

Contractor Information Packet



**North County Fire Authority
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The North County Fire Authority uses the California Fire and Building Codes with some Municipal Code amendments, Title 19 - California Code of Regulations and nationally recognized standards.



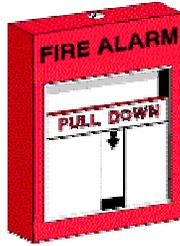
Access for Firefighting Equipment

1. All new roadways shall have a **minimum** of 20' in **unobstructed** width and maintain a 13'6" vertical clearance. [CFC 902.2.2.1]
2. Roadways must have an all-weather surface and capable of carrying 68,000 pounds Gross Vehicle Weight. [CFC 902.2.2.2]
3. Access roads of 150' or longer must be provided with turnarounds for fire department apparatus. [CFC 902.2.2.4]
4. Fire lanes will be designated on approved plans. All fire lanes must be red curbed and designated "NO PARKING FIRE LANE" per the California Vehicle Code and the Municipal Code. [CFC 901.4.2]
5. For Subdivisions: No combustible materials will be allowed on-site until all-weather access roads capable of withstanding the imposed load of fire apparatus are installed. Hydrants must be in place and operational. [CFC 902.2.2.2, 903.2]
6. Fire roads must be secured for emergency vehicles only, must be kept unobstructed at all times, and must be signed accordingly. [CFC 901.4.2]



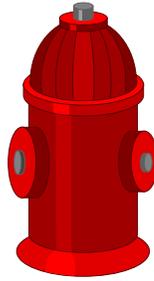
Building Addresses

All buildings must have address numbers visible from the street or roadway fronting the property. Coloration of numbers to contrast with building colors for visibility and shall be either internally or externally illuminated. The minimum size of the numbers shall be 2 ½" high with a ½" stroke. [CFC 901.4.4]



Fire Alarm Systems

1. Fire alarm systems shall be provided when required by the California Fire Code and installed in accordance with the appropriate standards of Chapter 35 of the California Building Code. All fire alarm systems shall be monitored by an approved central or proprietary station service or a local alarm which gives audible and visual signals at a constantly attended location. [CFC 1006.3.3.6.1]
2. U.L. listed exterior horn-strobe devices shall be used for exterior alarm-signaling. Exterior horn-strobe devices shall be mounted in an approved location. [NCFA]
3. Systems that provide sprinkler system monitoring only shall have electrically monitored waterflow and alarms valves (*Exception: Secured alarm valves need not be monitored*). Signals shall be transmitted to an approved central station. A UL listed exterior horn/strobe device shall be provided at an approved location on the exterior of the building. An approved audible sprinkler flow alarm shall be provided in the interior of the building at a normally occupied location. [CFC 1003.3, NCFA]
4. Each fire alarm system shall have posted at the main control panel instructions for silencing and resetting the system, the day and night phone numbers of the person responsible for the property, and the company or individual providing maintenance services for the alarm system. [NCFA]
5. Each operator of a fire alarm system is required to have a maintenance/inspection contract with a company or individual; licensed by the California Department of Consumer Affairs to perform work on a fire alarm system. Individuals performing maintenance or inspection services must be appropriately licensed or directly employed by an appropriately licensed contractor. A current copy of the maintenance/inspection contract shall be submitted to the fire department each year before issuance of an annual fire alarm permit. This contract shall provide for inspections and service in accordance with NFPA 72. [NCFA]



Fire Hydrants

1. All fire hydrants shall be installed, tested, flushed and in-service prior to any combustible construction on site. [CFC 903.4.1.2]
2. Fire hydrants shall be installed approximately 300 feet apart and must meet City requirements. [See City Standard Specifications]
3. All new fire hydrants or replacement of existing hydrants shall have two 2 ½” and one 4 ½” hose connections in commercial districts or one 2 ½” and one 4 ½” hose connection in residential districts. [See City Standard Specifications]
4. All painted city hydrants shall be painted as follows: Barrel: Dunn-Edwards Syn-Lustro #10-14 high Visibility Yellow-Industrial Maintenance Enamel “Chrome Yellow”. Outlet caps shall be painted according to the marking requirements set forth in NFPA 291, “Standard for Fire Flow Testing and Marking of Hydrants”. [See City Standard Specifications]
5. Use reflective blue markers on the street pavement to identify all hydrants. Placement shall be 0.75’ off centerline of street on the side toward the fire hydrant. [CFC 901.4.3, City Standard Specifications]
6. On-site hydrants shall be required when any portion of a protected building is more than 150 feet from a water supply on a public street (as measured by an approved route around the exterior of the building). [CFC 903.2]
7. Hydrant street valve covers shall be painted red. [NCFA]



