EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE ADOPTION BY REFERENCE OF THE
2012 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE
WITH PROPOSED AMENDMENTS INTO THE 2013 CALIFORNIA RESIDENTIAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2.5

(HCD)

The Department of Housing and Community Development (HCD) proposes to adopt the 2012 edition of the International Residential Code (IRC) for codification and effectiveness into the 2013 edition of the California Residential Code (CRC) as presented on the following pages, including any necessary amendments. HCD further proposes to:

- Repeal the 2009 edition of the International Residential Code;
- Repeal the 2010 edition of the California Residential Code, which includes amendments to the model code that are no longer necessary;
- Repeal or amend building standards that are not addressed by a model code;
- Relocate or codify existing adopted and necessary amendments to the model code into the format of the model code proposed for adoption, the action of which has no regulatory effect; and/or
- Adopt new building standards that are not addressed by the model code proposed for adoption.

LEGEND FOR EXPRESS TERMS:

1. **IRC language with new California amendments:** IRC language shown in normal Arial 9-point; California amendments to IRC text shown *underlined and in italics*.

2. **Existing California amendments or code language being modified**: *All such language shown in italics, modified language is underlined or shown in ~~strikeout~~.*

3. **Text not being modified**: All language not displayed in full is shown as "…" (i.e., ellipsis).

4. **Repealed text**: All language shown in ~~strikeout.~~

5. **Amended, adopted or repealed language after public hearing:** All such language appears in double underline or ~~double strikeout~~.

6. **Notation:** Authority and Reference citations are provided at the end of each action.

THE EXPRESS TERMS PACKAGE IS A COMPILATION OF THE FOLLOWING ITEMS:

- **STRUCTURAL STANDARDS (Chapters 4, 5, 6, 8, 9 and 10)**

- **NON-STRUCTURAL STANDARDS (Chapters 1, 2, 3, 7, 44, Appendix H)**

- **NON-ADOPTED STANDARDS (Specified definitions in Chapter 2, Chapters 11 – 43 and remaining Appendices)**

The Express Terms include amendments which correct references from the *International Residential Code* (*IRC*) to the *California Residential Code* (*CRC*). Similar amendments are also proposed to correct references to other International model codes to the appropriate California code and to correct reference to IRC sections not proposed for adoption by HCD.

NOTE OF EXPLANATION:

For the **2012 Triennial Code Adoption Cycle**, the Express Terms are displayed as follows:

- PART 1 includes the California Amendments HCD proposes to bring forward from the 2010 California Residential Code **with changes** as shown, and also identifies the model code standards from the 2012 International Residential Code HCD proposes for adoption into the 2013 California Residential Code.

- PART 2 displays the standards HCD proposes to bring forward from the 2010 California Residential Code **without change**, except for nonsubstantive editorial corrections, for adoption into the 2013 California Residential Code; the text is provided for context and for the convenience of the code user.

SUMMARY OF REGULATORY ACTION

PART 1

HCD PROPOSES TO:

- Adopt standards from the 2012 International Residential Code into the 2013 California Residential Code **without amendment**.

- Adopt standards from the 2012 International Residential Code into the 2013 California Residential Code **with amendment**.

- Bring forward existing California Amendments from the 2010 California Residential Code for adoption into the 2013 California Residential Code **with amendment**.

- Repeal 2010 California Amendments, which are **not** brought forward into the 2013 California Residential Code.

PART 2

NOTE: *The language in Part 2 is brought forward from the previous code adoption cycle without change, except for nonsubstantive editorial corrections, and is displayed for context and for the convenience of code users.*

HCD PROPOSES TO:

- Bring forward existing California Amendments from the 2010 California Residential Code for adoption into the 2013 California Residential Code **without amendment**, except for editorial corrections.

