



## COMMERCIAL FIRE SPRINKLER STANDARD

Arcadia Fire Prevention Bureau

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**The fire sprinkler system shall be designed by either a California licensed Fire Protection Engineer, or a California licensed Fire Protection Contractor (C-16). A C-16 contractor may not install a design by another C-16 contractor.**

### 1. PLAN SUBMITTAL REQUIREMENTS

All fire sprinkler plans submittals shall include:

- 3 sets of plans (hard copy) or 1 set (electronic copy, pdf format only)
- Hydraulic calculation for each design area.
- Water flow data (within 6 months) from the water purveyor.
- Manufacturer's material information sheets for the fire sprinkler heads, piping, and horn/strobe device, flow switch and hangers.

Specific fire sprinkler plan submittal requirements:

- Location of project including street address and suite number if applicable.
- Name of sprinkler installer, address, phone number, type of license and license number.
- Complete detailed work sheets and hydraulic calculations as required by NFPA 13 shall be included with all submittals for hydraulically designed sprinkler systems. Calculations shall extend to the point at which the water supply data was determined.
- Sprinkler system design, including hose demand, shall be limited to 90% of the available water supply.
- A fire sprinkler legend including sprinkler symbol, manufacturer, Sprinkler Identification Number (SIN), model, style, K-factor, degree, finish, escutcheon and quantity.
- The occupancy type of each room, ceiling heights and ceiling slopes with direction, slope pitch and ceiling height at the beginning of the slope as applicable.
- Provide seismic bracing calculations on the drawings per NFPA 13. Separate seismic bracing calculations shall be provided for lateral and longitudinal braces and each pipe size. Show details of the seismic bracing and branch line restraints on the drawings.
- Hydraulic plate information shall be included on the drawings.
- A site plan drawn to scale with the following items shown on the plan:
  - All property lines, the outline of all buildings on the parcel, roads adjacent to the parcel, the driveway, a north arrow and the scale the plan is drawn to note.
  - The point of connection to public or private water system and size of any public water main.
  - The point of entry of the water service to the building.
  - The size and type of all pipe and fittings, with the length of each segment of the underground supply line.
  - The location, size and arrangement of all devices on the water supply line, such as a meter, valves, and backflow prevention devices.
  - The location of the exterior horn/strobe.
- A floor plan drawn to scale with the following items shown on the plan:
  - Label all rooms and indicate the use of any room where sprinkler protection is not being provided with exception used.
  - The location of the fire sprinkler riser.
  - All sprinkler locations and spacing dimensioned on the floor plan.
  - Size and type of all pipe and fittings, with length of each segment.
  - The location and type of all pipe hangers and other means of support.
  - The location, size, depth and spacing of exposed beams.

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## 2. SYSTEM COMPONENTS

- All control valves for systems with over 6 heads shall be monitored by an approved monitoring system.
- An approved weather-proof exterior horn/strobe shall be provided facing the address street side.
- In buildings exceeding 3 stories in height, each floor shall have a sectional riser with a UL listed indicating control valve, riser check valve, water flow indicator and main dra
- The FDC(s) shall be installed at apparatus access roads at location(s) approved by AFD. The FDC should be installed on the address side of the building. The FDC shall extend between thirty (30) inches and thirty-six (36) inches above finished grade.
- Vehicle protection shall be provided and approved for FDC's subject to vehicular damage by the installation of approved bollards or a minimum of a six-inch curb.
- FDC(s) and DCDA(s) shall be painted OSHA safety red.
- FDC signage shall be provided identifying the address(es) served.