

**15-DAY COMMENT PERIOD
MODIFICATIONS TO EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF THE STATE FIRE MARSHAL
REGARDING THE 2007 CALIFORNIA BUILDING CODE
CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2**

The Office of the State Fire Marshal (OSFM) proposes to make necessary changes to the 2007 edition of the California Building Code (CBC), based on the 2006 International Building Code (IBC). OSFM further proposes to:

- Adopt necessary amendments to the model code;
- Repeal amendments to the model code that are no longer necessary.

Legend for Express Terms:

1. Existing California amendments or code language being modified: All such language appears in *italics*, modified language is underlined, repealed language appears in ~~strikeout~~.
 2. New California amendments: All such language appears double underlined and in italics.
 3. Repealed text: All such language appears in ~~double strikeout~~.
 4. Rationale: The justification for the change is shown after each section or series of related changes.
 5. Notation: Authority and reference citations are provided at the end of each chapter.
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AMENDMENTS, REPEAL OF EXISTING AMENDMENTS AND/OR CALIFORNIA BUILDING STANDARDS NOT ADDRESSED BY MODEL CODES THAT ARE NO LONGER NECESSARY AS FOLLOWS:

CHAPTER 2

~~**FIRE-RETARDANT TREATED WOOD [SFM]** is any wood product impregnated with chemicals by a pressure process or other means during manufacture, and which, when tested in accordance with ASTM E 84-05 for a period of 30 minutes, shall have a flame spread of not over 25 and show no evidence of progressive combustion. In addition, the flame front shall not progress more than 10 1/2 feet (3200 mm) beyond the center line of the burner at any time during the test. Materials that may be exposed to the weather shall pass the accelerated weathering test and be identified as Exterior type, in accordance with ASTM D 2898-94 and ASTM D 3201-94. Where material is not directly exposed to rainfall but exposed to high humidity conditions, it shall be subjected to the hygroscopic test and identified as Interior Type A in accordance with ASTM D 2898-94 and ASTM D 3201-94.~~

~~All materials shall bear identification showing the fire performance rating thereof. Such identifications shall be issued by an approved agency having a service for inspection of materials at the factory. Fire retardant treated wood shall not be construed as "noncombustible."~~

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to the definition of Fire-Retardant Treated Wood (FRTW) and proposed amendments to Sections 602.2, 602.3 and 602.4. The commenter stated the requirements for when and where FRTW may be used was clear without retaining the last sentence. SFM agrees and is proposing the repeal of the last sentence and is withdrawing the proposed amendments to Sections 602.2, 602.3 and 602.4.

Authority: Health and Safety Code Sections 13108, 13108.5(a), 13143, 13210, 13211, and 18949.2(b) and (c) and Government Code Section 51189.

References: Health and Safety Code Sections 13143, 13211 and Government Code Sections 51176, 51177, 51178 and 51179 and Public Resources Code Sections 4201 through 4204

LABORATORY. [SFM] *A room, building or area where the use and storage of hazardous materials are utilized for testing, analysis, ~~teaching~~ instruction, research or developmental activities.*

Rational for change:

SFM is making this editorial modification replacing the term “teaching” with “instruction” to be consistent with proposed amendments to 304.1 originally proposed in this rulemaking.

Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2(b)

References: Health and Safety Code Sections 13143

CHAPTER 4

443.2.4 443.4.6 Emergency power. *An emergency power system shall be provided in accordance with Chapter 27.*

443.4.6.1 Required Systems. *Emergency power shall be provided for all electrically operated equipment, systems and connected control circuits ~~for the following systems including:~~*

1. Mechanical ventilation systems. See section 443.4.7.

2. Emergency alarm and monitoring systems.

3. Temperature control systems required to prevent unsafe process excursions or chemical reactions.

4. Treatment Systems and Scrubbers.

5. Egress lighting

6. Electrically operated systems required elsewhere in this code and the California Fire Code

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to section 443.4.6. The commenter suggests treatment systems for highly toxic materials be provided with emergency power. SFM agrees with the commenter and is adding “Treatment Systems” and “Scrubbers” to avoid conflict with current requirements in the California Fire Code (CFC). This addition coincides with current requirements in CFC Sections 2704.7 and 2705.1.5 which currently require emergency power to be provided for treatment systems.

443.4 443.4.7 Ventilation.

