

# REVISION RECORD FOR THE STATE OF CALIFORNIA

## ERRATA

January 1, 2015

### 2013 Title 24, Part 2.5, California Code of Regulations

#### General Information:

1. The date of this erratum is for identification purposes only. See the History Note Appendix on the back side or accompanying page.
2. This erratum is issued by the California Building Standards Commission in order to correct nonsubstantive printing errors or omissions in California Code of Regulations, Title 24, Part 2.5, of the 2013 *California Residential Code*. Instructions are provided below.
3. Health and Safety Code Section 18938.5 establishes that only building standards in effect at the time of the application for a building permit may be applied to the project plans and construction. This rule applies to both adoptions of building standards for Title 24 by the California Building Standards Commission, and local adoptions and ordinances imposing building standards. An erratum to Title 24 is a nonregulatory correction because of a printing error or omission that does not differ substantively from the official adoption by the California Building Standards Commission. Accordingly, the corrected code text provided by this erratum may be applied on and after the stated effective date.
4. You may wish to retain the superseded material with this revision record so that the prior wording of any section can be easily ascertained.

#### Title 24, Part 2.5

##### Remove Existing Pages

25 through 28  
39 and 40  
113 and 114  
545 through 550  
665 and 666

##### Insert Buff Colored Pages

25 through 28  
39 and 40  
113 and 114  
545 through 550  
665 and 666



## CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE CHAPTER 2 – DEFINITIONS

(Matrix Adoption Tables are non-regulatory, intended only as an aid to the user.  
See Chapter 1 for state agency authority and building applications.)

Adopting agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt entire chapter																			
Adopt entire chapter as amended (amended sections listed below)			X																
Adopt only those sections that are listed below		X																	
Chapter / Section																			
R201.1		X																	
R201.2		X																	
R201.3		X	X																
R201.4		X																	
ACCESSORY STRUCTURE		X																	
ADDITION		X																	
AGED HOME OR INSTITUTION		X																	
ALTERATION		X	X																
APPROVED		X	X																
APPROVED AGENCY		X	X																
APPROVED LISTING AGENCY		X	X																
APPROVED TESTING AGENCY		X	X																
ATTIC		X																	
ATTIC, HABITABLE		X																	
BASEMENT		X																	
BEDRIDDEN PERSON		X																	
BUILDING		X	X																
BUILDING OFFICIAL		X																	
BUILT-UP ROOF COVERING		X																	
CARE AND SUPERVISION		X																	
CATASTROPHICALLY INJURED		X																	
CEILING HEIGHT		X																	
CHILD-CARE CENTER		X																	
CHILD OR CHILDREN		X																	
CHRONICALLY ILL		X																	
CLOSET		X																	
COMBUSTIBLE MATERIAL		X																	
CONGREGATE LIVING HEALTH- FACILITY (CLHF)		X																	
CONGREGATE RESIDENCE		X																	
CONSTRUCTION DOCUMENTS		X																	
DAYCARE		X																	
DAY-CARE HOME, LARGE FAMILY		X																	
DAY-CARE HOME, SMALL FAMILY		X																	
DEPARTMENT			X																
DESIGN PROFESSIONAL		X																	

(continued)

**CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE  
CHAPTER 2 – DEFINITIONS—continued**

Adopting agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt entire chapter																			
Adopt entire chapter as amended (amended sections listed below)			X	X															
Adopt only those sections that are listed below		X																	
Chapter / Section																			
DRAFT STOP		X																	
DWELLING		X																	
DWELLING UNIT		X																	
<i>EFFICIENCY DWELLING UNIT</i>			X																
EMERGENCY ESCAPE AND RESCUE OPENING		X																	
ENFORCEMENT			X																
ENFORCING AGENCY		X	X																
ENFORCEMENT AGENCY			X																
EXTERIOR WALL		X																	
FAMILY			X																
FENESTRATION			X																
FIREBLOCKING		X																	
FIRE-RETARDANT-TREATED WOOD		X																	
FIRE SEPARATION DISTANCE		X																	
FLAME SPREAD		X																	
FLAME SPREAD INDEX		X																	
FULL-TIME CARE		X																	
GRADE		X																	
GRADE FLOOR OPENING		X																	
GRADE PLANE		X																	
<i>GUARD OR GUARDRAIL</i>		X	X																
HABITABLE SPACE		X																	
HANDRAIL		X																	
HAZARDOUS LOCATION		X																	
HEIGHT, BUILDING		X																	
HEIGHT, STORY		X																	
IGNITION SOURCE		X																	
<i>INSULATING SHEATHING</i>		X	X																
INFANT		X																	
LABEL		X																	
LABELED		X	X																
LIMITED-DENSITY OWNER- BUILT RURAL DWELLINGS			X																
LISTED		X	X																
<i>LISTING AGENCY</i>			X																
LIVING SPACE		X																	
<i>LODGING HOUSE</i>			X																
LOT		X																	
LOT LINE		X																	
MARK		X																	

