ITEM #: 41
DEPT: FIRE

Staff Report

FIRE STATION #2 RELOCATION - NET-ZERO READY VERSUS NON NET-ZERO READY

August 12, 2025

BACKGROUND:

Ames Fire Station #2 is located at 132 Welch Avenue, at the intersection of Chamberlain Street and Welch Avenue. The station, which was built in 1966, is a single story, 5,500 square foot, three apparatus bay station.

The current facility presents significant operational challenges, including access difficulties for fire apparatus and outdated facilities that no longer meet fire service requirements. **The size of the lot and corresponding design of the fire station do not allow for drive-through access into the station, requiring apparatus to back into the fire station upon returning to the station in the midst of heavy pedestrian and vehicle traffic. Therefore, it is now appropriate to take steps to replace this station with a modern facility that incorporates the best practices for emergency response services and improves fire department response times.**

Staff has identified land owned by Iowa State University on the west side of State Avenue as an appropriate site for a relocated Station #2. To accomplish this project, the University will need to approve a long-term lease for the land on which to construct a new fire station. The specific location of the new fire station will be coordinated with the University to avoid unnecessary impacts to the property.

This location will also improve the Fire Department's overall average response times to the total city. After construction of the new Fire Station #2 is completed, the existing fire station could be sold and the proceeds used to help reduce the amount of property taxes needed to pay the principal and interest on the bonds issued to finance the project. The existing fire station was built with funding from the City and Iowa State University. In discussions with Iowa State, administrators have expressed support to allow ISU's proceeds from the sale to be used to offset the cost of the new station.

On April 22, 2025, the City Council approved a contract for schematic and design development with Brown Watford Architects (BRW), of College Station, Texas. The new facility is anticipated to be a single-story, four-bay fire station capable of accommodating an aerial platform apparatus.

In this initial phase, the consultant is providing the City:

1. A schematic design and design development for the construction of the new fire station which includes a conceptual design with floor plans and elevations;

2. A preliminary cost estimate based on metrics of the City and the number of projected

calls, equipment and staff needs; and

3. A timeline with milestones for the project to provide sufficient information to seek a bond referendum as soon as in November 2025 should the City Council prioritize Fire Station #2 as the next capital improvement that should be pursued.

NET-ZERO READY VERSUS NON NET- ZERO READY:

One of the suggested Six Big Moves highlighted in the City's Climate Action Plan is to construct all new City buildings to Net-Zero Ready standards. A Net-Zero Ready building incorporates all of the features necessary to make it net zero with the addition of a renewable energy system (i.e., solar panels) in the future.

Prior to making a final decision related to this issue and finalizing the schematic plans, the consultant was to provide an incremental cost for a Net-Zero Ready building. To provide the incremental costs, the consultant has prepared three cost estimates for review: 1) a Non Net-Zero building, 2) a Net-Zero-Capable building, and 3) a Net-Zero Ready building.

Non Net-Zero Ready Building
The Non Net-Zero Ready building would be a traditional building, designed and constructed to adopted codes, with mechanical systems housed in an attic or mezzanine to reduce the overall square footage. The Non Net-Zero building would still have a more robust HVAC system compared to a typical commercial building to accommodate individual temperatures in sleeping quarters. The roof will be designed to allow for the installation of solar panels.

Net-Zero Capable Building
The Net-Zero Capable building would have an additional square footage to accommodate future installation geothermal heating and cooling, upgraded mechanical equipment on the main floor, and room for installation of future upgrades to electrical systems.

Net-Zero Ready Building
The Net-Zero Ready building would have the additional square footage, the geothermal heating and cooling installed, upgraded mechanical systems installed, upgraded electrical systems installed, and would meet Net-Zero if solar panels were installed.

The following table shows the construction cost of three options. These are 2025 construction costs, and this does not include other items for the total project, such as Architectural/Engineering fees, third-party testing, and furniture and fixture equipment.

Building Construction Type	Total Cost	Building Square Ft.*	Cost per sf
Non-Net-Zero	$7,985,137	14,000	$570
Net-Zero Capable	$8,432,013	14,810	$569
Net-Zero Ready	$9,061,654	14,810	$612

** The current Fire Station #2 is 5,500 square feet and Fire Station #3 is 7,340 square feet.*

It should be noted that the estimated cost shown above to construct Fire Station #2 to a Net-Zero Ready status includes $317,947.97 to build to an LEED Silver status. The

Council will have to decide whether or not to pursue this standard.

In addition, BRW has estimates that the cost to install solar panels on the roof of the station would cost an additional $725,000.

Since the two Net Zero options shown (Net-Zero Capable and Net-Zero Ready) would require more square footage in the interior of the building, there would not be an opportunity to have that as an alternate during bidding. The increase in square footage is due to the weight and complexity of moving this to a mezzanine. **However, Geothermal with the Net-Zero Capable could be bid as an alternate.**

OPTIONS:

1. Direct staff to have the architect design a Net-Zero Ready building.

2. Direct staff to have the architect design a Net-Zero Capable building.

3. Direct staff to have the architect design the building a Non Net-Zero building.

4. Direct staff to come back with more information before final direction is given.

STAFF COMMENTS:

In order to proceed with the schematic design of the new Fire Station, the City Council must first give direction to the architect as to which of the first three options listed above should be pursued.

It should be emphasized that the cost estimates listed above do not include an option for utilizing an air source heat pump system.

ATTACHMENT(S):
Ames Cost Estimate 8 1 25 Net Zero Ready Minimum-EDIT.pdf
Ames Cost Estimate 7 31 25 No Net Zero - edit.pdf
Ames Cost Estimate 8 1 25 Net Zero-edit.pdf