2.04 Fire Sprinkler Submittals (2025)

Reference: 2025 SFBC, 2025 SFFC, 2025 NFPA 13, 2025 NFPA 13R, and 2025 NFPA 13D.

Purpose: This bulletin describes the information to be provided on plans submitted for a building permit to install or modify a fire sprinkler system.

Notes:

1. **Applicable Codes for FIRE Only Permits.** FIRE Only permits shall utilize the applicable code requirements from the date of "RECEIVED" stamp of the 1st submission of the FIRE Only permit. This includes FIRE Only permits under an addenda schedule.

   Revisions based on SFFD comments that have been submitted after the original permit expired (not issued) may require to comply with more recent applicable codes on a case-by-case basis, as required by SFFD.

   Exception: FIRE Only as-builts and revisions under a new Fire Only permit number after the original permit was issued, must reference the original FIRE Only permit number and shall comply with the same applicable codes as per the original permit.

   Example 1: A sprinkler permit under an addenda is received by plan check on 1/2/2026, but the addenda permit number is from 1/2/2024. Since the fire sprinkler is a FIRE Only permit, even though it is under an addenda, the effective applicable code requirements would be the 2025 San Francisco Fire Code (SFFC) and 2025 NFPA 13, rather than the 2022 SFFC and 2022 NFPA 13.

   Example 2: A fire sprinkler permit is received by plan check on 12/30/2024 (under 2022 SFFC and 2022 NFPA 72). Comments were given and the permit was not issued. The applicant addresses the comments on 1/2/2026. However, this permit expired and an action by the applicant is required to reopen that same permit. Since the fire sprinkler permit is a FIRE Only permit and this is a revision based on comments of the original submission, this may require the new permit to comply with the most recent applicable 2025 code, SFFC and 2025 NFPA 13.

2. **Approved Reference Plans.** New fire sprinkler system plan submittals must have approved reference architectural plans. Mechanical and/or electrical plans may be required as applicable.

3. **Approved Reference Plans for R-3 Occupancies.** All new NFPA 13D, NFPA 13R, or NFPA 13 systems for R-3 occupancies shall have an approved reference architectural plan (signed by the DBI building inspector) indicating the specific type of the required sprinkler system (NFPA 13D, NFPA 13R, or NFPA 13) and, if not fully sprinklered, the specific areas that are to be sprinklered (NFPA 13 systems only).

4. **Fully Sprinklered NFPA 13D and NFPA 13R Systems.** New NFPA 13D or NFPA 13R sprinkler systems are required to be fully sprinklered throughout the building. New partially sprinklered NFPA 13D and NFPA 13R systems are prohibited. Only NFPA 13 systems are permitted to be partially sprinklered.

2.04 Fire Sprinkler Submittals (2025)

I. GENERAL REQUIREMENTS

1. **Type of Sprinkler System.** Provide the type of sprinkler system provided on the plans (NFPA 13, NFPA 13R, NFPA 13D).

2. **Owner/Occupant Information.** Name(s) and Phone Number(s) of Owner and Occupant / Tenant.

3. **Address Information.** Address of Building, Including Assessor's Block and Lot Number.

4. **Contractor Information.** Contractor's Name, Address, Telephone Number, and License Number.

5. **Building Information.** Include the following information on the cover sheet of the sprinkler plan submittal:

   A. Building Occupancy and Use per 2025 CBC Chapter 3.
   B. Number of Stories.
   C. Building Height (Indicate if the building is classified as a “low-rise building” or “high-rise building”).
   D. Level of Sprinkler Protection (for New and Existing Buildings).
      (1) Fully Sprinklered.
      (2) Partially Sprinklered.
      (3) Non Sprinklered.
   E. Type of Construction.
   F. Other Fire Protection Systems (such as fire alarm system, emergency generator, fire pump, fire service access elevators, etc.).
   G. Occupant Load (if deemed necessary by the Fire Inspector).

