

Huntington Beach Fire Department

Automatic Sprinkler, Underground and Hydrant Systems

Automatic sprinkler requirements in this City Specification are indicated in the following codes:

- California Building Code (CBC)
- Huntington Beach Fire Code (HBFC)
- National Fire Protection Association (NFPA) Standards

REQUIREMENTS

1. GENERAL AUTOMATIC SPRINKLER PROTECTION REQUIREMENTS

1.1 Automatic sprinklers may be required by the Huntington Beach Fire Department to mitigate excessive fire loading/hazards where access for fire apparatus or hose streams are insufficient, any anticipated delay in fire response or building access, or as a substitution for fire-resistive construction (*HBFC Section 901.4.3; CBC Section 504.2 & 506.3*).

1.2 Automatic sprinklers may be required by the Huntington Beach Fire Department to protect hazardous equipment, materials, or select areas within a protected or unprotected building.

EXAMPLES: Spray booths, dust collection systems, laboratory fume hoods, dip tanks, commercial cooking equipment, dumpsters, rubbish/linen chutes, industrial ovens, refrigeration machine units, freezers, equipment handling combustible or flammable materials, combustible storage facilities, etc.

1.3 The following buildings are required to be provided with automatic fire sprinkler systems or other approved automatic fire extinguishing systems:

- All new unprotected buildings, except Group U occupancies, having a total gross floor area exceeding 5,000 ft² (*HBFC Section 903.2*).
- Existing unprotected buildings, except Group U occupancies, where new construction or improvements to the building causes the total gross floor area to exceed 5,000 ft² (*HBFC Section 903.2*).
- New unprotected storage buildings, regardless of the floor area, containing hazardous materials where the aggregate quantity is in excess of the exempt amounts set forth in HBFC Section 2703.1 (*HBFC Section 2407.5*).

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- Existing unprotected buildings, except Group U occupancies, having a change in occupancy classification to an assembly, educational, institutional, hazardous or residential use, where the total gross floor area exceeds 5,000 ft² (*HBFC Section 903.2*).
- When changing the occupancy use of an existing building, the Huntington Beach Fire Department may require the building to be subject to the latest fire code requirements, as necessary, to protect the new occupancy. If the occupancy use of an existing building is changed to a mixed occupancy, the latest fire code requirements may apply to protect the entire building based on the most stringent or hazardous of the mixed occupancies.
- New unprotected buildings having a floor level with an occupant load of 30 or more that is located 55 feet or more above the lowest level of the fire department vehicle access.

EXCEPTIONS: Group U Occupancies, airport control towers, open parking structures, and Group F, Division 2 Occupancies (*HBFC Section 903.2.10.3*).

- Dry cleaning plants with flammable and combustible liquids shall be protected throughout by an automatic fire sprinkler system in accordance with the California Building Code (CBC), or comply with provisions of NFPA 32 in its entirety (*HBFC Section 1208*).
- Existing dry cleaning plants shall comply with NFPA 32.

1.4 The following newly constructed rooms or areas inside protected or unprotected buildings, not including Group R Division 3, are required to be provided with automatic fire sprinkler systems or other approved automatic fire extinguishing systems:

- Rooms where nitrate film is stored (*HBFC Section 903.2.4.3; NFPA 40*).
- Rooms where more than 100 pounds of cellulose nitrate plastics are stored or handled (*HBFC Sections 903.2.4.3, 4204.2; NFPA 42*).
- Rooms or vaults with a capacity not exceeding 1,000 ft³ used for storing combustible fiber as defined in Chapter 2 and Chapter 29 of the HBFC. Combustible fibers are readily ignitable and free burning fibers such as cotton, sisal, henequen, jute, hemp, tow, cocoa fiber, oakum, baled waist, baled waist paper, kapok, hay, straw, excelsior, or other like materials (*HBFC Section 903.2; HBFC Chapter 29*).
- Rooms or areas in which hazardous materials exceeding the aggregate quantity allowed in HBFC Section 2703.1.1 are dispensed or used (*HBFC Section 2704.5, 2705.1.8*).

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- Indoor storage of toxic compressed gas, exceeding the exempt amounts, including gas cabinets, exhausted enclosures, and gas rooms for storage of cylinders, shall be internally protected by an automatic sprinkler system. Alternate fire extinguishing systems shall not be used (*HBFC Section 1803.10.2, 2705.18, 3006.2.2*).
 - Closed systems (gas cabinets, exhausted enclosures, gas rooms, etc.) handling or containing hazardous materials, including but not limited to flammable, oxidizing and/or pyrophoric gasses, shall be protected (*HBFC Section 2705.1.8*).
 - At the top of rubbish and linen chutes and in their terminal rooms. Chutes exceeding through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors per NFPA 13 installation requirements.
 - See NFPA 13, Latest Adopted Edition per HBFC Chapter 45 for details on sprinkler requirements in elevators. NFPA standards and the American Society of Mechanical Engineers (ASME) A17.1 codes apply. For enclosed, noncombustible elevator shafts that do not contain combustible hydraulic fluids, sprinklers installed at the bottom of the hoist way (in the pit) will require protection from accumulated combustible debris. Sprinklers are not required at the tops of noncombustible hoist ways of passenger elevators with car enclosure materials that meet ASME A17.1 requirements.
- 1.5 Existing high-rise building corridor walls, ceilings and opening protection not in compliance with the HBFC may be continued when such buildings are protected with an approved automatic fire sprinkler system throughout.
- 1.6 Control valves for system risers in all buildings shall be accessible to the Huntington Beach Fire Department. This shall be accompanied by the use of Post Indicator or Wall Post Indicator Valves. All sprinklered buildings three (3) or more stories in height shall have floor zone control valves.
- 1.7 Separate systems will be required in adjoining fire divisions of different ownership, building of different ownership, or buildings of different address.
- 1.8 Fire Protection requirements for Carpet Storage shall be designed and installed meeting the Factory Mutual Global Loss Prevention Data Sheet 8-30 requirements.

2. STANDPIPE SYSTEMS PROTECTION REQUIREMENTS

- 2.1 Standpipe systems shall meet the following Huntington Beach Code requirements:
- CBC Section 905 and 405.11
 - HBFC Section 905 and 1413

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- NFPA 14, latest adopted edition per HBFC Chapter 45, Standpipe and Hose Systems.
- 2.2 At least one accessible standard 2 ½ inch x 4 inch fire hydrant is required to be located within 150 feet hose lay distance of automatic sprinkler system Fire Department connections. For buildings greater than 55 feet, the distance shall be 25 feet.
- 2.3 The Fire Department connection shall be located within 5 feet of the curb of a public or private street. Exception can only be made with prior permission as obtained from the Huntington Beach Fire Department. The Fire Department connection shall be installed at a height of 30 inches above finished grade. If an above ground double check assembly is required, the Fire Department connection may be attached directly to the system side.

APPROVED: Original Signed
Patrick McIntosh, Fire Chief

DATE: May 17, 2010