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**CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE  
CHAPTER 2 – DEFINITIONS—continued**

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Adopting agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt entire chapter																			
Adopt entire chapter as amended (amended sections listed below)			X	X															
Adopt only those sections that are listed below		X																	
Chapter / Section		X																	
MENTALLY RETARDED PERSONS, PROFOUNDLY OR SEVERELY		X																	
METAL ROOF PANEL		X																	
METAL ROOF SHINGLE		X																	
MEZZANINE, LOFT		X																	
MULTIPLE STATION SMOKE ALARM		X																	
NONAMBULATORY PERSONS		X																	
NONCOMBUSTIBLE MATERIAL		X																	
OCCUPIED SPACE		X																	
OWNER		X																	
PASSIVE SOLAR ENERGY COLLECTOR			X																
PRESIDENTIAL FACILITY (RF)		X																	
PROTECTIVE SOCIAL CARE FACILITY		X																	
PUBLIC WAY		X																	
RAMP		X																	
REPAIR		X	X																
REROOFING		X																	
RESIDENTIAL CARE FACILITY FOR THE CHRONICALLY ILL (RCF/CI)		X																	
RESIDENTIAL CARE FACILITY FOR THE ELDERLY (RCFE)		X																	
RESTRAINT		X																	
RISER			X																
ROOF ASSEMBLY		X																	
ROOF COVERING		X																	
ROOF COVERING SYSTEM		X																	
ROOFDECK		X																	
ROOF RECOVER		X																	
ROOF REPAIR		X																	
ROOFTOP STRUCTURE		X																	
SHALL		X																	
SINGLE STATION SMOKE ALARM		X																	
SMOKE-DEVELOPED INDEX		X																	
STAIR		X																	
STAIRWAY		X																	
STATE-OWNED/LEASED BUILDING		X																	

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**CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE  
CHAPTER 2 – DEFINITIONS—continued**

Adopting agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt entire chapter																			
Adopt entire chapter as amended (amended sections listed below)			X	X															
Adopt only those sections that are listed below		X																	
Chapter / Section																			
STORY		X																	
STORY ABOVE GRADE PLANE		X																	
STRUCTURE		X																	
SUNROOM			X																
TERMINALLY ILL		X																	
TESTING AGENCY			X																
TOWNHOUSE		X																	
VENTILATION			X																

# CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE

## CHAPTER 3 – BUILDING PLANNING

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(Matrix Adoption Tables are non-regulatory, intended only as an aid to the user.  
See Chapter 1 for state agency authority and building applications.)

Adopting agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt entire chapter																			
Adopt entire chapter as amended (amended sections listed below)			X																
Adopt only those sections that are listed below		X																	
Chapter / Section																			
<i>R300</i>			X																
<i>R300.1</i>			X																
<i>R300.2</i>			X																
R301.1		X																	
R301.1.1			X	X															
<i>R301.1.1.1</i>			X																
R301.1.3			X	X															
<i>R301.1.3.1</i>			X																
<i>R301.1.3.2</i>			X																
<i>R301.1.3.3</i>			X																
Table R301.2(1)			X																
R301.2.2.1.1			X	X															
R301.2.2.1.2			X	X															
R301.2.2.3.7			X																
R301.2.2.4			X	X															
R301.3			X	X															
R302.2		X	X																
R302.5.1		X	X																
R302.6		X	X																
Table R302.6		X																	
R302.9.4		X																	
R302.9.5		X																	
R302.13		X	X																
R303.1			X																
R303.3			X																
<i>R303.3.1</i>			X																
<i>R303.4</i>			X																
R303.6		X																	
R303.6.1		X																	
<i>R303.8</i>		X	X																
<i>R303.8.1</i>		X																	
<i>R303.8.1.1</i>			X																
<i>R303.9</i>		X	X																
R304.1		X																	
R304.2		X																	
R304.3		X	X																
R304.4		X																	
<i>R304.5</i>			X																
R305.1		X	X																
R305.1.1		X																	
R306.1		X																	
R307.1			X																
Figure R307.1			†																
R308.3 through R308.4		X																	

