 1” thick application of interior shotcrete on diaphragm.

9. **Question:** Please reference C300 Note 10. This note appears to state that the GC is required to employ a “soils scientist” while the materials within a 5.2 acre area x 2 feet deep are excavated as required for the project. Specification 012200-1.02.W further states that during “mass excavation activities” the Contractor shall provide a “soils scientist experienced in identifying such contaminated soils. Please clarify the concerns we have with this note and specification.

- a. Please delineate the noted 5.2 acre area.
- b. Please further define all specific certifications and/or trainings required by the GC employed “soils scientist”.
- c. Is the 5.2 acres x 2 feet deep volume of material stated in note 10 required to be excavated and disposed of offsite and replaced with good soils or is this trying to identify the “envelope” of excavation limits for which we must have a soils scientist on site.
- d. Please further define “mass excavation” as stated in Specification 012200-1.02.W.
  - i. Is this any excavation in the 5.2 acre x 2 feet deep envelope as stated in drawing C300 note 10 or does it extend to the extents of deeper excavations or excavations outside the 5.2 acre are.
  - ii. Does the soils scientist need to be at the site for just the upper two foot of excavation or the extents of mass excavation?
  - iii. Does “mass excavation” as stated in Specification 012200-1.02.W include the
    - 1.Extents of structural excavation
    - 2.grading,
    - 3.pipe trenches,
    - 4.duct bank trenches?

**Answer:** The intent of this project is to construct the storage facility as depicted in the Plans and Specifications. The site environmental documents were provided to inform contractors about the site material that may be encountered during excavation. The duty of the soil professional is to be onsite during excavation of any soils (for the purpose constructing the storage facility) to identify and subsequently test if necessary, to determine if the soil shall be disposed of at a landfill or is safe to dispose of at a nearby fill site.

**10. Question:** Please confirm that no “special” remediation or handling of groundwater is required during dewatering beyond that typically required for construction activities.

**Answer:** Special remediation of groundwater during dewatering shall be considered an unforeseen condition. Contractors shall incorporate typical dewatering practices into their bid.

**11. Question:** Please reference drawing C201. Please confirm that encroachment of temporary excavation open cut layback for the proposed west retaining wall beyond the existing overhead electric line easement along the western limits of disturbance is permissible for construction purposes.

**Answer:** There is approximately 10’ from the wall closest to the easement line, Sta. 0+90.

**12. Question:** Please reference drawing C202 and E03 near the proposed Diversion Structure. There is an existing overhead electric line directly over the proposed diversion structure which will be an extreme safety concern for the construction of this project. I do not see any notes referencing relocation of this line. This power line must be relocated prior to construction of this project. Please provide bidding direction for the relocation of this permanent power line.

**Answer:** There are no plans nor have there been discussions with EPB or other utilities about relocating approximately 6 lines crossing over the trunk sewers where the Diversion Structure has to be built. Contractor is encouraged to contact utilities owners and conduct a safety meeting prior to any work in this area.

**13. Question:** Please reference Specification 40 05 70-2.2. D which states that the ARV’s at the Storage Tank Fill Meter Vault are to be 6”. The only reference I see to this Storage Tank Fill Vault appears to be a secondary name to the CSSPS Meter vault (see C406 line D). Are these referenced ARV’s at the CSSPS valve vault? If so, shouldn’t these be 4”?

**Answer:** Refer to Project Manual Volume II, Item 3 above.

**14. Question:** Please reference drawing C411. There is a buried 36” inline check valve shown in the future 36” line. I am unable to find a specification for this “inline check valve”. Please provide specification or otherwise provide engineer’s intent.

**Answer:** Provide the inline 36” check valve per below:

A. V421 – 78” and smaller Elastomeric Inline Check

1. Full elastomer one-piece ply-reinforced body, saddle, and bill. BUNA-N construction.
2. Valves which incorporate separate valve bodies or mechanical hinges shall not be acceptable.
3. Secured with interior expanding type 316 stainless steel bands at each end of the check valve.
4. Notched bill providing 1-inch or less cracking pressure.
5. Tideflex Checkmate Ultraflex or Approved Equal.

**15. Question:** Please reference drawing M201 which shows MOV-2058 on the future pump discharge line. Please confirm this valve is not required to be included in this bid.

