



HOW TO OBTAIN A PERMIT FOR  
**Residential Fire Sprinklers**

City of San Diego  
 Development Services Department  
 1222 First Avenue, MS 401, San Diego, CA 92101-4101

INFORMATION  
 BULLETIN

**124**

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This Information Bulletin describes the procedures for obtaining a fire sprinkler permit for a single family home, duplex, or townhome. See Information Bulletin 139 for fire sprinkler systems permitting requirements for all other uses.

**I. SUBMITTAL REQUIREMENTS**

The following plans and documents shall be submitted when applying for a fire sprinkler permit for a single family home, duplex, or townhome.

**A. Forms**

1. Provide one copy of the completed General Application (DS-3032).
2. Provide one copy of the completed Hydrant Flow Request Form (DS-160) provided by the City of San Diego staff within the last 12 months or a copy of the approved water study for new developments. See Information Bulletin 180, How to Obtain Hydrant Flow Data for further information.

**B. Plans**

All fire sprinkler system submittals for single family homes, duplexes, and townhomes shall provide two copies of the sprinkler plans with all information specified in NFPA 13D and the following, as applicable :

1. General information
  - a. Project address
  - b. Installing contractor
  - c. Sprinkler legend with manufacturer, model, type, temperature rating, orifice size, and maximum spacing
2. Hydrant flow test provided by City of San Diego staff inserted into plans
3. Site plan
  - a. Location of water supply source
  - b. Water supply line with material type, pipe sizing, wall thickness schedule and length
  - c. Size and type of water meter

**Documents referenced in this Information Bulletin**

- [California Plumbing Code \(CPC\)](#)
- [California Residential Code \(CRC\)](#)
- [National Fire Protection Association \(NFPA\) 13D](#)
- [Information Bulletin 113, How to Obtain Approval for Cross-Connection Control](#)
- [Information Bulletin 114, How to Establish and Permit Residential Units per Master Plans](#)
- [Information Bulletin 139 How to Obtain a Permit for Fire Sprinkler Systems](#)
- [Information Bulletin 180, How to Obtain Hydrant Flow Data](#)
- [Information Bulletin 506, Fee Schedule for Construction Permits – Structures](#)
- [Technical Bulletin FIRE-9-3, Sprinkler Protection for Balconies, Canopies, Porte-cocheres, and Decks](#)
- [Technical Bulletin RESD-3-1, Fire Sprinkler Requirements for Additions to Existing, Non-Sprinklered Dwellings](#)
- [Hydrant Flow Request, DS-160](#)
- [General Application, DS-3032](#)
- [Refund Application, DS-721](#)

- d. Cross-connection control device type & size, if provided (see Section II)
- e. Total area of building (s)
- f. Finished floor elevation above mean sea level for ground floor level

4. Floor plan (each floor level)
  - a. Scale
  - b. North arrow
  - c. Each room occupancies/uses indicated
  - d. Location of all partitions and beams
  - e. Location and size of all areas not requiring sprinklers with code citation
  - f. Dimension of sprinklers to walls and obstructions
  - g. Ceiling construction, pitch and height
  - h. Location of all high temperature appliances and devices (i.e. fireplaces, stoves, furnaces)
  - i. Attached garage and covered walkways protected (except per Technical Bulletin FIRE-9-3)

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- j. Location of all sprinklers
- k. Piping—locations, sizes and lengths

5. Full-height cross-section
  - a. Location where section is taken
  - b. Scale
  - c. Piping shown
  - d. Sprinklers shown
  - e. Finished floor elevations for all stories

6. Required notes on plans
  - a. All penetrations through rated construction such as walls and ceilings between attached garage and residence will be sealed in an approved manner to maintain the integrity of the firewall.
  - b. Pipe hangers shall be in accordance with NFPA 13D and the written instructions of the pipe manufacturer.
  - c. Drilling or notching of structural members shall be performed in strict compliance with the California Residential Code (CRC).
  - d. All pipe and fittings are new and UL listed.

### C. Hydraulic Calculations

Provide one copy of hydraulic calculations per each NFPA 13D system for the most remote area(s). Calculations shall include the following:

1. Hydraulic reference points
2. Source pressure
3. Demand pressure
4. Source elevation
5. Domestic demand added (as needed)
6. Meter loss (chart) or (NFPA 13D)
7. Fixed loss device (backflow & meter)
8. Single most hydraulically demanding sprinkler (if required)
9. Most hydraulically demanding multiple sprinklers (2-3-4)
10. Elevation at reference point
11. Loss through fittings and pipe runs calculated.

