

August 1, 2007

California Amendments to the 2006 International Building Code (excerpts)

as referenced in

One & Two Family Dwelling Construction under the 2006 International Building Code (IBC)

Published by International Code Council

The 2007 California Building Code (CBC), including provisions for one- and two- family dwellings, is based on the 2006 International Building Code (IBC). The CBC contains numerous amendments to the model code requirements of the IBC. California amendments specific to one- and two-family dwellings are included below.

To distinguish between model code language and the incorporated California amendments, including exclusive California standards, California amendments will appear in italics.

[HCD] This symbol within a section identifies which State agency(s), by its “acronym,” has amended a section of the model code.

Legend of Acronyms of Adopting State Agencies

BSC California Building Standards Commission

HCD Department of Housing and Community Development

SFM Office of the State Fire Marshal

CHAPTER 1 GENERAL CODE PROVISIONS

See Chapter 1 of the 2007 California Building Code (CBC) for Administrative Provisions

CHAPTER 2 DEFINITIONS

DETACHED SINGLE-FAMILY DWELLING [HCD 1 &HCD 2] *is any single-family dwelling which is separated from adjacent property lines by 3 feet (914 mm) or more or is separated from adjacent buildings by 6 feet (1829 mm) or more.*

See Chapter 2 of the 2007 California Building Code (CBC) for other definitions.

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 502

DEFINITIONS

[HCD 1 & HCD 2] “Grade or grade plane” is the lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line or, when the property line is more than 5 feet (1524 mm) from the building, between the building and a line 5 feet (1524 mm) from the building. For additional information, see Health and Safety Code, Section 19955.3 (d).

SECTION 503

GENERAL HEIGHT AND AREA LIMITATIONS

503.1 General. The height and area for buildings of different construction types shall be governed by the intended use of the building and shall not exceed the limits in Table 503 except as modified hereafter. Each part of a building included within the exterior walls or the exterior walls and fire walls where provided shall be permitted to be a separate building.

Exception: *[HCD 1] Limited-density owner-built rural dwellings may be of any type of construction which will provide for a sound structural condition. Structural hazards which result in an unsound condition and which may constitute a substandard building are delineated by Section 17920.3 of the Health and Safety Code.*

CHAPTER 6 TYPES OF CONSTRUCTION

TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE^{a,e}

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H, L	OCCUPANCY GROUP F-1, M, S-1	OCCUPANCY GROUP A, B, E, F-2, I, R ^f , S-2, U ^{b,f}
$X < 5^c$	All	3	2	1
$5 \leq X \leq 10$	IA	3	2	1
	Others	2	1	1
$10 \leq X \leq 30$	IA, IB	2	1	1 ^d
	IIB, VB	1	0	0
	Others	1	1	1 ^d
$X \geq 30$	All	0	0	0

For SI: 1 foot = 304.8 mm.

- Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.
- For special requirements for Group U occupancies see Section 406.1.2
- See Section 705.1.1 for party walls.
- Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.
- The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of the exterior wall and the story in which the wall is located.
- Group R-3, and Group U when used as accessory to Group R-3, shall not be required to have a fire-resistance rating where the fire separation distance is 5 feet or more.

CHAPTER 7 FIRE-RESISTANCE-RATED CONSTRUCTION

SECTION 708

FIRE PARTITIONS

708.4 Continuity. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. If the partitions are not continuous to the sheathing, deck or slab, and where constructed of combustible construction, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 717.2 and 717.3 at the partition line. The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for tenant and sleeping unit separationwalls and corridorwalls in buildings of Types IIB, IIIB and VB construction.

Exceptions:

7. [HCD 1] Wall assemblies in two-family dwellings need not extend through attic spaces when the ceiling is protected by not less than 5/8 inch (15.9 mm). Type X gypsum board and an attic draftstop constructed as specified in Section 717.3.1 is provided above and along the wall assembly separating the dwellings. The structural framing supporting the ceiling shall also be protected by not less than 1/2 inch (12.7 mm) gypsum board or equivalent.

708.8 Joints. Joints made in or between fire partitions shall comply with Section 713.

Exception: [HCD 1] Fire-resistance-rated wall assemblies in two-family dwellings which extend to and are tight against the exterior wall, the ceiling as permitted in Section 708.4 or the underside of the roof sheathing.

CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION 903

AUTOMATIC SPRINKLER SYSTEMS

[F] 903.2.7 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

Exceptions:

- 1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress, unless specifically required by other sections of this code, or classified as Group R-4.*
- 2. Group U private garages accessory to a Group R-3 occupancy.*

SECTION 907

FIRE ALARM AND DETECTION SYSTEMS

[F] 907.2 Where required.

[F] **907.2.10 Single- and multiple-station smoke alarms.** Listed single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with the provisions of this code and the household fire-warning equipment provisions of NFPA 72.

***Exception: For Group R occupancies.** A fire alarm system with smoke detectors located in accordance with this section may be installed in lieu of smoke alarms. Upon actuation of the detector, only those notification appliances in the dwelling unit or guest room where the detector is actuated shall activate.*

907.2.10.5 Group R-3 occupancies.

907.2.10.5.1 *Existing buildings housing Group R-3 occupancies established prior to the effective date of these regulations may have their use continued if they conform or are made to conform to provisions of these regulations to the extent that reasonable and adequate life safety against the hazards of fire, panic and explosion is substantially provided. Additional means of egress, the installation of automatic sprinkler systems, automatic fire alarm system or other life safety measures, may be required to provide reasonable and adequate safety.*

***Note:** It is the intent of this section that every existing occupancy need not mandatorily conform with the requirements for new construction. Reasonable judgment in the application of requirements must be exercised by the enforcing agency.*

907.2.10.5.2 *For purposes of clarification, Health and Safety Code Section 13113.7 is repeated.*

(a) Except as otherwise provided in this section, a smoke detector, approved and listed by the State Fire Marshal pursuant to Section 13114, shall be installed, in accordance with the manufacturer's instructions in each dwelling intended for human occupancy within the earliest applicable time period as follows:

- (1) For all dwelling units intended for human occupancy, upon the owner's application on or after January 1, 1985, for a permit for alterations, repairs, or additions, exceeding one thousand dollars (\$1,000).*
- (2) For all other dwelling units intended for human occupancy on or after January 1, 1987.*

However, if any local rule, regulation, or ordinance, adopted prior to the compliance dates specified in paragraphs (1) and (2) requires installation in a dwelling unit intended for human occupancy of smoke detector, which receive their power from the electrical system of the building and requires compliance

with the local rule, regulation, or ordinance at a date subsequent to the dates specified in this section, the compliance date specified in the rule, regulation, or ordinance shall, but only with respect to the dwelling units specified in this section, take precedence over the dates specified in this section.

The State Fire Marshal may adopt regulations exempting dwellings intended for human occupancy with fire sprinkler systems from the provisions of this section, if he or she determines that a smoke detector is not reasonably necessary for fire safety in the occupancy.

Unless prohibited by local rules, regulations, or ordinances, a battery-operated smoke detector which otherwise meets the standards adopted pursuant to Section 13114 for smoke detectors, satisfies the requirements of this section.

CHAPTER 10 MEANS OF EGRESS

SECTION 1002

DEFINITIONS

GUARD [DSA-AC & HCD 1] or GUARDRAIL. A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level.

SECTION 1009

STAIRWAYS

1009.4 Stairway landings. There shall be a floor or landing at the top and bottom of each stairway. The width of landings shall not be less than the width of stairways they serve. Every landing shall have a minimum dimension measured in the direction of travel equal to the width of the stairway. Such dimension need not exceed 48 inches (1219 mm) where the stairway has straight run.

Exceptions:

1. Aisle stairs complying with Section 1025.
2. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing.
3. *[HCD 1 & SFM] In Group R-3 occupancies, a floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs.*

1009.10 Handrails. Stairways shall have handrails on each side and shall comply with Section 1012. Where glass is used to provide the handrail, the handrail shall also comply with Section 2407 of the *California Building Code*.

