

8.7.3 Flammable Liquids and Gases.

8.7.3.1 The storage and handling of flammable liquids or gases shall be in accordance with the following applicable standards:

- (1) NFPA 30, *Flammable and Combustible Liquids Code*
- (2) NFPA 54, *National Fuel Gas Code*
- (3) NFPA 58, *Liquefied Petroleum Gas Code*

8.7.3.2* No storage or handling of flammable liquids or gases shall be permitted in any location where such storage would jeopardize egress from the structure, unless otherwise permitted by 8.7.3.1.

8.7.4 Laboratories.

8.7.4.1 Laboratories that use chemicals shall comply with NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*, unless otherwise modified by other provisions of this *Code*.

8.7.4.2 Laboratories in health care occupancies and medical and dental offices shall comply with NFPA 99, *Health Care Facilities Code*.

8.7.5* Hyperbaric Facilities. All occupancies containing hyperbaric facilities shall comply with NFPA 99, *Health Care Facilities Code*, Chapter 20, unless otherwise modified by other provisions of this *Code*.

Chapter 9 Building Service and Fire Protection Equipment

9.1 Utilities.

9.1.1 Gas. Equipment using gas and related gas piping shall be in accordance with NFPA 54, *National Fuel Gas Code*, or NFPA 58, *Liquefied Petroleum Gas Code*, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.1.2 Electrical Systems. Electrical wiring and equipment shall be in accordance with NFPA 70, *National Electrical Code*, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.1.3 Emergency Generators and Standby Power Systems. Where required for compliance with this *Code*, emergency generators and standby power systems shall comply with 9.1.3.1 and 9.1.3.2.

9.1.3.1 Emergency generators and standby power systems shall be installed, tested, and maintained in accordance with NFPA 110, *Standard for Emergency and Standby Power Systems*.

9.1.3.2 New generator controllers shall be monitored by the fire alarm system, where provided, or at an attended location, for the following conditions:

- (1) Generator running
- (2) Generator fault
- (3) Generator switch in nonautomatic position

9.1.4 Stored Electrical Energy Systems. Stored electrical energy systems shall be installed, tested, and maintained in accordance with NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*.

9.2 Heating, Ventilating, and Air-Conditioning.

9.2.1 Air-Conditioning, Heating, Ventilating Ductwork, and Related Equipment. Air-conditioning, heating, ventilating ductwork, and related equipment shall be in accordance with

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, or NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*, as applicable, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.2.2 Ventilating or Heat-Producing Equipment. Ventilating or heat-producing equipment shall be in accordance with NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids*; NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*; NFPA 31, *Standard for the Installation of Oil-Burning Equipment*; NFPA 54, *National Fuel Gas Code*; or NFPA 70, *National Electrical Code*, as applicable, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.2.3 Commercial Cooking Equipment. Commercial cooking equipment shall be in accordance with NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.2.4 Ventilating Systems in Laboratories Using Chemicals. Ventilating systems in laboratories using chemicals shall be in accordance with NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals*, or NFPA 99, *Health Care Facilities Code*, as appropriate.

9.3 Smoke Control.

9.3.1 Where required by the provisions of another section of this *Code*, smoke control systems shall be installed, inspected, tested, and maintained in accordance with NFPA 92, *Standard for Smoke Control Systems*; NFPA 204, *Standard for Smoke and Heat Venting*; or nationally recognized standards, engineering guides, or recommended practices, as approved by the authority having jurisdiction.

9.3.2 The engineer of record shall clearly identify the intent of the system, the design method used, the appropriateness of the method used, and the required means of inspecting, testing, and maintaining the system.

9.3.3 Acceptance testing shall be performed by a special inspector in accordance with Section 9.9.

9.3.4 Smoke Control System Operation.

9.3.4.1 Floor- or zone-dependent smoke control systems shall be automatically activated by sprinkler waterflow or smoke detection systems.

9.3.4.2 Means for manual operation of smoke control systems shall be provided at an approved location.

9.4 Elevators, Escalators, and Conveyors.

9.4.1* General. An elevator, other than an elevator in accordance with 7.2.13, shall not be considered a component in a required means of egress but shall be permitted as a component in an accessible means of egress.

