SECOND 15-DAY EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF THE STATE FIRE MARSHAL

REGARDING PROPOSED CHANGES TO
2016 CALIFORNIA RESIDENTIAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2.5

Legend for Express Terms:

1. **Existing California amendment:** California 45-Day language and First 15-Day language (October 28 - November 12, 2015) will appear in underlined and ~~strikeout~~.
2. **Amended, or repealed language**: Amended or repealed Second 15-Day language will appear in *italics and double underline* and ~~double strikeout~~.
3. **Rationale:** The justification for the change is shown after each section or series of related changes.
4. **Notation**: Authority and reference citations are provided at the end of each chapter.

CHAPTER 44
REFERENCED STANDARDS

13—~~*13*~~*16* Installation of Sprinkler Systems *as amended** . . . . . R302.3~~708.2, 903.3.1.1, 903.3.2, 903.3.5.1.1,903.3.5.2, 904.11, 905.3.4, 907.6.3, 1613.6.3, 1616.9.5, 1616.10.17~~

[Editorial Note: the "See CCR…" language was not shown within the First 15-Day language (October 28 - November 12, 2015). This language was shown in the 45-Day language.]
See CCR, Title 24 Part 2 California Building Code, Chapter 35 or CCR, Title 24, Part 9 California Fire Code, Chapter ~~47~~80 for amendments to NFPA 13.

~~***NFPA 13, Amended Sections as follows:***~~

~~***Add new Sections 8.15.5.6.1 as follows:***~~
~~***8.15.5.6.1 The sprinkler required at the top and bottom of the elevator hoistway by 8.15.5.6 shall not be required where permitted by Chapter 30 of the California Building Code.***~~

~~***Revise Section 8.15.7.2* as follows:***~~
~~8.15.7.2* Sprinklers shall be permitted to be omitted where the exterior canopies, roofs, porte-cocheres, balconies, decks, or similar projections are constructed with materials that are noncombustible, limited combustible, or fire retardant treated wood as defined in NFPA 703, *Standard for Fire Retardant Treated Wood and Fire Retardant Coatings for Building Materials.*~~

~~***Revise Section 8.15.7.3***~~
~~8.15.7.3 Sprinklers shall be permitted to be omitted from below the canopies, roofs, balconies, decks, or similar projections are combustible construction, provided the exposed finish material on the roof, or canopy is noncombustible,~~

~~limited-combustible, or fire-retardant-treated wood as defined in NFPA 703, *Standard for Fire-Retardant-Treated Wood and Fire-Retardant Coatings for Building Materials*, and the roofs, or canopies contains only sprinklered concealed spaces or any of the following unsprinklered combustible concealed spaces:~~
~~(1) Combustible concealed spaces filled entirely with noncombustible insulation.~~
~~(2) Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 ft^3 (4.5 m^3) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered attic *[See 11.2.3.1.5.2(9)]*.~~
~~(3) Concealed spaces over isolated small roofs, or canopies not exceeding 55 ft^2 (5.1~~

~~*Add new Sections 8.16.1.6, 8.16.1.6.1, 8.16.1.6.1.1, 8.16.1.6.1.2, 8.16.1.6.1.3, 8.16.1.6.2 as follows:*~~

~~*8.16.1.6 Sectional Valves.*~~

~~*8.16.1.6.1 Private fire service main systems shall have sectional control valves at appropriate points in order to permit sectionalizing the system in the event of a break or for the making of repairs or extensions.*~~

~~*8.16.1.6.1.1 Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.*~~

~~*8.16.1.6.1.2 Sectional control valves shall be indicating valves in accordance with Section 6.6.1.3.*~~

~~*8.16.1.6.1.3 Sectional control valves shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In rack sprinkler systems shall not be considered as a separate appurtenance.*~~

~~*8.16.1.6.1.4 The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.*~~

~~*8.16.1.6.2* A valve shall be provided on each bank where a main crosses a *body of* water or outside the building foundation(s) where the main or section of main runs under a building.~~

~~*Revise Section 9.3.5.11.4 as follows:*~~
~~9.3.5.11.4 *Where threaded pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40.*~~