6. **Scale and Documentation.** Plans shall be drawn to an indicated scale (not smaller than 1/8" = 1') with a graphic scale indication. All fonts on all sheets shall be a minimum 1/8” font size. All plans shall be of uniform size (11" x 17" minimum), with a plan of each floor. Plans must be clear with legible text and symbols so they could be electronically scanned. The scope of work must be indicated in detail and the reason for providing the system must be indicated (e.g., NFPA 13, 13D, 13R). All working drawings, regardless of the type of fire suppression system, must meet the drawing requirements in NFPA 13 for Working Drawings, unless the system specific standard has requirements for working drawings. For Electronic Plan Review (EPR) via Bluebeam: The applicant shall follow all DBI specific requirements for EPR submission and shall provide all the required information included in this section in electronic format. The requirements of this bulletin shall apply to both paper plans and EPR submittals.

7. **Pre-Application Meeting Minutes.** If applicable, pre-application meeting minutes signed by all parties.

8. **Stamp and Signature.** 2 sets of plans with the wet signature and stamp of the engineer, or C-16 contractor (Reference DBI Information Sheet G-01).

9. **Site Map and Directional Indicator.** Provide site map of building location with directional indicator (north arrow). The directional indicator is required to be included on all sheets.

10. **Street and Main Entrance.** Show all surrounding street locations and indicate the main entrance to the building for Fire Department access.

11. **Water Flow Request Form.** Provide the processed SFFD Water-flow Request Form on the drawings:

    A. **Provided By SFFD.** The Fire Department will provide water flow and supply information when requested by the applicant. The Department shall assess fees for this service as stated in 2025 SFFC Section 108.12.

    B. **Valid for 12 Months.** The water flow test information provided by SFFD is valid for a maximum of 12 months from the date of the test to the date of the associated permit application.

12. **City Main.** For the city main (or other water sources), the following conditions shall apply:

    A. **Size.** Provide the size of the city main and whether it is dead-end or loop.

    B. **Dead-End.** If dead-end, also show direction and distance to the nearest circulating main.

    C. **Elevation.** Provide system elevation at the point of connection. Standard elevation is 3 feet below grade.

    D. **Other Sources.** If other sources of water supply, provide pressure or elevation.

13. **Underground.** For the underground, the following conditions shall apply (See SFFD Administrative Bulletin 2.09 for more information):

    A. **Pipe Information.** Underground pipe information shall include size, lengths from the city main to the building and/or the main building riser, location, weight, material (complete description, such as cement lined ductile iron), fitting being used, and point of connection to city main.

    B. **Thrust Blocks.** For mechanical joints on underground piping, if the pipe joints are not restraint joints and thrust blocks are required, provide thrust block size/bearing area and details based on what type of soil is present.

    C. **Type**. The type of valves, meters, and valve pits.

    D. **Depth.** Depth of cover for the underground pipe and how much the clearance is between top of pipe and concrete sidewalk slab or roadway pavement. See SFFD Administrative Bulletin 2.09 for more information.

    E. **CPVC Prohibited.** CPVC underground piping is prohibited by SFPUC. Whether combination or dedicated fire underground, it must be brazed copper K (may be used up to 2” in diameter) or ductile iron for piping greater than 2” in diameter.

    F. **Pressure Fitting (ProPress) Prohibited.** Pressure fittings per 2025 NFPA 13 Section 6.4.7 are prohibited for underground piping by SF Plumbing Code.

14. **Modifications to Existing Systems.** The following conditions shall apply for modifications to the existing sprinkler system:

    A. **Remove Unused Piping.** Any modification to an existing system shall include removal of unused excess piping.

    B. **Inactive Sprinkler System.** Where all or part of an inactive sprinkler system is abandoned in place, components of the system shall be removed, including sprinklers, hose valves, and alarm devices.

    C. **Relocation of Sprinklers.** Relocation of sprinklers shall be according to the approved plan.

    D. **Threaded Sprinklers Not Reinstalled.** When a threaded sprinkler is removed from a fitting or welded, it shall not be reinstalled.