(continued)

**CALIFORNIA RESIDENTIAL CODE – MATRIX ADOPTION TABLE  
CHAPTER 3 – BUILDING PLANNING—continued**

Adopting Agency	BSC	SFM	HCD			DSA		OSHPD				BSCC	DHS	AGR	DWR	CEC	CA	SL	SLC
			1	2	1/AC	AC	SS	1	2	3	4								
Adopt Entire Chapter																			
Adopt Entire Chapter as amended (amended sections listed below)			X	X															
Adopt only those sections that are listed below		X																	
Chapter / Section																			
R308.5			X	X															
R309.4			X																
R309.7			X																
R309.6		X																	
R310.1			X																
R310 through R310.4		X																	
R311 through R31108.3.3		X																	
R312.1.2		X	X																
R312.3		X																	
R312.4		X																	
R313.1		X																	
R313.3 through R313.3.8.2		X																	
R314 through R314.6.3		X																	
R315.1			X																
R315.1.1			X																
R315.1.2			X																
R315.1.3			X																
R315.1.4			X																
R315.1.5			X																
R315.2			X																
R315.2.1			X																
R315.2.2			X																
R315.2.3			X																
R315.2.3.1			X																
R315.2.3.2			X																
R315.2.4			X																
R315.2.5			X																
R315.2.6			X																
R316.3 through R316.4		X																	
R316.5.8 through R316.5.11		X																	
R319		X																	
R320.1			X																
R321.3			X																
R322.1.6			X																
R322.1.7			X																
R322.1.9			†																
R324			X																
R324.1			X																
R325 through R325.8		X	X																
R326 through R326.8		X																	
R327 through R327.10.4		X																	
R328 through R328.4		X																	
R330			X																
R330.1			X																
R331		X																	

The † designation indicates that the State Fire Marshal's adoption of this chapter or individual section is applicable to structures subject to HCD1.



**R327.6.3 Ventilation openings on the underside of eaves and cornices.** Vents shall not be installed on the underside of eaves and cornices.

**Exceptions:**

1. The enforcing agency may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.
2. Vents complying with the requirements of Section R327.6.2 may be installed on the underside of eaves and cornices in accordance with either one of the following conditions:
  - 2.1. The attic space being ventilated is fully protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the California Building Code or,
  - 2.2. The exterior wall covering and exposed underside of the eave are of noncombustible material, or ignition-resistant materials as determined in accordance with SFM Standard 12-7A-5 Ignition-Resistant Material and the vent is located more than 12 feet from the ground or walking surface of a deck, porch, patio, or similar surface.

**SECTION R327.7  
EXTERIOR COVERING**

**R327.7.1 Scope.** The provisions of this section shall govern the materials and construction methods used to resist building ignition and/or safeguard against the intrusion of flames resulting from small ember and short-term direct flame contact exposure.

**R327.7.2 General.** The following exterior covering materials and/or assemblies shall comply with this section:

1. Exterior wall covering material.
2. Exterior wall assembly.
3. Exterior exposed underside of roof eave overhangs,
4. Exterior exposed underside of roof eave soffits.
5. Exposed underside of exterior porch ceilings.
6. Exterior exposed underside of floor projections.
7. Exterior underfloor areas.

**Exceptions:**

1. Exterior wall architectural trim, embellishments, fascias and gutters.
2. Roof or wall top cornice projections and similar assemblies.
3. Roof assembly projections over gable end walls..
4. Solid wood rafter tails and solid wood blocking installed between rafters having minimum dimension 2 inch (50.8 mm) nominal.
5. Deck walking surfaces shall comply with Section R327.9 only.