PART 1

1. HCD proposes to bring forward existing California Amendments in Chapter 1, Division 1, Sections 1.1.1 and 1.1.3, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

Part I — Administrative

CHAPTER 1
SCOPE AND APPLICATION

DIVISION I
CALIFORNIA ADMINISTRATION

SECTION 1.1
GENERAL

1.1.1 Title. *These regulations shall be known as the California Residential Code, may be cited as such and will be referred to herein as "this code." The California Residential Code is Part 2.5 of twelve parts of the official compilation and publication of the adoption, amendment, and repeal of building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2009~~ 2012 International Residential Code of the International Code Council with necessary California amendments.*

1.1.3 Scope. *The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every detached one-and two-family dwelling, efficiency dwelling unit, and townhouse not more than three stories above grade plane in height with a separate means of egress and structures accessory thereto throughout the State of California.*

Exceptions:

1. *Live/work units complying with the requirements of Section 419 of the California Building Code shall be permitted to be built as one- and two-family dwellings or townhouses. ~~Fire suppression required by Section 419.5 of the California Building Code when constructed under the California Residential Code for one- and two-family dwellings shall conform to Section 903.3.1.3 of the California Building Code.~~*

2. *Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the California Residential Code for One- and Two-family Dwellings.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

2. HCD proposes to adopt Chapter 1, Division 1, Section 1.8.1 as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

SECTION 1.8
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)

1.8.1 Purpose. *The purpose of this code is to establish the minimum requirements necessary to protect the health, safety and general welfare of the occupants and the public by governing accessibility, erection, construction, reconstruction, enlargement, conversion, alteration, repair, moving, removal, demolition, occupancy, use, height, court, area, sanitation, ventilation, maintenance and safety to life and property from fire and other hazards attributed to the built environment.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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3. HCD proposes to bring forward existing California Amendments in Chapter 1, Division 1, Section 1.8.3.4, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with a renumbering and amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

~~1.8.3.4~~ 1.8.4.4 **Inspections.** Construction or work for which a permit is required shall be subject to inspection by the building official, and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or other regulations of the Department of Housing and Community Development. Required inspections are listed ~~in the Matrix Adoption Table and~~ in Chapter 1, *Scope and Application*, Division II, Administration, ~~Division II. See Section R109.1~~ *Sections R109.1.1, R109.1.1.1, R109.1.3, R109.1.4, R109.1.4.1, R109.1.4.2, R109.1.5, R109.1.5.1, R109.1.5.2, R109.1.6 and R109.1.6.1*.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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4. HCD proposes to adopt Chapter 1, Sections R106.1, R106.1.1, R106.1.3 and R106.2, from the 2012 International Residential Code into the 2013 California Residential Code, Chapter 1, Division II without amendment:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 1
SCOPE AND APPLICATION

DIVISION II
ADMINISTRATION

R106.1 Submittal documents. … (No change to text)
R106.1.1 Information on construction documents. … (No change to text)
R106.1.3 Information for construction in flood hazard areas. … (No change to text)
R106.2 Site plan or plot plan. … (No change to text)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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5. HCD proposes to adopt Chapter 1, Section R109.1, from the 2012 International Residential Code into the 2013 California Residential Code, Chapter 1, Division II, with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

SECTION R109
INSPECTIONS

R109.1 Types of inspections. For onsite construction, from time to time the building official, upon notification from the permit holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or his or her agent wherein the same fails to comply with this code. *The enforcing agency upon notification of the permit holder or their agent shall within a reasonable time make the inspections set forth in Sections R109.1.1, R109.1.1.1, R109.1.3, R109.1.4, R109.1.4.1, R109.1.4.2, R109.1.5, R109.1.5.1, R109.1.5.2 and R109.1.6.*

Note: *Reinforcing steel or structural framework of any part of any building or structure shall not be covered or concealed without first obtaining the approval of the enforcing agency.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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6. HCD proposes to adopt Chapter 1, Section R109.1.3, from the 2012 International Residential Code into the 2013 California Residential Code, Chapter 1, Division II without amendment:

