

Fire Protection Changes in the 2015 IBC

High-rise Buildings IBC 403



IBC 403.3.2 Water Supply for Fire Pumps

- Fire pumps shall be supplied by connections to no fewer than two water mains located in different streets.
- Buildings more than 420 feet in building height.

403.4.7 Smoke Removal

- Post-fire salvage & overhaul operations
- Buildings shall have natural or mechanical ventilation to remove products of combustion
 - Operable windows not more than 50-ft intervals
 - Air handling units exhaust (1) exchange per 15 minutes
 - Windows that can be cleared by firefighters



403.4.8.2. Fuel Line Protection

- Generator located inside building
- Fuel lines protected with 1-hr fire resistance rating
 - Building protected with fire sprinklers

Fire Protection Systems

901.8 Pump & Riser Room size

- Adequate space for all equipment
 - Manufacturer requirements
 - Working room
 - Maintenance
 - Replacement



902 Definitions

- All definitions moved to Chapter 2
- New
 - Water Mist
 - Commercial Motor Vehicle
 - Electrical Circuit Protection System
 - Private Garage

Fire Sprinkler Systems



903.2. Assembly Occupancies

- 903.2.1.6 Assembly Occupancies on Roof
 - Spelled out in the 2015 edition; however, has been the practice to classify any occupied roof by it's primary use.
 - DSPS is proposing to not include this section.
- 903.2.1.7 Multiple Fire Areas
 - Sprinklers required if multiple assembly occupancies share exiting and the combined occupant load exceeds 300 or more.



903.2.2 Ambulatory Care Occupancies

- Provide sprinklers throughout the floor
- Provide sprinklers throughout all floors below the Ambulatory Care
- Provide sprinklers on all floors between the Ambulatory Care and the nearest level of exit discharge

Upholstered Furniture & Mattresses

- 903.2.4. Group F-1 greater than 2500 square feet
- 903.2.7 Group M Display: area increased to 5000 square feet
- 903.2.9 Group S-1 storage greater than 2500 square feet
 - Proposed to be removed by DSPS



NFPA 13D One- & Two Family Dwellings

- IBC allows the sprinkler system to comply with NFPA 13D installation and design requirements
- 903.2.8.1. Group R-3 Occupancies
 - Occupants are primarily permanent in nature and isn't classified as a R-1, R-2, R-4 or an I occupancy.
- 903.2.8.2 Group R-4 Condition 1
 - 5-16 residents under supervised conditions receiving custodial care.
 - All capable of responding to an emergency situation and evacuate without assistance.
- 903.2.4 Care Facilities
 - 5 or fewer in a single family home

903.2.8.3 Group R-4 Condition #2

- Sprinkler Protection in accordance with NFPA 13R
- PLUS Attic Protection
- No living purpose, storage, or fuel-fired equipment
 - Sprinklers
 - Heat Detection
 - Non-combustible attic
 - Fire-retardant-treated wood



Occupant Evacuation Elevators

- Elevator machine rooms, machinery spaces, control rooms etc for elevators complying with IBC 3008 may omit fire sprinkler coverage.



903.3.8 Limited Area Sprinkler Systems

- Limited to (6) sprinklers per fire area.
 - Proposed by DSPS to increase back up to (20)
- Only Light or Ordinary Group I hazards
- Must be supplied from an automatic wet standpipe system if present
- Plumbing system must be capable of supplying both domestic and sprinkler demands simultaneously.
- Allowed where code requires a specific hazard to be protected not a fire area. Workshop, stages, chutes, incidental uses.

Multi-family Buildings

- Does not include mixed use buildings
- Remaining at 3-Units or more until DSPS revises SPS 362.

Alternative Automatic Fire-Extinguishing Systems

- 904.5 – 904.10 Maintain records of Inspection & Testing
- 904.13 Domestic Cooking in I-2 Condition 1
 - Domestic cooking equipment installed in a facility where the equipment is open to a corridor.
 - Fire-extinguishing system recognized to protect domestic cooking and listed per UL300A is required.

905.3.8 Hose valve at roof top garden

- Provide a hose valve at the roof level where a garden or landscaped roof is located.



906 Portable Fire Extinguishers

- Exception to omit fire extinguishers from most buildings with fire sprinkler systems has been removed.
- Still applicable to Group R-2 occupancies with extinguishers in each unit.
 - Note: Code assumes all Group R-2 occupancies have fire sprinkler systems.



Fire Alarm Systems

907.1.2. Fire Alarm Shop Drawings

- 14 items that are required to be included on fire alarm plans.
- Item #4 Design minimum audibility level for occupant notification.



907.2.3. Group E

- Manual fire alarm is required for occupancies greater than 50.
- Emergency voice evacuation systems for notification is required where the occupant load exceeds 100.



907.2.9.3 College operated R-2

- Automatic smoke detection in apartments for students or staff housing.
 - Common spaces
 - Laundry, mechanical, and storage rooms
 - Interior corridors serving sleeping or dwelling units

Smoke Alarm Placement

- Smoke alarms shall not be installed unless no other option to comply with 907.2.11.
- 907.2.11.3 Near Cooking Appliances
 - Ionization alarm within 20-ft of a cooking appliance
 - Ionization alarm with silence within 10-ft of a cooking appliance
 - Photoelectric within 6-ft of a cooking appliance
- 907.2.11.4 Near Bathrooms
 - Within 3-ft of a bathroom door with a tub or shower

Smoke Detectors equal Smoke Alarms

- 907.2.11.7 Smoke detectors listed with UL268 and connected to a fire alarm system shall be an acceptable alternative to single- or multi-station smoke alarms.
 - Annunciation within the dwelling or sleeping unit only
 - Supervisory signal is generated and monitored

907.2.13.1.1. High-rise Smoke Detection

- In addition to other requirements area smoke detection shall be provided in:
 - Mechanical equipment, electrical, transformer, telephone, or similar rooms without sprinkler protection
 - Each elevator machine room, machinery space, control room/space and elevator lobbies.

907.6.3 Initiating Device Identification

- The fire alarm system shall identify the specific initiating device address, location, type, floor level and status.
- Exceptions:
 - Single story buildings less than 22,500 sqft
 - Systems activated by manual pulls and/or water flow alarms (May have an addition 10 initiating devices.)

Fire Command Centers

- Building Information Card

- Property Name, address, number of floors above and below grade, use & occupancy classifications, estimated population for day, night & weekends.
- Emergency Contact Info: Building Manager & Building Engineer. Work & cell numbers as well as email.
- Type(s) of building construction
- Location of mechanical rooms, building management system, generator, natural gas service, and fuel oil tanks
- Fire protection equipment location and different types
- Hazardous Materials

Questions, Comments, Concerns?