    E. **Recalculation.** Field installations which do not reflect the approved set of plans may require recalculation of the system, taking into account all new piping and fittings.

15. **Additions to Existing Sprinkler System Piping Plans.** Where additional sprinklers and/or piping are to be added to an existing sprinkler system, the revised sprinkler piping plan shall show the existing sprinkler system configuration which is associated with the addition including connection to the existing riser.

16. **Cut Sheets**. Provide 1 set of manufacturer's specification sheets (cut sheets) for all components of the system. Manufacturer's installation instructions and technical data for any specially listed equipment, including descriptions, applications and limitations for any sprinklers, devices, piping, or fittings. This includes backflow preventers, fire pumps (including pump curves), and pressure reducing valves, special design systems and accessory devices.

17. **Required Details On Drawings.** All pertinent information (if applicable) regarding the sprinkler system design shall be incorporated on the drawings. Some examples shall include:
    A. Current Water Flow Request Form (information sheet) provided by SFFD. Shall be within 12 months of the permit application date per 2025 NFPA 13 Section 4.5.1.1.
    B. Sway Bracing Calculations.
    C. Backflow Preventer Friction Loss Graph.
    D. Underground Trench Detail.
    E. Fire Pump Curve.
    F. Fire Pump Cut Sheets.
    G. Fire Pump Controller Cut Sheets.
    H. Jockey Pump Cut Sheets.
    I. Jockey Pump Controller Cut Sheets.
    J. Flexible Pipe Cut Sheets.

    Exception: Hydraulic calculations sheets and other materials submittals not listed above may be submitted separately from the drawings (may be loose leaf).

18. **Floor Plans.** The following items must be included for the floor plans associated with the sprinkler system design:

    A. **Room/Space/Area Labeled.** All floor plans shall be based on latest approved architectural plans with every room/space/area labeled with a specific name or use.

    B. **Sprinkler System Occupancy Classification.** Include sprinkler system occupancy classification and use per NFPA 13 Section 4.3 for each specific sprinkler system design and especially for closets, attics, and bathrooms.

    C. **Fire Rating.** Include information of any fire rated walls or partitions.

    D. **Total Area.** Total area protected by each system on each floor.

    E. **Full Height Cross Section.** Full height cross section (or schematic diagram if required for clarity) shall include ceiling construction, height, type (beam, smooth), if open to the floor above, skylights, etc., and method of protection for nonmetallic piping. Also show beam size, material, and location.

    F. **Concealed Spaces.** For concealed spaces, include location, the size of the spaces, indicate if they are combustible or noncombustible construction.

19. **Equipment/Components.** Include information for the following equipment/components, if applicable:

    A. **3" Hose Outlets and Related Equipment.** Include location of 3" hose outlets and related equipment.

    B. **Backflow Preventer.** Include location, manufacturer, size, and type. Type must comply with San Francisco Public Utilities Commission's Rules and Regulation (Resolution No. 19.786).*

        (1) **USC Approved Backflow Preventer.** Per SFPUC Rules And Regulation Governing Water Service Addendum G Rule 3b, it shall be required to only utilize University of Southern California (USC) approved backflow preventer. Any proposed backflow preventer assembly shall only be acceptable from the list of USC Approved Backflow Prevention Assemblies.

            Link to the SFPUC Document:
            https://www.sfpuc.gov/accounts-services/water-power-sewer-rates/rules-and-regulations-governing-water-and-electric

            Link to the USC Approved Backflow Prevention Assemblies:
            https://fccchr.usc.edu/_downloads/List/list.pdf

        **Certain projects located on Port of San Francisco property within a certain distance of the waterfront may require a reduced-pressure principal type backflow preventer assembly. This type of backflow preventer assembly may require additional drain capacity. Refer to SFPUC Resolution No. 19.786 for additional information. Contact the SFPUC for further guidance.*

C. **Drainpipes and Test Connections.** Show location of drain pipes and test connections including inspectors test assembly.