**R327.7.3 Exterior walls.** The exterior wall covering or wall assembly shall comply with one of the following requirements:

1. Noncombustible material.
2. Ignition-Resistant material.
3. Heavy timber exterior wall assembly.
4. Log wall construction assembly.
5. Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1.

**Exception:** Any of the following shall be deemed to meet the assembly performance criteria and intent of this section:

1. One layer of  $\frac{5}{8}$ -inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing.
2. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

**R327.7.3.1 Extent of exterior wall covering.** Exterior wall coverings shall extend from the top of the foundation to the roof, and terminate at 2 inch (50.8 mm) nominal solid wood blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.

**R327.7.4 Open roof eaves.** The exposed roof deck on the underside of unenclosed roof eaves shall consist of one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.
3. One layer of  $\frac{5}{8}$ -inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the roof deck designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

**Exceptions:** The following materials do not require protection:

1. Solid wood rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
2. Solid wood blocking installed between rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
3. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
4. Fascia and other architectural trim boards.

**R327.7.5 Enclosed roof eaves and roof eave soffits.** The exposed underside of enclosed roof eaves having either a boxed-in roof eave soffit with a horizontal underside, or sloping rafter tails with an exterior covering applied to the underside of the rafter tails, shall be protected by one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.
3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

**Exceptions:** The following materials do not require protection:

1. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
2. Fascia and other architectural trim boards.

**R327.7.6 Exterior porch ceilings.** The exposed underside of exterior porch ceilings shall be protected by one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.
3. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering on the underside of the ceiling.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the ceiling assembly including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. Porch ceiling assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

**Exception:** Architectural trim boards.

**R327.7.7 Floor projections.** The exposed underside of a cantilevered floor projection where a floor assembly extends over an exterior wall shall be protected by one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.

3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor projection including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. The underside of a floor projection assembly that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

**Exception:** Architectural trim boards.

**R327.7.8 Underfloor protection.** The underfloor area of elevated or overhanging buildings shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.
3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

**Exception:** Heavy-timber structural columns and beams do not require protection.

**R327.7.9 Underside of appendages.** When required by the enforcing agency the underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

1. Noncombustible material.
2. Ignition-Resistant material.
3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

**Exception:** Heavy-timber structural columns and beams do not require protection.

# NAIMA

North American Insulation Manufacturers Association  
 44 Canal Center Plaza, Suite 310  
 Alexandria, VA 22314

Standard reference number	Title	Referenced in code section number
AH 116—09	Fibrous Glass Duct Construction Standards, Fifth Edition . . . . .	M1601.1.1

# NCMA

National Concrete Masonry Association  
 13750 Sunrise Valley Drive  
 Herndon, VA 20171-4662

Standard reference number	Title	Referenced in code section number
TR 68-A—75	Design and Construction of Plain and Reinforced Concrete Masonry and Basement and Foundation Walls . . . . .	R404.1.1

# NFPA

National Fire Protection Association  
 1 Batterymarch Park  
 Quincy, MA 02269

Standard reference number	Title	Referenced in code section number
13—13	Installation of Sprinkler Systems <i>as amended</i> * . . . . .	R302.3

*See CCR, Title 24 Part 2 California Building Code, Chapter 35 or CCR, Title 24, Part 9 California Fire Code, Chapter 47 for amendments to NFPA 13.*

13D—13	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes <i>as amended</i> * . . . . .	R313.1.1, R313.2.1, R313.3.1, R313.3.2, R313.3.2.3.1, R313.3.2.4.2, R313.3.6.1
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**\*NFPA 13D, Amended Sections as follows:**

**Revise 6.2.2, 6.2.2.1, 6.2.4 to read as follows:**

**6.2.2** Where a well, pump, tank or combination thereof is the source of supply for a fire sprinkler system, the water supply shall serve both domestic and fire sprinkler systems, and the following shall be met:

- (1) A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
- (2) Any disconnecting means for the pump shall be approved.
- (3) A method for refilling the tank shall be piped to the tank.
- (4) A method of seeing the water level in the tank shall be provided without having to open the tank.
- (5) The pump shall not be permitted to sit directly on the floor.