~~*Replace Section 9.3.5.12.5 as follows:*~~
~~*9.3.5.12.5 Lag screws or power driven fasteners shall not be used to attach braces to the building structure.*~~

~~*Replace Section 9.3.5.12.6 as follows:*~~
~~*9.3.5.12.6 Fastening methods other than those identified in 9.3.5.12* shall not apply to other fastening methods, which shall be acceptable for use if certified by a registered professional engineer to support the loads determined in accordance with the criteria in 9.3.5.6. Calculations shall be submitted to the authority having jurisdiction.~~

~~*Revise Section9.3.5.12.8.4 as follows:*~~
~~*9.3.5.12.8.4* Concrete anchors other than those shown in Table 9.3.5.12.2(a) through Table 9.3.5.12.2(f) *and identified in 9.3.5.11.11* shall be acceptable for use where designed in accordance with the requirements of the building code and certified by a registered professional engineer.~~

~~*Revise Section 10.4.3.1.1 as follows:*~~
~~*10.4.3.1.1* Pipe joints shall not be located under foundation footings. *The pipe under the building or building foundation shall not contain mechanical joints.*~~

~~*Exceptions:*~~
~~*1. Where allowed in accordance with 10.4.3.2*~~
~~*2. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.*~~

~~*Revise Section 11.2.3.1.5.2(9) as follows:*~~

~~*11.2.3.1.5.2(9)* Exterior columns under 10 ft^2 (0.93m2) in *total* area, formed by studs or wood joist, *with no sources of ignition within the column*, supporting exterior canopies that are fully protected with a sprinkler system.~~

~~*Revise Section 25.1 as follows:*~~

~~25.1 Approval of Sprinkler Systems and Private Fire Service Mains. The installing contractor shall do the following:~~
~~(1) Notify the authority having jurisdiction and the property owner or property owner's authorized representative of the time and date testing will be performed.~~
~~*(2)* Perform all required testing *(see Section 25.2)*~~
~~*(3)* Complete and sign the appropriate contractor's material and test certificate(s) *(see Figure 25.1)*~~
~~(4) Remove all caps and straps prior to placing the sprinkler~~
~~system in service~~
~~*(5) Upon system acceptance by the authority having jurisdiction a label prescribed by Title 19 California Code of Regulations, Chapter 5 shall be affixed to each system riser.*~~

~~*Revise Section 25.4 as follows:*~~

~~25.4 Instructions. The installing contractor shall provide the property owner or the property owner's authorized representative with the following:~~

~~(1) All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed~~
~~*(2) NFPA 25, Standard for the Inspection, testing, and maintenance of Water Based Fire Protection Systems, 2013 California Edition*~~
~~*(3) Title 19, California Code of Regulations, Chapter 5, "Fire Extinguishing Systems".*~~

~~*Revise Section 25.5.1 as follows:*~~

~~25.5.1 The installing contractor shall identify a hydraulically designed sprinkler system with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, preaction valve, or deluge valve supplying the corresponding hydraulically designed area. *Pipe schedule systems shall be provided with a sign indicating that the system was designed and installed as a pipe schedule system and the hazard classification(s) included in the design."*~~

~~*Revise Section 25.5.2 as follows:*~~

~~25.5.2 The sign shall include the following information:~~
~~(1) Location of the design area or areas~~
~~(2) Discharge densities over the design area or areas~~
~~*(3) Required flow and pressure of the system at the base of the riser*~~
~~(4) Occupancy classification or commodity classification and maximum permitted storage height and configuration~~
~~(5) Hose stream allowance included in addition to the sprinkler demand~~
~~(6) The name of the installing contractor~~
~~*(7) Required flow and pressure of the system at the water supply source.*~~
~~*(8) Required flow and pressure of the system at the discharge side of the fire pump where a fire pump is installed.*~~
~~*(9) Type or types and number of sprinklers or nozzles installed including the orifice size, temperature rating, orientation, K-Factor, sprinkler identification number (SIN) for sprinkler heads when applicable, and response type.*~~
~~*(10) The minimum discharge flow rate and pressure required from the hydraulically most demanding sprinkler.*~~
~~*(11) The required pressure settings for pressure reducing valves.*~~
~~*(12) For deluge sprinkler systems, the required flow and pressure at the hydraulically most demanding sprinkler or nozzle.*~~
~~*(13) The protection area per sprinkler based on the hydraulic calculations*~~
~~*(14) The edition of NFPA 13 to which the system was designed and installed.*~~

