



## **Fire District Dwelling Construction Requirements**

Includes Sacramento County Fire Marshals Association Standard for  
Residential Sprinklers

**City of Rancho Cordova  
Building & Safety Department  
2729 Prospect Park Dr.  
Rancho Cordova, CA 95670**

**Thomas L. Trimberger, Chief Building Official  
[www.cityofranhocordova.org](http://www.cityofranhocordova.org)**

## **Fire District Permit Release.**

A “Fire District Permit Release” shall be required before a building permit can be issued for the following structures:

Single family dwellings, duplexes, and modular homes that:

- Exceed 3,600 square feet in area, or
- Are constructed where no public water is available, or
- Have the furthest point of the habitable structure more than 150 feet from a public paved road, or
- Undergo an alteration/addition that results in an increase in area of 50 percent or more, and the final total area is over 3,600 square feet.

**Note:** Mobile homes and manufactured housing of any size require fire district permit release.

### **Fire Flow.**

An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into or within the jurisdiction. (see chart below.) When any portion of the facility or building protected is in excess of 150 feet from a water supply on a public street, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and water mains capable of supplying the required fire flow shall be provided when required by the chief.

<b>Fire Flow Requirements – Residential</b>	
<b>Fire Area (square feet)</b>	<b>Fire Flow (gallons per minute)</b>
0-3,600	1,000
3,601-4,800	1,750
4,801-6,200	2,000
6,201-7,700	2,250
7,701-9,400	2,500
9,401-11,300	2,750
11,301-13,400	3,000
Fire flow may be reduced by 50% when an approved residential fire sprinkler system is installed.	
Ref: California Fire Code, Div. III, Appendix A (City of Rancho Cordova Code 1135, Chapter 17)	

***Exception:***

Group R Division 3 Occupancies (single family, duplex, mobile homes, manufactured housing, or modular home) provided with an automatic fire sprinkler system approved by the adopted NFPA Standard in areas not provided with a public water supply.

**Additions.**

Additions to existing dwellings can create problems (acceptable fire flow and access) that are not normally covered unless the dwelling is considered “new”.

The need to evaluate an addition is triggered when the total square footage of the dwelling, including any attached garage, carport, or covered patio, is increased 50 percent or more and the final total area is over 3,600 square feet.

See Fire District Release section above for additional conditions that trigger the need to evaluate.

**CONSULT THE SACRAMENTO METROPOLITAN FIRE DISTRICT EARLY IN THE PLANNING STAGE OF YOUR PROJECT.**

The items that will be reviewed are: access, roofing, and fire flow. Many times, the existing access is not acceptable and will have to be improved per the Road Construction Requirements. By increasing the size of the dwelling, fire flow requirements change substantially. Additionally, when the dwelling is reroofed or new roofing is installed, the roofing materials shall conform to City roofing requirements. The design of the fire sprinklers must be submitted to the Sacramento Metropolitan Fire District and approved prior to Building & Safety Department issuing the building permit. The Sacramento Metropolitan Fire District will provide you with a Fire District Permit Release. In addition, the fire sprinkler system installation must be inspected and approved by the Sacramento Metropolitan Fire District prior to the Building & Safety Department performing the frame inspection. See page 1 for Fire District Permit Release section.

**Helpful Hint:**

**It is strongly recommended that applicants have the designs of their fire sprinkler system and house plumbing coordinated with their pump and well contractor to ensure sufficient water capacity for all needs.**

**Roofing Requirements:**

All buildings constructed in the City require a minimum Class C roofing system. This is a requirement for new construction, additions, alterations to existing roofs, and for re-roofing. Typical examples of Class C Roofing systems are:

1. Approved pressure treated shakes/shingles applied per the manufacturer's listing.
2. Tile over solid sheathing.
3. Class C rated composition shingles over solid sheathing,
4. Approved and listed Class "C" assembly.

