



Council Communication

Office of the City Manager

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| Date | February 26, 2007 |
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| Agenda Item No. | 64 |
| Roll Call No. | <u>07-</u> |
| Communication No. | <u>07-124</u> |
| Submitted by: | Don Tripp, Park and Recreation Director |

AGENDA HEADING:

On bids to overhaul the chiller at City Hall, designating Johnson Controls (11318 Aurora Avenue, Urbandale, Iowa 50322) as the lowest compliant bidder at \$42,287. (Eight bids mailed, two received.)

SYNOPSIS:

Recommend acceptance of the low dollar compliant bid from Johnson Controls (11318 Aurora Avenue, Urbandale, Iowa 50322) for a lump sum amount of \$42,287 to provide an overhaul of the chiller at City Hall, 400 Robert D Ray Drive.

FISCAL IMPACT:

Amount: \$42,287

Funding Source: 2006-07 CIP, Page Municipal Improvements-10, CP034, PKS990000, Capital Projects/HVAC Electrical and Plumbing Improvements.

ADDITIONAL INFORMATION:

The portion of the chiller needing overhaul (the freon compressor) would be needed if the City continues with the current system or if we explore a conversion to geothermal. The use of geothermal simply moves heat from inside to outside or moves heat from outside to inside. The mediums that are used differ. Currently, the system uses water and air (cooling tower) cooling by evaporation of the water going through the tower. Geothermal systems transfer the heat from inside to either wells with water or by burying long pipes in trenches so the ground can absorb the heat.

While more energy efficient and environmentally friendly heating and cooling solutions for City buildings are being explored, such as a geothermal heating and cooling system, renovation of the City Hall chiller would be needed regardless of whether or not a geothermal cooling system is installed. A geothermal cooling system would improve the chiller's efficiency; however, there are several factors to consider.

Michael's Engineering, Inc. of LaCrosse, Wisconsin completed the Phase I Energy Conservation Analysis for some City buildings in 2003, which included City Hall. Michael's Engineering concluded that there was not enough open area adjacent to City Hall to install a typical underground geothermal system. Staff has asked for an update of this analysis. They also analyzed the possibility of utilizing well water to improve the chiller's efficiency. In 2003 the estimated cost of the well water installation was approximately \$45,000 with an annual energy savings of \$4,000 per year. Before the well water

system can be considered feasible, the water quality of the well water would need to be analyzed to determine the type of water treatment equipment required and its additional cost added to the project cost. In addition, a water use permit from IDNR would be required for discharging the well water directly into the Des Moines River. Engineering staff has further recommended that a consultant be hired to evaluate whether geothermal or some other form of energy improvement might be beneficial in other City buildings.

PREVIOUS COUNCIL ACTION(S):

Date: February 12, 2007

Roll Call Number: [07-264](#)

Action: Bids from the following:

B) [Johnson](#) Controls to overhaul the chiller at City Hall, \$42,287. (Eight bids mailed, two received.) Moved by Vlassis to defer to the 2-26-07 City Council meeting. Motion Carried 7-0.

BOARD/COMMISSION ACTION(S): NONE

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:

Approve contract and bond; also partial payments to the contractor and final acceptance of work.