



# Long Beach Fire Department

New Ladder Truck 2022

Presented by Fire Commissioner Joseph F. Miller

January 2022

# The City of Long Beach

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- The City of Long Beach has 61 high-rise buildings, eight (8) over seven (7) stories.
- These includes Schools, Nursing Homes, Condos, Hotels, and Apartment Buildings.
- After Super Storm Sandy, many homes in Long Beach went from one story houses to three story houses.
- Long Beach is a Barrier Island that needs to be self sufficient in case of bridge failure.

# New Buildings

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- Construction in the City of Long Beach, is adding additional multi story high-rise buildings. For example, the Super Block located between Long Beach Blvd and Riverside Blvd and more on Shore Road.

# NFPA and ISO

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- National Fire Protection Association is the national standard for the fire service.
- The Insurance Service Office sets the fire insurance rating for the residents of Long Beach.

# NFPA and ISO Low Hazard Area

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- Low-hazard occupancies (one-, two-, or three-family dwellings and scattered businesses and industrial occupancies):
  - ***at least two pumpers, one ladder truck, and other specialized apparatus as may be identified or available.***

# NFPA and ISO Medium Hazard Area

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- Medium-hazard occupancies (apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting capabilities):
  - ***at least three pumpers, one ladder truck, and other specialized apparatus as may be identified or available.***

# NFPA and ISO High Hazard Area

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- High-hazard occupancies (apartment buildings, nursing homes, hotels, condos, schools,):
- ***at least three pumpers, two ladder trucks, and other specialized apparatus as may be identified or available.***

# Long Beach is a High Hazard Area

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- NFPA Standard recommends for a high hazard occupancies, such as Long Beach a minimum of **two** ladder trucks.
- ISO recommends also that we have a minimum of **two** ladder trucks for our area.



# Recommendation

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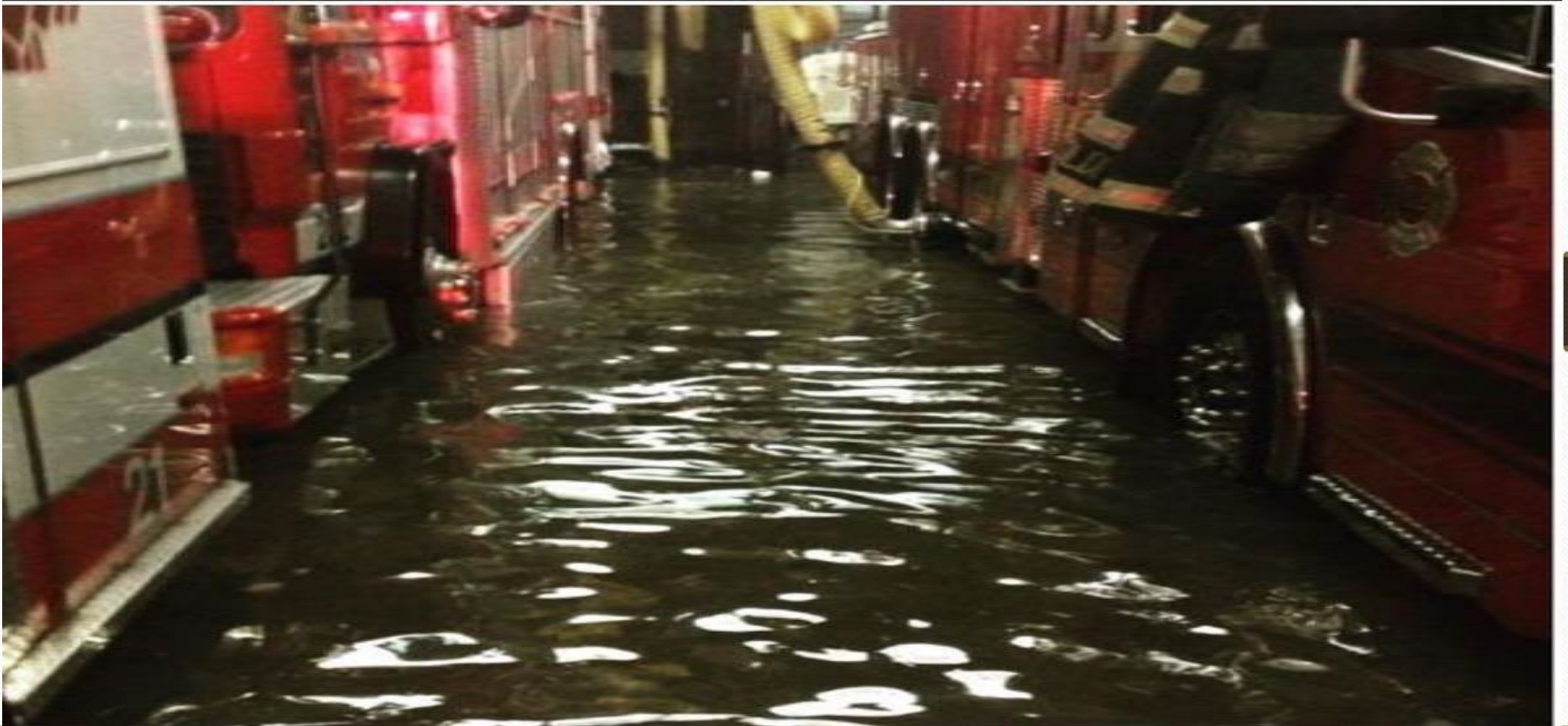
- City enter into an agreement to purchase a new Ladder Truck at a cost of \$1,769,000 to replace an existing Ladder Truck.

