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SECTION 907.2.13.2

TITLE: Fire department communication system.

Where a wired communication system is approved in lieu of an emergency responder radio coverage system in accordance with Section 510, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 508, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside interior exit stairways. The fire department communication device shall be provided at each floor level within the interior exit stairway.

907.2.14 Atriums connecting more than two stories. A fire alarm system shall be installed in occupancies with an atrium that connects more than two stories, with smoke detection in locations required by a rational analysis in Section 909.4 and in accordance with the system operation requirements in Section 909.17. The system shall be activated in accordance with Section 907.5. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.5.2.2.

907.2.15 High-piled combustible storage areas. An automatic smoke detection system shall be installed throughout high-piled combustible storage areas where required by Section 3206.5.

907.2.16 Aerosol storage uses. Aerosol storage rooms and general-purpose warehouses containing aerosols shall be provided with an approved manual fire alarm system



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where required by this code.

- 907.2.17 Lumber, wood structural panel and veneer mills. Lumber, wood structural panel and veneer mills shall be provided with a manual fire alarm system.
- 907.2.18 Underground buildings with smoke control systems. Where a smoke control system is installed in an underground building in accordance with the International Building Code, automatic smoke detectors shall be provided in accordance with Section 907.2.18.1.
- 907.2.18.1 Smoke detectors. Not fewer than one smoke detector listed for the intended purpose shall be installed in all of the following areas:
- 1. Mechanical equipment, electrical, transformer, telephone equipment, elevator machine or similar rooms.
- 2. Elevator lobbies.
- 3. The main return and exhaust air plenum of each air-conditioning system serving more than one story and located in a serviceable area downstream of the last duct inlet.
- 4. Each connection to a vertical duct or riser serving two or more floors from return air ducts or plenums of heating, ventilating and air-conditioning systems, except that in Group R occupancies, a listed smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m3/s) and serving not more than 10 air inlet openings.
- 907.2.18.2 Alarm required. Activation of the smoke control system shall activate an audible alarm at a constantly attended location.



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907.2.19 Deep underground buildings. Where the lowest level of a structure is more than 60 feet (18 288 mm) below the finished floor of the lowest level of exit discharge, the structure shall be equipped throughout with a manual fire alarm system, including an emergency voice/alarm communication system installed in accordance with Section 907.5.2.2.

907.2.20 Covered and open mall buildings. Where the total floor area exceeds 50,000 square feet (4645 m2) within either a covered mall building or within the perimeter line of an open mall building, an emergency voice/alarm communication system shall be provided. Emergency voice/alarm communication systems serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.5.2.2.

- 907.2.21 Residential aircraft hangars. Not fewer than one single-station smoke alarm shall be installed within a residential aircraft hangar as defined in Chapter 2 of the International Building Code and shall be interconnected into the residential smoke alarm or other sounding device to provide an alarm that will be audible in all sleeping areas of the dwelling.
- 907.2.22 Airport traffic control towers. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in airport control towers in accordance with Sections 907.2.22.1 and 907.2.22.2. Exception: Audible appliances shall not be installed within the control tower cab.
- 907.2.22.1 Airport traffic control towers with multiple exits and automatic sprinklers. Airport traffic control towers with multiple exits and equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall be provided



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with smoke detectors in all of the following locations:

- 1. Airport traffic control cab.
- 2. Electrical and mechanical equipment rooms.
- 3. Airport terminal radar and electronics rooms.
- 4. Outside each opening into interior exit stairways .
- 5. Along the single means of egress permitted from observation levels.
- 6. Outside each opening into the single means of egress permitted from observation levels.
- 907.2.22.2 Other airport traffic control towers. Airport traffic control towers with a single exit or where sprinklers are not installed throughout shall be provided with smoke detectors in all of the following locations:
- 1. Airport traffic control cab.
- 2. Electrical and mechanical equipment rooms.
- 3. Airport terminal radar and electronics rooms.
- 4. Office spaces incidental to the tower operation.
- 5. Lounges for employees, including sanitary facilities.
- 6. Means of egress.
- 7. Accessible utility shafts.



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907.2.23 Battery rooms. An automatic smoke detection system shall be installed in areas containing stationary storage battery systems with a liquid capacity of more than 50 gallons (189 L).

907.3 Fire safety functions. Automatic fire detectors utilized for the purpose of performing fire safety functions shall be connected to the building's fire alarm control unit where a fire alarm system is required by Section 907.2. Detectors shall, upon actuation, perform the intended function and activate the alarm notification appliances or activate a visible and audible supervisory signal at a constantly attended location.

In buildings not equipped with a fire alarm system, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72.

907.3.1 Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required by Section 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the International Mechanical Code. In facilities that are required to be monitored by a supervising station, duct smoke detectors shall report only as a supervisory signal and not as a fire alarm. They shall not be used as a substitute for required open area detection.



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Exceptions:

- 1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the building's alarm notification appliances.
- 2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.
- 907.3.2 Delayed egress locks. Where delayed egress locks are installed on means of egress doors in accordance with Section 1010.1.9.7, an automatic smoke or heat detection system shall be installed as required by that section.
- 907.3.3 Elevator emergency operation. Automatic fire detectors installed for elevator emergency operation shall be installed in accordance with the provisions of ASME
- A17.1 and NFPA 72.
- 907.3.4 Wiring. The wiring to the auxiliary devices and equipment used to accomplish the fire safety functions shall be monitored for integrity in accordance with NFPA 72.

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