9.4.2 Code Compliance.

9.4.2.1 Except as modified herein, new elevators, escalators, dumbwaiters, and moving walks shall be in accordance with the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

9.4.2.2 Except as modified herein, existing elevators, escalators, dumbwaiters, and moving walks shall be in accordance with the requirements of ASME A17.3, *Safety Code for Existing Elevators and Escalators*.

9.4.2.3 Elevators in accordance with ASME A17.7/CSA B44.7, *Performance-Based Safety Code for Elevators and Escalators*, shall be deemed to comply with ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, or ASME A17.3, *Safety Code for Existing Elevators and Escalators*.

9.4.2.4 For other than elevators used for occupant-controlled evacuation in accordance with Section 7.14 and other than existing elevators, the elevator corridor call station pictograph specified in 2.27.9 of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, shall be provided at each elevator landing.

9.4.3 Fire Fighters' Emergency Operations.

9.4.3.1 All new elevators shall conform to the fire fighters' emergency operations requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

9.4.3.2 All existing elevators having a travel distance of 25 ft (7620 mm) or more above or below the level that best serves the needs of emergency personnel for fire-fighting or rescue purposes shall conform to the fire fighters' emergency operations requirements of ASME A17.3, *Safety Code for Existing Elevators and Escalators*.

9.4.4 Number of Cars. The number of elevator cars permitted in a hoistway shall be in accordance with 8.6.9.4.

9.4.5* Elevator Machine Rooms. Elevator machine rooms that contain solid-state equipment for elevators, other than existing elevators, having a travel distance exceeding 50 ft (15 m) above the level of exit discharge, or exceeding 30 ft (9.1 m) below the level of exit discharge, shall be provided with independent ventilation or air-conditioning systems to maintain temperature during fire fighters' emergency operations for elevator operation (see 9.4.3). The operating temperature shall be established by the elevator equipment manufacturer's specifications. When standby power is connected to the elevator, the machine room ventilation or air-conditioning shall be connected to standby power.

9.4.6 Elevator Testing.

9.4.6.1 Elevators shall be subject to periodic inspections and tests as specified in ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

9.4.6.2 All elevators equipped with fire fighters' emergency operations in accordance with 9.4.3 shall be subject to a monthly operation with a written record of the findings made and kept on the premises as required by ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

9.4.6.3 The elevator inspections and tests required by 9.4.6.1 shall be performed at frequencies complying with one of the following:

- (1) Inspection and test frequencies specified in Appendix N of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*
- (2) Inspection and test frequencies specified by the authority having jurisdiction

9.4.7 Openings to Exit Enclosures. Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure.

9.5 Rubbish Chutes, Incinerators, and Laundry Chutes.

9.5.1 Enclosure.

9.5.1.1 Rubbish chutes and laundry chutes shall be separately enclosed by walls or partitions in accordance with the provisions of Section 8.3.

9.5.1.2 Inlet openings serving chutes shall be protected in accordance with Section 8.3.

9.5.1.3 The doors of chutes specified in 9.5.1.2 shall open only to a room that is designed and used exclusively for accessing the chute opening.

9.5.1.4 The room used for accessing the chute opening shall be separated from other spaces in accordance with Section 8.7.

9.5.1.5 The requirements of 9.5.1.1 through 9.5.1.4 shall not apply where otherwise permitted by the following:

- (1) Existing installations having properly enclosed service chutes and properly installed and maintained service openings shall be permitted to have inlets open to a corridor or normally occupied space.
- (2) Rubbish chutes and laundry chutes shall be permitted to open into rooms not exceeding 400 ft² (37 m²) that are used for storage, provided that the room is protected by automatic sprinklers.

9.5.2 Installation and Maintenance. Rubbish chutes, laundry chutes, and incinerators shall be installed and maintained in accordance with NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*, unless such installations are approved existing installations, which shall be permitted to be continued in service.

9.6 Fire Detection, Alarm, and Communications Systems.

9.6.1* General.

9.6.1.1 The provisions of Section 9.6 shall apply only where specifically required by another section of this Code or where supervision of a new fire sprinkler system or new fire alarm system is required by the Florida Building Code.

9.6.1.2 Fire detection, alarm, and communications systems installed to make use of an alternative permitted by this Code shall be considered required systems and shall meet the provisions of this Code applicable to required systems.

