

AUBURN FIRE DEPARTMENT



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Proposals were solicited from the following fire apparatus manufactures for a 100 foot Tower Quint that was either available as a demonstrator unit or in process of construction and would be available within 30 days of the execution of a purchase agreement.

Proposals were received from the following manufactures, Ferrara Fire Apparatus, Pierce Manufacturing and Emergency One. All three design and manufacture quality fire apparatus and are considered leaders in the field.

The specifications were reviewed for, price, warranty, performance characteristics, availability and other options provided. The trade in value for our existing Tower - 1 and ability to of take advantage of cooperative group purchasing were also important considerations. Emergency One was found to provide the best overall package for purchase consideration. The E-One delarship in Maine is Greenwood Emergency Vehicles located in Brunswick maine.

E-One is proposing a 100' Tower Quint manufactured in December of 2012. This unit has been used as a demonstration model and has 27,297 road miles with 871 engine hours.

This comparison is written with the comparison of how each product and dealer performs in the State of Maine as regional specific items have a bearing on product performance.

Dealership- Of the vendors selling aerial apparatus only Greenwood has a dealership in Maine and only Greenwood maintains a service center in Maine with factory trained personnel.

Greenwood is both a Hale and Waterous factory authorized service center for pumps, has an on site pump testing facility, mobile service, and parts in stock.

Greenwood has been an E-One dealer since 1979; in that 35 year time period many dealerships have represented numerous lines, gone bankrupt, or lost their lines. As we enter into a 20 year ownership cycle for this expensive vehicle we should consider the longevity and stability of the dealership as a positive attribute for the City of Auburn.

Single Source- E-One builds their own chassis and cabs in Ocala Florida. This is important because these components along with the in house made aerial and bodies provide for a true single source vehicle.

Integrated engineering in product design makes for a better performing truck. Emergency One does not buy aerial ladders or cabs elsewhere and simply bolt them on.

As we need service, support, and warranty work we will never be told that a major piece of the truck such as the chassis, cab, or aerial is built by a 3rd party and that support from outside will be needed.

Cab/Chassis- The E-One cab and chassis are made in house and to the highest standards. E-One has been crash testing cabs long before the requirement by NFPA in 2003. Each E-One cab model has been roof load tested to 117,000# which is 5 times the NFPA requirement.

The E-One cab is also constructed of 3/16" aluminum with aluminum extrusions for support. Our cab doors are also 3/16" for added strength. The roofs are overlaid with aluminum tread plate for better strength and to protect the cab from damage from walking on the roof.

Chassis Frame and Aerial Torque Box- This is an item where E-One is completely unique from every other manufacturer. All other ladders whether steel or aluminum have a bolt on torque box place on top of the chassis frame rails.

E-One builds a box into the chassis frame rail which allows for three major advantages:

- #1 Much stronger frame for longer service life
- #2 Much lower center of gravity to allow for increased safety when responding to emergencies
- #3 No issues of rust forming in the areas where a bolt on torque box meets the chassis frame. With the road treatments in use in Maine this is a huge challenge and has caused issues on many steel aerials in service in Maine

Body and Hose Storage- The E-One body is constructed from 3/16" aluminum plate supported by extruded aluminum framework.

The areas under the body that are hard to clean and are most exposed to road salt such as tank framework, body framework and pump module are all aluminum with E-One and steel with the other vendors who provided RFPs.

Compartment space- The E-One body has a much larger amount of compartment space due to the lower torque box and x style jacks. A steel ladder has large out and down jacks that eat up a larger amount of compartment space, in addition the volume of available compartment space is negatively affected by the bolt on torque box.

Hose Load- The E-One side stacker hose bed is much easier to deploy and load than a chute style system. With our truck you can load the hose without having to roll the hose, carry it to the truck, and lift the aerial. With other vendors you will need to roll hose, carry it to the truck, lift the ladder, and then feed the hose up a chute.

Aerial and Jack Performance- This is one area where there is simply no comparison between aluminum and steel ladders.

E-One aluminum ladders are stronger- it's a documented fact
E-One rates every ladder with a 2 ½ to 1 safety factor. Steel ladders (and Pierce aluminum too) are rated with a 2 to 1 safety factor.

What does that mean in practice?

E-One HP 100 platform has a 1000# platform payload with an additional 375# of equipment load. If we add the 2 ½ to 1 factor that is a 3,438# load rating

Other manufacturers rate their towers at 1000# and do not advertise equipment loads. If we use their 2 to 1 safety factor that makes the rating 2000#

E-One has an added margin of safety of 1,438 pounds of load capacity.

The E-One X style jacking system also has many advantages vs.: the competition

Jack spread to fully deploy the truck for E-One is 15'6", for steel trucks is 18-20'

The E-One jacks need no T pins which add time to set up and potential cost to repair damage

The E-One jacking system is superior in managing hills, and important factor is a city like Auburn

E-One allows for full operation 360 degrees around the truck even when the wheels are off the ground, most/all steel aerial ladders will not permit operation to the front of the truck when the wheels are up. What that means is pretty much anytime the truck is facing down hill. This is a huge factor.

Performance in grade is another little discussed item. E-One allows for full tip load when the aerial is corrected to be anywhere from 0-5% front or side. Other manufacturers only allow full load from 0-2.5% and 50% load from 2.5-5%

Given the geography and many hills in Auburn, this is a significant plus in operational efficiency.

Aluminum aerial ladders require much less maintenance and don't rust. If you account for costs of torque box repairs, rung cover repairs, and aerial paint repairs it's not an exaggeration to say a steel platform could easily cost \$50,000-\$100,000 more to own over a 20 year cycle than an aluminum ladder.

For the reasons listed above, it is my recommendation that the proposal from Emergency One is the best choice for the City of Auburn.

Respectfully,

Frank L. Roma
Fire Chief