**Answer:** MOV-2058 is a future valve and actuator and is not part of the current construction project scope.

**16. Question:** Please reference drawing M02. There are 24” dampers and expansion joints on the FA duct at the tanks. I do not see these dampers and expansion joints on any other details for the FA duct. Please confirm these are required. Please provide detailed of attachment of the FA duct to the tanks.

**Answer:** FA ducts should attach to tanks with flanged connections. Provide a flexible duct connector per 23 31 13. Provide a damper in the straight run of duct per 23 31 16.

**17. Question:** Please reference drawing M500 and M550. Drawing M500 shows the FA duct beyond the grease filter to be 36” diameter. M550 shows this same duct to be 30” diameter. Please clarify required duct size. Additionally, can you please show the location for MOV-2083.

**Answer:** Duct size is correctly shown on M500 as 36”

**18. Question:** Please reference Specification 40 06 20-5 (Electrically Operated Valve Schedule). MOV-2080 thru MOV-2083 show to be gate valves. The drawings indicate these are to be butterfly valves. Please clarify valve type requirement.

**Answer:** Items in question are dampers.

**19. Question:** Reference spec section 00 21 13-17.03. This spec section states that the proposal is be submitted together with the “Contract Documents” and “Statement of Compliance with General Contractors Licensing Law”. Please confirm that we don’t have to submit the “Contract Documents” (specs, drawings, etc.) with our proposal. I can’t find a “Statement of Compliance with General Contractors Licensing Law” in the bidding documents – please confirm that this form does not exist and need not be submitted with our proposal.

**Answer:** Contract Drawings nor Technical Specifications are required to be submitted when Proposal is filed.

**20. Question:** Reference spec section 00 72 00 (EJCDC GC’s as modified by City of Chattanooga). What recent modifications have been made to this document? This document states that the modifications are as of 7-30-13 but there appears to have been some recent modifications. Please itemize the recent differences/revisions and re-date this document to reflect the correct “date of” modifications. Anyone who has to re-visit these vastly modified general conditions would appreciate any “heads up” on specific updates/revisions to this document.

**Answer:** Contractor shall comply with this document as it exists in the Contract Documents. All known revisions are indicated.

- 21. Question:** Reference 00 7200-6.06. J. This spec section states that the GC shall perform a minimum of 50% of the onsite labor with its own employees. For this project, with so much work being performed by “specialty subcontractors” (in particular, prestressed concrete tank construction, micropiles, electrical, paving, fencing, erosion control, etc.), this requirement may not be met. Please waive or clarify this requirement.

**Answer:** Labor associated with the construction of the Storage Tanks and Deep Foundations (micropiles) for all site structures shall be excluded from the 50% requirement.

- 22. Question:** Reference spec section 00 7300-4.02.C.1 & C.2. Should the date referenced in C.1 be October 3, 2018 – the report that was made available in Addendum 1? We have not seen a report dated March 30, 2018. Should paragraph C.2 be deleted? Please confirm or clarify.

**Answer:** The Geotech report dated October 3, 2018 is the final version. The March 30<sup>th</sup> version was preliminary.

- 23. Question:** Reference spec section 00 7300-4.06. A. Please address the following:

- a. Confirm that these reports/information are/is provided “for information only” and all work (other than safety) associated with the results of the “analyses” of these reports has been defined and incorporated into the bidding plans/specs.

**Answer:** Confirmed

- b. Confirm that the “result” of these reports as it relates to the GC’s work (other than safety) is that a soil scientist is to be present “during mass excavation activities” to identify potentially contaminated soils and that 6000 tons of material has been separately addressed as a unit price bid item for contaminated materials determined/mandated to be disposed of in a non-hazardous waste landfill.

**Answer:** Confirmed

- c. Confirm that excavation activities will not be delayed or stopped as a result of handling potentially contaminated materials other than “short pause” as a result of the GC’s soil scientist’s observations.

**Answer:** Unless something is found that was not mentioned in the environmental reports, there should be only a short pause to determine where excavated material should be disposed of based “soil scientist” direction.

- d. Confirm that the soil testing/analysis of potentially contaminated soils to classify ultimate disposal is to be paid for out of the “Materials Testing” allowance.

**Answer:** Confirmed

- e. Confirm that any work (including additional safety means/methods) and associated delays beyond that as stated previously (items c & d) with regard to potentially

contaminated materials will be considered an unforeseen condition and a change order executed/issued accordingly.

