THE CITY OF ASHEVILLE
NORTH CAROLINA

Addendum No. 3

Issue Date: 2/5/2024

Project Name: **Mills River WTP Miscellaneous Upgrades Phase II**

Project Number: **298-MRWTPRehabPh2**

TO: Prospective Bidders

This addendum forms a part of the **Bid Document Package** and modifies the original Project Number **298-MRWTPRehabPh2** only to the extent specifically noted below. Failure to acknowledge this addendum in the submittal may subject the submitter to being deemed non-responsive.

This Addendum is posted on the City procurement website at www.ashevillenc.gov/bids. All addenda and attachments shall be published to the same location.

This Addendum consists of 162 pages in total.

- Geotechnical Design Report is provided to supplement the boring log information provided in the Project Manual. The report is provided for information only. The Contractor should rely upon the contract documents (drawings/specs) for the geotechnical requirements of the work. For Clearwell No. 2, Contractor is required to submit their own geotechnical foundation design and Engineers should be considered preliminary. Field conditions may vary, and the Contractor should exercise judgment and expertise in interpreting, adjusting, and applying the recommendations provided in the report.

Response to Questions and Clarifications:

Note: All questions proposed below are as they were submitted by prospective bidders and have not been altered or re-worded.

1. Hello, We are interested in being added as a list bidder with Sulzer p[umps for this project. I am not sure who needs to review, but preliminary selections are attached for review.
   Response: Manufacturers not currently specified for each pump in the project will not be evaluated or added to each pump specification. All pump selections to be provided by specified manufacturers.

2. *In addition, here is Sulzer end suction selection for preapproval to bid. Thanks very much!!*
   Response: Manufacturers not currently specified for each pump in the project will not be evaluated or added to each pump specification. All pump selections to be provided by specified manufacturers.

3. We would like to present the attached Xylem Goulds Water Technology vertical turbine selection for consideration on the Raw Water and Finished Water pumps for the subject job, spec section 43 24 16.15. Please let us know if you intend to add Xylem Goulds Water

Technology as an approved equal to bid on this job and we'll put together a formal proposal with comments on the spec.
Response: Manufacturers not currently specified for each pump in the project will not be evaluated or added to each pump specification. All pump selections to be provided by specified manufacturers.

4. We'd like to submit the following manufacturers for prequalification on the subject job:
   1. Spec section 432513 – Submersible Solids Handling Pumps (Influent PS) with KSB. See attached 60HP, 1200RPM KSB selection for this spec.
   2. Spec section – 432416.15 – Vertical Turbine Short-Set pumps (Raw Water / High Service pumps) with Xylem Goulds Water Technology (Lubbock, TX). See attached curves for these two applications – more information is available upon request obviously.

   Response: Manufacturers not currently specified for each pump in the project will not be evaluated or added to each pump specification. All pump selections to be provided by specified manufacturers.

5. Specification 018829-5, Section 2.1C provides Ss=0.298 and S1=0.108. Drawing Sheet S-1 provides the same values. Specification 434163-6, Section 2.1D 3a provides Ss=0.136 and S1=0.067. Please confirm which values are required.
   Response: Section 018829 and Drawing S-1 provide the correct values.

6. Specification 434163-6, Section 2.1D4, provides a Seismic Site Class – C. Drawing Sheet S-1, provides a Seismic Site Class – D. Please confirm which Seismic Site Class is required.
   Response: Site Class D. Refer to specification change at the end of this addendum.

7. Specification 434163-6, Section 2.1D7, requires the inner wall to be designed with the outer chamber full and the inner chamber empty and the inner wall to be designed with the outer chamber empty and the inner chamber full. The current design shown on drawing sheet M-20 does not allow for separate chambers. Please confirm the current design shown is correct.
   Response: Current design shown is correct. There is no separate chamber and Section does not apply.

8. Specification 434163-6, Section 2.1D 8a, requires a differential water pressure of 12 inches for the baffle wall loading criteria. Typical loading criteria for baffle walls is 1" differential water pressure. Would it be acceptable to provide a 1" differential water pressure or something less than the 12" of differential water pressure as required? This would help to reduce the overall cost of Clearwell #2 tank. Please confirm.
   Response: Tank design and design of the baffles must consider the effects of seismic sloshing, which will be more than 1-in differential water pressure.

