



Sacramento Metropolitan Fire District

Community Risk Reduction Division www.metrofire.ca.gov

10545 Armstrong Ave., Suite 310 • Mather, CA 95655 • Phone (916) 859-4330 • Fax (916) 859-3717

SACRAMENTO METROPOLITAN FIRE DISTRICT			
FIRE PREVENTION STANDARD			
STANDARD TITLE:	Installation of Residential Sprinkler Systems		
STANDARD NUMBER:	21	EFFECTIVE DATE:	09/06/12
		REVISION DATE:	04/07/26

SCOPE

This standard is for the design and installation of residential fire sprinkler systems in One- and Two-Family Dwellings including Mobile and Manufactured Homes and is pursuant to the 2025 California Fire Code, the 2025 California Residential Code, Local Ordinance and the 2025 edition of NFPA 13D and 13R.

SPECIFICATIONS

GENERAL

1. A C-16 license holder shall install all sprinkler systems. The licensed company or a registered engineer that is licensed and authorized for fire protection shall prepare plans. License numbers shall be shown on all copies of plans. (NFPA 13D 4.5)

Exception: 13D sprinkler systems designed and installed in accordance with owner-builder provisions of the California Business and Professions Code, Section 7026.12. A signed copy of the Home Owner Exemption Letter (attachment 1) shall be provided upon plan submittal.

2. Plans for residential fire sprinkler systems for dwelling units requiring Certificate of Release will not be accepted before certificate of release plans are submitted and approved.
3. Residential Care Facilities for the Elderly (RCFE) with more than 6 clients shall be protected with NFPA 13 or NFPA 13R systems. (CFC 903.2.8)
4. Hydrostatic Test Requirements:
 - a. NFPA 13D systems utilizing CPVC piping shall be hydrostatically tested for leakage at a minimum pressure of 150 PSI, for a period of 30 minutes. Other piping systems shall be tested in accordance with the manufacturer specifications. (NFPA 13D 5.2)

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- b. NFPA 13R systems having more than 20 sprinklers shall be hydrostatically tested for leakage at a minimum pressure of 200 PSI for 2 hours. (NFPA 13R 10.2.2.1 in accordance with NFPA 13 6.11.2.2.1)
- 5. In configurations not meeting section 10.2.1 and 10.2.3 of NFPA 13D, the minimum number of design sprinklers shall be 3. (NFPA 13D 10.2.4)
- 6. When a new code cycle begins, the fire sprinkler master plans for a development project must be resubmitted and reviewed to confirm they meet the latest building code and NFPA standards.

Exception: Master plans are valid 10 years from the date of the last approval per AB 130.

WATER SUPPLY

- 1. Single family homes and accessory dwelling units on the same parcel may be served from the same source provided the following:
 - a. Both the domestic and fire sprinkler system shall be shut off together. The fire sprinkler system shall not be able to be isolated (NFPA 13D 7.1.1)
 - b. Each dwelling unit shall have a separate control valve from the other units that is accessible by each unit (NFPA13D 6.2.3)
- 2. A system supplied by a well shall have a letter (well report) from the civil engineer or well contractor indicating that the well and tank have the capacity to provide the sprinkler demand (volume and pressure) for a minimum 10-minute duration shall be provided. (NFPA13D 6.1.2)
- 3. Underground supply piping shall be visually inspected, tested for leakage, and flushed in accordance with the manufacturer specifications, prior to backfilling. (NFPA13D 4.3)

Exception: Underground supply piping inspected and tested by the County of Sacramento, City of Rancho Cordova, or City of Citrus Heights Building Departments.

- 4. Sprinkler systems in mobile and manufactured homes are the responsibility of the California Department of Housing and Community Development and are subject to the following:

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- a. The contractor or owner of the manufactured home shall provide written verification that the site water supply is capable of providing the minimum flow (gallons per minute) and pressure (pounds per square inch), at the base of the fire sprinkler system riser, as indicated on the Fire Sprinkler Information Label, located in the water heater compartment. This documentation must be provided prior to the issuing of the Certificate of Release by the Fire District, which is required to obtain the building permit from the building code official.
- b. The seller of the mobile or manufactured home shall provide written verification that the system has been installed, tested and approved by the California Department of Housing and Community Development. This documentation must be provided prior to the final inspection and sign off by the Sacramento Metropolitan Fire District and the building code official.

PIPING CONFIGURATION

- 1. The piping configuration shall be designed to circulate water throughout and between each floor level by looping the piping system and maintaining minimal dead-end branch lines with a maximum length of 3 feet.

- Exception 1: Systems where a reduced pressure principle backflow assembly is required by the water purveyor.
- Exception 2: Systems supplied by a private well.
- Exception 3: Multi-purpose piping systems.

- 2. When required by the water purveyor, all systems shall be equipped with a modified passive purge design. The piping configuration shall provide one ½-inch outlet, connected to each water closet to facilitate water circulation. The piping shall be CPVC to clearly identify that the water closet is connected to the sprinkler system.

- Exception 1: Systems where a reduced pressure principle backflow assembly is required by the water purveyor.
- Exception 2: Systems supplied by a private well.
- Exception 3: Multi-purpose piping systems.

Attachment 1 – Home Owner Exemption Letter



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HOMEOWNER EXEMPTION LETTER

This fire sprinkler system is designed and will be installed in accordance with the owner-builder provisions of the California Business and Professions Code, Section 7026.12, which states:

The installation of a fire protection system, excluding an electrical alarm system, shall be performed only by a contractor holding a fire protection contractor classification as defined in the regulations of the board or by an owner-builder of an owner-occupied, single-family dwelling, if not more than two single-family dwellings on the same parcel are constructed within one year, plans are submitted to and approved by the city, county, or city and county authority, and the city, county, or city and county authority inspects and approves the installation.

Homeowner's Signature: _____

Homeowner's Printed Name: _____

Date: _____