D. **Fittings.** The following conditions shall apply for fittings:

(1) **Type.** Type of fittings including description (such as 125# cast iron threaded fittings, mechanical joints, above/below ground).

(2) **Joints, Welds, Bends.** Shall include information for joints and location of all welds and bends.

(3) **Shop Weld.** The contractor shall specify on the drawing any sections to be shop welded (non-restraint type joint) and the type of fittings or formations to be used.

E. **Pipes for Sprinklers.** The following conditions shall apply for sprinkler piping:

(1) **General.** Include location, piping provisions for flushing, pipe type, and schedule of wall thickness.

(2) **Hangers/Pipe Supports.** Include location of the hangers/pipe supports.

(3) **Size.** Nominal pipe size and cutting lengths of pipe using center to center dimensions. Where typical branch lines prevail, it will be necessary to size only one typical line.

(4) **Reflected Ceiling Plan.** Piping plans must not be submitted on a reflected ceiling plan. A separate reflected ceiling plan showing fire sprinkler locations only, but no piping shall be provided, and shall identify all ceiling features, elevations, structural members, ducts, lighting, and any other potential obstructions. The reflected ceiling plan shall identify whether the ceiling construction is obstructed or unobstructed, defined in NFPA 13 for each room/area.

(5) **Nonmetallic Sprinkler Piping.** The following conditions shall apply for nonmetallic sprinkler piping:

a. **Only in Low-Rise Residential.** Nonmetallic (such as CPVC, etc.) sprinkler piping is only permitted to be installed in low-rise residential occupancies per their specific listing.

b. **Concealed.** The sprinkler piping shall be installed concealed in the wall or ceiling assemblies behind a minimum of one-layer of 5/8 thick gypsum board, and they shall not be permitted to be exposed in any location within the building.

c. **Nonmetallic Risers.** The specific installation of exposed nonmetallic system risers in garages of R-2 and R-3 occupancies is prohibited. Installation of nonmetallic system risers shall only be permitted when they are concealed in a wall or installed within a dedicated enclosure/closet behind a minimum of one-layer of 5/8 thick gypsum board with an associated access door required to access all riser components for testing, repair, and maintenance.

F. **Riser Nipple or Drop.** Include location, size, and length of the riser nipple or drop.

G. **Riser/Standpipe.** Provide location and a detailed and labeled riser/standpipe detail.

H. **Sprinklers.** The following conditions shall apply for sprinklers:

(1) **General.** Include location, SIN (Sprinkler Identification Number), manufacturer, manufacturer's model number, response type, temperature rating, sprinkler type, orifice size, and any other necessary identification information for all sprinklers used.

(2) **Sprinkler Quantity.** Include Number of Sprinklers on:
a. Each Riser per Floor
b. Each Dry Pipe System
c. Each Pre-Action System
d. Each Combined Dry Pipe Pre-Action System
e. Each Deluge System

(3) **Elevations.** Relative elevations of sprinklers, distance of sprinkler deflector to ceiling, junction points, and supply or reference points.

(4) **Small Room Rule.** Identify if applying the small room rule. See 2025 NFPA 13 Section 10.2.4.1.2.

(5) **No Sprinklers in Spaces.** Identify any enclosures or spaces in which sprinklers are not required to be installed, explain why, and provide code section reference.

I. **Sprinkler Bell.** Show location of the sprinkler bell per each riser (if more than one riser is provided) at the exterior of the building above the FDC associated with each riser. State that the bell(s) shall be “F.B.O (furnished by others)” and shall be installed by the fire alarm contractor. See SFFD Administrative Bulletin 2.01 and 4.11 for more information.

J. **Valves.** The following conditions shall apply to valves:

(1) **General.** Include the location, make, type, model, and size.

Example: Control valves, check valves, and relief valves for all systems per 2025 NFPA 13 Section 8.1.2.

(2) **Pressure Reducing Valve.** Include location, make, type, model, size, and the setting for pressure-reducing valves (Both static and residual pressures).

