

COUNCIL ACTION FORM

**SUBJECT: ENGINEERING SERVICES FOR TOP-O-HOLLOW SUBSTATION
IMPROVEMENTS CHANGE ORDER NO. 2**

BACKGROUND:

On March 22, 2016, City Council awarded this contract to Dewild Grant Reckert & Associates Company, Rock Rapids, Iowa, for the Engineering Services for Ames Substation Improvements in an amount not-to-exceed \$264,791. This project will convert the existing direct-buried underground 69kV transmission tap connection at the Top-O-Hollow substation to a more reliable dual-source overhead transmission connection, including the necessary relaying and breakers for high-speed/selective line and transformer protection.

The scope of this project includes the replacement and expansion of the existing 13.8kV metalclad switchgear to provide the addition of a main breaker, upgrade obsolete air-blast breakers and electromechanical relays with vacuum interrupter breakers and microprocessor-based relaying equipment, and expand the battery and charger system to replace undersized batteries. The project includes the addition of a padmounted capacitor bank for power factor correction and replacement of undersized feeder conduits and cables. The addition of the dual 69 KV transmission source and upgraded 69kV and 13.8 kV relay protection will improve reliability of the 69kV transmission system, improve service to the customers served by this substation, improve worker safety, and provide improved protection to electrical assets from fault damage.

The land for this project was purchased previously to allow for expansion of the existing substation. The use of breakers for transmission line, transformer, and 13.8kV main breaker protection is consistent with recommended engineering practices in the electric utility industry.

This phase of the project is for project engineering, which involves the analysis, design, drawings and specifications development, construction contract preparation, and detailed cost estimates for the project. The scope of work also requires the engineering firm to provide an approved bidders list for all major equipment purchases and a detailed engineer's estimate. In addition, the selected firm will provide construction management services.

One change order was previously issued for this contract. Change Order No. 1 for amount not-to-exceed \$20,000 was approved by staff. That change order was for the additional engineering design for a block retaining wall instead of the planned chain link

fence, buried vs overhead 69kV taps, and the addition of a concrete driveway requested by the DRC.

This proposed Change Order No. 2 in the amount not-to-exceed of \$65,000.

The City has requested additional construction/site management support to augment current City staff during its extended staffing vacancies. DGR is now performing detailed Construction Administration and Site Management that was not included in the original bid. Actual costs will be based on a time and expense basis.

The total contract amount with both change orders will be \$349,791.

To cover the additional expenses for additional design and construction costs related to the addition of a block wall, buried 69kV taps and DRC-required improvements, unspent funds from three other current or recent CIP projects were moved to this project. These include \$800,000 from Transmission Reconstruction, \$331,652 from 69kV Switchyard Relay, and \$271,843 from Street Lights, for a total of \$1,404,495, bringing the total amount of funding available for the project to be \$3,753,378. **These funding transfers were approved by Council in May 2018.**

A breakdown of the budget as well as contracts awards to date is attached at the end.

ALTERNATIVES:

1. Approve contract Change Order No. 2 with Dewild Grant Reckert & Associates Company, Rock Rapids, Iowa, for the Engineering Services for Ames Substation Improvements in the amount not-to-exceed \$65,000.
2. Reject contract Change Order No. 2.

MANAGER'S RECOMMENDED ACTION:

This project will improve reliability of the 69kV transmission system, improve service to the customers served by this substation, improve worker safety, and provide improved protection to electrical assets from fault damage. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.

To date the Top-O-Hollow CIP project budget has the following items encumbered:

<u>3,753,378</u>	FY 2017/18 CIP plus transfers
	<u>Morrissey</u>
\$24,883	Land Purchase for substation expansion FY2008/2009
	<u>Dewild Grant Reckert</u>
\$8,920	Engineering FY2015/16
\$264,791	Engineering Services contract; cost-not-to-exceed
\$20,000	Change Order #1 – design block wall, buried 69kv taps & meet DRC requirements.
\$65,000	Change Order #2 – construction administration to augment staff vacancies; design for additional overhead transmission improvements.
	<u>H K Scholz</u>
\$599,231	Switchgear and Control Panels
	<u>RESCO</u>
\$37,012.26	69kV Switches
\$27,895.27	Instrument Transformers
\$10,884.30	69kV Lightning Arrestors
	<u>Kriz-Davis Co. – BSE</u>
\$42,003.18	Steel Structures
	<u>Siemens Industry, Inc</u>
\$75,221	(2) 69kV Breakers
	<u>Controllix Corporation</u>
\$104,748.35	(1) 13.8kV Cap Bank
	<u>Primoris Aevenia, Inc.</u>
\$1,511,291.16	Construction
\$171,732.50	Installation Services for 69kV UG Power Cable
\$27,267.45	Change Order #1 – from 1000 to 1500 kcmil AL cable
	<u>L & S Electric, Inc.</u>

<u>\$76,169.00</u>	Equipment Commissioning
\$3,067,049.47	Costs committed to date for project
\$686,328.53	Remaining Project Balance for the CIP Project.