



## Automatic Sprinklers: Sprig Supports

No. FP-2009-20 May 19, 2009

**Learning Objective:** The student shall be able to specify requirements for restraining sprigs 4 feet (1.2 m) or longer.

This 1-inch upright is known as a “sprig” which is defined in National Fire Protection Agency (NFPA®) 13, *Standard for the Installation of Sprinkler Systems* as “a pipe that rises vertically and supplies a single sprinkler.”

For years, there was no requirement in the standard for restraining sprigs against lateral movement, regardless of the pipe’s length. When a sprinkler (especially an upright sidewall sprinkler) at the top of an unrestrained sprig operated, the kinetic reaction forces created the potential for the pipe to move in the opposite direction and the sprinkler discharge could be displaced from its intended pattern.

The 2007 edition of NFPA® 13 requires that sprigs “4 feet (1.2 m) or longer shall be restrained against lateral movement.” The sprig shown in the photograph has been restrained by clamping it to the truss web. The method used to restrain the pipe must be acceptable to the code enforcement official.



Photo courtesy of Freedom Fire Protection, LLC, Longmont, Colorado. Because of its length, this sprig must be supported to restrain lateral movement.

A close look at the picture reveals another item the inspector should check closely: the position of the sprinkler deflector in relation to the roof slope. NFPA® 13 has for many years required sprinkler deflectors to be aligned **parallel** to ceilings or roofs. However, since this sprinkler is located at the peak of the truss, it meets the requirements of NFPA® 13.

For sidewall sprinklers installed under a sloped ceiling with a slope exceeding 2 in 12, the sprinklers must be located at the high point of the slope and positioned to discharge downward along the slope. Sidewall sprinklers specifically listed for other ceiling configurations should be installed in accordance with the listing requirements.

For additional information, refer to NFPA® 13, *Standard for the Installation of Sprinkler Systems*, Chapters 8 and 9.

