A. **SCOPE.** This Addendum No. 3 consists of page AD3-1 through AD3-2 and covers the following additions and changes to the Specifications and Drawings for this Project and contains the following attachments.

- Invitation to Bid
- Specification Volume 2 of 2, 31 52 00 - Cofferdams

B. **SPECIFICATIONS.**

1. **Volume 1 of 2, section INVITATION TO BID** – DELETE this section in its entirety and REPLACE with the revised INVITATION TO BID attached herein.

2. **Volume 1 of 2, section 01 50 00 – TEMPORARY FACILITIES AND CONTROLS – Section 4. Power** - after first sentence “Contractor shall provide all power for heating, lighting, operation of Contractor's plant or equipment, or for any other use by Contractor.”, ADD: Contractor may determine method(s) of providing power, but shall be advised that existing electrical infrastructure is not available in the vicinity of the subject site. The proposed service shall be available for connection once new service, transformer and electrical panels are installed and placed into service.

3. **Volume 2 of 2, Section 31 23 11 – EXCAVATION AND FILL FOR STRUCTURES** –

   a. **Section 2-1.01.02. Filter Fabric Type B.** – DELETE this section in its entirety and REPLACE with: “Filter fabric type B shall be provided for installation at location indicated on the Drawings and as specified herein. Filter Fabric Type B shall be a woven geotextile composed of high tenacity polypropylene yarns in the machine direction and high tenacity polyester multifilament yarns in the cross-machine direction which are woven into a stable network such that the yarns retain their relative position. The Filter Fabric Type B shall be TenCate Mirafi HP770PET or approved equal.”

   b. **Section 3-2.06. Dewatering; after the last sentence of the first paragraph** “The Contractor shall install a minimum of three piezometers to demonstrate that groundwater has been lowered to the specified levels before excavation begins below the natural groundwater level adjacent to the site.” ADD: “At least one piezometer shall be installed near upstream side of the intake structure and another piezometer near the downstream side of the intake structure.”

   c. **Section 3-2.06. Dewatering; after first paragraph, ADD as a new paragraph:** “The dewatering system shall be operated continuously to remove ground water and surface water. Enough equipment and materials shall be maintained on the Site for necessary modifications and to ensure continuous and successful operation of the dewatering system. Provide one hundred percent standby electrical generating
capacity with automatic switching, including all safety features to prevent backfeeding the electrical supply system. At least 25 percent standby pumps shall be provided or provide contingency detail for delivery of additional pumps to the site within 24 hours. Contractor shall maintain standby pumps in operational condition on the Site. Standby pumps and generators shall be tested weekly to ensure their immediate availability.

System maintenance shall include on-call 24-hour supervision by personnel skilled in the operation, maintenance, and replacement of system components for dewatering systems, standby and spare equipment of the same capacity and quantity as primary system and equipment. The dewatering system shall operate continuously and shall not be interrupted due to power outages."

d. Section 3-5 FILTER FABRIC INSTALLATION – After first sentence “Filter fabric shall be placed as specified herein and at the locations specified or otherwise indicated on the drawings” ADD: “, and in accordance with the manufacturer’s instructions.”

4. Volume 2 of 2, Section 31 52 00 – COFFERDAMS – DELETE this section in its entirety and REPLACE with revised specification section Volume 2 of 2, Section 31 52 00 – Cofferdams attached herein.

5. Volume 2 of 2, Section 31 63 33 – MICROPILES – Section 1-2.01.a) after “Micropile experience listed shall include piles installed with permanent casing having minimum diameter of 7.00” ADD: “Inches”.

6. Volume 2 of 2, Section 31 63 34 – MICROPILE LOAD TESTING – section 3-1. Pile Load Testing Requirements, first paragraph, after “One (1) axial compression verification load” DELETE “tests shall be performed on sacrificial micropiles” and REPLACE with “test shall be performed on one (1) sacrificial micropile”.

7. Volume 2 of 2, Section 40 05 93 – COMMON MOTOR REQUIREMENTS FOR PROCESS EQUIPMENT, Section 2-2 Performance and Design Requirements – After “Insulation class and temperature rise above 40°C design ambient by resistance method.” DELETE “Class F with 80°C Rise at 1.0 SF; Class H with 105°C rise at 1.0 SF” and REPLACE with “Class F with 80°C rise at 1.0 SF (Non-AFD driven Motors); Class H with 90°C rise at 1.15 SF (AFD driven motors).”