**Special Roofing Considerations.**

To comply with Government Code Section 51175, etc., otherwise known as the Bates Bill, the Board of Supervisors enacted Ordinance No. 1057. This ordinance is effective January 1, 1997, and applies principally to structures near the American River Parkway. This ordinance requires a Class A rating, as defined in the 1997 Edition of the Uniform Building Code, for roof coverings of new structures or reroofing of an existing structure when 50 percent of the total roof area is replaced within a one-year period. This ordinance was adopted by the City of Rancho Cordova.

The parcels that are affected are primarily located adjacent to the American River in the communities of Orangevale, Fair Oaks, and Carmichael.

Contact the Sacramento Metropolitan Fire District or the Building & Safety Department to determine whether or not your parcel is affected. The typical examples of Class A roofing systems are:

1. Tile over Solid Sheathing.
2. Class A rated composition shingles over solid sheathing
3. Approved and listed Class "A" assembly.

Repairs such as local patching to fix leaks is not considered a reroof. If there are any questions about whether you are doing a repair or a reroof, call the Building & Safety Department staff at 942-0223.

**Liquefied Petroleum Gas:**

Approval from the Sacramento Metropolitan Fire District is required prior to installation when LPG is used as the fuel supply for heating, cooking, etc. when the tank is in excess of 125 gallons water capacity.

## Fire Vehicle Access:

Private access road construction that will be required by the Rancho Cordova City Zoning Code are:

<b>Road Construction Requirements</b>		
Type of Lot	One or Two Dwellings	More than Two Dwellings
Any residential Lot:		
Width, feet	16	20
Asphalt, Inches	2	2
Aggregate Base, inches	4	4
Agriculture-Residential Lots (AR10 or less):		
Width, feet	16	20
Aggregate Base, inches	4 or equiv.	4 or equiv.
Agricultural Lots:	Improvements will be determined on a case by case basis by the fire protection district. Consult the appropriate fire protection district for their specific requirements.	

The above requirements apply to both the private access road and the driveway. The driveway must extend to the garage.

In addition, dead-end private access roads longer than 150 feet must provide a turnaround for fire service vehicles. Contact the Sacramento Metropolitan Fire District for their requirements.

### Helpful Hint:

**For a longer lasting road, it is suggested that 6 inches to 8 inches of “pit run” be used as a temporary road during construction, then finished off with 4 inches of aggregate base prior to final.**

New dwellings or additions as described under the Fire Flow section served by a private access road require approval from the Sacramento Metropolitan Fire District for the fire vehicle access prior to the Building & Safety Department issuing the building permit. The Sacramento Metropolitan Fire District will provide you with a Fire District Permit Release. A copy of the release is attached for your information. In addition to fire vehicle access needs, there may be conditions of approval associated with the parcel map that pertain to road construction. Inquire at Community Development’s public counter, and ask staff to check the street improvement requirements on the map.

Of the new dwelling or addition is at the end of or along a private access road with several existing houses and the existing road does not meet the above requirements, the road to your dwelling must be upgraded to provide adequate access. It is recommended that you review your proposed plans with the Planning Department and the Sacramento Metropolitan Fire District before making any financial commitment.

### Private Driveways:

A private driveway runs from the public or private road to the dwelling. Private driveway construction requirements are the same as those for private roads serving two or less dwellings. As a minimum, it must extend to the garage. When the furthest point of the new dwelling is more than 150 feet from the road or driveway, the Sacramento Metropolitan Fire District must also approve the driveway before the building permit can be issued.

### Road Signs and House Numbers:

To facilitate location in an emergency and avoid delays in response, all roads and the dwellings served by them must be designated by name and/or number on the sign. These signs must be clearly visible from the main traveled roadway. Every dwelling needs an approved marker located with respect to the nearest public

highway, street, or road servicing it. This marker must be clearly visible at all times to an approaching vehicle for a distance of not less than 100 feet. Normally, the approved marker shall be a metal sign on a metal post or other acceptable noncombustible support. As a minimum, it may be a metal sign on a 4” by 4” pressure treated wood post.