9. Specification 434163-6, Section 2.2A3, states that the Clearwell tank will be an 80 feet internal diameter, 1-million-gallon tank, with a side water depth of 27 feet 8 inches with a dome roof. Drawing Sheet M-21 tank section shows a top of overflow flare elevation of 2108.17, a top of wall elevation of 2109.17, and a top of footing elevation of 2080.00 which is noted as FIN. FL. The actual finish floor elevation would be at 2079.42 with our typical edge footing rise of 7". Based on this information, the side water depth would be 28'-9" and the side wall depth would

be 29’-9”. Please confirm these values are required to be used for all prestressed concrete Clearwell #2 tank manufacturers.
Response: Elevation of 2080 is for top of the footing as noted. Minimum thickness of the floor slab is 4 inches per Section 2.1.B.2. This puts elevation of floor slab at 2079.33. With overflow elevation at 2108.17, maximum side water depth is 28'-9" from top of floor slab. Refer to specification change at the end of this addendum.

10. Drawing Sheets M-20 and M-21 do not provide a top of baffle wall dimension or elevation. Typically baffle walls are shown 6” higher than the HWL elevation. Please confirm that an elevation of 2108.67 and wall height of 29’-3” is correct.
Response: Baffle walls shall have a TOW elevation of 2108.67.

11. Specification 434163-8, Section 2.2H 1c, states that the ladders shall be fitted with a fall protection device conforming to OSHA requirements. This device shall be a SAF-T-CLIMB fall prevention device. Drawing sheet MD-3, Detail 3 (exterior ladder) does not mention a safety climb device. Drawing Sheet MD-4, Detail A (interior ladder) requires a TS rail. Please confirm if a TS safety rail device is an acceptable alternate in lieu of the SAF-T-CLIMB rail device.
Response: TS safety rail device is an acceptable alternate. OSHA compliant safety rail device shall be provided for both interior and exterior ladder.

12. Specification 434163-7, Section 2.3 B4, provides a 4000 psi concrete strength for the footings, floor, dome roof, and cast-in-place walls. Specification 033000-7 and 20, Sections 2.3I and 3.12A, Class E3 concrete mix has a 4,500 psi concrete strength and is for structural concrete 10” or less in thickness. Drawing Sheet S-1, Concrete, requires all concrete shall be air-entrained with 4,500 psi compressive strength at 28 days unless otherwise noted. Please confirm that 4000 psi concrete strength is acceptable for the Clearwell #2 tank footing, floor, and dome.
Response: Concrete in Section 033000 does not apply to the prestressed tank.

13. Specification 055213 requires handrail is to be anodized. Please confirm if the exterior ladder and cage needs to be anodized as well.
Response: Mill finish per Section 055000, Paragraph 2.4-G.

14. Specification 434163-9, Section 2.3 H5, Wall Manway, requires a watertight elliptical shape made of type 316 stainless steel with hinges mounted to the inside of cover and shall be capable of being “Dogged” from the exterior of the tank. Crom’s typical rectangular wall manhole size with “dogged” latches has a 2’-9” tall clear opening x 4’-5” wide clear opening. Please confirm this size manhole is acceptable.
Response: Rectangular manhole and proposed opening size acceptable. Bottom of the manhole shall be raised to 2082.5 to allow 6" clearance from bottom of manhole to proposed finish grade elevation.

15. Drawings Sheet MD-4, Detail C, Wall Manhole Detail, requires the centerline of the manhole to be at 2082.08. Based on the proposed finish grade elevation of 2082.00, the manhole would be partially covered. We suggest moving the manhole up the wall to provide a 6” clear area from

the bottom of the manhole to the proposed finish grade elevation to allow for access into the tank and to provide adequate wall area for prestressing the tank. This new centerline elevation would be 2084.25. Please confirm moving the manhole centerline elevation from 2082.08 to 2084.25 is acceptable.
Response: Bottom of the manhole shall be raised to 2082.5 to allow 6" clearance from bottom of manhole to proposed finish grade elevation.

16. Specification 434163-12, Section 3.1 G4, does not allow for expansion anchors to be used when installing the dome handrail. Crom's standard practice for installing dome handrail is to use expansion anchors. Please confirm if expansion anchors are acceptable.
Response: Expansion anchors are not permitted for railing. Refer to Section 055213, Paragraph 2.4-D.

17. Specification 033000-7, Section 2.3I, requires an entrained air content of 3.5 to 5%. Crom's typical floor and dome total air content is 5% ±1%. Please confirm if a total air content of 5% ±1% is acceptable for the prestressed concrete Clearwell #2 tank.
Response: Air requirements of Section 033000 do not apply to the prestressed tank.