9.6.1.3 A fire alarm system required for life safety shall be installed, tested, and maintained in accordance with the applicable requirements of NFPA 70, *National Electrical Code*, and NFPA 72, *National Fire Alarm and Signaling Code*, unless it is an approved existing installation, which shall be permitted to be continued in use.

9.6.1.4 All systems and components shall be approved for the purpose for which they are installed.

9.6.1.5* To ensure operational integrity, the fire alarm system shall have an approved maintenance and testing program complying with the applicable requirements of NFPA 70, *National Electrical Code*, and NFPA 72, *National Fire Alarm and Signaling Code*.

9.6.1.6* Where a required fire alarm system is out of service for more than 4 hours in a 24-hour period, the authority having jurisdiction shall be notified, and the building shall be evacuated, or an approved fire watch shall be provided for all parties left unprotected by the shutdown until the fire alarm system has been returned to service.

9.6.1.7 For the purposes of this *Code*, a complete fire alarm system shall provide functions for initiation, notification, and control, which shall perform as follows:

- (1) The initiation function provides the input signal to the system.
- (2) The notification function is the means by which the system advises that human action is required in response to a particular condition.
- (3) The control function provides outputs to control building equipment to enhance protection of life.

9.6.1.8 Protection of Fire Alarm System.

9.6.1.8.1* In areas that are not continuously occupied, and unless otherwise permitted by 9.6.1.8.1.1 or 9.6.1.8.1.2, automatic smoke detection shall be installed to provide notification of fire at the following locations:

- (1) Each fire alarm control unit
- (2) Notification appliance circuit power extenders
- (3) Supervising station transmitting equipment

9.6.1.8.1.1 The provisions of 9.6.1.8.1(2) and (3) shall not apply to existing alarm systems.

9.6.1.8.1.2 Where ambient conditions prohibit installation of a smoke detector, a heat detector shall be used.

9.6.2 Signal Initiation.

9.6.2.1 Where required by other sections of this *Code*, actuation of the complete fire alarm system shall be initiated by, but shall not be limited to, any or all of the following means:

- (1) Manual fire alarm initiation
- (2) Automatic detection
- (3) Extinguishing system operation

9.6.2.2 Manual fire alarm boxes shall be used only for fire-protective signaling purposes. Combination fire alarm and guard's tour stations shall be acceptable.

9.6.2.3 A manual fire alarm box shall be provided as follows, unless modified by another section of this *Code*:

- (1) For new alarm system installations, the manual fire alarm box shall be located within 60 in. (1525 mm) of exit doorways.
- (2) For existing alarm system installations, the manual fire alarm box either shall be provided in the natural exit access path near each required exit or within 60 in. (1525 mm) of exit doorways.

9.6.2.4 Manual fire alarm boxes shall be mounted on both sides of grouped openings over 40 ft (12.2 m) in width, and within 60 in. (1525 mm) of each side of the opening.

9.6.2.5* Additional manual fire alarm boxes shall be located so that, on any given floor in any part of the building, no horizontal distance on that floor exceeding 200 ft (61 m) shall need to be traversed to reach a manual fire alarm box.

9.6.2.6* For fire alarm systems using automatic fire detection or waterflow detection devices to initiate the fire alarm system in accordance with Chapters 11 through 43, not less than one manual fire alarm box shall be provided to initiate a fire alarm signal. The manual fire alarm box shall be located where required by the authority having jurisdiction.

9.6.2.7* Each manual fire alarm box on a system shall be accessible, unobstructed, and visible.

9.6.2.8 Where a sprinkler system provides automatic detection and alarm system initiation, it shall be provided with an approved alarm initiation device that operates when the flow of water is equal to or greater than that from a single automatic sprinkler.

9.6.2.9 Where a total (complete) coverage smoke detection system is required by another section of this *Code*, automatic detection of smoke in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, shall be provided in all occupiable areas in environments that are suitable for proper smoke detector operation.

9.6.2.10 Smoke Alarms.

9.6.2.10.1 General.

9.6.2.10.1.1 Where required by another section of this *Code*, single-station and multiple-station smoke alarms shall be in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, unless otherwise provided in 9.6.2.10.1.2, 9.6.2.10.1.3, or 9.6.2.10.1.4.

