



CITY OF MCKINNEY, TEXAS

Legislation Text

File #: 18-036, **Version:** 1

Consider/Discuss/Act on a Resolution Authorizing the City Manager to Execute a Contract with Birkhoff, Hendricks, & Carter, LLP to Provide Consulting Engineering Services for the WA1625 - University Pump Station - 920 PP Pump Project and Authorizing Any Supplemental Agreements

COUNCIL GOAL: Operational Excellence

MEETING DATE: January 16, 2018

DEPARTMENT: Development Services/Engineering

CONTACT: Nick Ataie, PE, Engineering CIP Manager
Paul Tucker, PE, Senior Utility Engineer

RECOMMENDED CITY COUNCIL ACTION:

- Approval of Resolution.

ITEM SUMMARY:

- This Resolution authorizes the City Manager to execute a contract in the amount of \$108,715 as well as all required supplemental agreements thereto, with Birkhoff, Hendricks, & Carter, LLP for professional consulting engineering services for the WA1625 - University Pump Station - 920 Pressure Plane (PP) Pump Project, for a total aggregate contract amount, inclusive of any supplemental agreements, not to exceed \$120,000.

BACKGROUND INFORMATION:

- Per the 2012-2013 Water Master Plan, a new 920 Pressure Plane (PP) 15 Million Gallons per Day (MGD) pump is needed to provide additional pumping capacity for the growing City population and businesses.
- The Public Works Department has requested to add the new pump to assist in meeting the peak summer demands and to provide supplemental pumping redundancy due to the age of the existing pumps that serve the 920 PP.
- A new 15-MGD pump with an 800-HP motor will be installed in the vacant Pump Slot No. 7. The addition of the pump will require the design of the piping, valves and gauges from the existing pump base to the flanged plug at the pump station wall. The work will include the addition of a medium voltage Variable Frequency Drive (VFD) for proposed Pump No. 7 and the replacement of an existing medium voltage VFD for existing Pump No. 2 along with all the electrical connections and Supervisory Control and Data Acquisition (SCADA) controls.
- Review of the existing HVAC system will be conducted to evaluate the heat loads of the new

VFDs in the electrical room. If needed, improvements to the Heating, Ventilation and Air Conditioning (HVAC) system will be provided.

- Upgrade and modification to existing electrical equipment include:
 - Specification of a spare pad mounted switch gear.
 - Specification of an upgraded computer and spare hard drive for the Caterpillar Human Machine Interface (HMI).
 - Specification for service or replacement of the battery system for the switchgear.
 - Upgrade of the motor protection relays on the soft-starters.
 - Upgrade the metering on the switchgear and motor control centers.
 - Replacement of the power factor correction capacitors on the soft starters.
- Power System Study - Provide an update to the existing overall Power System Study to include the new pump and variable frequency drives.
- Birkhoff, Hendricks, & Carter, LLP submitted a response to 15-36RFQ for Utility Design. They were one of five firms shortlisted by City Council on October 20, 2015.
- Birkhoff, Hendricks, & Carter, LLP has extensive knowledge of University Pump Station and has provided all of the site planning and design efforts for the facility.
- Construction of this project is estimated to cost a total of approximately \$1,413,500.
- Birkhoff, Hendricks, & Carter, LLP submitted a proposal for this project in the amount of \$108,715 (7.69% of the overall estimated construction cost) to perform the engineering services. The proposed fee is separated into basic services of \$70,575 (4.99% of construction cost) and \$38,140 (2.70% of construction cost) in special services. Special services will be provided on an hourly basis, as needed during the design and construction.
- Upon approval of the engineering services contract, Birkhoff, Hendricks, & Carter, LLP will prepare the design, and provide bid phase and construction administration services during construction.

FINANCIAL SUMMARY:

- This Resolution authorizes a contract with Birkhoff, Hendricks, & Carter, LLP for an amount not to exceed \$120,000.
- Funds are available in the Capital Improvements Program WA1625.
- With the approval of this item \$895,000 will remain in WA1625.

BOARD OR COMMISSION RECOMMENDATION:

- N/A