



Fire Department

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CITY OF REDONDO BEACH FIRE SPRINKLER PLAN REVIEW FEES/POLICIES

When a Permit is required: Permits shall be issued for the following work:

- a. When the system requires shutting down (exceptions apply-call (310) 318-0673 for verification).
- b. A new system is installed.
- c. An existing system is expanded to or extended.
- d. An existing system is modified, including relocation of heads and/or demolition, regardless of number of fire sprinkler heads.
- e. When the occupancy of a structure is changed (reference the CBC Chapter 3).
- f. Construction occurs, which alters the building construction type.
- g. Occupancy classification or storage commodity is changed in the NFPA 13 standard (reference Chapter 5).
- h. Additions, modifications, and changes to existing fire sprinkler systems, underground lines and/or associated equipment.
- i. Demolition work.

Permit applications and other forms may be obtained at the Building Department located at: 415 Diamond Street, Redondo Beach, CA.

Fire Permit Applications: Each submitted or resubmittal shall include the Building Permit when applicable.

Fees: The fees for plan review are set by contract total.

Fire Sprinkler Cover Sheets-Design: Each permit application shall be accompanied with a “Fire Sprinkler Calculation Cover Sheet-Design” describing each affected fire sprinkler system and/or design area etc., as they apply. NOTE: The form may be obtained online at: www.redondo.org/fire.

Tenant Improvements Work: Tenant improvements work is work on an existing system. Submittals shall include the relevant existing fire sprinkler system design information (a helpful “2008 TI Work Sheet” is available), which includes but not limited to:

- Date or approximate date original system was installed.
- Type of construction (unobstructed, obstructed, combustible, noncombustible,

limited combustible, etc.) If obstructed, provide the type as addressed in NFPA 13-A.3.7.1.

- The type of system working on (wet, gridded, tree, dry, looped, preaction, antifreeze, etc.)
- Existing Occupancy Hazard. New occupancy hazard.
- Building Occupancy Classification (Reference CBC Chapter 3),
- Original fire sprinkler head spacing (ft/2 area per head).
- The existing fire sprinkler head type/s (that are associated with your work). Include the new sprinkler manufacturers data submittals with head/s identified).
- Original ceiling height.
- New ceiling height.
- Was a Q.R. modifier applied previously in the design (reference NFPA 13-11.2.3.2.4)?
- Any other relevant and pertinent information required for a related CFC review.

NOTE: The form may be obtained online at www.redondo.org/fire. "2008 TI Work Sheet".

Resubmittals:

A minimum three (3) complete plans will be required when projects require resubmittals. All but one set of failed plans will be returned for required modifications to be provided by the submitter. The code official is authorized to assess a fee for re-reviewing plans, including but not limited to, construction or fire protection systems which have been rejected for not satisfying the requirements of this code. The re-review fee shall apply to each re-submittal starting with the third review. The re-review fee shall be in accordance with the conditions, amounts, and limitations listed in the adopted and amended edition of the Building Code. The code official shall make all reasonable attempts to perform complete reviews of each submittal and re-submittal. However, the code official reserves the right to stop reviewing documents when in his estimation the package is found to be so far from compliance that further review would constitute actually doing the applicants work for them. (NOTE: It is not the responsibility of the reviewing authority to package and re-bundle submittals).

Adopted Codes:

City of Redondo Beach Fire Department recognizes the State Fire Marshals Office adoption of the 2002 editions (as amended) of: NFPA 13, 13R, 13D, 24, 72, 318 and 2003-14, 20 and 22 and 25-2006 California Edition. The City of Redondo Beach currently enforces the 2007 Title 24-California Fire Code and CCR Public Safety Title 19. The City of Redondo Beach has adopted Municipal Code Amendment to the fire codes referenced as Ordinance #2894-02.

Minimum and maximum Fire Sprinkler Plan Sets:

The minimum number of plan sets for fire sprinklers (including water supply certificate, and fire sprinkler cover sheet/s), is 3 (three). The maximum is 5 (Five). Additional sets beyond 5 will be returned unstamped.

Underground Supply Permits, Design and Inspections:

- a. The underground portion of fire sprinkler systems requires a plan review and a permit. Underground work may be done in conjunction with the overhead work in which case the permit and approved plans must include both.