18. Specification 033000-7, Section 2.3H, Concrete Slump, states that if a high-range water-reducing admixture (plasticizer) is used, the slump indicated shall be that measured before plasticizer is added. Plasticized concrete shall have a slump ranging from 7 inches to 10 inches. Crom's typical floor mix requires a slump of 6" ±1" after adding super-plasticizer. Please confirm if a slump of 6" ±1" is acceptable after adding super-plasticizer for the prestressed concrete Clearwell tank.
Response: Slump requirements of Section 033000 do not apply to the prestressed tank.

19. Specification 033000-16/17, Section 3.10 E3, sample concrete and make one set of five cylinders for every 100 cu. yd. or less of each class of concrete placed each day, and for every 5,000 sq. ft. of surface area for slabs and walls. Form specimens in 6 inch diameter by 12 inches long non-absorbent cylindrical molds. Please modify language to include standard testing for prestressed concrete tanks in accordance with ACI is to record the total of 5 (five) test cylinders for every 50 CY minimum placed with 4" x 8" cylinders. Please confirm this is acceptable.
Response: 4x8 cylinders are permitted.

20. Drawing Sheet S-1, Design Loads- Concrete 28-Day Strength, Prestressed Elements 5000 psi. Specification 434163-7, Section 2.3 D1, requires Shotcrete shall have a minimum f'c = 4000 psi at 28 days. We will construct the corewall, inside cover over diaphragm, outside cover over prestressing, and the interior baffle walls with a 4000 psi Shotcrete mix. Please confirm this is acceptable.
Response: S-1 is intended to refer to prestressed, precast concrete elements and does not refer to the prestressed concrete tank.

21. Drawing Sheet S-1, General Notes- Reinforcing Steel, requires all accessories shall be in conformance with ACI 315 requirements. Reinforcing steel shall have the following clear cover

unless otherwise noted. Concrete cast against earth = 3". Formed surfaces in contact with soil, sewage, water, or exposed to weather = 2". Please confirm that the parameters required above are for other concrete construction other than the prestressed concrete Clearwell #2 tank which requires a 4" thick floor.
Response: In accordance with AWWA D110 membrane slabs are not required to meet the requirements of ACI 350. This would apply to cover requirements. If a structural slab is required, as determined by the prestressed tank designer, then the requirements for structural floors per AWWA D110 would apply.

22. Drawing Sheet M-20 shows a dashed line around the tank representing the outside of the gravel road. We require a 6" thick x 15'-0" wide stone workroad beyond the tank footing around the tank for prestressing. Please confirm a 15'-0" wide workroad can be provided.
Response: Yes.

23. Specification 264113-4, Section 3.1J5, states "Use schedule 80 PVC conduit for any required physical protection of down conductors". Drawing Sheet E-3, Scope of Work 2, requires lightning protection systemin accordance with Specification 264113 at Clearwell #2. Bonding to any concrete encased tank steel is not recommended and shall not be allowed, per the tank manufacturer. All bonding shall be done by using air terminals on the top of the tank wall with PVC conduit adhered to the exterior tank wall.

    Electrical grounding to the reinforcing of a prestressed concrete tank is prohibited by AWWA D110-13 per Section 5.16. Items requiring grounding, such as lightning protection, are required to be a separate system with its own ground connections. Excerpts of the referenced sections are provided below.
    - AWWA D110-13, Sec. 5.16 – Electrical grounding to non-prestressed reinforcing steel or prestressed reinforcement for any equipment or electrical service shall be strictly prohibited.
    - AWWA D110-13, Sec. 5.17 – Lightning protection, if required, shall be a separate system with its own ground connections

    Please confirm if one or four down conductor conduits will be required to attach to the exterior tank wall.
    Response: In compliance with AWWA D110-13, Sec. 5.16 grounding to reinforcing of the prestressed concrete tank is not required. Provide lightning protection in compliance with specification 264113 except where not permitted by the tank manufacturer's requirements. Provide two down conductors with PVC conduit adhered to the exterior tank wall.

24. Light Fixture and Controls Recommendations 265119.13A - 4 issued with bid documents, specifies (14) type A fixtures and (4) type C fixtures as shown on 1996 drawing E-2. E.2 was not included in our bid documents. Please furnish drawing E-2.
Response: Record Drawing Sheet E-2 is attached.