R109.1.3 Floodplain inspections. … (No change to text)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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7. HCD proposes to renumber former California Amendment, Section R109.1.4.1 to Section R109.1.4.2, from the 2010 California Residential Code and adopt new Section R109.1.4.1 into the 2013 California Residential Code as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

R109.1.4.1 ~~***Lath and gypsum board inspection.***~~ ***Moisture content verification.*** *Moisture content of framing members shall be verified in accordance with the California Green Building Standards Code, Chapter 4, Division 4.5.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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8. HCD proposes to adopt Section R109.1.6.2 into the 2013 California Residential Code as follows:

R109.1.6 Final inspection. … (No change to text)
R109.1.6.1 Elevation documentation. … (No change to text)

R109.1.6.2 Operation and maintenance manual. *At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency shall be placed in the building in accordance with the California Green Building Standards Code, Chapter 4, Division 4.4.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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9. HCD proposes to adopt Part II, Chapter 2, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

Part II — Definitions

CHAPTER 2
DEFINITIONS

SECTION R202
DEFINITIONS

ALTERATION. Any construction or renovation to an existing structure other than repair or addition ~~that requires a permit. Also, a change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit~~.

APPROVED. (HCD 1) *Meeting the approval of the enforcing agency, except as otherwise provided by law, when used in connection with any system, material, type of construction, fixture or appliance as the result of investigations and tests conducted by the agency, or by reason of accepted principles or tests by national authorities or technical, health, or scientific organizations or agencies.*

Notes*:*

1. *See Health and Safety Code Section 17920 for "Approved" as applied to residential construction and buildings or structures accessory thereto, as referenced in Section ~~1.8.1.1.1~~ 1.8.2.1.1.*

2. *See Health and Safety Code Section 17921.1 for "Approved" as applied to the use of hotplates in residential construction referenced in Section ~~1.8.1.1.1~~ 1.8.2.1.1.*

~~3. See Health and Safety Code Section 17921.3 for "Approved" as applied to low-flush water closets in residential construction, as referenced in Section 1.8.1.1.1.~~

~~4~~ 3. *See Health and Safety Code Section 19966 for "Approved" as applied to factory-built housing as referenced in Section ~~1.8.2.2.5~~ 1.8.3.2.5.*

~~5~~ 4. *See Health and Safety Code Section 18201 for "Approved" as applied to mobilehome parks as referenced in Section ~~1.8.2.2.2~~ 1.8.3.2.2.*

~~6~~ 5. *See Health and Safety Code Section 18862.1 for "Approved" as applied to special occupancy parks as referenced in Section ~~1.8.2.2.3~~ 1.8.3.2.3.*

~~**COMMERCIAL BUILDING.** See Section N1101.9.~~

~~**CURTAIN WALL.** See Section 1101.9 for definition applicable in Chapter 11.~~

~~**DEMAND RECIRCULATION WATER SYSTEM.** See Section N1101.9 for definition applicable in Chapter 11.~~

EFFICIENCY DWELLING UNIT. *A dwelling unit containing only one habitable room and includes an efficiency unit as defined by Health and Safety Code Section 17958.1. See Section R304.*

~~**GRAY WATER.** Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.~~

GUARD *OR GUARDRAIL*. A building component or a system of building components located near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to the lower level.