9.6.2.10.1.2 The installation of smoke alarms in sleeping rooms shall be required where required by Chapters 11 through 43.

9.6.2.10.1.3* The interconnection of smoke alarms shall apply only to new construction as provided in 9.6.2.10.3.

9.6.2.10.1.4 System smoke detectors in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, and arranged to function in the same manner as single-station or multiple-station smoke alarms shall be permitted in lieu of smoke alarms.

9.6.2.10.2 Smoke alarms, other than existing battery-operated smoke alarms as permitted by other sections of this *Code*, shall be powered in accordance with the requirements of *NFPA 72, National Fire Alarm and Signaling Code*.

9.6.2.10.3* In new construction, where two or more smoke alarms are required within a dwelling unit, suite of rooms, or similar area, they shall be arranged so that operation of any smoke alarm shall cause the alarm in all smoke alarms within the dwelling unit, suite of rooms, or similar area to sound, unless otherwise permitted by the following:

- (1) The requirement of 9.6.2.10.3 shall not apply where permitted by another section of this *Code*.
- (2) The requirement of 9.6.2.10.3 shall not apply to configurations that provide equivalent distribution of the alarm signal.

9.6.2.10.4 The alarms shall sound only within an individual dwelling unit, suite of rooms, or similar area and shall not actuate the building fire alarm system, unless otherwise permitted by the authority having jurisdiction. Remote annunciation shall be permitted.

9.6.2.11 Where required by Chapters 11 through 43, an automatic fire detection system shall be provided in hazardous areas for initiation of the signaling system.

9.6.3 Occupant Notification.

9.6.3.1 Occupant notification shall be provided to alert occupants of a fire or other emergency where required by other sections of this *Code*.

9.6.3.2 Occupant notification shall be in accordance with 9.6.3.3 through 9.6.3.10.2, unless otherwise provided in 9.6.3.2.1 through 9.6.3.2.4.

9.6.3.2.1* Elevator lobby, hoistway, and associated machine room smoke detectors used solely for elevator recall, and heat detectors used solely for elevator power shutdown, shall not be required to activate the building evacuation alarm if the power supply and installation wiring to such detectors are monitored by the building fire alarm system, and if the activation of such detectors initiates a supervisory signal at a constantly attended location.

9.6.3.2.2* Smoke detectors used solely for closing dampers or heating, ventilating, and air-conditioning system shutdown shall not be required to activate the building evacuation alarm, provided that the power supply and installation wiring to the detectors are monitored by the building fire alarm system, and the activation of the detectors initiates a supervisory signal at a constantly attended location.

9.6.3.2.3* Smoke detectors located at doors for the exclusive operation of automatic door release shall not be required to activate the building evacuation alarm, provided that the power supply and installation wiring to the detectors are monitored by the building fire alarm system, and the activation of the detectors initiates a supervisory signal at a constantly attended location.

9.6.3.2.4 Detectors in accordance with 22.3.4.3.1(2) and 23.3.4.3.1(2) shall not be required to activate the building evacuation alarm.

9.6.3.3 Where permitted by Chapters 11 through 43, a presignal system shall be permitted where the initial fire alarm signal is automatically transmitted without delay to a municipal fire department, to a fire brigade (if provided), and to an on-site staff person trained to respond to a fire emergency.

9.6.3.4 Where permitted by Chapters 11 through 43, a positive alarm sequence shall be permitted, provided that it is in accordance with *NFPA 72, National Fire Alarm and Signaling Code*.

9.6.3.5 Unless otherwise provided in 9.6.3.5.1 through 9.6.3.5.8, notification signals for occupants to evacuate shall be audible, and visible signals in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, and *ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities*, or other means of notification acceptable to the authority having jurisdiction shall be provided.

9.6.3.5.1 Areas not subject to occupancy by persons who are hearing impaired shall not be required to comply with the provisions for visible signals.

9.6.3.5.2 Visible-only signals shall be provided where specifically permitted in health care occupancies in accordance with the provisions of Chapters 18 and 19.

9.6.3.5.3 Existing alarm systems shall not be required to comply with the provision for visible signals.

9.6.3.5.4 Visible signals shall not be required in lodging or rooming houses in accordance with the provisions of Chapter 26.