Exceptions:

4. In Group R-3 occupancies, [HCD 1&SFM] *a continuous run of treads or flight of stairs with fewer than four risers does not require handrails.*
5. Changes in room elevations of only one

SECTION 1013

GUARDS

1013.3 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter (102 mm) sphere cannot pass through any opening. ~~*[Deleted: From a height of 34 inches (864 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, a sphere 8 inches (203 mm) in diameter shall not pass.]*~~

SECTION 1014

EXIT ACCESS

1014.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

4. *[HCD 1] Except for one- and two- family dwellings and townhouses, means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.*
5. *[HCD 1] For one- and two- family dwellings and townhouses, means of egress is allowed to pass through rooms and intervening spaces except garages.*

CHAPTER 12 INTERIOR ENVIRONMENT

SECTION 1203

VENTILATION

1203.4 Natural ventilation. Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

[HCD 1] In employee housing, all openable windows in rooms used for living, dining, cooking or sleeping purposes, and toilet and bath buildings, shall be provided and maintained with insect screening.

[HCD 1] Door openings of rooms used for dining, cooking, toilet and bathing facilities in employee housing shall be provided and maintained with insect screening or with solid doors equipped with self-closing devices in lieu thereof, when approved by the enforcement agency.

[HCD 1] The windows, doors, louvers or other approved closeable openings not required by Section 1026 may open into a passive solar energy collector for ventilation required by this section. The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space.

SECTION 1204

TEMPERATURE CONTROL

1204.1 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive space-heating systems capable of maintaining a minimum indoor temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor on the design heating day.

Exceptions:

1. Interior spaces where the primary purpose is not associated with human comfort.
2. *[HCD 1] For limited-density owner-built rural dwellings, a heating facility or appliance shall be installed in each dwelling subject to the provisions of Subchapter 1, Chapter 1, Title 25, California Code of Regulations, commencing with Section 74; however, there shall be no specified requirement for heating capacity or temperature maintenance. The use of solid-fuel or solar-heating devices shall be deemed as complying with the requirements of this section. If nonrenewable fuel is used in these dwellings, rooms so heated shall meet current installation standards.*

SECTION 1205

LIGHTING

1205.1 General. Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with Section 1205.2 or shall be provided with artificial light in accordance with Section 1205.3. Exterior glazed openings shall open directly onto a public way or onto a yard or court in accordance with Section 1206.

[HCD 1] Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening in the passive solar energy collector is increased to compensate for the area required by the interior space.

SECTION 1207 [HCD]

SOUND TRANSMISSION

1207.1 Purpose and scope. *The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons within hotels, motels, dormitories, apartment houses and dwellings other than detached single-family dwellings from the effects of excessive noise, including, but not limited to, hearing loss or impairment and interference with speech and sleep. This section shall apply to all buildings for which applications for building permits were made subsequent to August 22, 1974.*

[See Section 1207 of the California Building Code for additional requirements]

SECTION 1208

INTERIOR SPACE DIMENSIONS

1208.1 Minimum room widths. Habitable spaces, other than a kitchen, shall not be less than 7 feet (2134 mm) in any plan dimension. Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

[HCD 1] For limited-density owner-built rural dwellings, there shall be no requirements for room dimensions, provided there is adequate light and ventilation and adequate means of egress.

SECTION 1211 [HCD 1 & HCD 2]

GARAGE DOOR SPRINGS

1211.1 General. *This section shall apply to applications listed in Sections 108.2.1.1 and 108.2.1.3 regulated by the Department of Housing and Community Development.*

1211.1.1 Extension garage door springs. *Every garage door spring sold or offered for sale, whether new or as a replacement, or installed in any garage or carport which is accessory to an apartment house, hotel, motel or dwelling shall conform to the following requirements: Hard-drawn spring wire shall conform to ASTM A 227-71 or a more current version, and shall be made by the steel processes described therein, conforming to the chemical composition requirements listed and meeting the standards of steel heat as set forth by the ladle analysis. Wire tensile strength and dimension variations shall meet the prescribed properties of established standards. Oil-tempered wire shall conform to ASTM A 229 -71 or a more current version, and shall be made by the steel processes described therein conforming to the chemical composition requirements listed and meeting the standards of steel heat as set forth by the ladle analysis. Wire tensile strength and dimension variations shall meet the prescribed properties of established standards.*

Extension springs shall be fabricated from either hard drawn spring wire or oil-tempered wire as specified above.