443.4.1 443.4.7.1 General Compatibility. *In all Group L occupancies, exhaust streams Incompatible materials shall not be conveyed in the same duct system. Combined products in mechanical exhaust ducts when combined shall not create a physical hazard or reaction that could degrade the containment duct material. The building official may require a technical report in accordance with Section 443.2 443.7.1. ~~Fire and smoke dampers in fume hood exhaust ducts are prohibited. Ducts from laboratory hoods and local exhaust systems shall be constructed entirely of noncombustible materials.~~*

Exceptions:

1. Flexible ducts for special local exhausts used within a laboratory work suite.

2. Combustible ducts with flame spread index less than 75 located within a shaft of noncombustible construction where passing through areas other than the laboratory suite they serve and provided with internal fire sprinklers.

3. Combustible ducts or duct linings having a flame spread of 25 or less.

~~Exhaust ducts from each laboratory suite shall be separately ducted to a point outside the building, to a mechanical space or to a shaft. Connection to a common duct may occur at those points. Exhaust ducts within the same laboratory suite may be combined within that laboratory suite.~~

~~Perchloric acid hoods and exhaust ducts shall be constructed of materials that are acid resistant, nonreactive, and impervious to perchloric acid. A water spray system shall be provided for washing down the hood interior behind the baffle and the entire duct system. Ductwork shall provide a positive drainage slope back to the hood and shall consist of sealed sections. The hood baffle shall be removable for inspection.~~

Rational for change:

SFM is modifying the language of section 443.4.7.1 to further clarify that ducts shall not convey incompatible materials within and provide consistency the current requirements of the California Mechanical Code.

443.4.7.4 Laboratory suite exhaust air.

~~**443.4.7.4.1 Exhaust air from Laboratory suites** exhaust air shall not be recirculaed and shall be independently ducted to a point outside the building or a roof top structure.~~

~~**443.4.7.4.2 Laboratory suite exhaust air** and shall be independently ducted to a point outside the building or a roof top structure.~~

Exceptions:

- ~~1. Exhaust ducts serving a single laboratory suite.~~
- ~~2. Exhaust ducts serving separate laboratory suites on the same story may be connected to a common duct within a fire rated vertical shaft when the sub-ducts extended vertically upward at least 22 inches.~~
- ~~3. Exhaust ducts serving separate laboratory suites on the basement through the 4th story may be connected to a common duct within a fire rated vertical shaft when the sub-ducts extended vertically upward at least 22 inches.~~
- ~~4. Exhaust ducts serving separate laboratory suites on the 5th story and above may be connected to a common duct that does not exceed 100 vertical feet within a fire rated vertical shaft when the subducts extended vertically upward at least 22 inches. Ducts serving the 5th story and above shall be a separate from the duct serving the 4th story and below, but may be within the same fire rated shaft.~~

~~**5. 443.4.7.4.3 Laboratory suite** Exhaust ducts shall not penetrate the 2-hour fire barrier required by Section 443.4.3 unless it is part of a 2-hour shaft.~~

~~**Exception:** Where the exhaust duct is enclosed in a 2-hour shaft in accordance with Section 707.~~

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to section 443.4.7.4. The commenter suggests that the initial proposed language would allow the recirculation of exhaust air within the suite or building. SFM agrees with the commenter in part, and is proposing further modifications to clarify the SFM intent. SFM is creating separate sections for exhaust air circulation and ducting requirements. SFM if further adding clarification by creating a new subsection for exhaust duct penetrations of fire barriers required by other parts of the code.

~~**443.6.2 Travel distance within rooms L Occupancy.** Within a Group L occupancy all portions of any room shall be within 100 foot (30 480mm) to an exit. Travel distance within an individual laboratory suite shall not exceed 125 foot.~~

~~**443.6.3 443.6.2 Door swing.** All exit and exit-access doors serving areas with hazardous materials shall swing in the direction of exit travel, regardless of the occupant load served.~~

~~**443.6.4 443.6.3 Panic hardware.** Exit and exit access doors from areas with hazardous materials shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.~~

~~**443.6.5 443.6.4 Horizontal exits Buildings more than 4 stories.** Buildings containing Group L occupancies located four or more floors above the first floor shall have each floor of the building separated with at least one horizontal exit~~

~~constructed as required for a 2-hour fire barrier. Each side of the horizontal exit shall be provided with a separate mechanical exhaust system without interconnection. No side shall be less than 30 percent of the total area for the floor. At least one elevator shall be provided to serve the floor on each side of the horizontal exit wall and shall comply with the provisions of Chapter 30. A minimum of one exit shall be provided to serve the floor on each side of the 2-hour fire barrier and shall comply with the provisions of Chapter 10.~~

~~**443.6.6** **443.6.5 Corridors doors.** Corridor doors shall be protected by a fire assembly having a fire protection rating of not less than ¾ hour with smoke gasketing, shall not have more than 100 square inches (64 516 mm²) of wired glass set in steel frames and shall be maintained self-closing or shall be automatic closing. Corridors shall comply with Section 1017 and shall have opening protectives in accordance with Table 715.4, Table 715.5 and Table 715.5.3.~~

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to section 443.6.2. The commenter suggests that the initial proposed language for travel distance is within a room, whereas the section referenced is for travel distances to an exit. SFM agrees with the commenter and is deleting the proposed section and the existing requirement which specifies travel distance in Group L occupancies. SFM feels that the egress travel distance requirements within Group L occupancies should be contained in Chapter 10. The CBC allows the exit access travel distance for occupancy groups to comply with Table 1016.1 Exit Access Travel Distance. Furthermore, SFM has renumbered the remaining subsections to 443.6 resulting for the repeal of this section.