9.6.3.5.5 Visible signals shall not be required in exit stair enclosures.

9.6.3.5.6 Visible signals shall not be required in elevator cars.

9.6.3.5.7* Public mode visual notification appliances in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, shall not be required in designated areas as permitted by

Chapters 11 through 43, provided that they are replaced with approved alternative visible means.

9.6.3.5.8* Where visible signals are not required, as permitted by 9.6.3.5.7, documentation of such omission shall be maintained in accordance with 9.7.7.

9.6.3.6 The general evacuation alarm signal shall operate in accordance with one of the methods prescribed by 9.6.3.6.1 through 9.6.3.6.3.

9.6.3.6.1 The general evacuation alarm signal shall operate throughout the entire building.

9.6.3.6.2* Where total evacuation of occupants is impractical due to building configuration, only the occupants in the affected zones shall be notified initially. Provisions shall be made to selectively notify occupants in other zones to afford orderly evacuation of the entire building.

9.6.3.6.3 Where occupants are incapable of evacuating themselves because of age, physical or mental disabilities, or physical restraint, the private operating mode, as described in *NFPA 72, National Fire Alarm and Signaling Code*, shall be permitted to be used. Only the attendants and other personnel required to evacuate occupants from a zone, area, floor, or building shall be required to be notified. The notification shall include means to readily identify the zone, area, floor, or building in need of evacuation.

9.6.3.6.4 The general evacuation signal shall not be required in exit stair enclosures.

9.6.3.6.5 The general evacuation signal shall not be required in elevator cars.

9.6.3.7 Audible alarm notification appliances shall be of such character and so distributed as to be effectively heard above the average ambient sound level that exists under normal conditions of occupancy.

9.6.3.8 Audible alarm notification appliances shall produce signals that are distinctive from audible signals used for other purposes in a given building.

9.6.3.9 Automatically transmitted or live voice evacuation or relocation instructions shall be permitted to be used to notify occupants and shall comply with either 9.6.3.9.1 or 9.6.3.9.2.

9.6.3.9.1 Automatically transmitted or live voice evacuation or relocation instructions shall be in accordance with *NFPA 72, National Fire Alarm and Signaling Code*.

9.6.3.9.2* Where permitted by Chapters 11 through 43, automatically transmitted or live voice announcements shall be permitted to be made via a voice communication or public address system that complies with the following:

- (1) Occupant notification, either live or recorded, shall be initiated at a constantly attended receiving station by personnel trained to respond to an emergency.
- (2) An approved secondary power supply shall be provided for other than existing, previously approved systems.
- (3) The system shall be audible above the expected ambient noise level.
- (4) Emergency announcements shall take precedence over any other use.

9.6.3.10 Unless otherwise permitted by another section of this *Code*, audible and visible fire alarm notification appliances shall comply with either 9.6.3.10.1 or 9.6.3.10.2.

9.6.3.10.1 Audible and visible fire alarm notification appliances shall be used only for fire alarm system or other emergency purposes.

9.6.3.10.2 Emergency voice/alarm communication systems shall be permitted to be used for other purposes, subject to the approval of the authority having jurisdiction, if the fire alarm system takes precedence over all other signals, with the exception of mass notification inputs.

9.6.4 Emergency Forces Notification.

9.6.4.1 Where required by another section of this *Code*, emergency forces notification shall be provided to alert the municipal fire department and fire brigade (if provided) of fire or other emergency.

9.6.4.2 Where fire department notification is required by another section of this *Code*, the fire alarm system shall be arranged to transmit the alarm automatically via any of the following means acceptable to the authority having jurisdiction and shall be in accordance with *NFPA 72, National Fire Alarm and Signaling Code*:

- (1) Auxiliary fire alarm system
- (2) Central station fire alarm system
- (3) Proprietary supervising station fire alarm system
- (4) Remote supervising station fire alarm system

9.6.4.3 For existing installations where none of the means of notification specified in 9.6.4.2(1) through (4) are available, an approved plan for notification of the municipal fire department shall be permitted.

9.6.5 Fire Safety Functions.

9.6.5.1 Fire safety functions shall be installed in accordance with the requirements of *NFPA 72, National Fire Alarm and Signaling Code*.