INSULATING SHEATHING. An insulating board having a minimum thermal resistance of R-2 of the core material. ~~For definition applicable in Chapter 11, see Section N1101.9.~~

LODGING HOUSE. ~~A one-family dwelling where one or more occupants are primarily permanent in nature, and rent is paid for guestrooms.~~ *Any building or portion thereof containing not more than five guest rooms where rent is paid in money, goods, labor or otherwise.*

REPAIR. The reconstruction or renewal of any part of an existing building for the purposes of its maintenance. ~~For definition applicable in Chapter 11, see Section N1101.9.~~

RISER. ~~(*NOT ADOPTED IN CA*)~~
~~1.~~ The vertical component of a step or stair.
~~2. A water pipe that extends vertically one full story or more to convey water to branches or to a group of fixtures.~~

~~**SKYLIGHT.** See Section N1101.9 for definition applicable in Chapter 11.~~

~~**SLEEPING UNIT.** See Section N1101.9 for definition applicable in Chapter 11.~~

SUNROOM. A one-story structure attached to a dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof. ~~For definition applicable in Chapter 11, see Section N1101.9.~~

~~**THIRD-PARTY CERTIFICATION AGENCY.** An approved agency operating a product or material certification system that incorporates a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.~~

~~**THIRD-PARTY CERTIFIED.** Certification obtained by the manufacturer indicating that the function and performance by testing and ongoing survei8llance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.~~

~~**THIRD-PARTY TESTED.** Procedure by which an approved testing laboratory provides documentation that a product material or system conforms to specific requirements.~~

VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space. ~~For definition applicable in Chapter 11, see Section N1101.9.~~

~~**WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM.** An exhaust system, supply system, or combination thereof that is designed to mechanically exchange indoor air for outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole-house ventilation rate. For definition applicable in Chapter 11, see Section N1101.9.~~

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

10. HCD proposes to adopt Part III, Chapter 3, except Section R313, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

Part III—Building Planning and Construction

CHAPTER 3
BUILDING PLANNING

SECTION R300
SITE DRAINAGE

R300.1 Storm water drainage and retention during construction*. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction in accordance with the California Green Building Standards Code, Chapter 4, Division 4.1.*

R300.2 Grading and paving. *Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings in accordance with the California Green Building Standards Code, Chapter 4, Division 4.1.*

SECTION R302
FIRE-RESISTANT CONSTRUCTION

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1), or dwellings equipped throughout with an automatic ~~*residential fire*~~ sprinkler system installed in accordance with Section P2904 ~~*R313*~~ shall comply with Table 302.1(2).

Exceptions:

1. Walls, projections, openings, or penetrations in walls perpendicular to the line used to determine the fire separation distance.

2. Walls of dwellings and accessory structures located on the same lot.

3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.

4. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).

5. Foundation vents installed in compliance with this code are permitted.

TABLE R302.1(1)
EXTERIOR WALLS ~~– DWELLINGS AND ACCESSTORY BUILDINGS WITHOUT AUTOMATIC RESIDENTIAL FIRE SPRINKLER PROTECTION~~

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	<5 feet
	(Not fire-resistance rated)	0 hours	≥5 feet
Projections	(Fire-resistance rated)	1 hour on the underside	≥ 2 feet to < 5 feet
	(Not fire-resistance rated)	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	< 3 feet
	25% Maximum of Wall Area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 5 feet
		None required	5 feet

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable

~~TABLE R302.1(2)~~
~~EXTERIOR WALLS – DWELLINGS AND ACCESSORY BUILDINGS WITH AUTOMATIC RESIDENTIAL FIRE SPRINKLER PROTECTION~~

~~EXTERIOR WALL ELEMENT~~		***~~MINIMUM FIRE-RESISTANCE RATING~~***	***~~MINIMUM FIRE SEPARATION DISTANCE~~***
~~Walls~~	***~~(Fire-resistance rated)~~***	***~~1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides~~***	***~~<3 feet~~***
	~~(Not fire-resistance rated)~~	***~~0 hours~~***	***~~≥3 feet~~***
~~Projections~~	***~~(Fire-resistance rated)~~***	***~~1 hour on the underside~~***	***~~≥ 2 feet to 3 feet~~***
	~~(Not fire-resistance rated)~~	***~~0~~***	***~~3 feet~~***
~~Openings in walls~~	***~~Not allowed~~***	***~~N/A~~***	***~~< 3 feet~~***
	~~Unlimited~~	***~~0 hours~~***	***~~3 feet~~***
~~Penetrations~~	***~~All~~***	***~~Comply with Section R302.4~~***	***~~< 3 feet~~***
		~~None required~~	***~~3 feet~~***