# Why?

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- Why do we need a new truck?
- Do we really need to replace the current truck?
- Can we lease/buy a used Ladder Truck?

# The Current Ladder Truck Under Water During Sandy



# Why?

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- Outlived its useful life
- While most fire apparatus last approximately 20 years (varies based on use), the damage to the truck from Hurricane Irene and Superstorm Sandy has accelerated the decline of the truck's serviceability.
- Experienced above average downtime
- The Ladder Truck has been out of service for 2 of the last 5 years while awaiting parts and repairs.
- Is going to keep costing the City money to stay in service
- \$325,000 spent so far, with more repairs to come.

# “Houston, we have a problem.”

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- During May of 2021, the Senior Mechanic of City Garage advised the truck company members, along with the Chiefs, that they should start looking to purchase a new Ladder Truck sooner rather than later because the damages in need of repair was increasing, as was the overall cost to keep the Ladder Truck in service.
- In consideration of these looming repair issues, a Committee was formed by the Chiefs and truck company members.
- In December 2021, a final design with specifications was made for a replacement Ladder Truck.

# Purchase of a used Ladder Truck

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- Most fire apparatus last between 20-25 years depending on the location of use and number of alarms they respond to.
- In our City we try to get 20 years out of each piece of apparatus, but sometimes for example Irene/Sandy, damage happens that decreases the serviceability of an apparatus.
- Attempting to purchase a used Ladder Truck would mean that it has probably been used to its potential; for a high response area like Long Beach, that Ladder Truck would not last the time frame we would need it for. It would cost the City additional funds to maintain and have to eventually replace it.

# What type of Ladder Truck should we purchase?

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- The Committee developed a pros/cons list for each of the manufacturers they looked at.
- Most of the manufacturers did not offer a truck with a ladder long enough to reach the upper floors of current buildings in the City, and other companies had trucks that were too long in length to get down blocks like the canals, president streets and one-way streets in the west end.

