

FIRE DEPARTMENT

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August 6, 2015

Mr. Joe Pieper, Chairman
Finance Committee
1011 W. Glenn Drive
Waukesha, WI 53188

**SUBJECT: EARLY APPROVAL OF FIRE DEPARTMENT AMBULANCE REPLACEMENT
PLAN DUE TO CATASTROPHIC FAILURE OF 2008 FORD MEDTEC AMBULANCE**

Dear Chairman Pieper:

Due to a catastrophic engine failure of the Department's 2008 Ford Medtec Ambulance (Fleet #085), the Department is seeking approval of the Finance Committee and Common Council to approve our vehicle replacement for ambulances through 2018 and enter into an agreement with North Central Ambulance Service for the purchase of four ambulances to be delivered in 2016, 2017 and 2018.

By entering into this agreement, the Department will be able to lock in pricing for our next four ambulance purchases at 2015 pricing. By purchasing more than three ambulances, we will be able to obtain a \$4,500 per vehicle fleet discount and the Department will be able to receive a loaner ambulance at a discounted rate or at no cost based on usage. The Department will also be able to take delivery of the first ambulance in January of 2016, avoiding the current 10 month delivery time.

Current Situation

In late July while returning from a run, Ambulance 1555 (Fleet #085) began to run extremely rough. The vehicle was immediately taken out of service and mechanics from the City Garage were contacted. Initial diagnostics revealed that cylinder #8 was out of balance and it was quite obvious there was a major mechanical issue with the engine. The vehicle was towed to Badger Ford, where the engine was removed from the vehicle and disassembled to diagnose the problem.

It was discovered that the #7 piston rod had gone through the cylinder head and it was determined the engine was not repairable. Cost estimates for a rebuilt motor reusing the fuel injection and turbocharger would cost approximately \$14,000 and the purchase of a new motor would cost approximately \$17,000. Due to the fact this vehicle is scheduled for replacement within a year, the cost of repairs and salvage value of the vehicle, it was decided by representatives of the Fire Department and City Garage in consultation with the Finance Director and City Administrator that repairing the vehicle was not a financially viable option.



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At this time, it was identified that over \$5,000 worth of parts would be required immediately to facilitate repairs on existing vehicles and the remainder of the frame and chassis could be used for parts for three other similar ambulances currently in service. The vehicle has been taken to the former incinerator site and Fire Department personnel have stripped the vehicle of various equipment. The engine and transmission have been taken to the City Garage to be used for parts for future repairs.

The Department currently has only one spare ambulance and has already experienced a brief time period where only four ambulances were in service.

Background and History

The Department maintains a fleet of seven ambulances that are in an approximate eight to nine year replacement rotation. Five ambulances are designated as front line and used on a daily basis, with the oldest ambulances kept in reserve. The Department has found this ratio of front line to reserve ambulances has historically been sufficient to ensure that five ambulances are always in service.

As part of our normal vehicle replacement and the addition of an ambulance to the fleet when Fire Station #5 was constructed, the Department purchased four Ford F-450 Medtec ambulances in 2007 through 2009. The first ambulance was funded with 2007 budget funds and was delivered in January of 2008. The Department took delivery of two additional ambulances in the third quarter of 2008 (funded with 2008 capital) and the fourth ambulance in early 2009.

All of these ambulances were spec'd. identically and delivered with the Ford 2008 chassis, that coincided with increased federal emissions standards. The vehicles were delivered with the Power Stroke 6.4 liter diesel engines that utilized new pollution control technology. The Department has experienced problems with these engines and the associated pollution control equipment. Under warranty, the first ambulance we received (Fleet #082) had its entire engine replaced due to multiple mechanical failures within the first year of the vehicle being placed in service. We have experienced problems with the fuel systems in these vehicles and cracked frames in three of these ambulances. In reviewing repair records, the ambulance that experienced the catastrophic failure (Fleet #085) actually had the least amount of repairs and received all of its scheduled preventive maintenance.

Based on conversations with mechanics familiar with these motors, they have a reputation of being problematic and the failures we experienced are common for this engine. Ford discontinued the use of this motor and now uses a fully Ford manufactured 6.7 liter engine that no longer has a heat driven regeneration system to meet emission control standards. The Fire Department currently has three ambulances with these drivetrains and has not experienced the problems we encountered with the older 6.4 Power Stroke engines. The new motors do not use a regeneration system, but utilize fluid as part of their pollution control system.

The Department's 2013 Ford F-450 Braun ambulance has been in service for approximately two years and is our busiest ambulance. This vehicle has not experienced any of the issues encountered with the older engines and has proven to be a very reliable vehicle.