~~For SI: 1 foot = 304.8 mm.~~
~~N/A = Not Applicable~~

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors, equipped with ~~a~~ self-closing *and self-latching* device*s*. ~~*Doors shall be self-closing and self-latching.*~~

R302.5.2 Duct penetration. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved materials and shall have no openings into the garage. *Fire dampers, installed pursuant to the California Building Code, Section 717, may be used with other types of duct materials when approved by the enforcing agency.*

SECTION R303
LIGHT, VENTILATION AND HEATING

R303.1 Habitable rooms. All habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

Exceptions:

1. The glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system is installed in accordance with ~~Section M1507~~ *the California Mechanical Code*.

2. The glazed areas need not be installed in rooms where Exception 1 above is satisfied and artificial light is provided capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

3. Use of sunroom additions and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

4. *The windows, doors, louvers and other approved closeable openings not required by Section R310 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.*

5. *Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening(s) into the passive solar energy collector is increased to compensate for the area required by the interior space.*

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m^2), one-half of which must be openable.

Exception: The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be ~~determined~~ *50 cubic feet per minute (~~24~~ 25 L/s) for intermittent ventilation or ~~25~~ 20 cubic feet per minute (~~12~~ 10 L/s) for continuous ventilation* in accordance with ~~Section M1507~~ *the California Mechanical Code, Chapter 4.* Exhaust air from the space shall be exhausted directly to the outdoors.

R303.3.1 Bathroom exhaust fans. *Each bathroom containing a bathtub, shower, or tub/shower combination shall be mechanically ventilated for purposes of humidity control in accordance with the California Mechanical Code, Chapter 4; and the California Green Building Standards Code, Chapter 4, Division 4.5.*

Note: *Window operation is not a permissible method of providing bathroom exhaust for humidity control.*

R303.4 ~~Mechanical~~ Ventilation. ~~Where the air infiltration rate of a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2 inch w.c (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with M1507.3~~ *Ventilation air rates shall be in compliance with the California Mechanical Code.*

R303.5.2 Exhaust openings. Exhaust air shall not be directed onto walkways.

R303.5.2.1 Openings for whole house exhaust fans. *Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2 in accordance with the California Green Building Standards Code, Chapter 4, Division 4.5.*

SECTION R304
MINIMUM ROOM AREAS

R304.5 Efficiency dwelling units. (HCD 1) *Unless modified by local ordinance pursuant to Health and Safety Code Section 17958.1, efficiency dwelling units shall comply with the following:*

1. *The unit shall have a living room of not less than 220 square feet (20.4 m^2) of floor area. An additional 100 square feet (9.3 m^2) of floor area shall be provided for each occupant of such unit in excess of two.*

2. *The unit shall be provided with a separate closet.*

3. *The unit shall be provided with a kitchen sink, cooking appliance and refrigeration facilities, each having a clear working space of not less than 30 inches (762 mm) in front. Light and ventilation conforming to this code shall be provided.*

4. *The unit shall be provided with a separate bathroom containing a water closet, lavatory and bathtub or shower.*

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue required. Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have ~~a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening~~ *the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor*. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m^2)

~~**SECTION R313**~~
~~**AUTOMATIC FIRE SPRINKLER SYSTEMS**~~

SECTION R321
ELEVATORS AND PLATFORM LIFTS

R321.1 Elevators. … (No change to text)

R321.2 Platform lifts. … (No change to text)

R321.3 Accessibility. Elevators or platform *(wheelchair)* lifts that are part of an accessible route required by Chapter 11*A* of the ~~International~~ *California Building Code*, shall comply with ~~ICC A117.1~~ ~~*ASME A 17.1, Safety Code for Elevators and Escalators, Title 8, of the California Code of Regulations, under "Elevator Safety Orders"; ASME A18.1, Safety Standard for Platform Lifts and Stairway Chair Lifts; the State of California, Department of Industrial Relations, Division of Occupational Safety and Health, and any applicable safety regulations of other administrative authorities having jurisdiction. See*~~ *requirements in Section 1124A of the California Building Code* ~~*for additional information*~~.

