

New Challenges for Engine Company Chauffeurs

By Deputy Chief Nicholas Corrado

The Manhattan skyline has changed during the past several months. There are seven newly constructed or nearly completed mega-high-rise buildings in the midtown area. (See Photo 1.) In the background, you can see the iconic Empire State Building, which now is dwarfed by these newer buildings.

Our Department recently adopted the term, “mega” high-rise. A mega high-rise is any building that is more than 800 feet in height. It’s estimated that by the end of 2020, there will be 37 mega-high-rise buildings in Manhattan. These buildings also have been identified in our critical information dispatch system (CIDS) with the designation, “MEGA.” The critical response information management system (CRIMS) now designates our mega-high-rise buildings with a green outline. We are in the process of developing Fire Department Information Cards (FICs) for all residential buildings that are not mandated by fire code to have a Building Information Card (BIC).

Because of the need for extensive search operations, additional units above the normal response will respond for fire in a mega high-rise, per the *Communications Manual*, chapter 8. A 10-77 in a mega high-rise now will generate a response of an additional Battalion Chief, two ladder companies, one lobby control unit and a communication unit. A 10-76 in a mega high-rise will generate the response of an additional Battalion Chief and two additional ladder companies.

Mega high-rises pose new challenges for our engine company chauffeurs. One problem is calculating the correct engine pressure for a mega-high-rise fire. The chauffeur must anticipate multiple skipped floors and/or floor heights from 15 to 20 feet. It is crucial for chauffeurs to consider the height of the fire floor instead of the floor number. 1 Vanderbilt is a newly constructed, 1,407-foot, commercial, mega high-rise, with most floors measuring 20 feet in height. The top or 59th floor has a height of 1,026 feet. Conversely, due to skipped floors, the height of the 28th floor of 432 Park Avenue, a residential mega high-rise, also with a total height of more than 1,400 feet, is 130 feet. Both of these examples demonstrate that the chauffeur cannot determine fire floor height from the fire floor number.

Members can expect multiple water



Photo 1—The Manhattan skyline, featuring seven newly constructed or nearly completed mega-high-rise buildings.

tanks and booster pumps located throughout newly constructed mega-high-rise buildings. One of our newer mega high-rises has 12 gravity tanks and seven booster pumps and the system is designed so that at no point is the pressure greater than 250 psi. The challenge for our engine chauffeurs is patience. Chauffeurs must be prepared to augment systems, but must not pump high pressures unless ordered to do so. Officers must communicate to the Incident Commander (IC) if high pressures are needed.

Depending on the year the building was constructed, units may encounter a tiered standpipe system. Some mega-high-rise buildings have three standpipe siameses. (See Photo 2.) Engine chauffeurs must connect to the correct siamese. In the photo, the mid-rise standpipe covers floors 36 to 64. A fire on the 36th floor would require the chauffeur to connect to the low-rise siamese, if pressure was necessary from FDNY apparatus.

Because of increased construction, chauffeurs must be prepared to supply air-pressurized dry standpipe systems. Basic *Engine Company Operations*, chapter 9, addendum #2, should be reviewed. Properly draining the system of air and filling with water at appropriate pressures will take time and coordination. It’s important to avoid creating a water hammer and com-



Photo 2—A tiered standpipe system requires engine company chauffeurs (ECCs) to connect to the proper siamese.

promising the system by over-pressurizing. The IC should consider establishing a high-pressure group, supervised by a Battalion Chief, whenever high pressures are needed. ■

WNYF References

1. “What Firefighters Should Know About Gravity Tanks,” by Assistant Chief Ronald R. Spadafora, in the 2nd/2012 issue.
2. “High-Pressure Trilogy—The Drill at 7 World Trade Center,” by Assistant Chief Howard J. Hill (retired), in the 3rd/2007 issue.
3. “Water Supply in Super High-Rises,” by Battalion Chief Thomas Meara, in the 3rd/2007 issue.
4. “High-Pressure Pumping,” by Captains Sean Faherty and John Patten, in the 3rd/2007 issue.
5. “Air-Pressurized Standpipes and Alternate Tactics,” by then-Deputy Chief Fred Schaaf, in the 2nd/2017 issue.
6. “High-Pressure Pumping—A High-Rise Fire-fighting Tactic,” by Captain Richard A. Rotanz, in the 1st/99 issue.



About the Author

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