

COUNCIL ACTION FORM

**SUBJECT: REPLACEMENT OF FIRE APPARATUS ENGINE 2**

**BACKGROUND:**

The Fire Department utilizes two front line apparatus (Engine 1 and Engine 2) for structural firefighting. One aerial apparatus (Truck 3) is also used for structural firefighting and provides an elevated water stream with rescue capabilities beyond that of a fire engine. A single reserve engine is used should one of the front line apparatus be taken out of service.

Fire apparatus are used as front line emergency response vehicles for 15 years. After 15 years, some are chosen to be refurbished and utilized as reserve units. The 15 year replacement cycle has proven to be satisfactory in Ames due to the excellent maintenance program of Fleet Services and Fire Department personnel.

The award of a contract prior to budget approval, as is being recommended at this time, is *unusual for the purchase of a fire engine*. This step is being taken to lower the expected costs and deal with a change in emissions standards that we have been warned will result in reliability issues and additional costs for fire apparatus. Fortunately, by waving the City's purchasing policies and taking quick action, it appears that significant savings may be obtained and a more reliable way to reduce emission standards acquired.

The City's current Capital Improvements Plan calls for Engine 2 to be replaced in its 15<sup>th</sup> year of use in fiscal year 2010/11. At your October 27, 2009 meeting, the City Council voted to waive the City's purchasing policy, thereby authorizing staff to seek bids for Council's consideration. Staff distributed a request for proposals and held multiple meetings with four fire apparatus manufacturers. The evaluation team utilized five criteria to make their recommendation, including vendor rating, warranties, maneuverability, after sales service capabilities, price, and features. After careful consideration, the evaluation team's recommendation was to select Pierce Manufacturing, Inc. of Appleton, Wisconsin.

It is recommended that Pierce Manufacturing, Inc. be awarded a contract for the purchase of a firefighting engine for the amount of \$501,994. The manufacturing and delivery cycle is expected to be six to seven months from order. The contract stipulates that the order is conditional upon final budget approval as a part of the 2010-11 fiscal year budget in March of 2010. **The purchase price, when compared to the low bid, exceeds the low bid offered from Alexis manufacturing by \$8,087. The Pierce bid was deemed superior for its features, capabilities, and long term viability.** The Pierce model is a standard model from a major manufacturer verses a more custom approach from the lowest bidder. Parts availability and the serviceability are known commodities to the City's fleet service technicians and are deemed among the best in the industry.

Due to its location and service as first-in company to ISU buildings, a high priority was given to this engine's maneuverability to work in and around traffic encountered on Welch Avenue and Lincoln Way. The recommended unit has the best maneuverability rating of all the vehicles that were proposed. In addition, this unit will be the City's first fire apparatus with a compressed air foam (CAF) system. Pierce was the only proposal from a single source manufacturer for the CAF, water pump, and apparatus. This fact simplifies after sales support from the company.

By placing a conditional order now, the Department can avoid anticipated 2010 price increases. With the addition of travel, fire hose, and on-board equipment the total project is estimated to cost \$531,000. If approved as part of the 2010-11 fiscal year budget, this purchase will be funded by a scheduled 2010 general obligation bond issuance.

The recommendation to purchase from Pierce Manufacturing, Inc. may seem at odds with recent experiences of premature corrosion on the City's Pierce built ladder truck. Truck 3 is currently under repair for premature corrosion of undercarriage components between the dual frame rails (one inside another) and torsion box. Pierce presented evidence that convinced the evaluation team that they are taking the following steps to address the issue of undercarriage corrosion which are superior to those from the other firms presenting proposals: 1) The proposed Pierce apparatus box will be constructed of stainless steel components, 2) Pierce has eliminated the dual frame rails (one inside another) where moisture accumulates resulting in corrosion where the other proposals have not, and 3) Pierce was also the only manufacturer to include coating the undercarriage with corrosion protection spray.

**ALTERNATIVES:**

1. Award a contract for purchase of fire apparatus Engine 2 to Pierce Manufacturing, Inc., in the amount of \$501,994. The vendor is not to proceed with the order until receipt of budget approval in March of 2010. This alternative presumes that Pierce has approved a final contract form acceptable to the City Attorney prior to the Council meeting.
2. Award a contract for purchase of fire apparatus Engine 2 to Pierce Manufacturing, Inc., in the amount of \$501,994, but contingent upon receiving from Pierce a final contract after the December 8, 2009 Council meeting in a form acceptable to City staff. Under this alternative, the vendor is not to proceed with the order until receipt of budget approval in March of 2010.