8. Volume 2 of 2, Section 43 24 13 – VERTICAL DIFFUSION VANE PUMPS –

   a. Section 2-2 Performance and Design Requirements: After ”Maximum power required at pump input shaft at any point in the operating range” DELETE “120 bhp” and REPLACE with “125 bhp”.

   b. Section 2-3 Materials: after “impellers: Aluminum Bronze, ASTM B148-952” ADD “or 316 Stainless Steel”.

   c. Section 2-3 Materials: after “Lineshaft, carbon steel” Carbon steel with carbon steel couplings” ADD “or 416 Stainless Steel”.
C. **DRAWINGS.**

1. Drawing C-99-500, Sheet 15 of 106 – ADD "General Note: 1- in the event of any conflicts between information shown on this sheet and that shown on other sheets, the information on this sheet shall dictate:"


D. **ACKNOWLEDGEMENT BY BIDDER.** Each Bidder is required to acknowledge receipt of this Addendum No. 3 in the space provided in the Bid Form.
INVITATION TO BID

Pursuant to N.C.G.S. 143-129, sealed bid proposals endorsed “French Broad River Intake & Pumping Station” for the furnishing of materials, labor, and equipment for the construction of French Broad River Intake & Pumping Station project will be received by the City of Hendersonville at the City Operations Center, 305 Williams Street, Hendersonville, NC 28792 no later than 2:00pm January 14, 2021. Electronic bids and electronic bid bonds shall not be accepted. It is the bidder’s responsibility to ensure that bids are received by the specified time/date, bidders may contact Brent Detwiler, (828) 697-3060 to confirm receipt of bid.

The City of Hendersonville will open sealed formal Bids by Bidders at 2:00 pm on January 14, 2021 in the conference room of the City Operations Center, 305 Williams Street, Hendersonville, NC 28792. For the convenience of bidders, the opening shall be streamed or made available through a Microsoft Teams meeting. The virtual bid opening conference may be accessed via the following link or call in number. The link will also be posted on the City’s website and emailed to the pre-qualified bidders.

Join Microsoft Teams Meeting

+1 980-272-0984 Call-in Number (United States, Charlotte)
When prompted enter the Conference ID: 284 182 636#

Only Bids submitted by prequalified Bidders will be considered and accepted. The proposed project consists of construction of raw water supply facilities including raw water intake structure with three fixed mechanically cleaned trash racks; raw water pumping station with three vertical diffusion vane pumps, surge tank and compressor, and a traveling bridge crane; standby power; and site work.

Complete digital project bidding documents are available at through the City’s website or www.questcdn.com. You may download the digital plan documents for $15 by inputting Quest project #7437284 on the website’s Project Search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital project information.

A pre-bid conference will be held virtually at 9:00 am on Wednesday, December 9, 2020 via Microsoft Teams. The virtual Pre-Bid conference may be accessed in via the following link or call in number:

Join Microsoft Teams Meeting

+1 913-278-0791 Call-in Number (United States, Kansas City (Toll))
When prompted enter the Conference ID: 900 907 04#
Interested parties are invited to attend this meeting to review the plans, ask for additional information or clarifications, or visit the project site. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Consideration will be given only to Prime Contractors listed below who were selected as a result of a prequalification process by the City of Hendersonville. Each Bidder must be licensed under Chapter 87 of the North Carolina General Statute. A City of Hendersonville Privilege License in accordance with North Carolina General Statutes is required prior to the start of the project. All bids must include a non-collusion affidavit.

- 3D Enterprises Contracting Corporation
- Adams Robinson Enterprises, Inc.
- Crowder Construction Company
- Haren Construction Company, Inc.
- Harper Corporation
- Kiewit Infrastructure South Co.
- Morgan Contracting, Inc.
- Shook Construction
- Ulliman Schutte Construction, LLC
- Wharton-Smith, Inc.

