



The purpose of this Technical Bulletin is to provide the design criteria and requirements to the applicant for providing sprinkler systems in shell buildings without a specific tenant and/or use.

I. GENERAL

All new shell buildings and structures that require sprinkler systems must provide sprinklers prior to receiving a final inspection. For existing sprinkler-protected buildings that return the building or portion of the building back to a shell condition, sprinklers need to be intact but may not need to comply with the requirements in NFPA 13 until occupancy occurs. When a specific tenant or use is not known at the time of building permit, sprinklers must still be provided.

II. NEW SHELL BUILDING WITH FLOOR TO CEILING HEIGHTS 14 FEET OR LESS

When a fire sprinkler system is required or provided in a building or portion of a building with a clear height floor to ceiling of 14 feet or less, the following design criteria must be incorporated in the sprinkler design when the specific tenant or use is unknown.

A. Design Criteria

At a minimum, the sprinkler system for the shell portion must be designed as an Ordinary Hazard (Group 2), as defined by NFPA 13, with a minimum design density of not less than 0.2 gpm/square feet, with a minimum design area of 1,500 square feet. The maximum coverage shall be 130 square feet per sprinkler.

B. Outlet Sizing.

The minimum sprinkler outlet size permitted is 1 inch.

C. Sprinkler Type

Extended coverage sprinklers are not permitted.

III. NEW SHELL BUILDINGS WITH FLOOR TO CEILING HEIGHTS GREATER THAN 14 FEET

When a fire sprinkler system is required or provided in a building or portion of a building with a clear height floor to ceiling of greater than 14 feet, the following design criteria must be incorporated in the sprinkler design when the specific tenant or use is unknown.

Documents Referenced in this Technical Bulletin

- 2013 California Building Code, (CBC)
- 2013 California Fire Code, (CFC)
- 2013 National Fire Protection Association (NFPA) 13, Standard for the Installation of Sprinkler Systems

A. Design Criteria

At a minimum, the sprinkler system for the shell portion shall be designed assuming Class IV Non-encapsulated high piled storage utilizing single and double row racks, as defined by NFPA 13. The storage height must be based upon the maximum possible storage height for the building. The height of the storage must be determined by using the elevation to the bottom of the highest structural joist, beam, or girder. ESFR sprinklers are permissible as well.

B. Underground Fire Service

The underground fire service main must be an 8 inch minimum.

IV. EXISTING BUILDINGS RETURNING TO A SHELL CONFIGURATION

When an existing sprinkler protected building is proposed to be brought back to a shell condition, these situations will be reviewed on a case-by-case basis by the fire and life safety section of the Development Services Department.