

EXECUTIVE BRIEF

ELECTRIC UTILITY MEETING

AGENDA DATE: November 30, 2021

TITLE:

Task Order No. 10 with E.C. Fennell, PA., for Distribution System Planning services for the 6th Avenue Substation Circuits and Southeast Quadrant of the City's Electrical Service Area

SUMMARY:

Task Order No. 10 authorizes E.C. Fennell, PA, to provide Distribution Planning engineering services for the 6th Avenue Substation Circuits and Southeast Quadrant of the City's Electrical Service Area a cost not to exceed \$97,812. This project has been identified as an element of the City's electric utility System Hardening and Reliability Improvement Project (SHRIP) and for which bonds were sold in November 2020.

BACKGROUND AND JUSTIFICATION:

The City issued a Request for Qualifications (RFQ 18-303) to provide letters of interest and Professional Qualifications from consulting companies/firms for civil engineering, geotechnical engineering, surveying, architecture, hydrogeological services, energy management and engineering services. E.C. Fennell, PA, was one of three firms selected under the Energy Management category for the Continuing Contracts for Professional Services.

The City's Electric Utility is currently working with E.C. Fennell on the engineering design for the voltage conversion and system hardening of the four (4) existing 6th Avenue Substation circuits. In addition, E.C. Fennell has also prepared the PB&Z package for the new 6th Avenue 8-Bay Substation that will provide power to the existing 6th Avenue circuits and will also provide power to additional circuits currently being fed power from the 4kV House at the Main Yard Substation.

Task Order No. 10 authorizes E.C. Fennell to complete distribution planning analysis of the existing 6th Avenue circuits, 4kV House circuits and also evaluate the 12th Avenue South Substation circuits and 15th Avenue South Substation Circuits which canvas the Southeastern quadrant of the City.

The primary objective of the Distribution System Planning is to maintain grid safety and improve reliability at a reasonable cost. E.C. Fennell will utilize the newly developed Milsoft model of the City's electrical distribution system to evaluate existing loads on the 4kV House circuits, 12th Ave. South Substation circuits and 15th Ave. South Substation circuits to support and optimize capital decisions pertaining to voltage conversion and network reconfiguration. The Distribution System Planning scope includes; evaluating, comparing and tuning the Milsoft model against real-time operational data, evaluate loading and spare capacity on the existing circuits and transformers, perform power flow analysis to calculate kW, kVar, Voltage and current flows on the existing circuits, evaluate sub-transmission circuit routes, model various switching scenarios to identify potential issues, complete short circuit analysis on 26kV circuits and complete fuse coordination analysis.

MOTION:

Move to approve/disapprove Task Order No. 10 to E.C. Fennell PA., for Distribution System Planning services for the 6th Avenue Substation Circuits and Southeast Quadrant of the City's Electrical Service Area at a cost not to exceed \$97,812.

ATTACHMENT(S):

Fiscal Impact Analysis
Task Order No. 10

FISCAL IMPACT ANALYSIS**A.** Five Year Summary of Fiscal Impact:

Fiscal Years	2022	2023	2024	2025	2026
Capital Expenditures	\$97,812	0	0	0	0
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
 Net Fiscal Impact	 \$97,812	 0	 0	 0	 0
 No. of Addn'l Full-Time Employee Positions	 0	 0	 0	 0	 0

B. Recommended Sources of Funds/Summary of Fiscal Impact: Funds have been identified in account No. 421-6034-531-63.15, Project SH2132.

C.

Account Number	Account Description	Project Number	FY22 Budget	Current Balance	Budget Transfer	Agenda Expenditure	Balance
421-6034-531-63.15	Improve Other than Build / Infrastructure	SH2132	\$229,184	\$200,000		\$-97,812	\$102,188