**Helpful Hint:**

**Temporary road signs are acceptable during construction, although the permanent sign shall be installed prior to final.**

Address numbers need to be installed on the dwelling. The numbers shall be in such a position to be plainly visible and legible from the private road serving the dwelling. The numbers also need to be externally or internally illuminated and must contrast with their background. If the address number cannot be seen from the private road, an additional address sign has to be posted at the entrance of the private driveway from the private road.

Dwelling distance from property line (feet)	Minimum height of numerals, inches
25 or less	2*
50 or less	4*
Over 50	6*
	*illuminated

**Appeals:**

***Fire Vehicle Access and Fire Flow:***

Sometimes, an applicant cannot comply with the exact letter of the above requirements. Questions as to the acceptability of existing private access roads or alternate means of providing adequate access to the dwelling should be directed to the Fire Marshals of the Sacramento Metropolitan Fire District. Please note that all appeals need to be directed to the City’s Planning Department and the Sacramento Metropolitan Fire District.

**Fees:**

Contact the local fire district for their fee policies on reviewing residential fire sprinkler systems or alternate fire flow systems, inspecting the installed system, and checking for fire vehicle access.

**Questions/Information:**

If you have any questions or need specific information on any of the above requirements, please call the fire service representative at the Sacramento Metropolitan Fire District. The telephone number is 942-3300.

**CONSULT THE SACRAMENTO METROPOLITAN FIRE DISTRICT EARLY IN THE PLANNING STAGE OF THE PROJECT.**

Date: / /

**Fire District  
Permit Release**

City of Rancho Cordova  
Building & Safety Department  
3121 Gold Canal Dr.  
Rancho Cordova, CA 95670  
Attention: Permit Office, Residential Plan Check

Building Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
B&SD Case No.: \_\_\_\_\_ Parcel Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
Fire District Plan Check Number: \_\_\_\_\_ - \_\_\_\_\_  
Applicant's Name \_\_\_\_\_ Day Phone: (\_\_\_\_) \_\_\_\_\_

**City of Rancho Cordova Fire Inspection Agreement**

I agree to request a fire department/district inspection prior to calling the City Of Rancho Cordova Building & Safety Department for:

- 1. Frame inspection (residential)
- 2. Ceiling or T-bar inspection (commercial)
- 3. Final inspection (residential and commercial)

Fire department/district approval is required prior to calling for building inspections. Failure to comply may result in a reinspection fee being levied and a hold being placed on all inspections.

By: (Print/Type) \_\_\_\_\_ Signed \_\_\_\_\_

Permit Issuance may proceed while these plans are being reviewed by this jurisdiction

A building permit may be released. The following conditions have been met:

Adequate access to the dwelling is available for emergency services (mark as appropriate)

\_\_\_\_\_ Existing road is adequate  
 \_\_\_\_\_ 16 feet road width      \_\_\_\_\_ 20 feet road width  
 \_\_\_\_\_ 2 inch asphalt      \_\_\_\_\_ 4 inch asphalt

Note: Finish surfacing will be verified at the final inspection.

- \_\_\_\_\_ 1. Residential fire sprinkler system required. Install prior to frame inspection.
- \_\_\_\_\_ 2. Minimum Class C roofing system required.
- \_\_\_\_\_ 3. Street sign installed.
- \_\_\_\_\_ 4. Address number at driveway entrance installed.
- \_\_\_\_\_ 5. Hydrant installed if required.
- \_\_\_\_\_ Other: \_\_\_\_\_

Signed: \_\_\_\_\_ For: Fire Marshal

cc: File

# Sacramento County Fire Marshals Association Standards

Article No. 10    Section 1003    Standard No. 002  
Title: Residential Sprinklers    Date 6/29/92    Revised 2/26/96