1211.2 Design standards. *[HCD 1 & HCD 2] Minimum design standard shall be 9,000 cycles. (One cycle is equal to door opening plus door closing at maximum working load.)*

1211.3 Certification. *[HCD 1 & HCD 2] Mill certification of wire physical tests and chemical properties shall be kept on file by the spring manufacturer. Physical cycling tests shall be performed for each spring design and shall be certified by an approved testing agency acceptable to the department and reports kept on file by the manufacturer. Containment devices shall be physically tested for each spring design by installing the device on the spring and by destroying the spring at maximum recommended stretch. Containment tests shall be certified by an approved testing agency acceptable to the department and reports kept on file by the manufacturer.*

1211.4 Containment devices. *[HCD 1 & HCD 2] Each spring shall be equipped with an approved device capable of restraining the spring or any part thereof in the event it breaks.*

1211.5 Identification. *[HCD 1 & HCD 2] Springs shall be permanently identified as to manufacturer and also to indicate maximum recommended stretch. Both springs and containment devices shall bear information stating that they have been manufactured in accordance with requirements of the California Department of Housing and Community Development.*

1211.6 Installation. *[HCD 1 & HCD 2] Installation of springs, containment devices and hardware shall be in accordance with the manufacturer's installation instructions. Instructions shall be provided by the manufacturer and shall specify the approved method of restraint and maximum recommended stretch. Unless otherwise permitted by the manufacturer's installation instructions, the hardware and springs shall be mounted to nominal 12 by 6 framing members which shall be a species identified as Group I or II in Volume 3, Chapter 23, Division III.*

CHAPTER 13 ENERGY EFFICIENCY

See the California Energy Code, Title 24, Part 6.

CHAPTER 18 SOILS AND FOUNDATIONS

SECTION 1801

GENERAL

1801.2 Design. Allowable bearing pressures, allowable stresses and design formulas provided in this chapter shall be used with the allowable stress design load combinations specified in Section 1605.3. The quality and design of materials used structurally in excavations, footings and foundations shall conform to the requirements specified in Chapters 16, 19, 21, 22 and 23 of this code. Excavations and fills shall also comply with Chapter 33.

[HCD1] For limited-density owner-built rural dwellings, pier foundations, stone masonry footings and foundations, pressure-treated lumber, poles, or equivalent foundation materials or designs may be used provided that the bearing is sufficient for the purpose intended.

SECTION 1802

FOUNDATION AND SOILS INVESTIGATIONS

1802.1 General. Foundation and soils investigations shall be conducted in conformance with Sections 1802.2 through 1802.8. Where required by the building official, the classification and investigation of the soil shall be made by a registered design professional.

1802.1.1 General and where required for applications listed in Section 108.2.1.1 regulated by the Department of Housing and Community Development. *[HCD 1] Foundation and soils investigations shall be conducted in conference with Health and Safety Code Sections 17953 through 17955 as summarized below.*

1802.1.1.1 Preliminary soil report. *Each city, county, or city and county shall enact an ordinance which requires a preliminary soil report, prepared by a civil engineer who is registered by the state. The report shall be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code. The preliminary soil report may be waived if the building department of the city, county or city and county, or other enforcement agency charged with the administration and enforcement of the provisions of this part, shall determine that, due to the knowledge such department has as to the soil qualities of the soil of the subdivision or lot, no preliminary analysis is necessary.*

1802.1.1.2 Soil investigation by lot, necessity, preparation, and recommendations. *If the preliminary soil report indicates the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects, such ordinance shall require a soil investigation of each lot in the subdivision. The soil investigation shall be prepared by a civil engineer who is registered in this state. It shall recommend corrective action which is likely to prevent structural damage to each dwelling proposed to be constructed on the expansive soil.*

1802.1.1.3 Approval, building permit conditions, appeal. *The building department of each city, county or city and county, or other enforcement agency charged with the administration and enforcement of the provisions of this part, shall approve the soil investigation if it determines that the recommended action is likely to prevent structural damage to each dwelling to be constructed. As a condition to the building permit, the ordinance shall require that the approved recommended action be incorporated in the construction of each dwelling. Appeal from such determination shall be to the local appeals board.*

CHAPTER 23 WOOD

SECTION 2301

GENERAL

2301.1 Scope. The provisions of this chapter shall govern the materials, design, construction and quality of wood members and their fasteners.