# Manufacture Pros

Pierce	Ferarra	Seagrave	Rosenbauer
18 month manufacturing time	105' ladder	Compartment space	18 month manufacturing time
Shorter truck to fit the streets.	More compartment space		Larger cab
Salt water protection			
Larger variety of warranties			
Pricing			
Three manufacture Service centers on Long Island			



# Manufacture Cons

Pierce	Ferarra	Seagrave	Rosenbauer
Less compartment space	Decrease in reputability.	Longer truck	Ladder too short (88')
	Decrease in quality.	3 year delivery date	Parts not readily available
		1.5 million starting price	Foreign manufacture
			Only 1 department in Nassau County used them.
			Longer truck

# Why Right Now?

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- As a result of the extensive work done by the Committee last fall, they were able to secure extremely competitive pricing:
  - Trade-in value of \$200k-\$250k on existing Ladder Truck
  - The price for the Ladder Truck and/or all of its components will increase by 15%, or over \$100k if the agreement is not reached by 01/31/2022
  - Not only could the overall price be withdrawn from the offer, but any incentives set forth in the offer are also subject to change if we do not accept.

# Was this/ why wasn't this equipment already requested in prior Capital Plans

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- This equipment was not identified to be replaced in recent Capital Plan submissions.
- Prior Capital Plan submissions were made by the department projecting future needs, *e.g.* a new engine in 2018-2019.
- The condition of this ladder truck has been deteriorating over the years but dramatically starting the last 2 years. The department is attempting to be proactive in identifying the future needs of the department.

# Why we chose to go with Pierce?

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- Pierce offered the fastest and best quality turnaround time.
- Pierce owns Oshkosh Defense, which is contracted through the Defense Production Act. ( Allows access to material before other manufacture companies)
- They have better warranties.
- Three Service centers on Long Island.
- Fits the streets of Long Beach the best.

## **Was the Board of Fire Commissioners involved in the selection of this ladder apparatus?**

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- The truck committee was established and consisted of senior members from the company.
- Throughout the truck building process the committee was in constant contact with the Chiefs office and city garage, advising them of the progress of the truck.
- Fire Commissioners were notified of the truck's progress and the Commissioner was notified upon completion of the design.

# Has a model of this Pierce apparatus been inspected/tested? If so, when and by whom?

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- In September of 2021, Firematic Supply Company was able to bring a demo truck down to Long Beach for the truck committee, company members, and Chiefs to look at. The truck was driving up and down tight streets throughout the city so members could see how it performed. Members were able to see all the various controls, compartments, and cab space to decide what worked/did not work for the City of Long Beach.
- The truck committee was able to look at a variety of current in service Pierce ladder trucks across Long Island.
- North Bellmore, on October 27th 2021, the company was able to look at the truck when they had their dedication ceremony
- Roslyn, in July of 2021
- North Merrick, in October 2021
- Lindenhurst in January of 2022

## Do other Long Island fire departments use this aerial truck? If so, what is their experience with it?

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- Currently on Long Island there are 10 of these trucks in service, with an additional five on order.
- The committee spoke with four of these departments, asking many questions to each about their likes/dislikes.
- The committee was able to ascertain information such as, not to go with the Detroit diesel engine because Roslyn found that it needed regeneration too frequently.
- When speaking with North Bellmore, the department informed our truck committee that they did not like the roll down compartment doors because they stick from time to time.

**The proposal says it is being purchased under HGAC contract FS12-19 item FS19VA09. FS19VA09 is for a Pierce Arrow. The resolution was to purchase a Pierce Enforcer. This requires explanation.**

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- The HGAC contract FS12-19 item FS19VA09 is the base model of the type of cab that is offered by Pierce. As an add on option the truck committee decided it would be best to go with the Velocity cab as it offers more room in the cab for members. The Velocity does not have its own item number on the FS12-19.



**The contract price on FS19VA09 is \$1,322,460. The price in the resolution is \$1,769,000. Why is there a \$446,540 price difference?**

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- On the contract, the price is \$1,322,460, this is the base price.
- Added into the contract is a multiple services, testing, and treatments by the dealer over the next 5 years.
- Also included is tool mounting, a delivery fee, inspection trips out to the factory, and the tools that are being purchased with the truck.