Approved by unanimous vote of the members of the Sacramento County Fire Marshals Association at the meeting held on September 17, 1992

## Scope:

This Standard is pursuant to UFC Article 10, Section 1003, for the design and the installation of residential fire sprinklers in one and two family dwelling unit structures. The design and installation shall meet the latest edition of NFPA standard 13-D and the following clarifications and requirements:

## Definitions:

1. Entrance Foyer-An entrance enclosure located outside of a residential structure exterior wall.
2. Noncombustible Fixtures-Fixtures in bathrooms that have a minimum of one-half inch thick gypsum wallboard with taped joints located behind them or are wholly noncombustible.

## General:

1. Installation shall not begin until plans have been approved and all fees are paid. A complete fire district approved set of plans shall be kept at the job site at all times.
2. All hydraulic calculations shall include one head remote; two head remote; and, if applicable, four head remote areas addressed by this standard. All hydraulic calculations shall be submitted on an approved form to aid in plan check services.

## Water Supply:

1. An automatic water supply approved by the authority having jurisdiction shall be provided for each sprinkler system and shall be capable of sustain the required flow for a period of ten minutes.
2. Water supply feed to conform with NFPA 13-D, A-2-2 where the sprinkler system can only be shut off when domestic water is shut off. Domestic water can be shut off independent of fire sprinkler systems.
3. When the water supply is used for domestic and irrigation needs, calculations indicating sufficient water for the fire sprinkler in addition to other uses shall be provided. In lieu of this, a water flow actuated solenoid valve to shut off the domestic and irrigation water usage may be required.
4. The power supply to wells providing water for fire sprinklers shall be from the house meter and shall be equipped with a circuit breaker lock out device that is clearly labeled "fire pump" and is painted red.

## Design:

1. Open, attached porches do not require sprinkler protection unless there is a covering attaching a remote garage.
2. A fire sprinkler shall be installed in all water heater closets with a vent pipe
3. A fire sprinkler with guard shall be installed in all rooms or closets with attic access.
4. Rooms with vanities or sink areas separate from the toilet/bathing area shall be provided with sprinkler protection
5. The number of design sprinklers may be increased to four when ceilings have beams or sloped configurations. Consult your local fire district for directions.
6. Attached and detached garages and other "out" buildings within 6 feet of residential structures shall be provided with fire sprinkler protection. Approved plastic pipe may be used in garages when quick response sprinklers are utilized.
7. Install the flow switch a minimum of 6 inches away from any 90-degree ell. The flow switch shall be connected to a minimum 6 inch UL listed fire alarm bell located near the main riser.
8. Install a minimum of one upright residential sprinkler at the highest portion of each attic space as a pilot head for heat detection.
9. Install a rubber faced check vale on all main sprinkler risers. Systems installed with a steel pipe shall be provided with a reduced pressure backflow preventer.

**Materials:**

1. Pipe hangers shall be listed for the type of pipe being utilized. Screws are the only acceptable fastening method. A hanger shall be placed within 6 inches of each fire sprinkler.
2. A minimum of three spare sprinklers of each type shall be provided at a location near the main riser.
3. A minimum of 1-inch Schedule 40 PVC or copper pipe shall be used for the underground water supply line. Any transition from the plastic to ferrous piping shall be with Schedule 80 PVC fittings.

**Note:**

The City of Rancho Cordova Public Works Agency requires the underground pipe to transition from PVC to copper or galvanized iron pipe 5 feet out to the rubber faced check valve.

**Testing:**

1. All systems shall be pressure tested while visible for inspection at a pressure of 150 psi for a minimum duration of 30 minutes.
2. The alarm device(s) shall be tested prior to occupancy.

**Note:**

**This standard is designed to meet the minimum needs of most fire departments. However, it is recommended that the Sacramento Metropolitan Fire District be contacted to determine if any additional special provisions would be necessary. For example, pressure testing of pipe when metal roofs are installed or special construction features create obstructions to sprinklers.**