**TABLE 443.7.3.1
HAZARDOUS MATERIALS QUANTITY PER LABORATORY SUITE**

STORY		PERCENTAGE OF THE MAXIMUM ALLOWABLE QUANTITY PER LABORATORY SUITE^{a, b}
<i>Above grade plane</i>	<i>7 and above</i>	<i>50</i>
	<i>4, 5 and 6</i>	<i>75</i>
	<i>1, 2 and 3</i>	<i>100</i>
<i>Below grade plan</i>	<i>1</i>	<i>100^c</i>
	<i>2</i>	<i>75^d</i>
	<i>3 and below</i>	<i>0</i>

^a Percentages shall be of the maximum allowable quantity per laboratory suite shown in Tables 307.1(1) and 307.1(2). Allowable hazardous material increases for buildings equipped throughout with an automatic sprinkler system shall not be applicable to Group L Occupancies.

^b When an individual laboratory suite occupies more than one story, the more restrictive percentage of the maximum allowable quantity per laboratory suite shall apply.

^c The total aggregate quantity of flammable liquids on the first floor level below grade shall be limited to the maximum total aggregate quantity for Group B occupancy control areas.)

^d The total aggregate quantity of flammable liquids on the second floor level below grade shall be limited to a maximum total aggregate quantity for Group B occupancy control areas.

Rational for change:

SFM is making an editorial modification to the table footnote to be consistent with the format and style of the CBC base model code provisions.

Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2(b)

References: Health and Safety Code Sections 13143, 13211

CHAPTER 7A

704A.1.2 Roof coverings. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be firestopped with approved materials or have one layer of ~~No. 72 ASTM 72 pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D 3909~~ installed over the combustible decking.

Rational for change:

SFM is proposing this change to use industry standard language for the cap sheet. This amendment does not change the requirement or type of cap sheet required by this section. This change coincides with the same modifications being made to 704A.1.3 in this rulemaking.

Authority: Health and Safety Code Sections 13143, 13108.5(a) and 18949.2(b) and (c) and Government Code Section 51189.

References: Health and Safety Code Sections 13143 and Government Code Sections 51176, 51177, 51178 and 51179 and Public Resources Code Sections 4201 through 4204

CHAPTER 8

**TABLE 803.5
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k**

GROUP	SPRINKLERED ⁱ			NONSPRINKLERED ^m		
	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c
A-1 & A-2	B	B	C	A	A ^d	B ^e
A-3 ^f , A-4, A-5	B	B	C	A	A ^d	C
B, E, L M, R-1, R-4	B	C	C	A	B	C
F	C	C	C	B	C	C
H, L	B	B	C ^g	A	A	B
I-1	B	C	C	A	B	B
I-2, I-2.1	B	B	B ^{h,i}	A	A	B
I-3	A	A ⁱ	B	—	—	—
I-4	B	B	B ^{h,i}	A	A	B
R-2	C	C	C	B	B	C
R-3, R3-1	C	C	C	C	C	C
S	C	C	C	B	B	C
U	No restrictions			No restrictions		

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929m².

a. Class C interior finish materials shall be permitted for wainscoting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by Section 803.4.1.

b. In exit enclosures of buildings less than three stories in height of other than Group I-3, Class B interior finish for nonsprinklered buildings and Class C interior finish for sprinklered buildings shall be permitted.

c. Requirements for rooms and enclosed spaces shall be based upon spaces enclosed by partitions. Where a fire-resistance rating is required for structural elements, the enclosing partitions shall extend from the floor to the ceiling. Partitions that do not comply with this shall be considered enclosing spaces and the rooms or spaces on both sides

shall be considered one. In determining the applicable requirements for rooms and enclosed spaces, the specific occupancy thereof shall be the governing factor regardless of the group classification of the building or structure.

d. Lobby areas in Group A-1, A-2 and A-3 occupancies shall not be less than Class B materials.

e. Class C interior finish materials shall be permitted in places of assembly with an occupant load of 300 persons or less.

f. For places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall be permitted.

g. Class B material is required where the building exceeds two stories.

h. Class C interior finish materials shall be permitted in administrative spaces.

i. Class C interior finish materials shall be permitted in rooms with a capacity of four persons or less.

j. Class B materials shall be permitted as wainscoting extending not more than 48 inches above the finished floor in corridors.

k. Finish materials as provided for in other sections of this code.

l. Applies when the exit enclosures, exit passageways, corridors or rooms and enclosed spaces are protected by a sprinkler system installed in accordance with Section

903.3.1.1 or 903.3.1.2.

m. [SFM] Not permitted for Group I-3.