- b. Calculations shall be provided, starting at the point of public (or private) water supply connection. All underground piping must be inspected for installation prior to covering.
- c. Underground fire sprinkler work must also be performed by a fire sprinkler contractor that is licensed with the State Fire Marshals office as regulated by CCR Title 19.

Plan Check List:

- a. The minimum information requirements included on plans is per the checklist outlined in NFPA 13-14.1 and 14.2, as regulated by CFC as amended below. Minimum information and requirements for hydraulic calculations forms and work sheets shall be per NFPA 13-14.3.
- b. In addition, all calculations shall include a fire sprinkler head analysis sheet, which includes numbering the sprinklers flowing and the elevation of each, with K-factor, pressure (in psi) and flow (in gpm) each.

Water Supply Certification:

Redondo Beach Fire Department requires Architects and Engineers to provide water supply information in their packages for the fire sprinkler contractors. It is required by Redondo Beach Fire Department to include, with each set of building permit application plan submitted, a letter from the water purveyor indicating the static, residual and flow available for sprinkler design, at the point of connection where the sprinkler tap is or will or is made, with date and address of the water supply information. The architects of record for the construction phase of all projects are required to ascertain the water supply information available for automatic fire sprinkler systems. The “static”, “residual” and “flow” pressures are then to be included on the architectural plans or an attached certificate, submitted for construction (Grading or Building) permits.

When a water supply flow and minimum pressure is not provided, i.e., residential water supply certificates; a 500 gpm flow at 20 psi will be required. The static pressure shall be reduced 10% to create an additional cushion.

A copy of the water supply certificate must be provided with each fire sprinkler permit submittals.

Safety Factors:

- a. All commercial hydraulic design areas shall have a safety margin of 5% (cushion or more) on the remaining pressure.
- b. Where fire booster pump/s are installed, the maximum design flow shall be available at not less than 5 psi at the pump suction, at 150% of rated pump capacity including any inside and outside hose or other required system demands.

Pipe Scheduled Systems/work:

When pipe schedule system design is used, it shall be proven with hydraulic calculations unless meeting the water demand requirements of NFPA 13-11.2.2.

Fire Sprinkler Heads:

All submittal packages shall include manufacturer’s specification sheets with each plan set submitting, for all listed equipment installing. Sprinkler heads data submittals shall include the type and number of each on the plans, as required by NFPA 13.

The "Sprinkler Identification Number (SIN) must be provided and identified on the plan sprinkler legend. The submittal shall include the listed escutcheons to be installed with these sprinkler heads, as applicable.

Medical Gas Storage Rooms:

The following guidelines shall be used for installing fire sprinklers to protect medical gas storage rooms as required by CFC 7404 in buildings which otherwise do not have a fire sprinkler system. The intent of the code is not to mandate a full sprinkler system in a building due to the presence of medical gas storage.

- a. A Fire Sprinkler Permit is required.
- b. Work shall be performed by a licensed fire sprinkler contractor.
- c. The fire sprinkler may be installed on the domestic water supply using one of the two following design methods.
- d. The Pipe Schedule method of NFPA 13 may be used provided the sprinklers a 5.6 K-factor orifice and the minimum pipe size in NFPA 13-14.5.2.2, (1") is maintained back to the supply connection. The supply shall sustain a 15 psi residual to the system.
- e. The supply may be hydraulically calculated using a .10 density over the entire area of the room (room design method). For both methods described, there is no hose stream consideration or minimum riser flow.
- f. Backflow prevention device will not be required to have a fire protection listing, but must meet EPA and AWWA requirements. Pipe, fittings and sprinkler heads shall be listed for fire protection service as established in NFPA 13. Separation must be provided so when the domestic water supply feeding the structure is disabled, the fire sprinkler protection will still be maintained. No flow or electronic valve tamper detection is required, but the valve/s shall be (breakable) locked in an open position.
- g. The sprinkler(s) shall be located to cover the full area of the interior room in which medical gas bottles will be stored. NFPA 13-2002 Chapter 8 shall be the basis for evaluating the location of the sprinkler head in relation to obstructions to sprinkler discharge. If the room qualifies as an exterior room under CFC 7404.2.1.2, the sprinkler shall only be required to cover the area of the gas container storage and manifold.
- h. The fire sprinkler/s heads shall be of the Quick Response type.