[HCD 1] For limited-density owner-built rural dwellings, owner-produced or used materials and appliances may be utilized unless found not to be of sufficient strength or durability to perform the intended function; owner-produced or used lumber, or shakes and shingles may be utilized unless found to contain dry rot, excessive splitting or other defects obviously rendering the material unfit in strength or durability for the intended purpose.

SECTION 2304

GENERAL CONSTRUCTION REQUIREMENTS

2304.1 General. The provisions of this section apply to design methods specified in Section 2301.2.

2304.2 Size of structural members. Computations to determine the required sizes of members shall be based on the net dimensions (actual sizes) and not nominal sizes.

[HCD 1] For limited-density owner-built rural dwellings, owner-produced or used materials and appliances may be utilized unless found not to be of sufficient strength or durability to perform the intended function; owner-produced or used lumber, or shakes and shingles may be utilized unless found to contain dry rot, excessive splitting or other defects obviously rendering the material unfit in strength or durability for the intended purpose.

2308.2.2 Buildings in Seismic Design Category B, C, D or E. Buildings of conventional light-frame construction in Seismic Design Category B or C, as determined in Section 1613, shall comply with the additional requirements in Section 2308.11.

Buildings of conventional light-frame construction in Seismic Design Category D or E, as determined in Section 1613, shall comply with the additional requirements in Section 2308.12.

Exceptions:

- 1. [HCD 1] Detached one- and two- family dwellings in Seismic Design Category B.*
- 2. [HCD 1] Detached one- and two- family dwellings in Seismic Design Category C where masonry veneer is limited to the first two stories above grade.*

TABLE 2308.9.3(1)
BRACED WALL PANELS^a

SEISMIC DESIGN CATEGORY	CONDITION	CONSTRUCTION METHODS ^{b,c}								BRACED PANEL LOCATION AND LENGTH ^d
		1	2	3	4	5	6	7	8	
A and B	One story, top of two or three story	X	X	X	X	X	X	X	X	Located in accordance with Section 2308.9.3 and not more than 25 feet on center.
	First story of two story or second story of three story	X	X	X	X	X	X	X	X	
	First story of three story	—	X	X	X	X ^e	X	X	X	
C	One story or top of two story [HCD 1] or three story	—	X	X	X	X	X	X	X	Located in accordance with Section 2308.9.3 and not more than 25 feet on center.
	First story of two story [HCD 1] or second story of three story	—	X	X	X	X ^e	X	X	X	Located in accordance with Section 2308.9.3 and not more than 25 feet on center, but total length shall not be less than 25% of building length ^f .
	[HCD 1] First story of three story	—	X	X	X	X ^e	X	X	X	[HCD 1] Located in accordance with Section 2308.9.3 and not more than 25 feet on center, but total length shall not be less than 40% of building length.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. This table specifies minimum requirements for braced panels that form interior or exterior braced wall lines.

b. See Section 2308.9.3 for full description.

c. See Sections 2308.9.3.1 and 2308.9.3.2 for alternative braced panel requirements.

d. Building length is the dimension parallel to the braced wall length.

e. Gypsum wallboard applied to framing supports that are spaced at 16 inches on center.

f. The required lengths shall be doubled for gypsum board applied to only one face of a braced wall panel.

2308.11 Additional requirements for conventional construction in Seismic Design Category B or C.

Structures of conventional light-frame construction in Seismic Design Category B or C, as determined in Section 1613, shall comply with Sections 2308.11.1 through 2308.11.3, in addition to the provisions of Sections 2308.1 through 2308.10.

2308.11.1 Number of stories. Structures of conventional light-frame construction shall not exceed two stories in height in Seismic Design Category C.

Exception: [HCD 1] Detached one- and two-family dwellings are permitted to be three stories in height in Seismic Design Category C.

2308.12 Additional requirements for conventional construction in Seismic Design Category D or E.

Structures of conventional light-frame construction in Seismic Design Category D or E, as determined in Section 1613, shall conform to Sections 2308.12.1 through 2308.12.9, in addition to the requirements for Seismic Design Category B or C in Section 2308.11.

2308.12.1 Number of stories. Structures of conventional light-frame construction shall not exceed one story in height in Seismic Design Category D or E.