**6.2.2.1** Where a fire sprinkler system is supplied by a stored water source with an automatically operated means of pressurizing the system other than an electric pump, the water supply may serve the sprinkler system only.

**6.2.4** Where a water supply serves both domestic and fire sprinkler systems, 5 gpm (19 L/min) shall be added to the sprinkler system demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

NFPA—continued

**8.3.4\*** Sprinklers shall not be required in detached garages, open attached porches, carports with no habitable space above, and similar structures.

13R—13

*See CCR, Title 24 Part 2 California Building Code, Chapter 35 or CCR, Title 24, Part 9 California Fire Code, Chapter 47 for amendments to NFPA 13.*

31—06

Installation of Oil-burning Equipment . . . . . M1801.3.1, M1805.3

58—08

Liquefied Petroleum Gas Code . . . . . G2412.2, G2414.6.2

70—08

National Electrical Code . . . . . E3401.1, E3401.2, E4301.1, Table E4303.2, E4304.3, E4304.4

> || 72—13

National Fire Alarm and Signalling Code as amended\* . . . . R314.1, R314.2, R314.3.4, R325.5.2.1, R235.5.2.4

**\*NFPA 72, Amended Sections as follows:**

**10.3.1** Equipment constructed and installed in conformity with this code shall be listed for the purpose for which it is used. *Fire alarm systems and components shall be California State Fire Marshal approved and listed in accordance with California Code of Regulations, Title 19, Division 1.*

**10.3.3** All devices and appliances that receive their power from the initiating device circuit or signaling line circuit of a control unit shall be *California State Fire Marshal* listed for use with the control unit.

**10.7.1** *Where approved by the authority having jurisdiction*, ECS priority signals when evaluated by stakeholders through risk analysis in accordance with 24.3.1.1 shall be permitted to take precedence over all other signals.

**12.3.7 Testing.** Household fire alarm systems shall be tested in *accordance with the manufacturer's published instructions* according to the methods of Table 14.4.2.2.

**14.4.6.1 Testing.** Household fire alarm systems shall be tested in *accordance with the manufacturer's published instructions* according to the methods of Table 14.4.3.2.

**17.15 Fire Extinguisher Electronic Monitoring Device.** A fire extinguisher electronic monitoring device shall indicate those conditions for a specific fire extinguisher required by *California Code of Regulations, Title 19, Division 1, Chapter 1, Section 574.2 (c) and California Fire Code to a fire alarm control unit.*

**21.3.6** Smoke detectors shall not be installed in unsprinklered elevator hoistways unless they are installed to activate the elevator hoistway smoke relief equipment *or where required by Chapter 30 of the California Building Code.*

**23.8.5.1.2** Where connected to a supervising station, fire alarm systems employing automatic fire detectors or waterflow detection devices shall include a manual fire alarm box to initiate a signal to the supervising station.

**Exception:** Fire alarm systems dedicated to elevator recall control, and supervisory service *and fire sprinkler monitoring as permitted in section 21.3 of NFPA 72.*

**23.8.5.4.1** Systems equipped with alarm verification features shall be permitted under the following conditions:

(1) The alarm verification feature is not initially enabled unless conditions or occupant activities that are expected to cause nuisance alarms are anticipated in the area that is protected by the smoke detectors. Enabling of the alarm verification feature shall be protected by password or limited access.

(2) A smoke detector that is continuously subjected to a smoke concentration above alarm threshold does not delay the system functions of Sections 10.7 through 10.16, 23.8.1.1, or 21.2.1 by more than 30 seconds.

(3) Actuation of an alarm-initiating device other than a smoke detector causes the system functions of Sections 10.7 through 10.16, 23.8.1.1, or 21.2.1 without additional delay.

(4) The current status of the alarm verification feature is shown on the record of completion (*see Figure 7.8.2(a), item 4.3*).

(5) *Operation of a patient room smoke detector in I-2 and R-2.1 Occupancies shall not include an alarm verification feature.*

**29.3.1** All devices, combinations of devices, and equipment to be installed in conformity with this chapter shall be approved *and listed by the California State Fire Marshal* for the purposes for which they are intended.