**Answer:** Confirmed

**24. Question:** Reference 00 41 00-5.01, Parts 2 thru 4, regarding additive alternate bid items for the project. Will bids be considered non-responsive if the bidder elects to “NO BID” any or all of these alternates? Please advise.

**Answer:** Yes

**25. Question:** Reference spec sections 00 52 00-4.03, 00 72 00-1.01. A.25.1, and 01 11 00-1.06.A/C/D regarding “liquidated damages” and “additional Owner’s expenses”. Spec section 01 11 00-1.06.D states that “additional Owner’s expenses” are to be assessed in addition to “liquidated damages”. In effect, this means that “liquidated damages” aren’t really “liquidated damages” as defined in 00 7200. With that said:

- a. If the \$1500/day does not include costs for expenses as defined/listed in 00 7200-1.01.A.25.1 (administration, engineering, construction supervision, inspection, etc.), then what is the \$1500/day for “liquidated damages” for?
- b. Confirm that “additional Owner’s expenses” will indeed be assessed in addition to “liquidated damages” for late contract completion.
- c. We suggest setting a threshold (a maximum cost/day) for assessing “liquidated damages” (as defined in 00 7200- 1.01.A.25.1) or provide a threshold (maximum cost/day) for “additional Owner’s expenses”.

**Answer:** \$1,500/day shall be the agreed upon cost at each milestone listed (Substantial and Final Completion) relative to the definition of Liquidated Damages stated in 00 72 00-1.01.

A.25.1. Additional Owner’s Expenses incurred prior to Substantial Completion not associated with Liquidated Damages shall be billed at the hourly rates specified in 01 11 00-1.06-C. 01 11 00-1.06-D has been omitted.

**26. Question:** Reference spec section 01 35 00-1.05 regarding a 60-day “Administration Period”. Is an “administration period” mandated for this project? If it is mandated, is the “administration period” considered part of the contract times – or this 60-day period separate? We suggest this spec section be deleted. Please advise.

**Answer:** Delete specification 01 35 00 Part 1.05-Administration Period in it’s entirety.

**27. Question:** Reference spec section 01 75 16-1.08.C.2 regarding payment for “fuel, power, and chemicals consumed up to the date of “certified substantial completion””. As “certified substantial completion” will not be attained until after the 30- day operational acceptance period (see 01 75 16-1.07), these costs will be significant. We suggest that the Owner pay for these items beginning with the commencement of the operating test period (after successful initial startup) as they will be receiving beneficial use of the facility. Please advise.

**Answer:** Due to the nature of operation of this Facility, the 30 consecutive day operational test period does not apply. To achieve “Substantial Completion” all project components beginning with the Diversion Structure, to the Pump Station, through the Meter Vault, Valve Vault, into Two (2) Storage

Tanks, back through the Tank(s) drain valves, and back into the Diversion Structure must be tested as a mimicking an actual overflow event for it's intended use for the City to use as needed based on rain events. The slide gate on the 84" trunk sewer shall be utilized to cause sanitary flow to overflow the weir which releases flow into the CSSPS. In order to confirm the entire facility is operating as designed, this scenario should be repeated at least 5 times without any components failing to operate properly. At least one (1) of those events needs to be at least eleven (11) million gallons, the remaining four (4) shall be a minimum of three (3) million gallons.

- 28. Question:** Please forward this request to the City Engineer to accept Powdered DRYLOK® Masonry Waterproofer as an equivalent "substitution item" for the Chattanooga Wet Weather Combined Sewer Storage – Phase 1 project. This request is to review the proposed product as an equal substitution item for the Cementitious Coatings in Section 099700, Page 2, Paragraph 2.01 B.

**Answer:** The design team of this project is not familiar with DRYLOK Powdered Masonry Waterproofer and can not recommend it as an equal substitution at this time. However, should the contractor that is awarded the project provide documentation of proven success with the product and municipal contacts to call as references the design team may revisit this request.

- 29. Question:** Specification 331632, 2.02E, requires all tank walls and domes to contain Xypex Admin C-500. However, Specification 033000, 2.07C, requires only Class C concrete to use Xypex. Please confirm that Xypex is to be used in the tank walls and domes.