(3) **Test Valves.** All new water-based fire suppression systems must have test valves installed downstream of the backflow preventer.

20. **Dry Pipe and Pre-Action Systems.** Approximate capacity in gallons of dry pipe system and total number of sprinklers controlled by any single interlocking pre-action system (each control valve not to exceed 1000 sprinklers). Calculation program and method shall be listed by a nationally recognized testing laboratory.

21. **Seismic Bracing and Sprinkler Support (Hanger) Information.** The following conditions shall be required for seismic bracing and sprinkler support (hanger) information:

    A. **Location.** Include location and orientation (lateral and longitudinal) of seismic sway bracing and hangers, sleeves, braces. Provide associated symbols for each type of bracing and show the symbols on the plans at the required locations and spacing.

    B. **When Required.** Calculation of loads for sway bracing, including details, shall be required under one of the following conditions:

        (1) **New Sprinkler System.** Calculations shall be required for all new sprinkler systems.

        (2) **Modification to Existing Sprinkler System.** Calculations shall be required for upgrades / modifications / tenant improvements (TIs) to any existing sprinkler system for all exposed piping and accessible portions within the area of work per 2025 NFPA 13 Section 18.5. The following conditions shall apply:

            a. **No Existing Sway Bracing.** If there are no existing sway bracing, provide new sway bracing to meet the locations and spacing requirement per 2025 NFPA 13 Section 18.5.

            b. **Existing Sway Bracing: Not Meeting Requirements.** If there are existing sway bracing that do not meet the 2025 NFPA 13 Section 18.5 requirements for location and spacing, provide additional sway bracing as required.

            c. **Existing Sway Bracing: Meeting Requirements.** If the existing sway bracing meets the 2025 NFPA 13 Section 18.5 requirements for location and spacing, no additional sway bracing shall be required.

    C. **Methods of Securing Sprinklers.** Provide type, manufacturer, size, and figure number for hanger components, including maximum size pipe hanger can support per 2025 NFPA 13 Section 18.5.

    D. **Fasteners.** Include fastener type, manufacturer, size, length minimum embedment depth, ceiling / beam / joist information (type, material, size) fastener is attached to.

    E. **End-of-Line Restraint.** Provide end-of-line restraint for end sprinkler on each branch line, except as allowed in 2025 NFPA 13 Section 18.4.13.1.

    F. **Flexible Coupling.** Any flexible couplings used shall comply with 2025 NFPA 13 Section 18.5.5.9.

22. **Hydraulic Calculations.** The following conditions shall be required for hydraulic calculations:

    A. **When Required.** Hydraulic calculations shall be required under one of the following conditions:

        (1) **New Systems.** Hydraulic calculations shall be required for all new sprinkler systems per 2025 NFPA 13 Chapter 28 (NFPA 13R and NFPA 13D in new systems shall be provided with hydraulic calculations per the applicable code sections in those codes).

(2) **Modifications To An Existing System.** Modifications / tenant improvements (TIs) for an existing sprinkler system shall require hydraulic calculations under one of the following:

a. **Hydraulically Remote Area.** Hydraulically remote areas are changed or modified.

b. **Hazard Change.** Occupancy hazard classification of the sprinkler system is changed to a more conservative hazard (for example, change from light hazard to ordinary hazard).

c. **Backflow Preventer.** When the water supply pipe routing or backflow preventer assembly are modified/replaced.

d. **Case-by-Case Basis.** On a case-by-case basis, depending on the work of the sprinkler system, hydraulic calculations may be required.

B. **Stamp and Signature.** If hydraulic calculations are required, one (1) set of hydraulic calculations with the wet signature and stamp of the engineer or design-build C-16 contractor shall be provided.

C. **Waterflow Test.** Hydraulic calculations shall be based on a SFFD waterflow test that was performed not more than 12 months prior to submission of the calculations.