9.6.5.2 Where required by another section of this *Code*, the following functions shall be actuated:

- (1) Release of hold-open devices for doors or other opening protectives
- (2) Stairwell or elevator shaft pressurization
- (3) Smoke management or smoke control systems
- (4) Unlocking of doors
- (5) Elevator recall and shutdown
- (6) HVAC shutdown

9.6.6 Location of Controls. Operator controls, alarm indicators, and manual communications capability shall be installed at a convenient location acceptable to the authority having jurisdiction.

9.6.7 Annunciation.

9.6.7.1 Where alarm annunciation is required by another section of this *Code*, it shall comply with 9.6.7.2 through 9.6.7.7.

9.6.7.2 Alarm annunciation at the control center shall be by means of audible and visible indicators.

9.6.7.3 For the purposes of alarm annunciation, each floor of the building, other than floors of existing buildings, shall be considered as not less than one zone, unless otherwise permitted by 9.6.7.4.3, 9.6.7.4.4, 9.6.7.4.5, or another section of this *Code*.

9.6.7.4 If a floor area exceeds 22,500 ft² (2090 m²), additional fire alarm zoning shall be provided, and the length of any single fire alarm zone shall not exceed 300 ft (91 m) in any direction, except as provided in 9.6.7.4.1 through 9.6.7.4.5 or as otherwise modified by another section of this *Code*.

9.6.7.4.1 Where permitted by another section of this *Code*, fire alarm zones shall be permitted to exceed 22,500 ft² (2090 m²), and the length of a zone shall be permitted to exceed 300 ft (91 m) in any direction.

9.6.7.4.2 Where the building is protected by an automatic sprinkler system in accordance with 9.7.1.1(1), the area of the fire alarm zone shall be permitted to coincide with the allowable area of the sprinkler system.

9.6.7.4.3 Unless otherwise prohibited elsewhere in this *Code*, where a building not exceeding four stories in height is protected by an automatic sprinkler system in accordance with 9.7.1.1(1), the sprinkler system shall be permitted to be annunciated on the fire alarm system as a single zone.

9.6.7.4.4 Where the building is protected by an automatic sprinkler system in accordance with 9.7.1.1(2), the sprinkler system shall be permitted to be annunciated on the fire alarm system as a single zone.

9.6.7.4.5 Where the building is protected by an automatic sprinkler system in accordance with 9.7.1.1(3), the sprinkler system shall be permitted to be annunciated on the fire alarm system as a single zone.

9.6.7.5 A system trouble signal shall be annunciated at the control center by means of audible and visible indicators.

9.6.7.6 A system supervisory signal shall be annunciated at the control center by means of audible and visible indicators.

9.6.7.7 Where the system serves more than one building, each building shall be annunciated separately.

9.7 Automatic Sprinklers and Other Extinguishing Equipment.

9.7.1 Automatic Sprinklers.

9.7.1.1* Each automatic sprinkler system required by another section of this *Code* shall be in accordance with one of the following:

- (1) *NFPA 13, Standard for the Installation of Sprinkler Systems*
- (2) *NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*
- (3) *NFPA 13R, Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies*

9.7.1.2 Sprinkler piping serving not more than six sprinklers for any isolated hazardous area shall be permitted to be connected directly to a domestic water supply system having a capacity sufficient to provide 0.15 gpm/ft² (6.1 mm/min) throughout the entire enclosed area. An indicating shutoff valve, supervised in accordance with 9.7.2 or *NFPA 13, Standard for the Installation of Sprinkler Systems*, shall be installed in an accessible, visible location between the sprinklers and the connection to the domestic water supply.

9.7.1.3* In areas protected by automatic sprinklers, automatic heat-detection devices required by other sections of this *Code* shall not be required.

9.7.1.4 Automatic sprinkler systems installed to make use of an alternative permitted by this *Code* shall be considered required systems and shall meet the provisions of this *Code* that apply to required systems.

9.7.2 Supervision.

9.7.2.1* Supervisory Signals. Where supervised automatic sprinkler systems are required by another section of this *Code*, supervisory attachments shall be installed and monitored for integrity in accordance with *NFPA 72, National Fire Alarm and Signaling Code*, and a distinctive supervisory signal shall be provided to indicate a condition that would impair the satisfactory operation of the sprinkler system. Supervisory signals shall sound and shall be displayed either at a location within the protected building that is constantly attended by qualified personnel or at an approved, remotely located receiving facility.

