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TechNotes

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This issue of TechNotes was written by Robert Upson, Manager of Installation Standards. He is a retired career firefighter with 31 years service prior to working for NFSA.

Locations for Standpipe Hose Connections for Fire Department Use

Various **NFPA** installation standards refer to the Authority Having Jurisdiction (AHJ) and defer to their approval. Although we typically understand the AHJ to be either the building code official or the fire marshal, it is important to remember that sometimes the appropriate AHJ for a given requirement within a standard might be the chief officer of the fire department. One such scenario can be found in **NFPA 14**, *Standard for the Installation of Standpipe and Hose Systems*.

If you have followed the development of NFPA 14 from cycle to cycle, you might have noticed that the language setting the location for Class I hose connections in exit stairs has had a habit of flip-flopping from edition to edition. In some editions, the default requirement is for the hose connection to be installed on the main landing at each floor level while in other editions it is at the intermediate floor level. In each case, the standard permits the hose connections to be installed at the other location. For instance, here's how the language appears in the 2013 edition (the 2016 edition is expected to have similar language):

> 7.3.2* Class I Systems. Class I systems shall be provided with 2½ in. (65 mm) hose connections in the following locations:
> (1) At the main floor landing in exit stairways
> ....
>
> 7.3.2.1 Hose connections shall be permitted to be located at the highest intermediate landings between floor levels in exit stairways where required by the AHJ.

The 2007 edition, on the other hand, required hose connections at the intermediate landings or at the main landings where required by the AHJ which is still the language that appears in the International Building Code in the 2015 edition:

> [F] 905.4 Location of Class I standpipe hose connections.
>
> Class I standpipe hose connections shall be provided in all of the following locations:
> 1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.

…

Depending on the adopted building code wherever you may be, there is a very good chance that the code and the standpipe installation standard may define the default locations for hose connection exactly opposite of each other. In the case of a conflict, we know that the building code trumps the installation standard and the standard is purposefully written to address this. What is more important is why this apparent conflict exists and how to best address it when it is encountered.

The question of preference for hose connections on either the main or intermediate landing is not about any technical advantage of one over the other but about differences in firefighting tactics. A common doctrine in firefighting in a multistory building is that the first hose line is connected to the standpipe, not at the floor where the fire is located, but at a floor level below. This allows the hose to not only be connected at a protected location but also provides protection for that location after the door leading out of the stairway and onto the fire floor has been opened. Remember, once there is a hose line going through that door, it cannot be closed again. Making hose connections on a lower level helps keep them in a protected area relatively free from exposure to smoke and heat from the fire. The preference for main landing or intermediate is a question of balancing how much protection is provided versus how much further hose lines must be stretched from the hose connection to the door accessing the fire floor. Without debating the tactical merits of either choice, the important message is that the AHJ that needs to be consulted about this preference is the fire department.

Good layout and design is collaboration between a varied group of stakeholders. Don't forget to invite all the right stakeholders to the table when when considering AHJs and what input is required to obtain the best design result.