D. **Hydraulic Data Nameplate.** The information on the hydraulic data nameplate for the most remote area for each hazard for hydraulically designed systems shall be included on the plans.

E. **Supply/Demand Curve.** Provide graph of Supply/Demand Curve(s) showing available margin(s) for the highest system demand.

F. **Reference Points.** Hydraulic reference points shown on the plans shall correspond with comparable reference points on the hydraulic calculation sheets. Outline/highlight the most remote area on the plans.

G. **Design, Density, and Hose Stream.** Provide on the plan the minimum rate of water application (density), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside.

H. **Total Water and Pressure.** Provide on the plan the total quantity of water and the pressure required noted at a common reference point for each system.

I. **Room Design Method.** If the room design method is used, show all unprotected wall openings throughout the protected floor.

J. **Additional Occupancy Classifications.** The following will be classified as Ordinary Hazard Group 1 (OH1) in addition to the 2025 NFPA 13 examples listed in Section A.4.3.3.1:
(1) Fitness Center.
(2) Gymnasium.
(3) Electrical Rooms Other Than Transformer Vaults.

K. **Unknown Occupancy Classification.** Where an occupancy classification is not listed in the occupancy example of 2025 NFPA 13 Section 4.3, the applicable NFPA standard must be used along with engineering judgement to determine the appropriate occupancy hazard classification. Specific approval from SFFD is required for the proposed occupancy classification.

II. SPECIFIC CONDITIONS

23. **Windows with Exposure Protection**. The following conditions shall apply for windows with exposure protection:

    A. **Indication.** Indicate any windows that require exposure protection, for what reason, and provide detail showing mullions, sprinkler orientation, dimensions, etc.

    B. **Architectural Reference.** Approved architectural plans may be required for reference. If approved with an equivalency (DBI's AB-005), the minimum flow required for exposure sprinkler window protection shall be 3 GPM per lineal foot of window width. Any required architectural features and/or dimensions required for compliance with the installation requirements of specially listed window sprinklers shall be documented in the approved architectural plans and provided for reference with the sprinkler plans.

24. **Storage Occupancies**. Storage occupancies must show commodities being stored, maximum storage height, and distance from the ceiling or top of storage to sprinkler deflector. The drawings must include a completed Owner's Information Certificate per 2025 NFPA 13 Figure A.28.1(b).

25. **Electrical Rooms.** In any new occupancy provided with an NFPA 13 system, the electrical rooms shall be provided with sprinkler protection, regardless of the requirement in 2025 NFPA 13 Section 9.2.6.

    Exception: PG&E transformer rooms/vaults.

26. **R-2 and R-3 Parking Garages**. The parking garage(s) areas in R-3 and R-2 occupancies that are provided with NFPA 13R systems, or contain EV(s), associated charging station(s), and/or power walls, shall be hydraulically calculated per NFPA 13 – Ordinary Hazard Group 2 (OH2) per 2025 NFPA 13 Section 4.3.3.2 and A.4.3.3.2.

    Exception: Private garages in R-3 occupancies having NFPA 13D system.

27. **R-3 Buildings with NFPA 13D Systems.** If the water supply does not provide enough pressure or water to meet the sprinkler demand, it shall be permitted to use a listed booster pump. A listed fire pump shall not be required.

28. **Car Stacker / Lift System.** For sprinkler system requirements associated with car stacker / lift systems, refer to SFFD Administrative Bulletin 4.25.

29. **EV Charging Stations.** For sprinkler system requirements for parking spaces associated with EV charging stations in any occupancy other than Group R-3, refer to SFFD Administrative Bulletin 4.29.

30. **Phone/Privacy Booths/Pods.** The following conditions shall apply for phone/privacy booths/pods:

    A. **Permanent Structure.** All proposed phone/privacy booths/pods must be permanent structures attached to the building and have an associated building permit reviewed by DBI building inspector.

    B. **Cut Sheets.** Manufacturer's specification sheets (cut sheets) of the specific booth/pod must be provided for DBI and SFFD review and be placed/scanned onto the building permit plans showing that the booth/pod materials are non-combustable.

