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I’ve used this column plenty of times to address automatic fire alarm systems designed and installed in accordance with NFPA 72, "National Fire Alarm and Signaling Code" as well as requirements for fire alarm systems per two common model fire codes: NFPA 1, "Fire Code" and the International Code Council"s International Fire Code.

But it"s important to realize that the NFPA also has standards that are specific to a building or occupancy type, and in some cases may have requirements for structures or enclosures within a building.

The first is NFPA 76, "Standard for the Fire Protection of Telecommunication Facilities," for which the 2016 edition is current. Work on the 2020 edition has just concluded, and we"ll take a sneak peek at some of what"s to be added.

"Telecommunication facilities" are where your phone calls pass through. In the past, these were your phone company"s "central offices," in which large relay switch banks were installed and calls from one phone to another were routed. In today"s world telecommunications facilities are also where cellular calls pass through and facilities in which data is moved from one point to another.

1.1 Scope. This standard provides requirements for fire protection of telecommunications facilities, including landline, cable, wireless and satellite telecommunication services such as telephone/voice, voice over Internet protocol (VoIP), Internet, data and video transmission that are rendered to the public.

1.1.1. Telecommunications facilities include signal-processing equipment areas, cable entrance facility areas, power areas, main distribution frame areas, standby engine areas, technical support areas, administrative areas and building services and support areas occupied by a telecommunications service provider.

Telecommunication facilities can be manned or unmanned, and can be found within metropolitan city center or on a remote mountain top. One item is certain, though, no matter where the site is located, if a fire were to break out communications will be disrupted. Of course, for continuous conduction of business, healthcare, national security, government services and home entertainment, to name a few, it is vital that these facilities stay operational.

One threat is fire. NFPA 76 covers methods of identifying risks, and then how to mitigate these in either a prescriptive or performance-based approach. For our purposes here let"s look at Chapter 8, which covers fire protection elements, which includes both suppression and detection. Requirements for fire detection can be found in Section 8.5.

Depending on a risk analysis that is to be performed, the designer would lay out a detection system to meet

criteria of one of those detection levels. It may happen that, depending on what kind of assets a facility houses and what damage a fire may cause, multiple detection levels could be addressed within a single facility.

Depending on the level of detection that is to be used, NFPA 76 prescribes the minimum sensitivity and spacing settings for the detectors. These requirements are not found within NFPA 72 or the two model fire codes.

There are also provisions for an alert indication as opposed to an alarm condition. The alert is intended to allow staff to begin looking for an issue that may be in the incipient stage. The detection method implemented for most VEWFD and EWFD applications is air sampling systems. The standard specifies the coverage of each port that"s part of an air sampling system.

Detection can also be for an enclosure or cabinet; a placeholder for "in-cabinet detection" is included in the 2016 edition for which 2020 will add verbiage. While this language has been approved at the committee level, it has yet to be approved by the required formal committee ballot, and still may be subject to floor action at the 2020 NFPA Annual Meeting: 8.5.3.4.1.1 Electrical cabinet detection may either be spot-type detectors or air sampling type.