



RESIDENTIAL FIRE SPRINKLER REQUIREMENTS

DEPARTMENT OF PLANNING AND BUILDING SERVICES

707 Nevada Street, Suite 5 · Susanville, CA 96130-3912

(530) 251-8269 · (530) 251-8373 (fax)

www.co.lassen.ca.us

California Building Code (CBC) R313 – As of January 1, 2011, an automatic residential fire sprinkler system shall be installed in one- and two-family dwellings.

This handout is not intended to cover all circumstances, conditions or regulations

Since January 1, 2011, the California Residential Code has required that sprinkler systems be installed in all new homes constructed in the State. This handout is intended to summarize the requirements for submittal of plans and inspection of residential sprinkler systems pursuant to **California Residential Code (CBC), Section R313**.

System designs shall be submitted with the house plans unless temporarily deferred upon approval of the Building Official. A Fire Protection Contractor (C-16), licensed by the State of California or a properly licensed California Professional (Registered Civil, Mechanical or Fire Protection Engineer), may design the system. The Design Professional in Responsible Charge shall specify on the plans the type of system to be installed (i.e., Combination, Stand alone, Anti-Freeze, or other approved type); see Section 3, Design Requirements, below.

1. Submittal Requirements (see Section 4 for detailed checklist):

- a. For dwellings served by wells, provide the verified well log with tested GPM output.
- b. Two (2) sets of plans.
- c. Two (2) sets of hydraulic calculations.
- d. Two (2) sets of manufacturer's materials information sheets for sprinkler heads, piping, hangers, valves, gauges, and flow switch.

2. Approval of Plans and Inspections:

- a. The approved permit application entitles the applicant to **one (1)** hydrostatic/overhead piping inspection prior to installing insulation and **one (1)** final fire sprinkler inspection/performance test.
- b. It is the installer's responsibility to perform sufficient pre-inspection testing to ensure operational integrity and reliability of the system in order to avoid delays at the time of inspection.
- c. If an additional inspection is required, the current \$52 inspection fee will apply.

3. Design Requirements:

- a. **Freeze Protection** must be adequately shown on the plans (including heat sources) which will require coordination between the Design Professional in Responsible Charge and the Fire Sprinkler Contractor/Designer. Statements such as "Freeze Protection by Others" are not acceptable and will result in the plans being returned as incomplete.
- b. Sprinkler Systems shall be designed per National Fire Protection Act (**NFPA 13D**) or **C.R.C. Section R313.3**. (Note: Section R313.3 shall apply to stand alone and multi-purpose wet pipe sprinkler systems that DO NOT use anti-freeze. A multi-purpose system supplies domestic water to both fire sprinklers and plumbing fixtures).
- c. Freeze proofing shall be designed pursuant to the California Plumbing Code. Anti-Freeze systems shall be designed and installed pursuant to **NFPA 13D**.

4. **Plan Submittal Requirement Checklist:** A typical residential fire sprinkler plans submittal shall include the following: **(Check off completed items. Failure to provide the required information will result in the delay of your plan review.)**

- Provide a site plan, drawn to scale, showing the underground pipe size, location, water meter size, and connection point to the well or Service District main. Also, for well, tank storage, and pump systems, show equipment location, access, 120/220 volt receptacles, and freeze protection.
- Note any sloped, coffered or other non-conventional ceilings. Indicate pitch for sloped ceilings and rise or fall of coffered or dropped ceiling areas.
- Note any exposed beams, lighting fixtures, ceiling fans or other ceiling obstructions to the sprinkler heads. Indicate beam sizes.
- Provide scaled cross sections for any non-conventionally framed area(s) of the structure showing sprinkler system components and building construction.
- Indicate on the plans all heat sources.
- Indicate the type of piping being used in all areas (system piping, riser piping, and underground piping).
- Provide all pipe sizes and lengths (system piping, riser piping, and underground piping).
- Show any attic space areas with heat producing appliances and provide sprinkler coverage for those areas.
- Specify the manufacturer of the sprinkler head, orifice size, and temperature rating.
- Provide hanger details showing all components and attachment devices.
- Provide a system riser detail showing all valves and devices (no shut-off devices shall be installed on the system side).
- Show the location of the exterior all-weather horn device when provided.
- **C.R.C. R313.3.2.3** states, "Piping shall be protected from freezing as required by the California Plumbing Code.... Where fire sprinkler piping cannot be adequately protected against freezing, the system shall be designed and installed in accordance with **NFPA 13D.**" Show in **detail** how freeze protection is provided.

CALIFORNIA LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Contractor Name: _____ License Class and No. _____

Address: _____ Phone: _____

(City/St/Zip) _____ Date: _____

Contractor Signature _____

Staff verification of:

Lic.: _____

BP _____

**OWNER-BUILDER FIRE SPRINKLER
HOMEOWNER EXEMPTION**

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 and the Contractors License Board which states:

“7026.12. 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.”

Permit Number: _____

Project Address: _____

City/Zip: _____

OWNER-BUILDER DECLARATION:

I hereby affirm under penalty of perjury that I am the owner of the property and am in compliance with Business and Professions Code, Section 7026.12.

Printed Name: _____

Signature: _____