Research/Work Group Recommendation

In the fall of 2014, it was discovered that our Ford Medtec Fleet #084 had cracked frame rails. This vehicle was able to be repaired along with two other ambulances. Based on this failure and the need to review specifications for future budget requests, a work group was established to research options and specifications for future ambulance purchases.



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The work group was comprised of a diverse group of Fire Department personnel and City Garage Supervisor Bob Foxx. As part of the research, the group visited area Fire Departments, spoke with mechanics who service our vehicles and other department's vehicles, test drove different chassis and met with manufacturer representatives.

After much debate and consideration, the recommendation of the group was to remain with an "F" Series vehicle, but increase the chassis to an F-550 to accommodate increased hauling capacity. The group very seriously considered recommending purchasing ambulances mounted on commercial truck chassis. Switching to a commercial chassis would increase the purchase price of the ambulance by approximately \$45,000. Members of the committee favored the Ford F-550 chassis for several reasons, including the ability to purchase a four-wheel drive vehicle, the smaller vehicle size for maneuverability on narrower city streets and a reduced purchase price.

It should be noted the mechanics on the committee preferred the commercial chassis, due to better access to the engine compartment and repairs can be made without removing the cab from the vehicle. This is sometimes necessary to make certain repairs on the "F" Series vehicles.

In conducting the research, the group found that many departments are struggling to find the best vehicle chassis to meet their needs. The vehicle emissions standards have greatly impacted the reliability and durability of the vehicle chassis that area available in ambulance prep packages. Through cooperative effort, the Fire Department and City Garage are budgeting to provide city mechanics with the training and equipment needed to remove the "F" Series chassis, which will help reduce repair costs but will increase mechanic's time for repairs.

The Fire Department's vehicle capital improvement plan was submitted to the City Administrator prior to the engine failure in Fleet #085. Our vehicle request was based on a Braun Ford F-450 four-wheel drive chassis. Immediately after being made aware that repairs to Fleet #085 were not reasonable, we contacted North Central Ambulance Service. North Center worked with Braun Ambulance and by arranging the reschedule, would be able to deliver a replacement ambulance in January of 2016.

Attached you will find a proposal that would match our previous specifications, with the exception of upgrading to an F-550 chassis. The following table represents the vehicle replacement schedule and total project amounts that would be needed if the city approves the purchase of our ambulances at this time. The city could still receive the \$4,500 discount for a fleet purchase by purchasing three ambulances; however, the ability to lock in the price of the vehicle would be lost for a planned January of 2016 delivery. The total project cost includes the purchase of the vehicle, upgrades to existing cots to meet rollover protection requirements, and the installation of radios, computer equipment and replacement of EMS equipment not being transferred from existing ambulances.

ITEM	VENDOR	DELIVERY DATE	AMOUNT
Braun/Ford F-550 4x4 Super Chief w/Power Load	North Central Ambo*	January 2016	\$238,010
Braun/Ford F-550 4x4 Super Chief	North Central Ambo*	October 2016	\$216,100
Braun/Ford F-550 4x4 Super Chief	North Central Ambo*	April 2017	\$216,100
Braun/Ford F-550 4x4 Super Chief	North Central Ambo*	January 2018	\$216,100
		TOTAL:	\$886,310

Note: *North Central Ambulance is sole source for Braun Ambulance in Wisconsin



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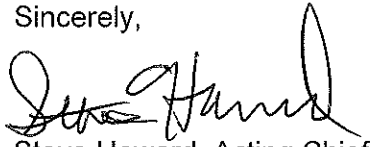
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Representatives of the Fire Department will be attending the Finance Committee meeting to answer any questions.

If you would like additional information prepared prior to the meeting, please do not hesitate to contact me at (262) 524-3649.

Thank you for your consideration in this matter.

Sincerely,



Steve Howard, Acting Chief

attachment



Proposal for New Waukesha F-550 Ambulance

Per Unit pricing including Graphics

Bid for 2016 Braun Chief XL on Ford F-550 4x4 to match latest ambulance:

Pricing to match existing Ambulance on an F-550	\$ 210,034.00
Ford FIN Rebate	\$ - 4,565.00
Additional Braun Discount	\$ -4,500.00
 FINAL PRICING	 \$ 200,969.00

This cost is per unit if all (4) are ordered at the same time. Six (6) month staggered delivery if approved. Price does not include Power load or cot. Power load to be an additional \$22,500. Loaner to be provided at cost of \$25 per day. If mileage on loaner is less than 200 miles per month, fee would be waved.

Thank You,

Andy Heimerl
North Central Ambulance Service
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