**FS19VA09 is the most expensive Pierce aerial listed in the HGAC contract. Why was the most expensive option selected? Also, under the HGAC contract, Pierce Enforcers are less expensive (\$300,000 - \$400,000) than Pierce Arrows.**

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- The FS19VA09 is the only Mid-Mount 100' Ladder listed on the HGAC contract. The Pierce Enforcer that is \$300,000 cheaper is the 110' Rear Mount Tower Ladder (FS19VA08) or the 107' Rear Mount Tower Ladder (FS19VA07) which are two different trucks. A Mid-mount is shorter in length and height which is what the committee is looking for.
- The resolution had a typo, it should state a Pierce Velocity. Firematic Supply Company has corrected the contract and it is attached below as well.

According to the proposal sheet the engine is a 605 horsepower Cummins X15 engine.

Per the Pierce website the engine options for the Enforcer are Cummins L9, X12 or PACCAR MX-13 with engine horsepower of 370 - 525 hp. There is no 605 horsepower engine option listed for the Enforcer. The X15 is an engine option on the Arrow, not the Enforcer. This requires explanation, since the resolution is to buy an Enforcer.

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- Parts of the Pierce's website have not been updated since December of 2019. Included is the link to the Pierce website for the Velocity cab, which is the cab the committee has decided to go with. Under engines it states the Cummins X15 engine.

**We are a two square mile city with flat terrain. Why does the apparatus need the highest horsepower (most expensive?) engine option available?**

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- The cab is a Velocity and not any of the other types listed. This is reflected in the bid spec and line item SKU's. The actual engine in the specifications is the Cummins X15 Pro that has the horsepower specifications to match what's in writing. The apparatus is very heavy, the largest engine is normally speced on an aerial device. It was done on both the current ladder tower we have and the 1991 Pierce ladder which we had before the current truck. Hills would strain an engine more, but even getting the apparatus moving without taxing the engine to redline on flat ground requires the larger engine.

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- During our research, we were informed by each of the departments that have this truck and put a smaller engine in it have not been happy with the decision. More importantly, the City Garage senior diesel mechanic recommended the bigger engine. The truck committee worked very closely with the City Garage to make sure everything mechanical in the truck can be easily maintained by the garage when the five year maintenance warranties are up. Thus prolonging the life of the truck.

**The proposal includes equipment that goes on the fire truck (e.g. ladders, pike poles, extinguishers, axes). Is this standard equipment that is included with the purchase of the fire apparatus or are they add ons (extra cost)? If an add on, is this new equipment needed? It may make sense to replace old equipment with the purchase of the new truck, but if it is an extra cost is the equipment currently on hand in need of replacement?**

- Normally a new truck has a lot of new equipment that comes with it because most of the equipment that is currently in service is outdated or over 20 years old. In this case the truck committee went through all of the equipment that is currently in service and wrote down items we needed to purchase with the truck. This included, battery powered fans, battery powered lights, a thermal imaging camera, ladders and radios for the truck itself. These battery powered items are needed as the new truck will not have a generator or power reels on it in an effort to cut costs on the truck.

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- The rest of the equipment; SCBA packs, saws, ropes, hand tools, extrication tools, portable radios, FAST equipment, and other miscellaneous things will be transferred over from the current truck. This helps cut costs on the overall truck price
- Many of our current ground ladders are in poor shape. There are two major aluminum ladder brands in use in the fire service. The brand we have is not what the manufacturer uses or designs for.
- We were able to accommodate more ground ladders into the new truck by going with the offered brand of ladders.

