



## DEVELOPMENT STANDARD #5b

# COMMERCIAL AUTOMATIC SPRINKLER SYSTEMS

### NON-RESIDENTIAL AUTOMATIC FIRE SPRINKLER SYSTEM INSTALLATIONS

The purpose of this standard is to provide minimum requirements for fire sprinkler systems in commercial and industrial use buildings, in order to aid in the detection and control of fires and thus provide improved protection against injury, life loss, and property damage.

This standard, in conjunction with the latest CFC adopted edition of NFPA 13 shall apply to the design and installation of, as well as the modification to, all fire sprinkler systems in commercial and industrial use buildings. In the event of an inconsistency or conflict between the provisions set forth in this Standard, the Montecito Fire Protection District Code and NFPA 13, the more restrictive provision shall apply.

#### I. RESPONSIBILITY

All individuals and companies who intend to engage in the installation or alteration of fire sprinkler systems are subject to the requirements of this standard.

Installer: The sprinkler system can be installed by an individual who holds a state of California C-16 (sprinklers) license.

Designer: Plans shall be designed by a C-16 licensed contractor or by a Registered Professional Engineer (Civil, Mechanical, or Fire Protection), licensed by the State of California (Board of Professional Engineers). All copies of the plans shall be stamped and signed by the licensed individual.

#### II. PLANS SUBMITTAL GUIDELINES

1. The property owner or applicant shall submit one (1) set of plans, data sheets, and hydraulic calculations for the proposed sprinkler system to the Fire District for review and approval at least three weeks prior to installation.
2. Plans will be checked and if approved, will be stamped "Approved", signed and dated. The Fire District will retain a set of plans electronically. Once approved, the plans can be picked up by the owner/applicant at District Fire Station #1 located at 595 San Ysidro Road.



3. Sprinkler plans shall be subject to review by a Fire District retained consultant at the Fire Code Official's discretion. All costs associated with this review shall be paid for by the property owner.
4. Any field changes shall be noted on the drawings. The edited drawings may need to be submitted to the Fire District for additional plan check prior to final Fire District approval.
5. A copy of the approved plans shall be maintained on the job site during all phases of system installation.
6. Copies of Manufacturer's data for all installed system components shall be provided upon Fire District request prior to final system acceptance. All system components shall be installed following manufacturer's guidelines unless specific relief is granted by the Fire Code Official.
7. Listed and Labeled: Only UL listed and labeled devices and materials shall be installed and used in accordance with the listing limitations and manufacturer's guidelines. New sprinkler heads and components shall be installed in the systems.

### III. PLANS

To speed up the plan check process and to avoid the possibility of having the plans returned for corrections, please use the following checklist, which identifies the information that is required on the working drawings prior to submittal.

- a. Name of sprinkler contractor, address, phone number, license number
- b. Sprinkler contractor's dated signature and seal (on each sheet)
- c. Cross-sectional drawings for all typical sprinklered areas.
- d. Riser schematic details to include all valves, jointing and support bracing.
- e. Control diagram for flow switch.
- f. Details of all typical hanger and bracing applications for this work.
- g. All applicable support and drainage provisions as described in NFPA 13 shall be met by the Sprinkler Contractor. Auxiliary drains shall be routed to the building exterior.
- h. A list of all abbreviations and symbols shall be provided on the drawings.
- i. Certification required for all welding. All welding to be indicated on shop drawings.
- j. The sprinkler shop drawings shall bear the signature and registration number of a National Institute for Certification in Engineering Technologies (NICET) Level III sprinkler designer. At the discretion of the Fire Chief, the sprinkler designer may submit resume and credentials which demonstrate an equivalent level of expertise.



IV. SPRINKLER SYSTEM DESIGN/INSTALLATION

1. Hydraulics: Maximum flow rate for any underground pipe shall not exceed 16 feet per second.
2. All pipe and materials delivered to the job site shall be protected from the elements and physical damage.
3. All penetrations of fire separation walls by sprinkler piping shall be sealed with a suitable sealant prior to final inspection.
4. All underground pipe shall be bedded on a puddled and tamped 4 inch thick base of yellow sand prior to hydrostatic testing. Backfilling shall consist of an initial 12 inch lift of tamped yellow sand. Subsequent compacted lifts of 12 inches, or a fraction thereof, shall be made with clean backfill.
5. The Sprinkler Contractor shall provide all information as deemed necessary by the Fire Chief to establish evidence of compliance with the Manufacturer's guidelines.
6. All system valves shall be UL and/or FM listed for fire sprinkler service.
7. Any deviations from procedures described within this Standard shall be allowed only with the express written consent of the Fire Chief.

V. INSPECTION REQUIREMENTS

1. The sprinkler system shall be inspected at the following intervals:
  - a. All welded sections shall be field inspected prior to installation. All burrs, slag, and welding residue shall be filed and removed prior to inspection.
  - b. All piping shall be inspected prior to being covered, buried or concealed.
  - c. Hydrostatic testing will be required upon completion of piping installation.
  - d. Final inspection for system acceptance shall be completed prior to granting occupancy clearance. A set of approved shop drawings with all field changes shall be produced for this inspection. All components of this system shall be operational and in compliance with this Section.

All required inspections shall be arranged to allow the Fire District 48 hours advance notice. Any work completed without the required inspections shall be removed and replaced at the discretion of the Fire Code Official.