

**COUNCIL ACTION FORM**

**SUBJECT: PRELIMINARY PLANS AND SPECIFICATIONS FOR ELECTRICAL MATERIALS – TOP-O-HOLLOW SUBSTATION EXPANSION AND BREAKER ADDITION**

**BACKGROUND:**

This project will convert the existing single underground 69kV transmission tap connection at the Top-O-Hollow substation to a more reliable dual-source transmission connection, including the necessary relaying and breakers for high-speed 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 and replacement of obsolete airblast breakers and electromechanical relays with vacuum-interrupter breakers, microprocessor-based relaying equipment.

The land for this project has been purchased previously to allow for the expansion of the existing substation. 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 portion of the project is for the purchase of electrical materials, consisting of vertical break switches, fused disconnect switches, instrument transformers, lighting arrestors and steel equipment support. The Engineer's estimated cost of these materials is \$159,600.** It is necessary to specify and order these electrical materials ahead of the final design and construction bidding due to the long lead time for these materials. Additionally, the construction phase approval of plans and specifications will be presented to Council in the near future.

The approved FY 2017/18 CIP for Electric Services includes \$1,950,000 for construction under the Top-O-Hollow Substation Expansion and Breaker Addition project. Iowa State University's (ISU) will also provide funding for this project. ISU's share of the project is based on a load-ratio-share at the time of implementation. For budgetary purposes, staff is assuming the ISU load ratio share to be 7% of the total project cost.

**ALTERNATIVES:**

1. Approve the plans and specifications for Furnishing Electrical Materials for Top-O-Hollow Substation and set March 7, 2018, as the bid due date and March 27, 2018, as the date of hearing and award of contract.
2. Do not approve the plans and specifications at this time.

**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 project budget has the following items encumbered:

|                         |  |
|-------------------------|--|
| \$1,950,000             | FY 2017/18 CIP amount budgeted for construction  |
| <b>\$1,950,000</b>      |  |
|                         | <u>H K Scholz</u>  |
| \$615,923.40            | Actual cost for switchgear and control panels  |
|                         | <u>To Be Determined</u>  |
| <b><u>\$159,600</u></b> | <b>Estimated cost for Electrical Materials — (pending Council approval of plans and specifications for this agenda item)</b> |
| \$775,523.40            | Costs committed to date for project  |
| <b>\$1,174,476.60</b>   | <b>Remaining Project Balance</b> to cover remaining equipment and construction   |