**29.5.2.1.1\* Smoke and Heat Alarms.** Unless exempted by applicable laws, codes, or standards, smoke or heat alarms used to provide a fire-warning function, and when two or more alarms are installed within a dwelling unit, suite of rooms, or similar area, shall be arranged so that the operation of any smoke or heat alarm causes all alarms within these locations to sound.

*Exception to 29.5.2.1.1 not adopted by the SFM*

**29.7.2.1** *The alarm verification feature shall not be used for household fire warning equipment.*

**29.7.6.7.1** *The alarm verification feature shall not be used for household fire warning equipment.*

NFPA—continued

**29.8.3.4 Specific location requirements.** The installation of smoke alarms and smoke detectors shall comply with the following requirements:

- (1) Smoke alarms and smoke detectors shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
- (2) Smoke alarms and smoke detectors shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F (4°C) or exceed 100°F (38°C).
- (3) Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, smoke alarms and smoke detectors shall be mounted on an inside wall.
- (4) *Smoke alarms or smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently installed cooking appliance.*

**Exceptions:** *Ionization smoke alarms with an alarm silencing switch or photoelectric smoke alarms shall be permitted to be installed 10 feet (3 m) or greater from a permanently installed cooking appliance.*

*Photoelectric smoke alarms shall be permitted to be installed greater than 6 feet (1.8 m) from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 ft distances would prohibit the placement of a smoke alarm or smoke detector required by other sections of the code.*

*Smoke alarms listed for use in close proximity to a permanently installed cooking appliance.*

(5) *Installation near bathrooms. Smoke alarms shall be installed not less than a 3-foot (0.91 m) horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the code.*

(6) Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.

(7) Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan.

(8) Where stairs lead to other occupied levels, a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.

(9) For stairways leading up from a basement, smoke alarms or smoke detectors shall be located on the basement ceiling near the entry to the stairs.

(10) For tray-shaped ceilings (coffered ceilings), smoke alarms and smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in. (300 mm) vertically down from the highest point.

(11) Smoke alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17.7.3.2.4 of NFPA 72.

(12) Heat alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17.6.3 of NFPA 72.

31—11	Installation of Oil-burning Equipment . . . . .	M1801.3.1, M1805.3
58—11	Liquefied Petroleum Gas Code . . . . .	G2412.2, G2414.6.2
70—11	National Electrical Code . . . . .	E3401.1, E3401.2, E4301.1, Table E4303.2, E4304.3, E4304.4
72—13	National Fire Alarm and Signalling Code . . . . .	R314.1, R314.2
82—09	Standard on Incinerators and Waste Linen Handling Systems and Equipment . . . . .	G2427.2.3
85—11	Boiler and Construction Systems Hazards Code . . . . .	G2452.1
211—13	Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances . . . . .	R1002.5, G2427.5.5.1
252—03	Standard Methods of Fire Tests of Door Assemblies . . . . .	R327.6.3.2.3
257—13	Standard for Fire Test for Window and Glass Block Assemblies . . . . .	R327.6.3.2.2
259—13	Test Method for Potential Heat of Building Materials. . . . .	R316.5.7, R316.5.8 275—13 Standard Method of Fire
Tests for the Evaluation of		
	Thermal Barriers Used Over Foam Plastic Insulation . . . . .	R316.4
286—11	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth . . . . .	R302.9.4, R316.4, R316.5.8, R316.6
501—13	Standard on Manufactured Housing. . . . .	R202, AE201
720—12	Standard for the Installation of Carbon Monoxide (CO) Detectors and Warning Equipment. . . . .	R-315.2
853—10	Standard for the Installation of Stationary Fuel Cell Power Systems . . . . .	M1903.1

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Text continues on page 549.*

# NSF

NSF International  
789 N. Dixboro  
Ann Arbor, MI 48105

Standard reference number	Title	Referenced in code section number
14—2008e	Plastics Piping System Components and Related Materials . . . . .	M1301.4, P2608.3, P2908.3
42—2007ae	Drinking Water Treatment Units—Anesthetic Effects . . . . .	P2908.1, P2908.3
44—2007	Residential Cation Exchange Water Softeners . . . . .	P2908.1, P2908.3
53—2007a	Drinking Water Treatment Units—Health Effects . . . . .	P2908.1, P2908.3
58—2007	Reverse Osmosis Drinking Water Treatment Systems . . . . .	P2908.2, P2908.3
61—2008	Drinking Water System Components—Health Effects . . . . .	P2608.5, P2722.1, P2903.9.4, P2905.4, P2905.5, P2905.6, P2907.3

