



MINNESOTA DEPARTMENT OF PUBLIC SAFETY
State Fire Marshal Division
INTERPRETATION

Interpretation #: INTERP FP-06 (2007)	Subject of Interpretation: Horizontal sidewall sprinklers positioned above shelves.		
Reviewed and Approved By: Jerry Rosendahl	Title: State Fire Marshal	Effective Date: July 10, 2007	Revision: July 10, 2007

A number of sprinkler designs have been submitted to the Minnesota State Fire Marshal – Fire Protection Section with horizontal sidewall sprinklers positioned above shelving. In particular, the sprinklers are placed by design directly above shelves found in bedroom and entry closets.

The installation of horizontal sidewall sprinklers positioned directly above shelves similar to those found in bedroom and entry closets should be avoided.

NFPA 13(2002 edition) 8.7.5.2.1.1 *Continuous or non-continuous obstructions less than or equal to 18 in. (457 mm) below the sprinkler deflector that prevent the pattern from fully developing shall comply with this section.*

NFPA 13(2002 edition) 8.7.6 Clearance to Storage (Standard Sidewall Spray Sprinklers): *The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater.*

Rationale: Understanding that although the location of any type sprinkler above the top shelf will restrict the use of this shelf for storage the “18-in rule” is seldom heeded. Also understanding that in small confined spaces such as closets protected by pendent or upright sprinklers, obstructions caused by items such as shelving would not likely delay activation of a sprinkler nor prevent the sprinkler from controlling the fire. The positioning of a horizontal sidewall sprinkler is more critical. Due to the sprinkler’s closer proximity to obstructions, the spray distribution is more adversely affected by obstructions projecting out from the same wall on which the sprinkler is mounted. Items being placed on the top shelf also increase the risk of physical damage to a sidewall sprinkler head. Horizontal sidewall sprinklers must be located to avoid obstructions that affect the head’s discharge pattern development and to reduce the risk of physical damage to the sprinkler head.

It is not the SFMD’s position to retroactively cause the removal of this type of installation previously installed by contractors and approved by state or local AHJs acting in good faith.