Hood and Duct Extinguishing Systems

1. Automatic fire-extinguishing systems shall be provided for commercial cooking equipment producing grease-laden vapors. Such systems shall be listed for the application or specially designed for such application. [CFC 1005.2.1]
2. Manual activation devices shall be located in an approved location. [CFC 1005.2.6]
3. A fire extinguisher listed and labeled for Class K fires shall be installed within 30-feet of commercial food heat-processing equipment. [CFC 1005.2.7]
4. Submit 2 complete wet-stamped sets of plans drawn to scale under a separate fire permit. Plans shall include the room layout, including exit doors, walls, etc. Include flow calculations and cut-sheets for all components. [NCFA]



Sprinkler Systems

General

1. All new buildings or buildings with alterations, additions, renovations or repairs exceeding 50% of the building's original gross area, shall be provided with an automatic fire sprinkler system as determined by the Fire Department.

2. An automatic sprinkler system shall be installed in a building whenever its occupancy or use is changed. This includes condominium conversions. [All cities – Municipal Code]
3. An automatic sprinkler system shall be installed in all garbage compartments, rubbish and linen chutes, linen rooms, incinerator compartments, dumb waiter shafts, and storage rooms in all occupancies except Group R, Division 3. An accessible indicating shut-off valve shall be installed. [DCMC 15.32.090]
4. When serving 100 sprinklers or more, all water supply valves and waterflow alarms shall be supervised by an approved central station service. (Exception: Group I 1.1 and 1.2 serving 20 heads or more shall be supervised by an approved central station service). [CFC 1003.3.1, NCFA]
5. All exterior alarms shall be UL listed horn/strobe devices visible from the street/roadway fronting the building. Additional horn/strobe devices may be required to indicate multiple riser locations. [NCFA]
6. **Plastic piping is not allowed for sprinkler piping or sprinkler supply (underground) piping. [Daly City only, DCMC 15.20.040, Daly City Standard Specifications]**
7. No underground or aboveground piping shall be covered prior to a system rough-in/hydrostatic test. [NCFA]
8. All underground piping shall be flushed and approved by the Fire Department prior to connection to overhead piping. [NCFA]



Residential Buildings

1. Sprinklers are required in all areas of the structure including:
 - All egress paths including entrance foyers.
 - Exterior overhangs greater than 4 feet.
 - Bathrooms greater than 55 square feet.

- Closets greater than 24 square feet or greater than 3 feet in the least dimension.
 - Garages
 - Attic spaces used for storage.
 - Crawl spaces used for storage.
2. All heads shall be listed for residential occupancies. [NFPA 13D 3-5.1, NFPA 13R 2-4.5.1, 2-4.5.5]
 3. Piping shall be steel or copper. **Plastic piping is not allowed in Daly City.** [DCMC 15.20.040]
 4. All exterior heads shall be corrosion resistant or listed for exterior use. [NFPA 13 2-2.6.1]
 5. All 13D systems shall be tested for leakage at normal system operating water pressure. [NFPA 13D 1-5.4]
 6. All 13/13R systems with Fire Department Connections shall be tested at 200 psig for 2 hours. [NFPA 13R 2-1.3.2]



Residential Sprinkler Plan Requirements

[NCFA – See NFPA 13 8-1.1 for guidance]

1. 2 complete sets of piping plans drawn to scale showing all head locations and room descriptions. Submit plans to Fire Department under a separate fire permit.
2. Provide wet-stamp of system designer on all plans.
3. All pipe sizes and "cut" or "center to center" lengths shall be provided.
4. Note any sloped or special ceilings.
5. Note any exposed beams or other ceiling obstructions to the sprinkler heads.

6. Show the attic access door.
7. Indicate on the plan all heat producing zones, (furnace, fireplace, water heater, boiler).
8. Specify the manufacturer of the sprinkler head, orifice size, and temperature rating.
9. Provide a hanger detail showing all components and attachment devices.
10. Provide a system riser detail showing all valves and devices.
11. Show the location of the alarm horn/strobe.
12. Indicate the type of pipe being used in all areas (system piping, riser piping, and underground piping).
13. Provide a site plan drawn to scale showing the underground sizing, location, water meter, and connection point to the city main.
14. Provide a building cross section showing sprinkler system components and building construction.
15. Provide any necessary details that may be required to complete a comprehensive plan review.