# PCA

Portland Cement Association  
5420 Old Orchard Road  
Skokie, IL 60077

Standard reference number	Title	Referenced in code section number
100—07	Prescriptive Design of Exterior Concrete Walls for One- and Two-family Dwellings (Pub. No. EB241) . . . . .	R301.2.2.2.4, R301.2.2.3.4, R404.1.2, R404.1.2.2.1, R404.1.2.2.2, R404.1.2.4, R404.1.4.2, R611.1, R611.2, R611.9.2, R611.9.3

# SBCA

Structural Building Components Association  
6300 Enterprise Lane  
Madison, WI 53719

Standard reference number	Title	Referenced in code section number
BCSI—2008	Building Component Safety Information Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses. . . . .	502.11.2, 802.10.3
CFS-BCSI—2008	Guide to Good Practice for Handling, Installing & Bracing of Cold-formed Steel Trusses . . . . .	505.1.3, 804.3.7

**REFERENCED STANDARDS**

**SFM**

State of California  
 Department of Forestry and Fire Protection  
 Office of the State Fire Marshal  
 P.O. Box 944246  
 Sacramento, CA 944246-2460

Standard reference number	Title	Referenced in code section number
SFM 12-3	Releasing Systems for Security Bars in Dwellings . . . . .	R310
SFM 12-7A-1	Exterior Wall Siding and Sheathing . . . . .	R327.5.3, R327.6.3.1, R327.6.3.2.3
SFM 12-7A-2	Exterior Window . . . . .	R327.5.3, R327.6.3.2.2
SFM 12-7A-3	Horizontal Protection Underside . . . . .	R327.5.3, R327.6.2.3
SFM 12-7A-4	Decking . . . . .	R327.5.3, R327.6.4.1.1
SFM 12-7A-4A	Decking Alternate Method A . . . . .	R327.3.7, R327.9.3.4
SFM 12-7A-5	Ignition Resistant Building Material . . . . .	R327.2, R327.3.7, R327.4.2, R327.6.3.2, R327.9.3.1

(The Office of the State Fire Marshal standards referred to above are found in the California Code of Regulations, Title 24, Part 12.)

**SMACNA**

Sheet Metal & Air Conditioning Contractors National Assoc. Inc.  
 4021 Lafayette Center Road  
 Chantilly, VA 22021

Standard reference number	Title	Referenced in code section number
SMACNA—10	Fibrous Glass Duct Construction Standards (2003) . . . . . HVAC Duct Construction Standards—Metal and Flexible (2005) . . . . .	M1601.1.1, M1601.4.1 M1601.4.1

**TMS**

The Masonry Society  
 3970 Broadway, Suite 201-D  
 Boulder, CO 80304

Standard reference number	Title	Referenced in code section number
302—07	Standard Method for Determining the Sound Transmission Class Rating for Masonry Walls . . . . .	AK102.1.1
402—11	Building Code Requirements for Masonry Structures . . . . .	R404.1.1, R606.1, R606.1.1, R606.12.1, R606.12.2.3.1, R606.12.3.2, Table R703.4
403—10	Direct Design Handbook for Masonry Structures. . . . .	R606.1, R606.1.1, R606.12.1, R606.12.3.1
602—11	Specification for Masonry Structures . . . . .	R404.1.1, R606.12.3.1, Table R703.4

**TPI**

Truss Plate Institute  
 583 D'Onofrio Drive, Suite 200  
 Madison, WI 53719

Standard reference number	Title	Referenced in code section number
TPI 1—2007	National Design Standard for Metal-plate-connected Wood Truss Construction . . . . .	R502.11.1, R802.10.2



