

**Carlsbad Fire Department
Fire Prevention Bureau**

Guideline for Automatic Fire Sprinkler System in Multi-Family Dwellings NFPA 13R



Approved and Authorized By:

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PURPOSE

The intent of this guideline is to provide information necessary to ensure that the design and installation of automatic sprinkler systems in multi-family dwellings comply with applicable provisions set forth by 2019 California Fire Code (CFC), 2019 California Building Code, and 2016 NFPA 13R as adopted by the State of California, and locally adopted ordinances enforced by the city of Carlsbad, Office of the Fire Marshal (CFD).

SCOPE

This guideline provides specific requirements for the installation of automatic fire sprinkler systems within multi-family dwellings.

SUMBITTAL REQUIREMENTS

1. General Requirements

- A. Submit three (3) sets of legible, scaled plans with one (1) set of current and complete technical data sheets/manufacturer's specifications to Carlsbad Fire Prevention.
- B. Plans shall be submitted for approval to the authority having jurisdiction before any equipment is installed or remodeled.
- C. Plans shall be drawn in accordance with NFPA 13R section 8.1.7.

2. Place following notes verbatim on plan

- A. Scope of work.
- B. One set of approved plans with hydraulic calculations shall be maintained at all times at the construction site.
- C. This automatic fire protection system shall be designed, fabricated, and installed in accordance with 2016 NFPA 13R, the 2019 California Fire Code, and local amendments enforced by the City of Carlsbad.
- D. At least one water pressure gauge shall be installed on the riser assembly.
- E. All valves shall have permanently affixed signs that designate their function.
- F. The water flow switch shall be connected to the service panel on an uninterruptible house circuit.

- G. Valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.
- H. When special application sprinkler heads are utilized, draft curtain requirements and designs shall be illustrated on plans.
- I. All system risers shall be equipped with a Hydraulic Design Information Sign as described in NFPA 13, Section 25.5.
- J. An approved audible device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system.
- K. Underground mains and lead-in connections shall be flushed before connection is made to sprinkler piping.
- L. Flush must be witnessed by an approved party and documentation provided to the City of Carlsbad fire inspector.
- M. Water meter shall be in place prior to final if applicable.
- N. All new systems and additions or modifications to existing piping affecting more than 20 sprinklers shall be hydrostatically tested at 200 psi for two hours or at 50 psi above the system operating pressure, whichever is greater. Hydro testing above operating pressure is not required for relocated drops.
- O. All FDCs, wall PIVs, and exterior/exposed sprinkler riser valves shall be painted OSHA safety red. Other fire sprinkler or supply pipe exposed to the sky or susceptible to wet conditions shall be painted (any color) or otherwise coated to inhibit corrosion. Stainless steel assemblies and piping may be left unpainted provided that any hose connections, valves, or other components operated by the fire department are painted red.
- P. All sprinkler piping shall remain uncovered until inspected by the City of Carlsbad Inspector.
- Q. Deviations from approved plans shall require approval of the City of Carlsbad.
- R. Upon completion of work, contractors must provide the material and test certificate(s) for aboveground piping.
- S. Access doors for automatic sprinkler system riser rooms and fire pump rooms shall be labeled with an approved sign. The lettering shall be in contrasting color to the background. Letters shall have a minimum height of 2 inches (51mm) with a minimum stroke of 3/8 inch (10 mm) per CFC 901.4.6.2
- T. Call Inspection Scheduling at (442) 339-2660 to schedule all inspections at least 48 hours in advance.