25. 1996 drawing E-39, details 'A' & 'C' specify that the current fixture poles are rated for 100 mph winds. Specification Section 265613 section 2.1, paragraph F., item 1. specifies poles are to be

rated for 120 mph winds. If the retrofit option is taken, the fixture will not meet the current wind load specification. If the Replace option is taken, the entire fixture, pole, and concrete base will have to be changed. Please advise if these options are acceptable based on which option is taken.

Response: The existing poles and concrete base may be reused.

26. Please provide all of the Name Plate Data for MCC-1, MCC-2 AND MCC-4. This is necessary to provide the modifications for this equipment. The prebid walkthrough did not cover some of these areas.

    Response:

    a. MCC-1A: Cutler-Hammer Westinghouse Series 2100 Motor Control Center.
       HCH29354 IT.002 -FVC SEPT.98 H-BUS 1600A
       480V 3PH 3W 60Hz, 65kA
    b. MCC-1B: Cutler-Hammer Westinghouse Series 2100 Motor Control Center.
       HCH29354 IT.003 -FVC SEPT.98 H-BUS 1600A
       480V 3PH 3W 60Hz, 65kA
    c. MCC-2a: Cutler-Hammer Westinghouse Series 2100 Motor Control Center.
       HCH29354 IT.004 -FVC MAR.98 H.BUS 1600A
       480V 3PH 3W 60Hz, 65kA
    d. MCC-2B: Cutler-Hammer Westinghouse Series 2100 Motor Control Center.
       HCH29354 IT.005 -FVC MAR.98 H.BUS 1600A
       480V 3PH 3W 60Hz, 65kA
    e. MCC-4: Cutler-Hammer Westinghouse Series 2100 Motor Control Center.
       HCH29354 IT.008 -FVC APR.98 H.BUS 1200A
       480V 3PH 3W 60Hz, 65kA

27. What is this 100-mil fabric? Is there a spec? It's referenced in multiple drawings. This is one example inserted below. Can we just use 1 or 2 layers of the specified 6oz non-woven geotextile? 6oz is approx. 75mils thickness. Perhaps we could double it up making 150mils:

    Response: The referenced 100-mil fabric shown in Detail D/CD-2 can be replaced by two layers of the 6oz non-woven geotextile.

28. They are using the term "outlet structure" and "effluent structure" for what appears to be the same structure. Please confirm there are not actually 2 different sructures. Below is the connection detail for the effluent structure. This connection could be tricky. We need ample clearance to run the extruder both on the wall and on the floor. Also there should be a subgrade transition from subgrade up the wall so the liner doesn't bridge. We can't have an open gap like the drawing depicts. The earthworks contractor should create a 45-deg (approx.) bevel using the filter sand that is placed below the liner, so the liner transitions up the vertical wall surface without bridging.

    Response: ***As referenced in the inserted detail (Detail G/CD-2), yes the effluent structure is the same as the outlet structure. Filling the gap with sand is acceptable.***

29. Please find attached Statement of Qualifications

    Response: The following company is added as a Process Control Systems Supplier (PCSS) under Specification 40 61 00: Lord and Company (2100 Carolina Place Drive, Fort Mill, SC 29708; 803-802-0060)

30. The following instruments are not shown on the P&IDs or mentioned in the specifications. Can you confirm if these instruments are needed and if the integrator is to provide them.
    1. LE/LIT-5307
    2. LSH-5307
    3. LE/LIT-5300-1
    4. LE/LIT-5300-2
    5. LE/LIT-5405
    6. LSH-5405
    7. LE/LIT-5400

    Response: Yes they are to be provided by the integrator per specifications, and as shown on the drawings. Existing chemicals systems that have instrumentation replacement as per above do not have P&IDs.

31. Changes to SPECIFICATION 43 41 63 Wire and Strand Wrapped Concrete Tank:
    1. **DELETE** paragraph 2.1D3a and **REPLACE** with the following: Mapped Spectral Response Coefficients: SS= 0.298, S1= 0.108.
    2. **DELETE** paragraph 2.1D4 and **REPLACE** with the following: Site Class: D.
    3. **DELETE** “27 feet 8 inches” in paragraph 2.2A3 and **REPLACE** with “28 feet 9 inches”.

The due date remains unchanged. Bids are due no later than Thursday, February 22, 2024 by 3:00 pm EST.

I understand that failure to confirm the receipt of addenda may be cause for rejection of this Bid/proposal.

_____	_____	_____
Authorized Signature	Company	Date

- End -