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2011 Residential Automatic Fire Sprinkler

Effective January 1, 2011, automatic residential fire sprinklers system shall be installed in all one and two family dwellings based on 2010 CA Residential Code (Title 24, Part 2.5)

Questions & Answers

1) Will I need residential fire sprinklers in my new house?

Automatic fire sprinkler system shall be installed in all new (2011) one and two-family dwellings and townhouses.

Do manufactured homes require residential fire sprinklers?

Yes, an automatic fire sprinkler system is required.

Link: [Mobile Home Units Fire Sprinkler Information](#)

2) Will I need residential fire sprinklers for the remodel or addition to my house?

- a. An automatic fire sprinkler system shall not be required for additions or alteration to existing buildings that are not already provided with an automatic residential sprinkler system.

3) What are the new setbacks? See NFPA 13D Table R302.1 (attached)

4) Who can design and install residential fire sprinkler systems?

- a. C-16 license contractor
- b. C-47 General Manufactured Housing contractor
- c. Owner Occupied/Owner Builder (1 per calendar year)

5) Water Source requirements:

- a. **Water Company** – Consult with the local Water Company regarding the requirements and specification.
- b. **Rural (no water purveyor)** – For stored fire protection water application, the latest edition of NFPA 1142 shall be used. Refer to Riverside County Fire Department, Fire Protection Planning Standard #06-07.

6) Can I use a multi-purpose system?

Contact the local Building & Safety Department for details regarding the use of this system. If allowed – the system shall have a Ford Fire Service setter (LTBA 443-44W-AWT-Q-NL) or equivalent.

7) What maintenance do residential fire sprinklers require?

Maintenance for your residential fire sprinkler system is outlined in Chapter 4 of NFPA 13D:

4.1 The installer shall provide the owner/occupancy instruction on inspections, testing and maintaining the system.

4.1.2 Operating or damaged sprinkler shall be replaced with sprinklers having the same performance characteristics as the original equipment.

4.1.3 Any sprinklers that have been painted outside the factory shall be replaced with a new listed sprinkler

4.1.4 Antifreeze Systems – Before freezing weather each year, the following procedure shall be performed:

- (1) Empty solution in the entire antifreeze system into a convenient container.
- (2) Bring solution to the proper specific gravity by adding concentrated liquid as

- needed, or prepare a new solution in accordance with 8.3.3.
(3) Refill system with the new or remixed solution.

Note: On October 19, 2010, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending sections of the California Code of Regulations (CCR), Title 24, Part 2, 2.5, and 9 (California Building Code, California Residential Building Code, and California Fire Code). The approved emergency regulations addresses the use of antifreeze solutions in concentrations not to exceed 40% propylene glycol and concentrations of glycerin not exceeding 50% in residential occupancies and other dwelling units for the protection of sprinkler pipe in freezing conditions. This change is effective on January 1, 2011.

Plan Check Standard

Submittal Information:

Submit a completed Plan Review form and three (3) sets of drawings/plans and calculations for review. Plan checks are processed in the order in which they are received. The actual turn around time is relative to the requirements of the project and the completeness of the submittal.

The Fire Department Deposit Based fee is **\$614.00** for review of plans. Additional money may be due prior to or after the project is final.

Check or Money Orders are to be made payable to: **Riverside County Fire Department**. *We do not accept cash or credit cards*

Plan Information:

- Plan should be drawn to scale or full dimensions
- Name of owners, builder or responsible party
- Location, including street address, and vicinity map
- Production homes: lot or parcel number
- Point of compass
- Number of, manufacturer, sprinkler identification number (SIN), response type, temperature rating and k-factor of all sprinklers
- Underground/site piping including all of the following that apply:
 - Point of connection to public water system
 - Service point of entry to dwelling
- Alternative water supply components such as well, pump, and tank
- Size and type of all pipe and fittings, with length of each segment and actual inside diameter used for hydraulic calculations
- Location and arrangement of all devices such as meter and backflow
- On combined laterals serving fire sprinklers and domestic water, location of fire service take-off, master shut off valve, and point of added domestic flow allowance.
- Size/location of public water main at point of connection
- Flow test/pressure data used to hydraulic calculation, including location of test, elevation relative to finished floor of service point of entry and source of information
- Reference nodes matching hydraulic calculations
- Building system piping plan including all of the following that apply:
 - Point of connection to service pipe
 - Dimensioned location and spacing criteria for all sprinklers
 - Size and type of all pipe and fittings, with length of each segment and actual inside diameter used for hydraulic calculations
 - Location and type of hangers and means of support
 - Location and arrangement of valves and devices such as drain/test, pressure relief valve, alarm connection, appliance bypass on MP systems, etc
 - Full height building section
 - Reference nodes matching hydraulic calculations

- Means of freeze protection, as required
- Name, address and license number of designer or installing design/build contractor
- Materials Data Sheets
 - Fire Sprinklers
 - Pipe and fittings
 - Hangers, mean of support
 - Water supply components devices such as water meter, backflow, etc.

Field Inspections:

The inspection shall include an underground visual, overhead visual and a sprinkler final. The following items shall be verified upon final completion of the system.

- Sprinklers are not painted, damaged or otherwise hindered from operation.
- Where a pump is required to provide water to the system, the pump starts automatically upon water demand.
- Pressure-reducing valves, water softeners, water filters or other impairment to water flow that were not part of the original design have not been installed.
- The sign or valve tag is installed and the owner's manual for the system is present.

Call 951-955-5282 to schedule a field inspection. Allow 2-3 working days' advance notice when requesting an inspection. The permit card and an approved set of plans must be kept at the project site until the permit is finalized.