Each proposal shall be accompanied by a bid deposit in the amount of not less than five percent (5%) of the amount of the bid in the form and subject to the conditions provided in the Instruction to Bidders. The City reserves the right to waive any informality, to reject any and all proposals, and to award a contract which, in its judgment, is in the best interest of the City of Hendersonville. It is the policy of the City to award public building contracts without regard to race, religion, color, creed, national origin, sex, age or disabling condition.

City of Hendersonville, NC Brent Detwiler, PE City Engineer
PART 1 - GENERAL

1-1. SCOPE. This section covers materials, design, and construction of cofferdam(s) for construction of the intake structure, and other work shown on the drawings.

1-2. GENERAL. With reference to the terms and conditions of the construction standards for excavations set forth in OSHA "Safety and Health Regulations for Construction", Chapter XVII of Title 29, CFR, Part 1926, Contractor shall employ a competent person and, when necessary based on the regulations, a licensed professional engineer, to act upon all pertinent matters of the work of this section.

The intake structure, including all river and stream bottom excavations, shall be constructed in the dry. The work area shall be maintained in a dewatered condition throughout the course of this work which requires access within the French Broad River or drainage tributary. The Contractor shall be responsible for designing, scheduling, providing, utilizing, maintaining, and removing the river cofferdam and dewatering systems. Any loss or damage to the work, materials, or equipment which may be caused by floods, storm water, seepage, or failure of the diversion and/or dewatering systems or any part thereof shall be repaired or replaced by and at the expense of the Contractor.

1-3. SUBMITTALS. Data covering the proposed cofferdam(s) shall be submitted in accordance with the Submittals Procedures section and this specification.

1-3.01. Cofferdam Design Certificate. Before starting construction on the cofferdam, the Contractor shall ensure that the cofferdam design engineer shall complete and submit to Engineer the Cofferdam Design Certificate (Figure 1-31 52 00) and the Contractor shall use the cofferdam design. The design values shall be included in the Cofferdam Design Certificate. A separate certificate shall be submitted for each unique cofferdam design. The certificate shall be signed and sealed by the licensed professional engineer that designed the cofferdam. The professional engineer shall be licensed in the state where the cofferdam is located.

1-3.02. Contractor Experience. Details of Contractor’s cofferdam experience. Include for each project, the contact information for project owner, project owner’s design engineer, and general contractor.
1-3.03. **Cofferdam Designer Experience.** Details of cofferdam designer’s experience. Include for each project, the contact information for project owner, project owner’s design engineer, and general contractor and cofferdam contractor.

1-3.04 **Work Sequence.** Contractor shall submit a work sequence plan for how work will be performed in the dry and maintaining safe passage for canoeists, kayakers, rafters, or other persons traveling the river. *Include in work sequence description measures that will be used to prevent flotation of intake structure and other work protected by the cofferdam(s).*

1-4. **INSURANCE.** Professional Liability insurance shall be provided as specified in the Supplementary Conditions for the professional engineering services required by this specification.

1-5. **PERMITTING.** Owner has obtained the U.S. Army Corps of Engineers (COE) 404 Permit required for work to be performed within the limits of the French Broad River and unnamed tributary. All work performed and all operations of Contractor, its employees, or Subcontractors within the French Broad River, tributary and the jurisdictional limits of the COE shall be in conformity with the requirements and be under the control (through Owner) of the COE. A copy of the COE 404 Permit is attached in Appendix 01015-B.

The special provisions of COE 404 Permit prohibits any excavation or fill materials from being placed in the river outside the permitted work limits, including temporary cofferdams, work platforms, or other related work. The COE defines the permitted work limits as the footprint or foundation plan of the structures or facilities permitted to be constructed. The term “fill” includes, but shall not limited to, soil, rock (whole or crushed), organic materials, and concrete. Steel cofferdams are the only type of temporary cofferdams acceptable to the COE for this project.

**PART 2 - PRODUCTS**

2-1. **DESIGN.** Contractor shall assume all responsibility for the stability and adequacy of cofferdams erected by Contractor and all costs and damages resulting from any failure thereof.

The cofferdam design shall provide for adequate working space, watertightness, and a suitable dewatering system compliant with the Specifications that is designed to comply with the dewatering requirements of the Excavation and Fill for Structures specification Section 31 23 11.

Steel used in the construction of the cofferdam shall be designed in accordance with the American Institute of Steel Construction standards.
The design shall include provisions that will protect the intake structure from flotation while it is being constructed if the cofferdam is overtopped by river flows.

