

COUNCIL ACTION FORM

**SUBJECT: BAKER SUBDIVISION GEOTHERMAL HEAT PUMP SYSTEM
RECOMMENDATION TO REJECT BIDS AND RE-BID**

BACKGROUND:

City staff has been pursuing the installation of a geothermal heat pump system to be installed in Baker Subdivision. The geothermal system would provide space heating and cooling and boost water heating efficiency for all the homes in the subdivision. This project proposal was motivated by an effort to advance environmental sustainability of the subdivision developed by the City, while maintaining affordable utility costs for the mixed-income neighborhood. The system would help to balance the seasonal load and utilization of existing electric infrastructure and reduce community greenhouse gas emissions.

On September 22, 2020, City Council approved the preliminary plans and specifications for the District Geothermal Vertical Closed Loop Project at Baker Subdivision. On October 21, 2020, one bid was received as shown below.

Bidder	Bid Price	Sales and/or Use Taxes Included	Evaluated Bid Price
Thorpe Water Development Co. Ankeny, IA	\$755,237	\$10,320	\$765,557

The bid was reported to Council on October 27, 2020. This bid was significantly higher than the available budget for the project. City Council delayed taking action on the bid to allow staff to study the bid and specifications further. **City staff now recommends that the bid received from the initial bidding process be rejected and the Baker Subdivision Geothermal Heat Pump System be rebid.**

Staff met with the engineering consultant and other industry experts to compare the allocation of expenses in the engineer's estimate to those in the bid received. **The consultant determined that the disparity was caused by elements of the system that can be omitted by changing the design. This change in design is not expected to affect the original budget or timeline of the project. The design change will create individual geothermal well fields for each property rather than a large, single well field serving the entire subdivision.**

Staff has worked with the consultant to make these changes to the plans and specifications for the project. The construction costs of the redesigned system are estimated at \$267,000, with a project life of over 50 years.

A monthly customer charge would be based on the size of the customer's system. The proposed charge would start at \$5.25, with Council-approved rate increases as appropriate, resulting in a payback time of around 27 years. One goal of the project would be to keep the utility costs of homes in the neighborhood comparable to or lower than those with more traditional heating and cooling systems.

The approved Demand Side Management budget contains \$405,756 carried forward from the FY 2019/20 budget to cover this project cost.

ALTERNATIVES:

1. A. Reject the bid received for the District Geothermal Vertical Closed Loop Project at Baker Subdivision
- B. Approve preliminary plans and specifications for rebidding Baker Subdivision Geothermal Well Installations, establishing January 27, 2021, as the bid due date and February 9, 2021, as the date of hearing and award of contract.
2. Reject the bid and abandon the Baker Subdivision Geothermal Heat Pump Project.

CITY MANAGER'S RECOMMENDED ACTION:

A district geothermal system will provide highly efficient, affordable, and sustainable space heating and cooling to the new development. This application of geothermal heating and cooling would introduce more local contractors and residents to the technology and model an innovative project structure for other communities. Rejecting the bid at this time has allowed staff the ability to incorporate changes to the bid document that will produce clearer, more complete bids once the project is re-introduced to the market.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 A and B, as stated above.