

Address: 1191 Main Street, Half Moon Bay, CA, 94019 | Phone: (650) 345-1612

Email: cfpdfiremarshal@fire.ca.gov | Website: www.coastsidefire.org

STANDARD DETAIL AND SPECIFICATION MANUAL		
Section: Developer Information	Title: Commercial Sprinkler Requirements	
Effective: January 10, 1999	Revised: May 7, 2019	
Number: DI-006	Authorized By: Gary Sílva, Fíre Marshal	

Purpose:

The Coastside Fire Protection District, in an effort to speed the approval of plans checked by the District, is establishing this Standard for the use of the submitter.

General:

When plans are submitted with all of the proper code citations and notations of requirements are posted, then the time spent checking the plans is decreased, as there is less chance of rejection and re-submittal.

COMMERCIAL SPRINKLER INSTALLATIONS:

Submit three (3) copies of scaled drawings with complete Title Block information (building location, owner, installing contractor, etc.).

REQUIREMENTS:

A minimum of 3 spare sprinklers of each type, temperature rating, and orifice size plus appropriate wrench shall be provided in a box located 5-6 feet above floor next to the system riser. Instructions on maintenance shall be provided to the building owner.

The following areas will be reviewed and evaluated on all submitted plans:

Water Supply:

- Minimum water supply.
- Detail of connection to water supply.
- Detail of transition from underground to overhead system
 - 1. Materials, detail of penetrations, clearances.
- Hydrant test information.
 - 1. Location and elevation of static and residual pressure in relation to the base of system riser
 - 2. Flow location
 - 3. Static pressure (include. low static of record)
 - 4. Residual pressure
 - 5. Computed flow (in gallons per minute)
 - 6. Date of test



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- 7. Time of test
- 8. Test conductor by or information supplied by:
- 9. Circulating dead-end main
- 10. Pipe diameters and type of material
- System use limited to 90% of available water supply in calculated systems (established by policy).

Design Criteria:

- Hazard classification.
- Density & area of sprinkler operation.
- Allowable area coverage per sprinkler head.
- High pile storage of materials:
 - 1. Commodity classification
 - 2. Storage arrangements
 - 3. Density and area of sprinkler operation
- Rack storage of materials:
 - 1. Commodity classification
 - 2. Storage arrangements
 - 3. Density and area of sprinkler operation

Underground:

- Valves (including manufacturer, model number, listing as necessary):
 - 1. Provisions for securing from tampering
- Hydrants (including manufacturer, model number, listing, number and size of outlets).
- Piping material (including size, type, and manufacturer).
- Fittings (include type, manufacturer, and corrosion protection if required).
- Installation:
 - 1. Joining methods
 - 2. Thrust blocking or rodding details



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3. Depth of cover

System Components:

- Piping:
 - 1. Materials (include type, manufacturer, listings if required)
 - 2. Sizes (include wall thickness or nominal internal diameter)
- Fittings:
 - 1. Materials (include type, size, listings if required)
 - 2. Locations for required fittings
 - 3. Details of joining methods (specify if threaded, grooved, welded, etc.)

Hangers:

- 1. Materials and configuration (include manufacturer and listing)
- 2. Locations (include special conditions for high pressures, wrap around, etc.)
- 3. Fastener details (include type, size, etc.
- Earthquake bracing:
 - 1. Materials (include manufacturer, model numbers, sizes, engineering)
 - 2. Locations (include lateral, longitudinal, swing joint locations, flexible coupling locations, etc.)
- Drainage:
 - 1. Main drain (include size, specific location of valve, specific location of discharge outside of building)
 - 2. Inspectors test connection (include specific location of valve, specific location of discharge outside of building)
 - 3. Auxiliary drains and flushing connections (include size, location, type of drain fitting involved
- Valves:
 - 1. Manufacturer, model number, quantities, listings
 - 2. Pressure relief valve(s) on gridded systems
- Sprinklers:
 - 1. Manufacturer, model number, quantities, listings for special conditions or devices
 - 2. Temperature ratings
 - 3. Special conditions or locations (Exterior Corrosion protected)
- Alarms:
 - 1. Local waterflow (include location, type, weatherproof attributes, etc.)



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- 2. Sprinkler monitoring service (specify if central or remote station, ten heads or more)
- Fire Department Connection:
 - 1. Location (include size, specific location of connection, specific location above finished grade)

Spacing, Position, etc.:

- Complete construction details (include scaled full height building, cross section showing all soffits, recesses.
- Description of rooms, uses, occupancy.
- Applicable locations for full protection.

Hydraulic Calculations:

- Summary sheet.
- Detailed work sheets.
- Graph sheet on appropriate semi-log paper.
- Abbreviations and symbols.
- Peaking of gridded systems.
- Most remote (demanding) area.
- Hydraulic reference points.