Required limiting values for critical design criteria are listed on the Cofferdam Design Certificate. Design criteria provided are given as the minimum criteria based on Owner’s and Engineer’s evaluation of reasonable risk. Contractor shall perform their own risk evaluation and cost/benefit analysis and design the cofferdam per the cofferdam designer’s judgment. If Contractor’s cofferdam design exceeds the minimum criteria, all additional costs shall be included in the Contractor’s base bid.

Materials need not be new, but all materials shall be undamaged and free from defects which impair the strength or suitability. The analysis and design shall be in general accordance with the procedures described in Earth Retention Systems Handbook by Alan Macnab, McGraw-Hill, 2002 (Macnab) or the latest edition of Sheet Pile Design by Pile Buck, Harry A. Lindahl, and Don C. Warrington (Pile Buck) or other industry accepted procedures, if such procedures will produce a more conservative design.

Should Contractor utilize any portion of the new permanent construction as part of temporary cofferdam design, Contractor shall ensure no damage or reduced integrity to any part of the system. Contractor shall repair and/or replace any damaged items to original design specifications at no additional cost to owner.

Temporary cofferdam(s) shall not extend outside the limits of bank stabilization provided by the proposed pipe pile system extend outside the limits of rip rap and Combination Pipe Pile/Sheet Pile Wall shown on the drawings.

2-2. COFFERDAM PERMITS. Necessary permits for the work to be performed under the jurisdiction of the U.S. Army Corps of Engineers have been secured. Copies of the permits are bound as an appendix to these Specifications. It may also be necessary for Contractor to inform the Corps of Engineers as to the scope and nature of the work and the time of construction, and to provide additional data on cofferdam design and construction. Contractor will be notified regarding submittal of the necessary data to the Corps of Engineers.

2-3. COFFERDAM DESIGN ENGINEER. The cofferdam design engineer shall have experience on at least three prior projects involving cofferdams installed for river intakes or similar structures where construction involved installations along a river or another body of water. Experience must include projects in river or at edge of river channel like this Project.

The cofferdam design engineer shall be licensed to practice professional engineering in North Carolina. The cofferdam design engineer shall sign and seal the cofferdam construction drawings.
PART 3 - EXECUTION

3-1. **COFFERDAM INSTALLATION.** Contractor shall have experience on at least three prior projects that involved cofferdams installed for river intakes or similar structures where construction involved installations along a river or another body of water.

3-2. **DEWATERING.** The water level within each cofferdam shall be continuously maintained at a level which will provide a stable subgrade until completion of the base slab. Structural concrete shall not be placed in water. The dewatering system shall prevent the loss of foundation material and shall have reliable standby equipment and power supply. The dewatering system implemented for the cofferdam shall comply with requirements of Excavation and Fill for Structures specification Section 31 23 11. The groundwater level shall be maintained below the foundation subgrade level for the intake structure during installation of micropiles, placement of reinforcing and concrete, and below the level of structure backfill during its placement and compaction.

After completion of the base slab, the water level within the cofferdam shall be continuously maintained, by the dewatering system, at a level that prevents flotation of the structure. In addition to the dewatering system, an alternative failsafe method shall be provided to prevent flotation of the structure if the primary dewatering system fails.

The dewatering system implemented for the cofferdam(s) shall comply with requirements of Excavation and Fill for Structures specification Section 31 23 11. The dewatering system shall have reliable standby equipment and power supply for cases where the primary power system were to fail, as specified in Section 31 23 11. The groundwater level shall be maintained below the foundation subgrade level for the intake structure as specified, and below the level of structure backfill during its placement and compaction, and other fill placed in the vicinity of the intake structure.

The Contractor shall protect the intake structure while it is being constructed from flotation if the river overtops the cofferdam. Refer to paragraph 2-1 of this specification.

3-23. **REMOVAL.** The cofferdam shall remain in place until all work within the work area is completed and accepted by Owner. The cofferdam and all temporary construction shall be removed after completion of permanent construction. Removal of cofferdam(s) shall be complete, including all sheet piling, struts, braces, and other structural members.

3-34. **BLASTING.** Blasting shall not be permitted.