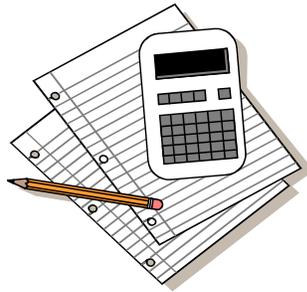
Commercial Sprinkler Plan Requirements

[NFPA 8-1.1]

1. Separate fire permits are required for all installations. Plans not required for additions or alterations to existing systems of 10 heads or less.
2. Working plans shall be drawn to an indicated scale, on sheets of uniform size, with plan of each floor, and shall show the following data:
 - a. Name of owner and occupant

- b. Location, including street address
- c. Point of compass
- d. Full height cross section
- e. Location of fire walls
- f. Location of partitions
- g. Ceiling configuration (flat, beamed, sloped, etc.)
- h. Occupancy of each area or room
- i. Location and size of concealed spaces, closets, and bathrooms
- j. All areas in which no sprinklers are to be installed – provide reason
- k. Size of city main in street, pressure and flow information.
- l. Other sources of water supply, with pressure or elevation, (if any).
- m. Make, type and nominal orifice size of sprinkler
- n. Temperature rating and location of high-temperature sprinklers
- o. Total area protected by each system on each floor
- p. Number of sprinklers on each riser per floor
- q. Make, type, model and size of alarm or dry-pipe valve
- r. Make, type, model, and size of pre-action or deluge valve
- s. Location of alarm horn/strobes
- t. Total number of sprinklers on each dry-pipe system, pre-action system, combined dry-pipe/ pre-action system, or deluge system
- u. Approximate capacity in gallons of each dry-pipe system
- v. Pipe type and schedule of wall thickness
- w. Nominal pipe size and cutting lengths of pipe (or center to center dimensions)
NOTE: Where typical branch lines prevail, it will be necessary to size only one line
- x. Location and size of riser nipples

- y. Type of fittings and joints and location of all welds and bends
- z. Type and locations of hangers, sleeves, braces, and methods of securing sprinklers when applicable
 - aa. All control valves, check valves, drain pipes, and test connections
 - bb. Size and location of hand hose, hose outlets, and related equipment
 - cc. Underground pipe size, length, location, material, point of connection to city main; the type of valves, meters, and valve pits, location of thrust blocks and the depth of cover.
Note: Plastic piping is not allowed for underground sprinkler supply piping in Daly City. [Daly City Standard Specifications]
 - dd. Provisions for flushing
 - ee. When an addition is made to an existing system, enough of the existing system shall be indicated on the plans to make all conditions clear
 - ff. For hydraulically designed systems, include data for the hydraulic nameplate, and date of installation
 - gg. Provide manufacturer's cut sheets
 - hh. Name, address, phone number (and e-mail address if available) of contractor.



Hydraulic Calculation Requirements (All Sprinkler Systems)

[NFPA 13 8-3, NCFA]

1. Outline of the calculation areas on the plans.
2. Calculations are required for the hydraulically most demanding sprinklers along with any supplemental areas that may be in question.
3. Indicate all hydraulic reference points on the plan.

4. Indicate flow switch location.
5. Indicate the meter size (if applicable) on the plan and include the appropriate pressure drop on the calculations.
6. Provide water flow data and the source of information on the plan.
7. Indicate location, type, and pressure drop of any back-flow preventers.



High-Rise Buildings (DALY CITY ONLY)

1. All Group B (office) and Group R, Division 1 (hotels and apartments; congregate residences accommodating more than ten persons) occupancies, each having floors used for human habitation located more than seventy-five feet (75') above the lowest level of fire department access, shall be equipped with an approved air-replenishment system. The system shall provide an adequate pressurized fresh air supply through a permanent piping system for the replenishment of Self-contained Breathing Apparatus bottles. Location and specifications of the air-replenishment system and access stations shall be made in accordance with the requirements of the Fire Department. [DCMC 15.32.080]



Standpipes and Water Systems

1. Minimum main size is 6" in any area. Fire flow determined for buildings/areas per the California Fire Code (CFC) or Conditions of Approval.
2. A water supply system must be installed and approved prior to building construction. [CFC 903.2]
3. Table 1004-A Standpipe Requirements is amended to read as follows:

Table 1004-A

SPRINKLERED BUILDING *		
OCCUPANCY	STANDPIPE CLASS	HOSE REQUIREMENT
1. Occupancies exceeding 150 ft. in height and more than one story	III	No
2. Occupancies 3 stories or more, but less than 150 ft. in height, except Group R, Div. 3	III	No
3. Group A Occupancies with occupant load exceeding 1,000 **	III	No
4. Group A, Div. 2.1 Occupancies over 5,000 sq. ft. in area used for exhibition	III	Yes
5. Groups B, F-Div. I, H, I, M, S Occupancies less than 3 stories in height, but greater than 20,000 sq. ft. per floor	III	No
6. Stages more than 1,000 sq. ft. in area	III	No

* The standpipe system may be combined with the automatic sprinkler system.

** Class III standpipes need not be provided in assembly areas used solely for worship.