



Legislation Text

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**Fiscal Note**

The budget amendment contained in this Resolution increases the budget authority in the Fire Station #12 Capital Project (Project 1) of the 2008 Fire Capital Budget by \$462,776. This budget amendment will be funded through additional GO Borrowing.

The budget amendment is as follows:

CB72-58310-810490 (Building)	\$462,776
CB72-79140-810490 (GO Proceeds)	(\$462,776)

There is also a necessary administrative budget amendment to reallocate funds to be used for building construction that were originally planned for an aerial ladder truck, since an engine (which is less expensive) was purchased.

The budget amendment is as follows:

CB72-58310-810490 (Building)	\$200,000
CB72-79140-810490 (GO Proceeds)	(\$200,000)
IM01-58610-810490 (Vehicles)	(\$200,000)
IM01-79140-810490 (GO Proceeds)	\$200,000

**Title**

Amending the 2008 Fire Capital Budget and Awarding Public Works Contract No. 6194, Fire Station #12 to Stevens Construction, Corporation.

**Body**

PREAMBLE

The Madison Fire Department has \$4,122,400 in the 2008 budget to build, furnish and equip Fire Station #12.

The MFD has planned for a Fire Station #12 on the far west of Madison for many years. A few years ago, the City gave MFD land for this station that was part of future Far Westside Public Works Facility. At that time, it was also determined that the building was going to include a number of green building features and become LEED certified with a goal obtaining Platinum Certification. In addition, the station would provide an architectural transition from the residential use across the street to the future industrial use behind the station.

On July 25, four construction bids were opened. The low bid was Stevens Construction at \$3,575,222. In addition, a construction contingency of \$200,000 will be added to this project for a total of \$3,775,220.

The adopted budget for Fire Station #12 authorizes the following expenditures:

Construction	\$3,064,800
Vehicles	\$ 751,700
<u>Furnishings/Equipment</u>	<u>\$ 305,900</u>
<b>Total</b>	<b>\$4,122,400</b>

In order to award bid plus contingency, the following funding will be used:

Construction	\$3,064,800
Vehicles	\$ 200,000
Budget Amendment	\$ 462,776
<u>Alerting System</u>	<u>\$ 47,646 (Will be deducted from project)</u>
<b>Total</b>	<b>\$3,775,222</b>

After the bid opening, City staff met with the lowest responsible bidder and the design staff to review the bid and conduct an engineering value analysis.

To meet the City's goals for LEED certification a number of green features were incorporated into the building design including:

- Geo-thermal heating and cooling system including an efficient heat exchanger
- Green roof on a section of the roof
- White metal-seamed roof on other section of the roof
- Water cistern system to capture water from metal section of the roof. (The water will be used for landscape irrigation and washing trucks.)
- Increased amounts of foam insulation in all outside walls
- Solar domestic hot water system
- Energy efficient lighting, including LED lighting
- Bio-swales and a detention pond
- Some pervious concrete

All of these elements provide operational savings over the life of the building. According to Sustainable Engineering, the City's consultant for commissioning the project, simple payback for some of these items is as follows:

Geo-thermal heating and cooling system including an efficient heat exchanger has a simple payback of 8 years.

Solar domestic hot water system has a simple payback of 10-20 years.

Energy Efficient Lighting has a simple payback of less than one year

Initial cost values are based on Stevens construction cost estimates for alternatives to the bid documents. Annual savings estimates are based on Trane Trace energy simulations.

It is well documented that a geo-thermal heating and cooling system is energy efficient because it uses the earth to pre-heat or cool water that is then used to heat or cool the building with heat pumps. Furthermore the heat exchanger, which returns most of the energy from the exhaust air to the outside air entering the building, significantly reduces the need for heating and cooling.

Increasing the amount of installation in exterior walls is easy to do while the building is under construction but very difficult to go back and add later.

Green roofs do provide extra insulation that lowers the heating and cooling load for the building. Furthermore, as the water in the soil evaporates it provides additional cooling in the summertime. Finally, green roofs protect the roof membrane extending the life of the roof. A white metal-seamed roof is much more durable than a rubber roof and will last many years longer. In addition, the white roof reflects sunlight thereby decreasing the cooling load needed in the summer.

The water cistern system will capture the water off of the metal-seamed roof. This water will be used to wash the fire trucks and for landscape irrigation, which decrease operational costs because the MFD will use less

City water. The pervious concrete, bio-swailes and detention pond will infiltrate additional rainwater into the ground when the cistern system is full.

Currently, the City is implementing many projects to increase the lighting efficiency at a number of City facilities including fire stations, public work facilities, and City offices. In addition, the City has just finished installing domestic hot water solar at all of our remaining 11 fire stations. Because fire stations are a 24/7 operation where staff is living, there is a significant hot water use. A simple payback for these systems is 10-20 years, while the solar equipment is expected to last 30 years.

Facilities Management has conducted energy audits of many of our City facilities. City fire stations are the top of the list for energy users/wasters because many of our fire stations are old and were not built with energy efficiency as a goal. Currently, Facilities Management is working on projects to also improve the energy efficiency of the City's current fire stations. As mentioned previously fire stations are 24/7 operations and the City owns and operates the buildings for many years to come.

It is also important to note that there are architectural treatments to the building that provide a residential feel to the building that are also important as it helps to buffer the residential uses across the street with the future City's future Far Westside Public Works Facility. These architectural treatments are also more durable and sustainable over alternate products.

It is planned that the City will implement one Change Order upon execution of this contract and that will be to remove the Alerting System (material and installation) from the bid as the MFD had already planned to purchase and install that equipment separately. That will be a savings of \$47,646.

After a detailed review of the building costs, the engineering value analysis, and the potential return on the investment for the energy saving components, it is the recommendation of Facility Management Staff and the Fire Department that the Common Council award the contract for Fire Station #12 contract and amend the Madison Fire Department 2008 Capital Budget to fully implement this project as designed.

WHEREAS in order to fund this construction contract, a budget amendment of \$462,776 to the 2008 Fire Capital Budget is necessary; and

WHEREAS an administrative reallocation of \$200,000 in the same capital project, made available by purchasing a less expensive fire truck, is also necessary.

NOW THEREFORE BE IT RESOLVED, that the 2008 Fire Capital Budget is hereby amended to increase budget authority and GO Borrowing Authority for the Fire Station #12 Capital Project (project 1) by \$462,776; and

BE IT FURTHER RESOLVED, that \$200,000 of budget authority in the Fire Station #12 capital project be reallocated from Vehicles to Buildings; and

BE IT FURTHER RESOLVED, that the following low bid for miscellaneous improvements be accepted and that the Mayor and City Clerk be and are hereby authorized and directed to enter into a contract with the low bidder contained herein, subject to the Contractor's compliance with Section 39.02 of the Madison General Ordinances concerning compliance with the Affirmative Action provisions **and subject to the Contractor's compliance with Section 33.07 of the Madison General Ordinances regarding Best Value Contracting;** and

BE IT FINALLY RESOLVED, that the funds be encumbered to cover the cost of the projects contained herein.