~~*Revise Section 25.6.1 as follows:*~~

~~25.6.1 The installing contractor shall provide a general information sign used to determine system design basis and information relevant to the inspection, testing, and maintenance requirements required by NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water Based Fire Protection Systems, 2013 California Edition.*~~

13R—~~13~~16 Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height *as amended. . . . . .* ~~*903.3.1.2, 903.3.5.1.1, 903.3.5.1.2, 903.4*~~

[Editorial Note: the "See CCR…" language was not shown within the First 15-Day language (October 28 - November 12, 2015). This language was shown in the 45-Day language.]
See CCR, Title 24 Part 2 California Building Code, Chapter 35 or CCR, Title 24, Part 9 California Fire Code, Chapter ~~47~~80 for amendments to NFPA 13R.

~~**NFPA 13R, Amended Sections as follows:*~~

~~*Add new Sections 6.6.10 and 6.10.1 as follows:*~~

~~*6.6.10 Solar photovoltaic panel structures*~~

~~*6.6.10.1 Sprinklers shall be permitted to be omitted from the following structures:*~~
~~*(1) Solar photovoltaic panel structures with no use underneath. Signs may be provided, as determined by the enforcing agency prohibiting any use underneath including storage.*~~

~~*(2) Solar photovoltaic (PV) panels supported by framing that have sufficient uniformly distributed and unobstructed openings throughout the top of the array (horizontal plane) to allow heat and gases to escape, as determined by the enforcing agency.*~~

Rational for revision:
During the First 15-Day Express Terms / Initial Statement of Reasons (October 28 - November 12, 2015) the SFM proposed for adoption the 2016 editions of NFPA 13, 13D, 13R and 72. The SFM accidently printed the State Amendments for NFPA 13 and 13R within the CRC First 15-Day language. This was an error and the amendments should not have been shown. Chapter 44 of the CRC has always directed the code user to the CBC/CFC to see the state amendments for NFPA 13 and NFPA 13R.

During this Second 15-Day Express Terms / Initial Statement of Reasons, the SFM is proposing to repeal the printing of the State amendments for NFPA 13 and NFPA 13R, that was proposed during the First 15-Day language. This will be consistent with the original intent of the 45-Day language.

Notation
Authority: Health and Safety Code Sections 13108, 13143, 13143.9, 13146, 17921, 18949.2
Reference(s): Health and Safety Code Sections 13143, 18949.2

R324.3 Photovoltaic systems. Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through ~~R324.7.2.5~~R324.7.2.7 and ~~NFPA 70~~*California Electric Code*. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

R324.7 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Sections R324.7.1 through ~~R324.7.2.5~~R324.7.2.7*.*

R324.7.2 Solar photovoltaic systems. Solar photovoltaic systems shall comply with Sections R324.7.2.1 through ~~R324.7.2.5~~*~~R324.7.2.6~~R324.7.2.7*.

~~R324.7.2.6~~R324.7.2.7 ***Locations of DC conductors****. Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be located such that conduit runs are minimized in the pathways between arrays. DC wiring shall be installed in metallic conduit or raceways when located within enclosed spaces in a building. Conduit shall run along the bottom of load bearing members.*

Rational for revision:
During the First 15-Day Express Terms / Initial Statement of Reasons (October 28 - November 12, 2015) the SFM brought back R324.7.2.6 Locations of DC conductors that was accidently repealed. After further review, the 45-day language already contained an R324.7.2.6 and now there were two different sections with the same section numbers. Section R324.7.2.6 was already being used for ground-mounted photovoltaic arrays.

During this Second 15-Day Express Terms / Initial Statement of Reasons, the SFM is proposing to change the section number for Locations of DC conductors to 324.7.2.7 to resolve the duplication of section numbers. The SFM is also proposing to include state amendments into the scoping language of Section R324.3, R324.7, and R324.7.2 to include the two state amendments (R324.7.2.6 and R324.7.2.7).

Notation
Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2
Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2