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to Table 803.5. The commenter suggests that the initial proposed language for current flame-spread index requirements contained in the 2007 CBC for Group L occupancies are not consistent with corridors and enclosed spaces for the former Group H-8 laboratory suites. SFM is proposing additional modifications that corrects this discrepancy which specifies the flame-spread index requirements of interior wall and ceiling finishes in Group L occupancies, this modification is consistent with the flame-spread index requirements contained in the 2001 CBC for corridors and enclosed spaces of Group H-8 laboratories suites.

Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2(b)

References: Health and Safety Code Sections 13143, 13211

CHAPTER 10

**TABLE 1016.1
EXIT ACCESS TRAVEL DISTANCE^a**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, I-1, M, R, S-1	200	250 ^b
B	200	300 ^c
F-2, S-2, U	300	400 ^c
H-1	Not Permitted	75 ^c
H-2	Not Permitted	100 ^c
H-3	Not Permitted	150 ^c
H-4	Not Permitted	175 ^c
H-5	Not Permitted	200 ^c
I-2, I-3 ^d , I-4	150	200 ^c
L	Not Permitted	100^c 225^e 200 ^f

For SI: 1 foot = 304.8 mm.

a. See the following sections for modifications to exit access travel distance requirements:

- Section 402: For the distance limitation in malls.
- Section 404: For the distance limitation through an atrium space.
- Section 1016.2 For increased limitations in Groups F-1 and S-1.
- Section 1025.7: For increased limitation in assembly seating.
- Section 1025.7: For increased limitation for assembly open-air seating.
- Section 1019.2: For buildings with one exit.
- Chapter 31: For the limitation in temporary structures.
- b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems in accordance with Section 903.3.1.2 are permitted.
- c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- d. *Not permitted in nonsprinklered Group I-3 occupancies.*

Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2(b)
 References: Health and Safety Code Sections 13143, 13211

Rational for change:

SFM received comment during the 45-day comment period addressing the amendments proposed to Table 1016.1. The commenter suggests that the initial proposed language for travel distances for exit access in Group L suites has increased nearly resembling requirements to that of a "B" occupancy rather than an "H" occupancy. SFM agrees with the commenter and is providing further modifications to exit access travel distances for Group L occupancies limiting them to 200 ft, which is the equal to that of Group H-5 occupancies. SFM considers this is a reasonable alternative as a result of the vast differences between the previous code provisions of the 2001 CBC and that of the 2007 CBC base model code. Whereas, the current CBC allows the exit access travel distance in Group B occupancies (which may contain laboratories) to be 300 ft.

CHAPTER 30

**CALIFORNIA BUILDING CODE – MATRIX ADOPTION TABLE
 CHAPTER 30 – ELEVATORS AND CONVEYING SYSTEMS**

Adopting Agency	BSC	SFM	HCD			DSA		OSHPD				CSA	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																				
Chapter / Section	Codes																			
3006.5 — 3006.5.45		X																		

~~3006.5.2 The Elevator power shunt-trip capability shall be disabled disengaged and shall not activate during Phase II emergency in-car operation.~~

3006.5.3 Audible and visual annunciation shall be provided at the fire alarm control unit indicating the disengagement disabling of elevator power shunt-trip capability in under Phase II operation.

~~3006.5.4 Audible and visual annunciation shall be provided inside all elevator cars and at the fire alarm control unit indicating that the automatic sprinklers, smoke detectors, or heat detectors in the elevator hoistway or elevator machine room have activated.~~

3006.5.5 Visual annunciation shall be provided inside all elevator cars indicating that the automatic sprinklers, smoke detectors, or heat detectors in the elevator hoistway or elevator machine room have activated.

Rational for change:

SFM is proposing additional modifications to further clarify the intent as stated in the Initial Statement of Reasons and correlate with ASME A17.1 and NFPA 72. 3006.5.4 is being separated into two subsections to make 3006.5.4 specific for the fire alarm control unit and 3006.5.5 specific visual annunciation inside the elevator car.

Authority: Health and Safety Code Sections 13108, 13143, 13210, 13211, 18949.2(b)

References: Health and Safety Code Sections 13143, 13211