



**Water, Sewer, and Solid Waste Committee**

**February 11, 2020**

**5:30 P.M.**

(Or immediately following Equipment Committee Session)

**City Hall – Room 326**

**Committee:** Chairman Mark Kinion; Council Member Sonia Gutierrez, Council Member Sloan Scroggin, Council Member Teresa Turk

**Copy to:** Mayor Lioneld Jordan, Paul Becker, Kara Paxton, Susan Norton, Chris Brown, Alan Pugh, Terry Gulley, Peter Nierengarten, Jeff Coles, Brian Pugh, Mark Rogers, Corey Granderson, Aaron Watkins, Greg Weeks, Matthew Benton, Tim Luther

**From:** Tim Nyander, Utilities Director

**CALL TO ORDER**

**ROLL CALL**

**OLD BUSINESS:**

**NEW BUSINESS:**

**1. Bid Award for I-49 & Wedington Water/Sewer Relocations**

On January 6<sup>th</sup>, 2020 the City of Fayetteville accepted sealed competitive bids for the I-49/Wedington Interchange Utility Relocations project. Forsgren Inc. submitted the lowest bid. All bids are shown here:

Brothers Construction, Inc.	\$4,896,138.00
<b><u>Forsgren Inc.</u></b>	<b><u>\$2,495,705.00</u></b>
Goins Construction, LLC	\$2,739,035.00
Goodwin & Goodwin, Inc.	\$2,817,620.00
KAJACS Contractors, Inc.	\$2,959,500.00

The City has completed engineering design and permitting through Burns & McDonnell Engineering Company, Inc. ArDOT intends to advertise the interchange construction project in the Fall of 2020. This bid award will allow the City's existing water and sewer facilities to be properly relocated out of the way in time for the ArDOT project.

Staff recommends awarding Bid #20-27 and approving a construction contract with Forsgren Inc. in the amount of \$2,495,705.00 for construction of approximately 1,474 linear feet (LF) of 8-inch waterline, 1,173 LF of 24-inch waterline, and 1,094 LF of 12-inch sewer line to

facilitate ArDOT's reconfiguration of the I-49/Wedington interchange. Funds are available and budgeted for this project in the Water/Sewer Relocations account.

**STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL**

**2. Construction Phase Services for I-49 & Wedington Water/Sewer Locates**

Resolution 118-18 permitted the original design work with Burns & McDonnell for utility relocations associated with ArDOT's upcoming improvements to the Wedington Drive Interchange improvements on I-49. Design, permitting, and bidding are completed and this amendment will allow Burns & McDonnell to provide project oversight and inspection during construction in accordance with engineering observation best practices and state law.

On January 6<sup>th</sup>, 2020 the City of Fayetteville accepted sealed competitive bids for this utility relocation project. Forsgren, Inc. submitted the lowest bid of \$2,495,705.00. This amendment will increase the existing engineering agreement amount by \$91,282.00 for a total not-to-exceed contract amount of \$294,551.

Staff recommends the approval of Amendment No. 1 to the Professional Engineering Services Agreement with Burns & McDonnell Engineering Company, Inc. in an amount not to exceed \$91,282.00 for construction management and observation services associated with Utility Relocations at I-49 & Wedington Interchange (ArDOT Project BB0411). Funds are available and budgeted in the Water/Sewer Relocations project.

**STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL**

**3. Engineering Services Agreement with Hawkins Weir for Benson Mountain**

The Benson Mountain Pressure Plane Improvements Project consists of the replacement of an aging water storage standpipe and associated pumping station, as well as approximately 2,385 linear feet of new waterline. This contract amendment will provide the funds necessary for Hawkins-Weir to parcel out the plans and specifications into separate projects and take these through the bidding phase.

This project was originally combined with the Goshen ground storage tank rehabilitation, but due to land acquisition delays and system functionality the project is now proposed to bid in separate phases. One project will be the pump station and water line work, the other will be the tank construction and subsequent removal of the existing tank. It is expected that the City will receive more competitive bids with this arrangement, as the scope of work for each project more closely follows specialty trade lines, eliminating the need for sub-contracting.

Staff recommends the approval of Amendment No. 3 to the Professional Engineering Services Agreement with Hawkins-Weir Engineers, Inc. in an amount not to exceed \$30,410.00 for advertisement and bidding services associated with the Benson Mountain Pressure Plane Improvements Project.

**STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL**

#### **4. Phosphorus/Ammonia Analyzer Replacement for Noland WWTP**

The existing phosphorus and ammonia analyzers units are located at the sand filter building and at the aeration basin. They are approximately 10 years old and require frequent maintenance, often on a weekly basis. These analyzers have reached their useful life. They track the efficiency of the treatment process through real-time analysis of phosphorus and ammonia. They also track intermittent spikes of ammonia and phosphorus and gauge whether the plant is nearing a permit violation.

The Utility wants to pursue Sole Source Justification with this purchase for equipment standardization reasons. We already have the same Hach analyzers in service at our West Side plant, so calibration and operation of the units will already be known by the operators. The proposed HACH analyzers have the additional benefit of being able to have the information downloaded directly into our Data Management System.

We have received a quote from HACH for **\$33,503** for 1 new Phosphax SC Phosphate Analyzer and 1 new Amtax SC Ammonium Analyzer. The anticipated not-to-exceed cost including taxes and freight is **\$38,000** for this project.

**STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL**

#### **5. Sludge Blanket Detectors for West Side WWTP**

The 4 existing blanket detectors are located on the 4 secondary clarifiers at the West Side WWTP and are approximately 12 years old. Currently, only 1 out of 4 are currently functioning. They were never able to communicate with the SCADA system, and parts are nearly impossible to find and expensive when available. Additionally, Hach will no longer service them.

Blanket detectors give a reading of how much sludge is in each clarifier. They are needed to prevent process issues and to avoid breaking permit limits. They also guard against potential spills around the plant. The proposed HACH analyzers will be able to be download information directly into our Data Management System

The Utility wants to pursue Sole Source Justification with this purchase for equipment standardization reasons. We already have the same Hach SONATAX blanket detectors in service at our Noland plant, so calibration and operation of the units will already be known by the operators.

We have received a quote from HACH for **\$23,440** from Hach for 4 new SONATAX detector assemblies. The anticipated not-to-exceed cost including taxes and freight is **\$27,000**. for this project.

**STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL**

## 6. SCADA Upgrades

Jacobs maintains the Supervisory Control and Data Acquisition (SCADA) system for the Noland and West Side Wastewater Treatment Plants, the Biosolids Management System, Wastewater Lift Stations Water & Sewer Office, Water Pump Stations, and the Water Tanks.

The existing SCADA software and hardware presently in use is obsolete and has significant vulnerabilities, therefore a SCADA Master Plan was created to capture and order priority projects for a holistic approach to the modernization of the entire SCADA system.

In 2019, the City Council approved implementation of the following tasks for priority replacement and upgrades identified in the Master Plan:

- Task 1: SCADA System Access Point Hardening – COMPLETE – part of Jacobs O&M contract
- Task 2: SCADA Telemetry System and Plant Network Hardening –COMPLETE – part of Jacobs O&M contract
- Task 3: SCADA System Software and Hardware Upgrade Plan – COMPLETE – passes by City Council \$326,582

The remaining Task 4 is for SCADA System Software and Hardware Upgrade Implementation, which includes in-lab configuration, application development and application and hardware deployment. These tasks can be completed with the following estimates for labor and expenses.

4.1: SCADA In-Lab Configuration	\$110,640
4.2: SCADA Standards for Process Graphics and HMI Screens	\$74,000
4.3: SCADA Application Development	\$161,480
4.4: SCADA Hardware Deployment	\$95,434
4.5: SCADA Application Deployment	\$51,256
4.6: Project Management and Administration	\$31,680
Task 4 Jacobs Labor and Expenses	\$524,490
VTScada Software	\$71,845
<b>Total Task 4</b>	<b>\$596,335</b>

## 7. Capital Projects Update

Discussion of current capital projects in the design state or underway.

## 8. Overview of WWTP Monthly Report

Discussion of December's Monthly WWTP Report

## PRESENTATIONS

Northwest Arkansas Land Trust – Westside Prairie

## ATTACHMENTS

Certified Bid Tab – Forsgren  
Burns & McDonnell Amendment  
Hawkins Weir Amendment

Phosphorus/Ammonia Analyzer Quote  
Sludge Blanket Detector Quote  
Scada Upgrade Plan  
Capital Projects Status  
WRRF December 2019 Monthly Report

**ADJOURN**

Next Water, Sewer, Solid Waste Committee meets on  
Tuesday, March 10<sup>th</sup>, 2020, 5:30 p.m., Room 326.