CITY OF McKINNEY, TEXAS

Legislation Details (With Text)

File #:	23-0394	**Name:**	City Wide I&I Meters - Design Contract
Type:	Resolution	**Status:**	Approved
		In control:	City Council Regular Meeting
On agenda:	5/16/2023	**Final action:**	5/16/2023
Title:	Consider/Discuss/Act on a Resolution Authorizing the City Manager to Execute a Contract with Birkhoff, Hendricks & Carter, LLP for Professional Engineering Services for the Citywide Inflow & Infiltration Sewer Basin Monitoring Project (WW2334) and Any Necessary Supplemental Agreements		
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Date	Ver.	Action By	Action	Result
5/16/2023	1	City Council Regular Meeting		

Consider/Discuss/Act on a Resolution Authorizing the City Manager to Execute a Contract with Birkhoff, Hendricks & Carter, LLP for Professional Engineering Services for the Citywide Inflow & Infiltration Sewer Basin Monitoring Project (WW2334) and Any Necessary Supplemental Agreements

COUNCIL GOAL: Operational Excellence
(2B: Balance available resources to accommodate the growth and maintenance needs of the city)

MEETING DATE: May 16, 2023

DEPARTMENT: Development Services / Engineering
Public Works

CONTACT: Blake Sills, P.E., Engineering CIP Manager
Paul Tucker, PE, Senior Utility Engineer
Scott Sandman, Wastewater Superintendent

RECOMMENDED CITY COUNCIL ACTION:

- Approval of the Resolution.

ITEM SUMMARY:

- This Resolution authorizes the City Manager to execute a contract in the amount of $609,200, as well as all required supplemental agreements thereto, with Birkhoff, Hendricks and Carter, LLP to provide professional engineering services for the Citywide Inflow & Infiltration Sewer Basin Monitoring Project, for a total aggregate contract amount, inclusive of any supplemental agreements, not to exceed $670,000.

BACKGROUND INFORMATION:

- The City of McKinney wastewater collection system consists of approximately 622 miles of gravity sewers. The Citywide Inflow & Infiltration Sewer Basin Monitoring Project will improve

the City's ability to monitor and track wastewater flows, system deterioration and excessive infiltration and inflow (I&I).

- One of the primary purposes of the Citywide Inflow & Infiltration Sewer Basin Monitoring Project is to collect and analyze wastewater flow data to support the City's overall goal in identifying and taking actions to address those areas within the wastewater collection system that are contributing excessive amounts of inflow and infiltration. The ability to locate sources of I&I will reduce the amount of construction efforts to resolve the problem wastewater lines.
- Wastewater Flow Monitoring Analysis & Equipment - Deploy twenty-six (26) flow meters and three (3) rain gauges in collection system at major line locations to establish existing dry-weather and wet-weather basin flow patterns and unit hydrographs for inflow and infiltration. The basins selected will be correlated to previous meter locations to compare I&I reduction results in basins where various cured-in-place-pipe (CIPP) installations, manhole rehabilitation, and point repair projects by Public Works and Engineering have been performed. Two (2) of the I&I meters will be used to monitor flows in the existing parallel Wilson Creek Sanitary Sewer Trunk Mains to monitor flows in this corridor.
- The information obtained from the wastewater flow monitoring data will be used to determine estimated quantities for Sanitary Sewer Evaluation Survey (SSES) activities performed by the Public Works Department. The SSES activities include CCTV investigation, manhole inspection, and other methods aimed at identifying locations of system defects allowing the excessive I&I to be introduced into the system.
- The wastewater flow data will be used for the wastewater model calibrations for the 2024 Wastewater System Master Plan and Impact Fee Update project.
- This is a one (1) year program with annual report of findings for each program year, summarizing the approach, basis, findings, and recommendations for potential relocation of flow meters and rain gauges for future program year(s).
- Since the majority of costs for the I&I meters are related to installation and removal there is an option to extend this program into a second year with a $156,000 credit to apply towards year two. Additional funding will be programmed into the FY24-28 CIP with the intent of continuing this program for future years.
- Birkhoff, Hendricks and Carter, LLP submitted a response to RFQ 21-42 (Category 1) for On-Call Utility Professional Services. They were one of thirteen firms shortlisted by City Council on September 07, 2021.
- Staff has negotiated a scope and fee from Birkhoff, Hendricks and Carter, LLP for professional engineering services in the amount of $609,200. Their scope includes the following elements:
    - Basic Services (Flow Meter Program Management, Flow Monitoring Data Analysis)
    - Special Services (Temporary Flow Meter and Rain Gauge Deployment)
- Staff is requesting approval of a not to exceed (NTE) amount of $670,000 in the event minor adjustments in the project scope are required.
- Flow meters are expected to be deployed in June 2023. An initial Master Plan analysis will be provided in December 2023, and a full year analysis will be provided in summer 2024.

FINANCIAL SUMMARY:

- The Resolution authorizes a professional services contract and any necessary supplemental agreements with Birkhoff, Hendricks and Carter, LLP for an amount not to exceed $670,000.
- With the approval of this item $30,000 will remain in WW2334.

BOARD OR COMMISSION RECOMMENDATION:

- N/A