Non-Combustible spaces

TRAINING



NFPA-13 and Permissible Sprinkler Omissions

Ref: Various extracts from NFPA-13 and NFPA Discussion Boards. Commercial. (I have OMMITTED references to RESIDENTIAL 13-R/13-D)

Brief: it comes down to Occupancy & the Material

Eave or Overhang: Light Ordinary Hazard: No Combustibles within or underneath: No Sprinklers

Detail:

Per NFPA-13 Installation of Sprinkler Systems

Not every space in a structure is required to be protected by sprinklers

Non-Occupied or Concealed spaces

The starting point for all designers, installers, and enforcers who are trying to determine if sprinklers are required in a specific concealed space is that concealed spaces should be sprinkled, unless Section 8.15.1 of the 201x edition of NFPA 13 provides alternate direction.

It discusses:

- **Concealed Spaces Requiring Sprinkler Protection**
- **Concealed Spaces NOT Requiring Sprinkler Protection** •

8.15 Special Situations.

8.15.1 Concealed Spaces.

8.15.1.1 Concealed Spaces Requiring Sprinkler Protection.

Concealed spaces of exposed combustible construction shall be protected by sprinklers except in concealed spaces where sprinklers are not required to be installed by 8.15.1.2.1 through 8.15.1.2.18 and 8.15.6.

8.15.1.2* Concealed Spaces Not Requiring Sprinkler Protection.

8.15.1.2.1* Concealed spaces of noncombustible and limited combustible construction with minimal combustible loading having no access shall not require sprinkler protection.

8.15.1.2.1.1 The space shall be considered a concealed space even with small openings such as those used as return air for a plenum.

8.15.1.2.2 Concealed spaces of noncombustible and limited combustible construction with limited access and not permitting occupancy or storage of combustibles shall not require sprinkler protection.

One of the distinctions this section makes is the type of construction that is used to form the concealed space. Concealed spaces that are constructed of noncombustible or limited combustible material are not required to be protected with automatic sprinklers, provided there is minimal combustible loading and no access to the space.

The presence of combustible loading increases the potential for fire growth within the space and would therefore necessitates sprinkler protection.

Where access is provided to these spaces, it is common for building occupants to use them for storage, creating a fuel load that would otherwise not be present in the noncombustible space.

Inside + Outside

Sprinkler omissions are not limited to combustible concealed spaces.

Stair shafts of noncombustible construction are permitted to have sprinkler protection only at the top of the shaft and underneath the first access landing above the bottom of the shaft.

Wet Suppression &



Non-Combustible spaces

Other spaces that may remain un-sprinkled include spaces beneath ground floors, exterior decks, and platforms.

Sprinklers can be omitted from these spaces provided they are not accessible for storage, contain no equipment such as conveyors or fuel-fired heating units, the floor above is not used for handling or storing combustible or flammable liquids, and the floor construction is tight.

Sprinklers can be omitted from several exterior spaces as well. Canopies, balconies, decks, roofs, and portecocheres that are constructed of noncombustible materials, limited combustible materials, or fire-retardanttreated wood need not have sprinkler protection.

Another outdoor space from which sprinklers can be omitted is an exterior exit corridor where the exterior walls of the corridor are at least 50 percent open and the corridor is entirely constructed of noncombustible material. This is a very common egress system for motels and apartment buildings.

And:

A.8.15.7.5 Short-term transient storage, such as that for delivered packages, and the presence of planters, newspaper machines, and so forth, should not be considered for storage or handling of combustibles. The presence of combustible furniture on balconies for occupant use should not require sprinkler protection.

I have attached extract