**One of the reasons listed for selecting the Pierce truck is it is shorter in both length (44 feet) and height (10'6") than the current ladder truck (48 feet long, 12 feet high). Length and height were used as cons on the other models in the comparison. But as an example, KME makes a fire truck that is even shorter than the Pierce, also with a 100 foot platform. That is not to say the KME is a better option, but their website says they offer the shortest wheelbases, overall lengths and lowest heights in the industry. Yet, they were not evaluated. This shows there are more manufacturers out there that were not looked at.**

- The comparisons were not a comprehensive list of what's out there, but rather a sampling. The committee and the company first decided on larger issues such as Mid-Mount VS Rear Mount design and the length of the aerial device. Once the type and size was established the committee evaluated apparatus that met that specification. Manufacturers were then eliminated based on that criteria and also general feedback from the Fire Service community. The KME was evaluated, while they currently offer a shorter truck, you must sacrifice the overall length of the ladder (16 feet shorter than what Pierce offers)



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- Directly from the KME website: “The new Mid-Mount AerialCat™ is now available with an 84’ and 102’ platform. These two replace the existing line up of 81’, 95’ and 100’ mid-mount platforms, with a longer horizontal and vertical reach and a shortened overall length. **The 102’ Mid Mount AerialCat™ Platform has a 2’ rated increased vertical height to 102’ and a 3’ horizontal increased horizontal reach height to 94’.** The apparatus’s overall length is decreased by 2’; using an MFD cab a 46’ over all length is achievable. **The 84’ Mid Mount Platform rated vertical height is increased by 3’ to 84’ and the horizontal reach is extended 4’ to 77’.** The vehicle overall length of the 84’ mid-mount platform is just 43’.”

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- Pierce also offers the largest scrub area out of all the manufactures, at 55 degrees. They also have the shortest length to get below grade, 20 feet, which is a must when dealing with taxpayer fires on West Beech Street.

Thomasnet (a reference source for finding equipment suppliers), lists 10 of the largest U.S. fire apparatus manufacturers. Some of the largest manufacturers (e.g. Spartan, Marion Body Works, Sutphen, plus others) are not included on the comparison list. They all offer options with 100 foot platforms, which is what our department wants.

Why weren't these options looked at?

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- Spartan and Marion do not make the entire truck, they use third party ladders and are not of the design we agreed upon after much discussion both within the company and the committee. Sutphen is a truss box boom tower ladder and not a ladder tower, meaning you can not climb up and down the ladder while it is extended. They are not a popular truck in our area with very few in service. Point Lookout-Lido has one and have not been fully happy with it.

The comparison sheet lists a con for E One as the ladder is only 95 feet. E One has options with ladders up to 137 feet (longer than other manufacturers) and is 3 1/2 feet shorter than the Pierce and 7 1/2 feet shorter than our current ladder truck. Rosenbaum was also disqualified because the ladder was only 88 feet. Rosenbaum platforms go up to 104 feet. The information on the comparison sheet seems to conflict with the manufacturers information on their websites.

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- The E One being mentioned is not an aerial platform, but a straight ladder. The vehicle we are specifying is a ladder tower which is a full aerial ladder with a bucket/basket at the end. This type of apparatus is more versatile than a straight aerial ladder or a tower ladder which is a box boom with a bucket on the end.
- Rosenbaum Mid-Mount aerial ladders are offered in 75-100 foot aerials, with the requirements the truck committee needed (100 foot and shortest length). The Ladder offered by Rosenbaum did not meet this, as the truck needed to be over 48 feet in length to accommodate the 100 foot aerial ladder.

# Final Notes:

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- Through the entire process, the committee kept in mind that the price would be the biggest concern that the City had with this purchase. With that in mind the committee made a truck that would be versatile, functional and provide the best services to the city and its residents.
- The committee came to Commissioner Miller with a truck and price, at that time he asked us to trim back some items on the truck to reduce the price. The first quote was higher and we were able to reduce the price approximately \$200,000 from the original quote.

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- The Pierce truck that we put together has the shortest overall length and height while still having a ladder that is 100' tall vertical, 93' horizontal, with a below grade reach of 20 degrees. The truck also has the largest scrub area of any manufacturer at 55 degrees which is a must when dealing with the tight streets of the City of Long Beach.
- Of all the manufactures, Pierce offered the shortest tail swing when turning at 1 1/2 feet off the rear.

Questions?

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