    C. **Sprinklers.** Phone/privacy booths/pods shall have sprinklers inside the booth/pod.

    Exception: A phone/privacy booth/pod shall not be required to have sprinkler protection within the booth/pod if all the following conditions are met:

    (1) The phone/privacy booth/pod is not exceeding a 4-foot dimension in length or width.

    (2) The phone/privacy booth/pod has a minimum 4 feet of clearance from any other adjacent booth/pod or any other similar obstruction.

    (3) The phone/privacy booth/pod are constructed of non-combustible materials.

31. **Elevators.** Buildings with elevators shall clearly show the elevator location and Elevator Machine Room (EMR) or Elevator Control Room (ECR) on the associated permit plans. The elevator checklist from SFFD Administrative Bulletin 2.01 Addendum F must be completed by the elevator contractor / vendor / consultant company and incorporated onto the plans. Requirements for elevators shall comply with all the specific applicable requirements. See 2025 NFPA 13 Section 9.2.14 for sprinkler omissions in elevator spaces and Section 9.3.6 for required sprinklers in elevator spaces.

    A. **Existing Elevators.** The following shall apply for existing elevators:

    (1) **New Sprinklers.** If new sprinklers are installed in an elevator machine room/hoistway, a shunt trip function and all its associated components shall be provided. New sprinklers are prohibited to be installed in the hoistway pit for all elevators.

    (2) **Existing Sprinklers in Freight Elevators.** Existing sprinklers shall not be removed from the top of freight elevator hoistways that are not fully enclosed and/or have manually operated doors. Shunt trip function shall be provided if shunt trip is not already provided.

    (3) **Existing Sprinklers in Elevator Without Shunt Trip.** If the existing elevator was not provided with the shunt trip function and existing sprinklers are located in the elevator machine room/hoistway, one of the following must occur:

    a. These sprinklers shall be removed per SFFD Administrative Bulletin 2.01 Addendum D.

    b. Shunt trip function shall be provided with smoke and heat detection at the sprinkler location. If detection devices are provided in the hoistway, they must be accessible from outside the hoistway per 2025 NFPA 72 Section 21.3.7.

Exception: Shunt trip is prohibited if the elevator does not have any Firefighter Emergency Operations (FEO), such as Phase 1 recall. A letter from the elevator contractor / vendor / consultant stating that there is no FEO, shall be provided. If FEO is not provided, the elevator checklist is not required.

(4) **Existing Shunt Trip Function.** If the existing elevator was provided with a shunt trip function, the fire alarm system shall maintain this function.

Exception: Shunt trip function shall be removed if the SFFD procedure for sprinklers removal was performed under separate permit (see SFFD AB 2.01 Addendum D). Sprinkler removal from EMRs/hoistways is permitted on a case-by-case basis.

B. **New/Modernized/Upgraded/Altered Elevators.** If an existing elevator is upgraded, modernized, or altered (elevator modernization or controller replacement, etc.) the requirements of CA Title 8 Elevator Safety Orders, ASME A17.1, NFPA 13, and items below shall apply:

(1) **Hydraulic Elevators.** The following shall apply for hydraulic elevators:

a. **Prohibited Spaces for Sprinklers.** Sprinklers shall not be installed in the following associated spaces in all hydraulic elevators per SFFD Administrative Bulletin 2.04:
   i. Hoistway Pits
   ii. Top of Hoistways (for Passenger and Fully Enclosed Freight Elevators without Manually Operated Doors)

b. **Prohibited Hydraulic Elevators.** Hydraulic elevators are prohibited to serve as Machine Room-Less (MRL) type elevators, Fire Service Access Elevators (FSAEs), or Occupant Evacuation Elevators (OEEs) per CA Title 8 Elevator Safety Orders and SFFD Administrative Bulletin 5.08.