# HISTORY NOTE APPENDIX

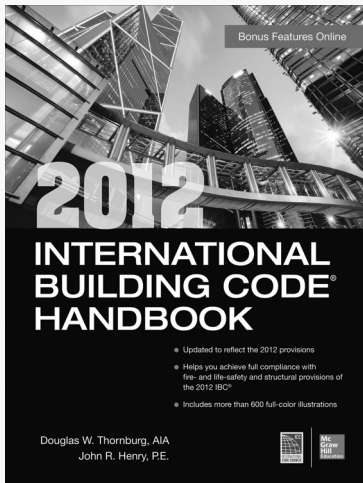
## California Residential Code Title 24, Part 2.5, California Code of Regulations (CCR)

For prior code history, see the History Note Appendix to the *California Residential Code (CRC)*, 2010 Triennial Edition effective January 1, 2011.

1. HCD 03/12, adoption by reference of the 2012 *International Residential Code* with necessary state amendments in the edition of the 2013 *California Residential Code*. Effective date January 1, 2014 for provisions of HCD and SFM (04/12).
2. Errata to correct editorial errors within the preface and Chapter 3 as well as Appendix R of this code. Effective January 1, 2014.
3. SFM EF 02/14 - Emergency regulations to amend section R902.4, Chapter 9, Part 2.5, Title 24 for a delayed effective date of UL 1703 fire classification. Approved as an emergency on April 22, 2014, filed with Secretary of State on April 23, 2014, with a delayed effective date of January 1, 2015.
4. 2013 Intervening Cycle Supplement – SFM 02/13 – Adoption of amendments to various sections throughout the 2013 *California Residential Code*. Approved by the California Building Standards Commission on July 22, 2014, filed with Secretary of State on July 30, 2014 and published on January 1, 2015. Effective on July 1, 2015.
5. Errata to correct editorial errors within various chapters throughout the code. Effective January 1, 2015.



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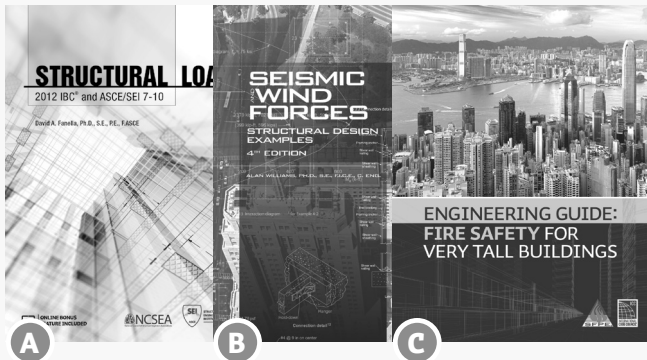
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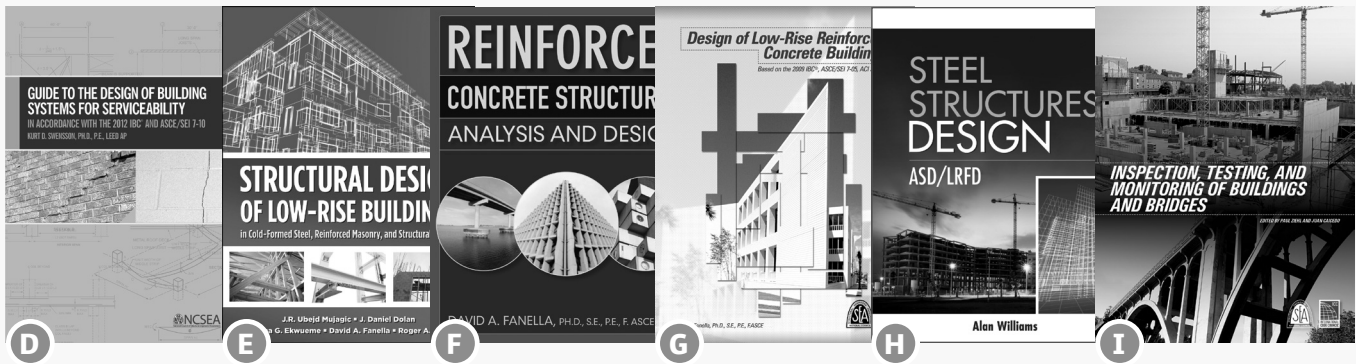
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