

**COUNCIL ACTION FORM**

**SUBJECT: LADDER TRUCK REFURBISHMENT - CHANGE ORDER #1**

**BACKGROUND:**

Fire apparatus are essential for structural firefighting. Ladder Truck #3 has been in service for the City since 2002. With the recent purchase of the City's first Tower apparatus, Ladder Truck #3 is undergoing a refurbishment that will extend its service life. Once the refurbishment is complete, it will be placed in a reserve role. On December 14, 2021, the City Council awarded a contract to Reliant Fire Apparatus, Inc. for the refurbishment work. Reliant is the authorized repair and refurbishment vendor for Pierce, which originally built Truck #3.

The City's Capital Improvement Plan (CIP) included \$125,000 in funding for this work. The contract with Reliant is in the amount of \$113,686. Work to be performed under the contract includes pump overhaul, valve and gauge replacement, limited suspension component replacement, new LED lights, replacement of electrical data cables, replacement of ladder cables and pulleys, hydraulic cylinder rebuild, and testing and certification of the ladder and pump.

As part of the contract with Reliant, the apparatus has undergone a thorough inspection to determine whether additional work is warranted, beyond the original scope of the contract. A list of any additional defects discovered is provided to the City, along with estimated repair costs. Reliant has provided a list of approximately 38 defects for the City to consider repairing.

These defects include items such as fluid leaks, worn or cracked rubber bushings, worn valves, poorly operating drain lines, cracked panels, inoperable gauges, paint corrosion, and dented components. Six of the listed defects are related to the aerial components and must be corrected if the City wishes to obtain independent certification of the aerial equipment before leaving the repair facility.

**The most significant of these additional defects is the substantial corrosion on the frame and the torque box.** The torque box is integral to the truck and distributes the load from the ladder to the truck frame and outrigger stabilizers. **Due to the harsh winter conditions experienced over the past twenty years, the frame and torque box have experienced significantly more corrosion than anticipated when Truck #3 was sent to Reliant for this refurbishment.**

Reliant has offered two potential approaches to addressing the frame and torque box corrosion. The less intensive option is to remove the body from the chassis, clean the accessible frame corrosion, replace the bottom of the torque box, and reassemble the

apparatus. The estimated cost for this option is \$49,258. The more intensive option includes a more comprehensive disassembly of the truck, replacement of a variety of structural members with new components, replacement of suspension components, and the application of anti-corrosion coating on much of the undercarriage. This option is estimated to cost \$133,630.

Staff from the Fire Department and Fleet Services met to review the proposed additional work. The team determined that several of the listed defects could be undertaken by Fleet Services staff at a lower cost once the apparatus is returned. Other defects were not urgent (e.g., cosmetic issues), and could be addressed at some point in the future by Fleet Services or could be disregarded entirely. **The team identified 14 items that it recommends be completed by Reliant, including the more intensive and costly disassembly, replacement, and repair of frame rails and torque box components. In total, the 14 items are estimated by Reliant to cost an additional \$142,608, bringing the total contract cost to \$256,294.**

Staff believes that these recommended additional repairs are appropriate to approve in order to achieve the goal of maintaining Truck #3 as a reliable reserve unit for an additional 15 years. In particular, the more intensive work to completely disassemble the torque box and frame will include the replacement of suspension components that cannot be replaced any other way, and which are likely to become increasingly problematic as the apparatus ages.

Staff has identified available funding to cover the increased expenses associated with this change order from the purchase of Tower 1, and from Fire Department operating budget savings (primarily salary savings). A project budget is outlined below:

FUNDING SOURCE	AMOUNT	EXPENSES	AMOUNT
Truck 3 Refurbishment CIP	\$ 125,000	Original Contract	\$ 113,686
Tower 1 CIP Savings	13,466	Change Order #1 (This action)	142,608
Fire Department FY 2021/22 Operating Budget Savings	165,047		
<b>TOTAL AVAILABLE FUNDING</b>	<b>\$ 303,513</b>	<b>TOTAL EXPENSES</b>	<b>\$ 256,294</b>

**ALTERNATIVES:**

1. Approve Change Order #1 in the amount of \$142,608 to the contract with Reliant Fire Apparatus, INC. (Pierce), for additional work to refurbish Ladder Truck #3.
2. Authorize a change order in the amount of \$58,236, which will cover 13 staff-recommended items plus the limited frame and torque box clean-up rather than the more extensive disassembly and replacement of corroded components.
3. Do not approve the requested change order, and direct staff to instruct Reliant to complete only the repair work covered by the original contract.

**CITY MANAGER'S RECOMMENDED ACTION:**

The cost of the proposed change order is substantial in comparison to the original contract amount. However, given the heavy use and age of this apparatus, combined with winter driving conditions, staff does not doubt that the corrosion and deterioration of components on Truck #3 exceeds the amount originally contemplated by the contract. The original contract was developed assuming a set of basic inspection and overhaul functions would be undertaken. It does not cover work to address substantial corrosion to truck components.

The proposed change order will allow for the replacement of components that are difficult to replace without such an extensive overhaul. Some of these components, such as suspension components, are susceptible to failure as the apparatus ages. This current overhaul is the only planned major overhaul for this apparatus.

The cost to purchase a new ladder truck would be in excess of one million dollars; this overhaul, which would be completed for approximately a quarter million dollars, is expected to extend the life of Truck #3 by an additional 15 years. Staff believes the investment in a more thorough overhaul provides a better long-term value to the City than a less intensive overhaul, which is likely to result in a shorter useful life extension for the apparatus.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as described above.