



PLANNING AND BUILDING DEPARTMENT

BUILDING DIVISION

[Building Division- El Dorado County](#)

RESIDENTIAL FIRE SPRINKLER SYSTEM PLAN SUBMITTAL REQUIREMENTS

The following items are all required for a submittal to be deemed complete

Design Requirements

- Residential Fire Sprinkler Systems shall be designed in accordance with 2010 CRC Section R313 or NFPA 13D.
- Fire sprinkler systems shall be designed by a California licensed Fire Protection Contractor (C-16), or by a California licensed Professional Engineer (Civil, Mechanical or Fire Protection).
- Design shall incorporate design amendments as adopted by area Fire Service District.
- Antifreeze Determination of use Form (areas where a wet pipe system cannot be maintained above 40⁰F. You can find your minimum anticipated temperature at <http://www.wunderground.com/climate/extremes.asp>
- Fire Flow & static pressure statement from water purveyor or fire district.

Plan Submittal Requirements

- All Residential Fire Sprinkler Systems submittals shall include two copies of the following:
 - Manufacturer's material information sheets for the sprinkler heads, piping, alarm device, flow switch and pipe hangers.
 - Hydraulic calculations that comply with the calculation procedure and format of the 2010 CRC, Section 313.3.6.2.2, or that of the 2010 NFPA 13D, Section 8.4.10.2. Include water flow data and source of information.
 - A Site Plan drawn to scale with the following items shown on the plan:
 - All property lines, the outline of all buildings on the lot, roads adjacent to the lot, 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.
 - Any alternate water supply components such as well, pump and any tanks.
 - The point of entry of the water service to the dwelling.
 - 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 meter, valves and backflow devices.
 - Reference points corresponding to matching locations in the hydraulic calculations.



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- A Floor Plan/Fire Sprinkler 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.
 - The location of the sprinkler system riser.
 - All sprinkler locations and spacing dimensioned on the floor plan, including the garage.
 - Size and type of all pipe and fittings, with length of each segment.
- A Floor Plan/Fire Sprinkler Plan continued:
 - The location and type of all pipe hangers and other means of support.
 - The location of all heat producing devices with their heat zones noted on the plan.
 - The location of all ceiling electrical fixtures. Indicate the size and depth of all fixtures not flush with the ceiling.
 - The location, size, depth and spacing of any exposed beams.
 - Provide ceiling elevations, or cross sections, to indicate any sloped, beamed, or special shaped ceilings.
 - The location of the alarm bell.
 - Specify the method of freeze protection for the piping system when it is determined to be necessary by the system designer.
 - Reference points corresponding to matching locations in the hydraulic calculations.
- A Fire Sprinkler Riser detail showing the following:
 - The location of main control valve for the domestic and fire sprinkler systems.
 - The location of the domestic tie-in showing the domestic control valve.
 - The location of the water flow switch, check valve, pressure gauges, and test/drain assembly.
 - A listed exterior water flow alarm and interior alarm interconnected with all smoke detectors.
 - The location of all transitions between piping materials.
 - Reference points corresponding to matching locations in the hydraulic calculations.

RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL BE INSTALLED BY A CALIFORNIA LICENSED FIRE PROTECTION CONTRACTOR (C-16) OR AN OWNER BUILDER OF AN OWNER-OCCUPIED SINGLE FAMILY DWELLING.