This alternative presumes that at the time of the Council meeting, Pierce has not yet provided a final contract form incorporating all of the terms requested by the City.

3. Direct staff to pursue alternative purchase options.

**MANAGER'S RECOMMENDED ACTION:**

The City's current Capital Improvements Plan shows Engine 2 being replaced on its fifteenth year of use in fiscal year 2010/11. The new engine had been estimated to cost approximately \$550,000. **It is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving award of a conditional contract for purchase of fire apparatus Engine 2 to Pierce Manufacturing, Inc., in the amount of \$501,994.**

**There are two aspects that make this alternative desirable: 1) the economy has led manufacturers to submit lower than expected pricing, and 2) the City will be able to improve vehicle emissions with a more proven product through the use of a diesel particulate filter.**

In 2010, the federal government's new diesel emissions standards become effective. All four manufacturers who submitted proposals expressed concerns about fire apparatus and the new diesel emission standards. One called the 2010 fire apparatus "Beta tests for how this will work for fire trucks." The 2010 standards will cause a substantial increase in costs (estimated at \$30,000 per apparatus), which is to be expected with the greater emissions control. However, there is also significant concern regarding the effect of the new engine modifications on the reliability of emergency response vehicles. The proposed approaches to these new emission standards were designed for over-the-road vehicles with hot engines. However, fire apparatus are short run vehicles that predominately run with cold engines.

The new 2010 standards also require maintenance to urea injection systems, which are a part of the emissions control system. The City is not prepared to supply and maintain these systems. The Fleet Services Director approached the Iowa DOT on their plans for addressing maintenance of urea injection systems, and found that the IDOT also has no plans to supply or maintain these systems. Instead, the DOT plans to use an alternative emissions control system not available for the larger diesel engines used in fire apparatus.

In short, the planned timing to replace Engine 2 falls during a time when brand new emissions control technology is being brought to market. Since fire apparatus are retained for so many years, it would seem prudent to avoid purchasing a new technology that could be problematic for many years.

The acquisition of the new engine will include a diesel particulate filter. The diesel particulate filter is not on any of the current fire department apparatus. However, this filter is a proven technology that will provide significant emissions reduction from the fifteen year old engine that will be replaced.

**The contract offered is conditional on decisions that will be a part of the fiscal year 2010-11 budget process. Given the financial uncertainty, should Council decide not to fund this purchase, the contract will stipulate that the order is terminated.**

**Costs with options equalized**

**Cost Scoring**

100.00%	\$ 467,208	Alexis	25.0	Awarded Points	25
98.30%	\$ 475,295	Pierce	24.6		25
94.29%	\$ 495,480	Rosenbaur	23.6		24
87.79%	\$ 532,215	E-1	21.9		22

% determined by taking low bid as the denominator and each bid as the numerator

	vendor	warranty	service	manuv.	cost	features	Total Score	Position
Alexis	8	8	7	19	25	20	87	2
Pierce	<u>10</u>	<u>10</u>	8	<u>20</u>	<u>25</u>	<u>25</u>	<u>98</u>	1
Rosenbaur	5	8	5	17	24	18	77	3
E-1	3	7	7	18	22	13	70	4

**Base costs only,**

**Cost Scoring**

100.00%	\$464,782	Alexis	25.0	Awarded Points	25
93.65%	\$496,288	Pierce	23.4		23
94.27%	\$493,015	Rosenbaur	23.6		24
88.03%	\$527,999	E-1	22.0		22

% determined by taking low bid as the denominator and each bid as the numerator

	vendor	warranty	service	manuv.	cost	features	Total Score	Position
Alexis	8	8	7	19	25	20	87	2
Pierce	<u>10</u>	<u>10</u>	8	<u>20</u>	<u>23</u>	<u>25</u>	<u>96</u>	1
Rosenbaur	5	8	5	17	24	18	77	3
E-1	3	7	7	18	22	13	70	4