Exception: [HCD 1] Detached one- and two-family dwellings are permitted to be two stories high in Seismic Design Category D or E.

TABLE 2308.12.4

WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E

(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line^a)

CONDITION	SHEATHING TYPE ^b	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS} > 1.00$
One story	G-P ^c	10 feet 8 inches	14 feet 8 inches	18 feet 8 inches	25 feet 0 inches
	S-W	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches
Story below top story [HCD 1]	G-P ^{c,d}	18 feet 8 inches ^d	NP	NP	NP
	S-W ^d	10 feet 8 inches ^d	13 feet 4 inches ^d	17 feet 4 inches ^d	21 feet 4 inches ^d
Bottom story of three stories [HCD 1]	G-P	Conventional construction not permitted; conformance with Section 2301.2, Item 1 or 2 is required.			
	S-W				

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

- Minimum length of panel bracing of one face of the wall for S-W sheathing or both faces of the wall for G-P sheathing; h/w ratio shall not exceed 2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.
- G-P = gypsum board, fiberboard, particleboard, lath and plaster or gypsum sheathing boards; S-W = wood structural panels and diagonal wood sheathing. NP = not permitted.
- Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:
 For ½-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;
 For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) at 7 inches on center;
 For gypsum sheathing board, 1¾ inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;
 For gypsum lath, No. 13 gage (0.092 inch) by 11/8 inches long, 19/64-inch head, plasterboard at 5 inches on center;
 For Portland cement plaster, No. 11 gage (0.120 inch) by 1½ inches long, 7/16-inch head at 6 inches on center;
 For fiberboard and particleboard, No. 11 gage (0.120 inch) by 1½ inches long, 7/16-inch head, galvanized nails at 3 inches on center.
- [HCD 1] Applies to detached one- and two- family dwellings only.

CHAPTER 27 ELECTRICAL

See the California Electrical Code

CHAPTER 28 MECHANICAL SYSTEMS

See the California Mechanical Code

CHAPTER 29 PLUMBING SYSTEMS

See the California Plumbing Code

CHAPTER 34 EXISTING STRUCTURES

SECTION 3401

GENERAL

3401.1 Scope. The provisions of this chapter shall control the alteration, repair, addition and change of occupancy of existing structures, *including state-regulated structures in accordance with Sections 3401.1.1 and 3401.1.2.*

Exceptions:

2. *[HCD 2] For moved buildings and maintenance, alteration, repair, addition or change of occupancy to existing buildings and accessory structures in mobilehome parks or special occupancy parks as provided in Section 108.2.1.3. See California Code of Regulations, Title 25, Division 1, Chapter 2, and 2.2.*

3401.3 Compliance with other codes. Alterations, repairs, additions and changes of occupancy to existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in the *California Fire Code, California Plumbing Code, California Mechanical Code and California Electrical Code. [HCD1] See Chapter 34, Section 3403.1, Exception 2 and Title 25, Division 1, Chapter 1, Subchapter 1, Article 1, commencing with Section 1 for existing buildings or structures.*

3401.4 Existing Group R-3 occupancies. *[SFM] For smoke alarm requirements in existing buildings, see Section 907.2.10.5.*

SECTION 3403

ADDITIONS, ALTERATIONS OR REPAIRS

3403.1 Existing buildings or structures.

Exceptions: [HCD 1]

1. *Limited-density owner-built rural dwellings.*

2. *Local ordinances or regulations shall permit the replacement, retention and extension of original materials, and the use of original methods of construction, for any building or accessory structure, provided such building or structure complied with the building code provisions in effect at the time of original construction and the building or accessory structure does not become or continue to be a substandard building. For additional information, see Health and Safety Code Sections 17912, 17920.3, 17922(d), 17922.3, 17958.8 and 17958.9.*

SECTION 3408

MOVED STRUCTURES

3408.1 Conformance. Structures moved into or within the jurisdiction shall comply with the provisions of this code for new structures.

***Exception:** [HCD] After July 1, 1978, local ordinances or regulations for moved apartment houses and dwellings shall permit the retention of existing materials and methods of construction, provided the apartment house or dwelling complies with the building standards for foundations applicable to new construction and does not become or continue to be a substandard building. For additional information, see Health and Safety Code Section 17958.9.*