**Answer:** Refer to Project Manual Volume II, Section 33 16 32, Prestressed Concrete Tank Part 2.02. E.

- 30. Question:** Specification 099000, Table 9-1 Painting Schedule, calls for the interior concrete walls and ceilings to be coated with Tnemec Series 130 and 113 or 114. Please confirm that the interior tank walls and domes are required to be coated.

**Answer:** Refer to Project Manual Volume II Section 33 16 32, Prestressed Concrete Tank Part 2.02. E.

- 31. Question:** Specification 331632, 3.02A, requires the concrete tank floors to contain not less than 0.8 percent reinforcing steel. Please confirm that 0.5 percent is acceptable.

**Answer:** Refer to question 3 above.

- 32. Question:** Specification 331632, 3.02B, requires the tank floor slabs to be designed as a concrete pile cap not less than 30" thick. Please confirm that the tank manufacture is responsible for the tank design and the floors slabs are not required to be a minimum of 30" thick.

**Answer:** See response to question 3 above.

- 33. Question:** Drawing Sheets M301, M310, and M320 give no dimensions, angular or otherwise, to determine the linear footage of dome perimeter handrail. Please confirm the linear footage of perimeter handrail for each tank dome.

**Answer:** Approximately 215 linear feet of handrail is required per Tank.

**34. Question:** Please confirm no interior fiberglass ladders are required in the 10.0-MG tanks.

**Answer:** Interior ladders are not required to be provided.

**35. Question:** Please confirm that class c concrete is only required in the diversion structure.

**Answer:** Correct as indicated in Drawings Note 1 on Sheet S102.

**36. Question:** Please reference drawing M201 which shows an 8" FA gooseneck vent w/ damper. Can you please provide detail of the associated damper?

**Answer:** Provide a damper as specified in 23 31 16.

**37. Question:** Please reference C300 Note 5. Please confirm that CLSM or CTA is only required if and where excavation support systems are used at the CSSPS and Diversion Structure. Further confirm that CLSM and CTA is not required at the open cut portions of the excavation of these structures.

**Answer:** CLSM or CTA is not required for open cut excavations. Proper backfill and compaction shall occur at open cut excavations.

**38. Question:** Please reference C302. The CSSPS Meter Vault is within the line delineating the prestressed tank construction road. This is a construction sequencing and potential excavation/shoring concern. Please consider moving this vault or moving Tank #1 such that the construction roads of Tank #1 and #2 overlap.

**Answer:** Price as currently shown.

**39. Question:** Please reference I200, LCP-2090 does not have an asterik (\*) by it but I do not see that it is to be provided by the instrumentation subcontractor. Please clarify intent of responsible supplier of LCP-2090.

**Answer:** LCP-2090, should be in the electrical contractor scope. Refer to E410.

**40. Question:** Section 31 40 00, Article 3.01.C, indicates vibratory type hammers shall not be used. Please confirm this does not apply to this project.

**Answer:** Restriction on vibratory hammers has been removed.

**41. Question:** Sheets M500/501/550/551 include detail callouts 23311601 and 2311602. The corresponding details are not found elsewhere in the drawings. Please clarify.

**Answer:** Refer to Sheet S905 for details.

**42. Question:** We respectfully request that Fontaine-Aquanox be approved as an equal for stop logs and slide gates specified under Sections 40 05 59 and 40 05 60, respectively. See attached information.

**Answer:** After review of the information provided, the Fontaine products submitted are not manufactured on a common basis in a robust manner in matching aspects as the listed manufacturers

for the intended application and therefore can not be considered an equal for this project. Guides and frame shall be one-piece, formed or welded.

**43. Question:** Section 26 05 73 – 1.01 Part B states that the power system studies shall be done for all existing equipment. Is it the intent of this specification for power system studies to be done on Plant Distribution Line A and C and all of their downfield equipment or only the in the areas of the Wet Weather Combined Sewage Storage and IRPS?

**Answer:** Power system studies shall be done for the Wet Weather Storage Facility and the IRPS.

**44. Question:** Section 26 05 00 – 1.03 D and E define who is responsible for all new work associated with the electrical utility. Who is responsible for the costs associated with relocation and demolition of existing utilities?

**Answer:** City shall directly reimburse EPB for their portion of the work. The Contractor is responsible for private demolition per EPB's instruction and EPB is responsibility for their utility.

## Supplemental Information by Others

NA

December 6, 2018

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/s/ Justin C. Holland, Administrator  
City of Chattanooga  
Department of Public Works