THE CITY OF ASHEVILLE

STAFF REPORT

Council Meeting Date: February 25, 2020

Subject: Professional services contract with Hazen and Sawyer for Phase 2 of a water system flushing program to address discolored water (Unidirectional Flushing Program Pilot Study)

Staff Resource(s): David Melton - Water Resources Director; Chad Pierce - Engineering Services Manager

Action Requested: Adoption of a resolution authorizing the City Manager to execute a professional services contract with Hazen and Sawyer for a not to exceed amount of $50,000 for the development of a Unidirectional Flushing Program Pilot Study.

Background:

- The Water Resources Department has identified the need for this project to address issues with discolored water that sometimes occurs after water main breaks or intermittent, large changes with system demand. The discolored water is a result of sediments, biofilms, and other deposits being scoured off the pipe walls when water velocities increase dramatically in a section of pipe. The dramatic increase in velocities is typically caused by main breaks and large demand changes.
- A Unidirectional Flushing (UDF) Program is designed to create water velocities in sections of pipe needed to scour the deposits from the pipe walls in a controlled manner by isolating customers, manipulating valves, and utilizing fire hydrants or blow-offs to discharge the water in an environmentally safe manner.
- Unidirectional Flushing is typically implemented over a percentage of the water system each year as a preventive maintenance measure. The methods of the UDF program can also be utilized during an emergency event where discolored water has been reported. Implementation of those methods will allow us to better isolate the issue to smaller parts of the system and to more effectively flush out any discolored water.
- This contract will allow the development of a pilot study to be implemented over two areas of the water system with pipes of various age and types to determine the effectiveness of removing deposits from pipes in the City of Asheville's water system. If the results of the pilot study are positive, a request for phase 2 of the program will be made to develop the program for the entire system.
- Selection of the two pilot areas will be a function of the contract. The process will incorporate input from staff and the engineer. Each pilot area will include approximately 25 miles or less of pipe in a geographically distinct and easily isolated section of the distribution system, one where city crews have conducted a valve assessment and one that has not been covered in the valve assessment program.
- Impact to customers will likely be possible discolored water. Customers will be notified prior to flushing. A "discolored water" template is being developed to utilize AVLAlerts for this exercise as well as normal system flushing. There will be the possibility of boiled water advisories during the flushing process which will be communicated prior to any flushing.
- The duration for the actual flushing will be a few weeks for each area. The duration for the complete pilot study will be determined based on estimates from the consultant with the limitation of not to exceed $50,000.

Vendor Outreach Efforts:

- Through a qualifications based selection process beginning in August of 2014, the City of Asheville Water Resources staff selected nine consulting firms to provide on-call professional services for an array of different types of water system General Projects. Hazen and Sawyer was one of the selected firms due to their expertise in areas of hydraulic modeling, water system analysis, and project development.
- The City of Asheville entered into a master agreement with Hazen and Sawyer on April 22, 2015 for on-call professional services for General Projects valid for three years with the option to renew for two additional years. On April 23, 2018, the City of Asheville executed a renewal master agreement with Hazen and Sawyer for the additional two years of on-call professional services.
- If approved, the proposed engineering services described here will be developed into a subcontract under the conditions of the master agreement.
- City of Asheville Water Resources staff determined that utilizing the on-call professional services for General Projects was the best method to deliver this project and Hazen and Sawyer was the most qualified of the on-call firms to develop the UDF program.
- No other vendor outreach was performed.

Council Goal(s):

- A Financially Resilient City, A Clean and Healthy Environment

Committee(s):

- None

Pro(s):

- This project is aligned with the City and the Water Resources Department goal of continued investment and improvement of the City's water system through Capital Improvement Projects to provide safe and reliable service.
- Hazen and Sawyer has successfully provided engineering services for other water system improvement projects. Their experience with our water system and expertise in hydraulic modeling and other areas needed to produce an UDF program will be critical to a successful UDF program.

Con(s):

- None

Fiscal Impact:

- The funding needed for the professional services agreement is currently allocated within the Water Resources Capital Improvements Project Fund.

Suggested Motion:

- Move to adopt a resolution authorizing the City Manager to execute a professional services contract with Hazen and Sawyer for the development of an Unidirectional Flushing Program Pilot Study for an amount not to exceed $50,000

Attachment(s)

- Resolution

RESOLUTION NO. 20-____

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH HAZEN AND SAWYER FOR PROFESSIONAL SERVICES ASSOCIATED WITH DEVELOPMENT OF AN UNIDIRECTIONAL FLUSHING PROGRAM PILOT STUDY

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, Hazen and Sawyer was one of nine firms selected by Staff via a qualifications based process to perform on-call professional services for water system General Projects; and

WHEREAS, the City of Asheville entered into a Master Agreement with Hazen and Sawyer, on April 22, 2015 and renewed the Master Agreement on April 23, 2018 for On-Call Professional Services for water system General Projects; and

WHEREAS, the professional services for the development of an Unidirectional Flushing Program Pilot Study will be part of a subcontract under said Master Agreement; and

WHEREAS, the use of Hazen and Sawyer, will utilize the most qualified firm to insure timely completion and full compliance with scope of services for the development of an Unidirectional Flushing Program Pilot Study;

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 the contract with Hazen and Sawyer, for professional services required to develop an Unidirectional Flushing Program Pilot Study for the not to exceed contract amount of $50,000.

Read, approved, and adopted this 25th day of February, 2020

_____ _____

City Clerk Mayor

Approved as to form:

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City Attorney