SECTION R324
~~RESERVED~~
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

R324.1 Construction waste management. *Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with the California Green Building Standards Code, Chapter 4, Division 4.4.*

R324.1.1 Excavated soil and land clearing debris. *100 percent of trees, stumps, rocks and associated soils resulting primarily from land clearing shall be recycled, salvaged or reused in accordance with the California Green Building Standards Code, Chapter 4, Division 4.4.*

SECTION R330
POLLUTANT CONTROL

R330.1 Finish material pollutant control. *Finish materials including adhesives, sealants, caulks, paints and coatings, aerosol paints and coatings, carpet systems, carpet cushion, carpet adhesive, resilient flooring systems and composite wood products shall meet the volatile organic compound (VOC) emission limits in accordance with the California Green Building Standards Code, Chapter 4, Division 4.5.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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11. HCD proposes to adopt Part III, Chapter 4, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.4 Soil tests. … (No change to text.)

R401.4.1 Geotechnical evaluation. … (No change to text.)

TABLE R401.4.1 PRESUMPTIVE LOAD–BEARING VALUES OF FOUNDATION MATERIALS … (No change to text.)

R401.4.1.1 General and where required for applications listed in Section ~~1.8.1.1.1~~ 1.8.2.1.1 regulated by the Department of Housing and Community Development. *Foundations and soils investigations shall be conducted in conformance with Health and Safety Code Sections 17953 through ~~17955~~ 17957 as summarized below.*

R401.4.1.1.1 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~~ Section R401.4.1.1, 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.

R401.4.1.1.2 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.

R401.4.1.1.3 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~~ code, 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.*

R401.4.1.1.4. Liability. *A city, county, or city and county or other enforcement agency charged with the administration and enforcement of the provisions of Section R401.4.1.1, is not liable for any injury which arises out of any act or omission of the city, county or city and county, or other enforcement agency, or a public employee or any other person under Sections R401.4.1.1.1, R401.4.1.1.2 or R401.4.1.1.3.*

R401.4.1.1.5. Alternate procedures. *The governing body of any city, county, or city and county may enact an ordinance prescribing an alternate procedure which is equal to or more restrictive than the procedures specified in Sections R401.4.1.1.1, R401.4.1.1.2 and R401.1.1.3.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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12. HCD proposes to adopt Part III, Chapter 5, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 5
FLOORS

SECTION R506
CONCRETE FLOORS (ON GROUND)

R506.2.3 Vapor retarder. A 6-mil (0.006 inch; 152 µm) polyethylene or approved vapor retarder with joints lapped

not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.

Exception: The vapor retarder may be omitted:

1. From garages, utility buildings and other unheated accessory structures.
2. For unheated storage rooms having an area of less than 70 square feet (6.5 m^2) and carports.
3. From driveways, walks, patios and other flatwork not likely to be enclosed and heated at a later date.
4. Where approved by the building official, based on local site conditions.

R506.2.3.1 Capillary break. *When a vapor retarder is required a capillary break shall be installed in accordance with the California Green Building Standards Code, Chapter 4, Division 4.5.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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13. HCD proposes to adopt Part III, Chapter 6, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 6
WALL CONSTRUCTION

SECTION R602
WOOD WALL FRAMING

R602.3 Design and construction. … (No change to text.)
R602.3.1 Stud size, height and spacing. … (No change to text.)
R602.3.2 Top plate. … (No change to text.)
R602.3.3 Bearing studs. … (No change to text.)
R602.3.4 Bottom (sole) plate. … (No change to text.)