c. **Sprinklers in the Elevator Machine Room.** Sprinklers shall be installed in every hydraulic elevator machine room. A shunt trip function associated with the EMR sprinkler shall be installed in buildings that are fully or partially sprinklered. Shunt trip function is not required for new or modernized hydraulic elevators in non-sprinklered buildings.

   i. Sprinklers installed in hydraulic elevators' machine rooms shall not be Quick Response (QR) type sprinklers per 2025 NFPA 13. They must have a higher Response Time Index (RTI) than their associated heat detector, which is required to be installed within 24 inches of each EMR sprinkler.

ii. If a new shunt trip function is required upon installation of sprinklers in elevator machine rooms or top of hoistway, the shunt trip equipment shall be acceptable to and approved by the California State Elevator Inspector (location and equipment type). The shunt trip equipment may be installed in the EMR and may be combined with the elevator mainline disconnect switch as a single listed combination device as approved by the California State Elevator Inspector.

d. **Freight Hydraulic Elevators.** Freight hydraulic elevators that are not fully enclosed and/or have manually operated doors shall have sprinklers at top of the hoistway with associated smoke detection and shunt trip function in buildings that are fully or partially sprinklered. Shunt trip function is not required for new or modernized hydraulic elevators in non-sprinklered buildings.

(2) **Traction (Electric) Elevators.** The following shall apply for traction (electric) elevators:

a. **Prohibited Spaces for Sprinklers.** Sprinklers shall prohibited to be installed in the following associated spaces in traction elevators:
   i. Elevator Machine/Control Rooms.
   ii. Elevator Machinery Spaces.
   iii. Hoistway Pits.
   iv. Top of Hoistways (for Passenger and Fully Enclosed Freight Elevators without Manually Operated Doors).

b. **No Shunt Trip.** If there are no sprinklers in the associated spaces mentioned above, shunt trip function shall not be provided.

c. **Freight Traction Elevators.** Freight traction elevators that are not fully enclosed and/or have manually operated doors shall have sprinklers at top of the hoistway with associated smoke detection and shunt trip function in buildings that are fully or partially sprinklered. Shunt trip function is not required for new or modernized traction freight elevators in non-sprinklered buildings.

d. **No Control Spaces.** Control spaces for traction MRL elevators are prohibited per 2025 SFEC.

e. **FT-1 Rated Belts.** All traction elevators having steel-coated-belts shall have FT-1 rated belts. Combustible belts (without FT-1 rating) are prohibited. A signed letter/document from the elevator manufacturer for the required FT-1 rating must be provided on the plans for all traction elevators having steel-coated-belts. The letter document shall indicate the specific building address and specific elevator ID.

(3) **Special Use Elevators.** The following conditions shall apply for special use elevators:

a. If a special use elevator is not capable of Phase I Emergency Recall Operation, then the shunt trip function shall not be provided. An elevator checklist filled by the elevator contractor / vendor / consultant showing that there is no FEO shall be provided. See SFFD Administrative Bulletin 2.01 Addendum F for more information.

Examples of Special Use Elevators:

1. *Private Residence Elevators (ASME A17.1 Section 5.3).*
2. *Limited Use Limited Application Elevators [LULA] (ASME A17.1 Section 5.2).*
3. *Limited Use Limited Access Elevators (CA Title 8 ESO Article 15).*

b. If the special use elevator is hydraulic type, sprinklers shall be installed in the associated elevator machine room (EMR). Shunt trip function shall only be installed if the elevator is provided with Phase 1 Emergency Recall Operation.

Exception: Sprinklers shall not be required to be installed in the EMR of hydraulic elevators installed in R-3 Occupancies protected by an NFPA 13D system.

(4) **FSAE and OEE.** New high-rise buildings provided with Fire Service Access Elevators (FSAEs) and/or Occupant Evacuation Elevators (OEEs) having Occupant Evacuation Operation (OEO) shall comply with SFFD Administrative Bulletin 5.08. Sprinklers shall be prohibited to be installed in any FSAEs/OEEs elevator associated spaces (EMR/ECR/hoistway).