



# DEPARTMENT OF RESOURCE MANAGEMENT

## Building Division

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### RESIDENTIAL FIRE SPRINKLER SUBMITTAL 2022 CRC

(Rev: 01-03-23)

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

Systems in the CAL FIRE/County Fire area will be submitted at the permit center. A C-16 Licensed Contractors can design and install the system or a properly licensed California Professional may design the system. Owner/Builders may install their own systems after completing the supplemental Owner-Builder Fire Sprinkler application and be knowledgeable and trained in accordance with NFPA 13D Section 4.8. The County will not provide training, design, or installation assistance.

#### **SUBMITTAL CHECKLIST**

- 3 Sets of plans – building plans, dimensions, rooms identified, cross sections, well or meter location, supply pressure and site elevation changes. Freeze protection of all pipe and heads in unconditioned space must be detailed unless an antifreeze system is installed.
- 3 sets of listing and installation packages for all components including piping

#### **REQUIRED INSPECTIONS: R313.3.8**

1. Rough piping including but not limited to the building, riser, and supply line from the meter or well and head type and location. In addition to the hydrostatic test, a flow or barrel test will be performed in the presence of the inspector. If the system is supplied by a pump, the pump must be set at the lowest pressure setting.
2. Final Inspections prior to any occupancy include but are not limited to having the Fire sprinkler manual on site and permanent signage installed as required by R313.3.7, final head locations, heads not painted and if a pump is used that it starts automatically.

#### **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 #: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Contractor Signature \_\_\_\_\_

#### **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."

***OWNER/BUILDER DECLARATION:*** I hereby affirm under penalty of perjury that I am the owner of the property and am in compliance Business and Professions Code, Section 7026.12.

Printed Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

***Can I defer the Fire Sprinkler Submittal?***

- Plans may be deferred but the review and approval is required prior to a rough frame inspection. The deferred items must be clearly listed on the cover sheet of the plans.
- Allow adequate lead time for the plan review and approval process.
- Show the riser location on the foundation plans. If you defer the system you may, at your own risk, install a minimum 1.5" line for the combination building/fire supply or a 2" sleeve. If your ultimate design requires a larger size, then you will be required to install it to the approved plans.

***Will my well work?***

- Yes, but it may require additional storage and/or pumps depending on its characteristics.
- The well should be in and tested to properly design the system.

**OFF-GRID HOMES:**

- Your system must be able to automatically start the pump upon system water demand which means an automatic back-up generator in most cases.

**COMMON DESIGN ISSUES:**

- No shut-off valve is allowed that will isolate the fire system. R313.3.3.2
- Piping must be listed for use in Residential Fire Sprinkler System. R313.3.3
- Where the supply from the meter or well also supplies the domestic water, it can be any material approved and tracer in accordance with the California Plumbing Code. Non-metallic building supply pipe must have a minimum #18 Blue tracer wire installed with the pipe.
- Piping must be sleeved where it passes through concrete.
- Provide a system drain. R313.3.3.4
- Provide Freeze protection of the pipe. In areas not heated, provide additional protection or dry-sidewall or dry-pendent sprinklers extending from a non-freezing area or design and install an antifreeze system in accordance with NFPA 13D R313.3.2.3 and the Office of the State Fire Marshall.
- Attached garages must be sprinklered. To be considered detached provide fire separation distances in accordance with Table R302.1(1) and Table R302.1(2) of the CRC.
- All areas of the dwelling spaces must be sprinklered. R313.3 except: Non-habitable attics or crawlspaces with a fuel burning appliance require only a head only above the appliance, clothes closets, linen closets, and pantries not exceeding 24 S.F. and bathrooms not more than 55 S.F.
- The system serving both domestic and fire requires additional 5 PSI. R313.3.5
- It is recommended that all systems have an alarm and flow switch installed and a check valve installed or other method to prevent stagnate water.
- Heads cannot be painted. If the heads are painted, they must be replaced with new heads.