R602.3.4.1 Rodent proofing. *Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings in accordance with the California Green Building Standards Code, Chapter 4, Division 4.4.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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14. HCD proposes to adopt Part III, Chapter 7, from the 2012 International Residential Code into the 2013 California Residential Code without amendment:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 7
WALL COVERING

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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15. HCD proposes to adopt Part III, Chapter 8, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R802
WOOD ROOF FRAMING

R802.10.2 Design. Wood trusses shall be designed in accordance with accepted engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered *design* professional ~~where required by the statutes of the *State of California or the* jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

SECTION R806
ROOF VENTILATION

R806.2 Minimum vent area. The minimum net free ventilation area shall be 1/150 of the area of the vented space.

Exception: The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:

1. In Climate Zones ~~6, 7 and 8~~ 14 and 16, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.

2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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16. HCD proposes to adopt Part III, Chapter 9, from the 2012 International Residential Code into the 2013 California Residential Code without amendment.

CHAPTER 9
ROOF ASSEMBLIES

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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17. HCD proposes to adopt Part III, Chapter 10, except Section 1004.4, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

NOTE: *See Part 2 of this document for existing California Amendments proposed to be brought forward from the 2010 CRC for adoption into the 2013 CRC.*

CHAPTER 10
CHIMNEYS AND FIREPLACES

SECTION R1004
FACTORY-BUILT FIREPLACES

R1004.1 General. Factory-built fireplaces shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127.

R1004.1.1 Factory-built wood burning fireplaces. *Factory-built wood burning fireplaces shall be qualified at the U.S. EPA's Voluntary Fireplace Program Phase 2 emissions level and be in accordance with the California Green Building Standards Code, Chapter 4, Division 4.5.*

~~**R1004.4 Unvented gas log heaters.** An unvented gas log heater shall not be installed in a factory-built fireplace unless the fireplace system has been specifically tested, listed and labeled for such use in accordance with UL 127.~~

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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18. HCD proposes to NOT adopt Part IV, Energy Conservation, which includes Chapter 11, from the 2012 International Residential Code.

Part IV—Energy Conservation
(Note: Part IV is not adopted. See California Energy Code, Title 24, Part 6.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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19. HCD proposes to NOT adopt Part V, Mechanical, which includes Chapters 12 through 23, from the 2012 International Residential Code.

Part V—Mechanical
(Note: Part V is not adopted. See California Mechanical Code, Title 24, Part 4.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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20. HCD proposes to NOT adopt Part VI, Fuel Gas, which includes Chapter 24, from the 2012 International Residential Code.

Part VI—Fuel Gas
(Note: Part VI is not adopted. See California Mechanical Code and California Plumbing Code, Title 24, Parts 4 and 5.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

21. HCD proposes to NOT adopt Part VII, Plumbing, which includes Chapters 25 through 33, from the 2012 International Residential Code.

Part VII—Plumbing
(Note: Part VII is not adopted. See California Plumbing Code, Title 24, Part 5.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

22. HCD proposes to NOT adopt Part VIII, Electrical, which includes Chapters 34 through 43, from the 2012 International Residential Code.

Part VIII—Electrical
(Note: Part VIII is not adopted. See California Electrical Code, Title 24, Part 3.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

23. HCD proposes to adopt Part IX, Chapter 44, from the 2012 International Residential Code into the 2013 California Residential Code with amendment as follows:

Part IX—Referenced Standards

CHAPTER 44
REFERENCED STANDARDS

Notwithstanding California laws and regulations, these referenced standards shall be applicable only to those California Residential Code sections that are adopted.

