



Meeting Date: April 4, 2016

Report No. SUA-16-19

Agenda Item No. 5-a

Status: General Orders

Purpose: Contract Approval: Phase 2 of the Fiber Optic Network Installation

Background Summary: On January 4, 2016, the Trustees authorized staff to contract with Trace Technologies for the construction of Phase 1 of the fiber optic network connecting the Stillwater Energy Center (SEC) to the City network and allowing for critical communications with the Supervisory Control and Data Acquisition (SCADA) system network that the Stillwater Electric Utility (SEU) uses to communicate with its electrical transmission and distribution system. The fiber optic network is a dual-ring design consisting of a northern and southern loop that intersect in order to provide fail-over and redundancy should a portion of either loop lose connectivity. Currently under construction, Phase 1 is the northern loop of the network and includes connections for City Hall, SEC, Boomer Lake Station and 5 electric substations. The northern loop has a total length of approximately 14 miles of fiber cable. Phase 2 will be the southern loop of the network and will provide connections to the remaining electric substations so that the SEC operator can control the entire SCADA system network via a secure fiber optic link. The southern loop is twice the size of the northern loop with a total length of approximately 28 miles of fiber cable. Once the fiber optic network is completed, all City owned facilities along the route could be connected eliminating costs for 3rd party connections and providing security, redundancy and high speed connectivity to all of those facilities.

Trace Technologies was selected as the Phase 1 fiber optic contractor after responses to RFP#: 2015-919 were received and evaluated. Construction of Phase 1 is underway and is expected to be completed in June 2016. Staff is now preparing to move forward with Phase 2 of the fiber optic network. At our request, Trace Technologies has submitted a proposal for the construction of Phase 2 and is poised to begin construction of this phase immediately after completion of Phase 1 if approved by the Trustees. Staff evaluated the Phase 2 proposal and it is in line with the original RFP. The pricing for the southern loop is \$5,350 less per mile than the northern loop. The southern loop covers a much larger area as the City assets and electric substations in the southern part of town are much more spread out than those in the north.

Budget Impact: This item requires a new appropriation and budget amendment. Funding is available in the Electric Rate Stabilization Fund (RSF).

Prior Council Action or Part of an Approved Project: Yes

Related Items: [Contract N. Fiber Optic Loop SUA-16-04](#)

[SUA-16-04 Attachment](#)

Alternatives:

- 1) Authorize staff to enter into a contract with Trace Technologies for the installation of Phase 2, the southern fiber optic loop.
- 2) Direct staff to prepare a Request for Proposal (RFP) and solicit prospective fiber optic network providers for the construction of Phase 2. This alternative will likely not yield more favorable results for the southern loop installation due to separate mobilization cost, fiber costs, and will delay construction.
- 3) Do not complete the fiber optic loop at this time.

Recommendation: It is recommended that the Trustees authorize staff to enter into a contract with Trace Technologies for the installation of Phase 2, the southern fiber optic loop in the amount of \$1,150,000 and authorize expenditures from the electric RSF up to \$1,265,000 (includes a 10% contingency).

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Reviewed by: Dan Blankenship, SUA Director

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Attachments: South Fiber Optic Loop Map