### D. Manufacturer's Data Sheets

Provide one copy of manufacturers' data

sheets for all portions of the sprinkler system including, but not limited to sprinklers, cross-connection control device, piping, etc.

## II. CROSS-CONNECTION CONTROL DEVICES

### A. General

Cross-connection control devices must be provided as required in Information Bulletin 113, How to Obtain Approval for Cross-Connection Control, unless a passive purge design is provided as described below.

### B. Passive Purge Design

The following items must be provided in order to utilize a passive purge design and eliminate the need for a cross-connection control device.

1. To prevent the stagnation of water, the design shall include one or more plumbing fixtures installed at the most remote portion(s) of the sprinkler system to allow for regular flushing and movement of water within the sprinkler system.
2. A pressure-reducing device shall be used at the plumbing fixture to comply with the maximum pressure allowed for plumbing systems in the CPC.
3. Where the plumbing fixture utilized for passive purge is not a toilet fixture, sprinklers throughout the building shall conform to the lead-free requirements in [Health and Safety Code, Section 116875](#).
4. The sprinkler system shall be designed utilizing a looped pipe arrangement. Systems in multi-story buildings shall be looped either within the story or vertically across stories to allow for water circulation.
5. All requirements in NFPA 13D.

## III. METERS

Meters will be sized based on the domestic plumbing fixture demand or the fire

sprinkler demand, whichever is greater. Unless a residential shut-off valve is used, the fire sprinkler demand must include an additional 5 GPM to account for residential flow. See **TABLE 1** below for the allowable flow rate per meter size.

**TABLE 1: METER CAPACITY**

Meter Size (Inch)	Max. Capacity (gpm)
<b>Displacement Type Meters-AWWA C700-15</b>	
5/8 x 3/4	16
3/4	24
1	40
1-1/2	80

**IV. REMODELS AND ADDITIONS,**

**A. Existing Non-Sprinklered Buildings**

Remodels and additions to existing, non-sprinklered single family homes, duplexes, and townhouses may require sprinkler protection depending upon the scope of the remodel or addition. See Technical Bulletin RESD-3-1, Protection of Existing Buildings with Residential Fire Sprinklers, for the criteria when fire sprinklers are required for existing non-sprinklered buildings.

**B. Existing Sprinklered Buildings**

Remodels and additions to existing, sprinklered single family homes, duplexes and townhomes are required to submit plans for modification or extension of the existing sprinkler system when the scope of work includes one of the following:

1. The area of work is 10% or more of the total area of the residence when the work is complete.
2. An additional story is added.
3. Area of work includes a new remote area of the sprinkler system.

Compliance with NFPA 13D is required regardless if sprinkler plans are required. During inspections, if the inspector determines that the scope of the addition or remodel requires sprinkler plans and/or calculations, then the applicant must

submit sprinkler plans and calculations prior to receiving final approval.

**V. MASTER PLANS**

Fire sprinklers submittals for master plans shall follow Information Bulletin 114, How to Establish and Permit Residential Units Per Master Plans.

- A. In new communities with no existing fire hydrants, the approved water study must be submitted with the plans.
- B. A master set of the sprinkler plans shall be submitted for each plan type.

**VI. MANUFACTURED HOMES**

Fire sprinkler submittals for manufactured homes shall be submitted with the building set of drawings and shall include the following:

- A. Stamp by the State Fire Marshal or other approved agency.
- B. System water demand on the plans.

**VII. REVIEW PROCESS**

Residential fire sprinkler systems for single family homes, duplexes, and townhomes must be submitted for plan review. Please check in on the 3rd floor of the Development Services Center, located at 1222 First Avenue.

**VIII. FEES**

Fire sprinkler fees will be charged based upon Information Bulletin 506, Fire Permit Fees. Plan check fees are required to be paid prior to review. For your convenience, DSD offers on-line payments through OpenDSD. Payment may also be made in person by cash, check, ATM card, or most major credit cards. Checks shall be in the exact amount, drawn on US banks, and made payable to the "City Treasurer." Due to space constraints, we are unable to store submitted plans awaiting fee payment.

**Please note that plan check fees and other administrative fees are non-refundable. See Refund Policy noted with-in Refund Application Form DS-721 for additional refund information.**