THE CITY OF ASHEVILLE

STAFF REPORT

Council Meeting Date: September 26, 2023

Subject: North Fork Dam - 12” Utility Pipe Backfill and Grouting Project

Staff Resource(s): David Melton, Water Resource Dept Director, Bill Hart, Water Production Manager

Action Requested: Adoption of a resolution for the professional services supplemental agreement with Schnabel Engineering South P.C. for the North Fork Dam - 12” Utility Pipe Backfill and Grouting repairs project.

Background:

- The original problem began when the 12” Utility Pipe was installed as part of the first phase of the North Fork Spillway and Dam Improvement project.
- The first phase was designed to stabilize the access tunnel under the North Fork Dam and included the installation of a 48” steel line for access, a 12” steel drain, and the 12” PVC Utility Pipe to carry intake sample lines and electrical power.
- These lines were encased within cellular concrete to further stabilize this site and to provide long term protection.
- As the cellular concrete cured it produced significant heat and pressure, which deformed the PVC Utility Pipe.
- This was discovered and the contractor used a bore to return the pipe to its original diameter.
- After the 12” Utility Pipe was bored the original wall was breached to concrete which has allowed water to intrude.
- Approximately 2 years ago, City of Asheville Water Production staff noticed a water leak from the 12” Utility Pipe in the North Fork Dam access tunnel. This leak increased over time and was transporting fine sediments from the internal dam outward.
- Schnabel Engineering South P.C. was notified and visited the site to investigate the problem. This investigation ultimately required the use of a camera that could travel through the 12” utility pipe to document where the leaks were occurring and how serious these leaks were.
- Leaks were noted at 267’ and 520” from the entrance of the utility pipe where the pipe had been damaged by the first contractor at the start of the North Fork Spillway and Dam Improvement project.
- Schnabel Engineering and their subcontractor Goettle will install packers at both the upstream and downstream 12” Utility Pipe openings that will allow sample lines and electrical lines to pass through each opening.
- Once the 12” Utility Pipe has been sealed, grout will be injected into the 12” Utility line under pressure. This grout will continue to be injected under pressure until the line is completely filled and the pressure inside the line is stabilized.
- Goettle will monitor this pressure to make sure it is stable and allow the grout to dry. If the pressure doesn’t stabilize, Goettle will continue to inject grout until pressures are stable. This method will ensure that all voids within the 12”Utility Pipe have been filled.

Vendor Outreach Efforts:

- This is a professional services agreement that utilizes the On Call Dam Engineer, Schnabel Engineering South P.C.

Council Goal(s):

- Provide a resilient water system.

- This project aligns with Council's desire to improve/expand core services through continued investment to create resilience and mitigate outages

Committee(s):
- N/A

Pro(s):
- A professional services agreement with Schnabel Engineering South P.C. will provide high quality engineering services to design and conduct a successful 12” Utility Pipe repair project at the North Fork Water Treatment Plant.
- Provides resilience and increased effectiveness for essential assets.
- Ability to continue to treat and deliver drinking water to the COA customers.

Con(s):
- None

Fiscal Impact:
- Funding for this project ($232,300) is available in the Water Resources operating budget.

Suggested Motion:
- Motion to adopt a resolution authorizing the City Manager to execute a professional services agreement with Schnabel Engineering South P.C. for $232,300 for the North Fork WTP 12” Utility Pipe Backfill Grouting Project.

Attachment(s):
- Resolution

RESOLUTION NO. 23-____

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE SUPPLEMENTAL PROFESSIONAL SERVICES AGREEMENT WITH SCHNABEL ENGINEERING SOUTH P.C. FOR THE NORTH FORK DAM 12" UTILITY PIPE BACKFILL GROUTING PROJECT.

WHEREAS, pursuant to N.C.G.S. § 160A-312, the City of Asheville has authority to operate a public enterprise; and

WHEREAS, pursuant to N.C.G.S. § 160A-20.1, the City of Asheville may enter into contracts with private entities to carry out any public purpose the City is authorized to engage in; and

WHEREAS,Schnabel Engineering South P.C. was selected as the On-Call Dam Engineering firm through the RFQ process; and

WHEREAS, the use of Schnabel Engineering South P.C. under a supplemental professional agreement was based on their qualifications, understanding of project scope, project staff, and the proposal for the North Fork Dam 12" Utility Pipe Backfill Grouting Project; and

WHEREAS, the City wishes to enter into a supplemental professional services agreement with Schnabel Engineering South P.C. for the project; and

WHEREAS, funding for the contract of $232,300.00 is allocated within the Water Resources - Operating budget.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASHEVILLE THAT:

The City Manager, on behalf of the City of Asheville, is hereby authorized to execute a supplemental professional services agreement for the North Fork Dam 12" Utility Pipe Backfill Grouting Project for the Water Production Division of the City of Asheville's Water Resources Department for $232,300.00.

Read, approved, and adopted this 26th day of September, 2023.

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City Clerk Mayor

Approved as to form:

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City Attorney