9.7.2.2 Alarm Signal Transmission. Where supervision of automatic sprinkler systems is provided in accordance with another provision of this *Code*, waterflow alarms shall be transmitted to an approved, proprietary alarm-receiving facility, a remote station, a central station, or the fire department. Such connection shall be in accordance with 9.6.1.3.

9.7.3 Other Automatic Extinguishing Equipment.

9.7.3.1 In any occupancy where the character of the fuel for fire is such that extinguishment or control of fire is accomplished by a type of automatic extinguishing system in lieu of an automatic sprinkler system, such system shall be installed in accordance with the appropriate standard, as determined in accordance with Table 9.7.3.1.

Table 9.7.3.1 Fire Suppression System Installation Standards

Fire Suppression System	Installation Standard
Low-, medium-, and high-expansion foam systems	NFPA 11, <i>Standard for Low-, Medium-, and High-Expansion Foam</i>
Carbon dioxide systems	NFPA 12, <i>Standard on Carbon Dioxide Extinguishing Systems</i>
Halon 1301 systems	NFPA 12A, <i>Standard on Halon 1301 Fire Extinguishing Systems</i>
Water spray fixed systems	NFPA 15, <i>Standard for Water Spray Fixed Systems for Fire Protection</i>
Deluge foam-water sprinkler systems	NFPA 16, <i>Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems</i>
Dry chemical systems	NFPA 17, <i>Standard for Dry Chemical Extinguishing Systems</i>
Wet chemical systems	NFPA 17A, <i>Standard for Wet Chemical Extinguishing Systems</i>
Water mist systems	NFPA 750, <i>Standard on Water Mist Fire Protection Systems</i>
Clean agent extinguishing systems	NFPA 2001, <i>Standard on Clean Agent Fire Extinguishing Systems</i>

9.7.3.2 If the extinguishing system is installed in lieu of a required, supervised automatic sprinkler system, the activation of the extinguishing system shall activate the building fire alarm system, where provided. The actuation of an extinguishing system that is not installed in lieu of a required, supervised automatic sprinkler system shall be indicated at the building fire alarm system, where provided.

9.7.4 Manual Extinguishing Equipment.

9.7.4.1* Where required by the provisions of another section of this *Code*, portable fire extinguishers shall be selected, installed, inspected, and maintained in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*.

9.7.4.2 Where required by the provisions of another section of this *Code*, standpipe and hose systems shall be provided in accordance with NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*. Where standpipe and hose systems are installed in combination with automatic sprinkler systems, installation shall be in accordance with the appropriate provisions established by NFPA 13, *Standard for the Installation of Sprinkler Systems*, and NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*.

9.7.5 Maintenance and Testing. All automatic sprinkler and standpipe systems required by this *Code* shall be inspected, tested, and maintained in accordance with NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

9.7.6 Sprinkler System Impairments. Sprinkler impairment procedures shall comply with NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

9.7.7 Documentation. All required documentation regarding the design of the fire protection system and the procedures for maintenance, inspection, and testing of the fire protection system shall be maintained at an approved, secured location for the life of the fire protection system.

9.7.8 Record Keeping. Testing and maintenance records required by NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, shall be maintained at an approved, secured location.

9.8 Carbon Monoxide (CO) Detection and Warning Equipment. Where required by another section of this *Code*, carbon monoxide (CO) detection and warning equipment shall be provided in accordance with NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment*.

9.9 Special Inspections and Tests.

9.9.1 Where required by another section of this *Code*, special inspections and tests shall be performed to verify the operation of the fire protection system in its final condition for acceptance by the authority having jurisdiction.

9.9.2 The special inspector's relevant experience in the design, installation, and testing of the fire protection systems being tested shall be documented.

9.9.3 The design documents shall provide the procedures and methods to be used and items subject to special inspections and tests.

9.9.4 The special inspector shall submit an inspection and test report to the authority having jurisdiction and registered design professional in responsible charge.

Chapter 10 Interior Finish, Contents, and Furnishings

10.1 General.

10.1.1 Application. The interior finish, contents, and furnishings provisions set forth in this chapter shall apply to new construction and existing buildings.