Part IX—Referenced Standards

ICC International Code Council, Inc.
500 New Jersey Avenue, NW
6th Floor
Washington, DC 20001

Standard reference number	Title	Referenced in code section number
IBC—12 International Building Code®		R101.2, R110.2, ~~R301.1, R301.1.3, R301.2.2.1.1, R301.2.2.1.2, R301.2.2.4, R301.3, R308.5, R320.1, R321.3, R322.1, R403.1.8, R602.10.3(3), R606.12.2.1, R802.1.3.4, R905.10.3,~~ N1102.2.10, G2402.3~~, Table AH107.4(1), AH107.4.3~~
ICC/ANSI A117.1—09 Accessible and Usable Buildings and Facilities		R321.3
ICC 400—12 Standard on the Design and Construction of Log Structures		R301.1.1
ICC 500—08 ICC/NSSA Standard on the Design and Construction of Storm Shelters		R323.1
ICC 600—08 Standard for Residential Construction in High-wind Regions		R301.2.1.1
IECC—12 International Energy Conservation Code®		N1101.2
IFC—12 International Fire Code®		R102.7, M2201.7, G2402.3, G2412.2, G2423.1
IFGC—12 International Fuel Gas Code®		G2401.1, G2423.1
IMC—12 International Mechanical Code®		N1103.2.2, G2402.3
IPC—12 International Plumbing Code®		~~Table R301.2(1), R903.4.1,~~ G2402.3, ~~R2601.1, AO102.6~~
IPMC—12 International Property Maintenance Code®		R102.7
IPSDC—12 International Private Sewage Disposal Code®		~~R322.1.7~~, AI101.1

NFPA National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269

Standard reference number	Title	Referenced in code section number
…		
720—~~09~~ *12*	Standard for the Installation of Carbon Monoxide (CO) ~~Detectors~~ Detection and Warning Equipment. . . .	~~R316.4~~ *R315*

UL Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062

Standard reference number	Title	Referenced in code section number
…		
2034—08	Standard for Single- and Multiple-station Carbon Monoxide Alarms	~~R315.4~~ *R315.1, R315.2*
2075—04	Standard for Gas and Vapor Detectors and Sensors—with revisions through September 28, 2007	~~R315.2~~ *R315.1.1, R315.2.1*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

24. HCD proposes to NOT adopt Appendix A from the 2012 International Residential Code.

APPENDIX A
SIZING AND CAPACITIES OF GAS PIPING

(This appendix is informative and is not part of the code. This appendix is an excerpt from the 2012 *International Fuel Gas Code*, coordinated with the section numbering of the *International Residential Code*.)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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25. HCD proposes to NOT adopt Appendix B from the 2012 International Residential Code.

APPENDIX B

SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS

(This appendix is informative and is not part of the code. This appendix is an excerpt from the 2012 *International Fuel Gas Code*, coordinated with the section numbering of the *International Residential Code*.)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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26. HCD proposes to NOT adopt Appendix C from the 2012 International Residential Code.

APPENDIX C
EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS

(This appendix is informative and is not part of the code. This appendix is an excerpt from the 2012 *International Fuel Gas Code*, coordinated with the section numbering of the *International Residential Code*.)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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27. HCD proposes to NOT adopt Appendix D from the 2012 International Residential Code.

APPENDIX D
RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION

(This appendix is informative and is not part of the code. This appendix is an excerpt from the 2012 *International Fuel Gas Code*, coordinated with the section numbering of the *International Residential Code*.)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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28. HCD proposes to NOT adopt Appendix E from the 2012 International Residential Code.

APPENDIX E
MANUFACTURED HOUSING USED AS DWELLINGS

(Note: This appendix is not adopted. See California Code of Regulations, Title 25, Chapters 2 and 3.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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29. HCD proposes to NOT adopt Appendix F from the 2012 International Residential Code.

APPENDIX F
RADON CONTROL METHODS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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30. HCD proposes to NOT adopt Appendix G from the 2012 International Residential Code.

APPENDIX G
SWIMMING POOLS, SPAS AND HOT TUBS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

(Note: See Chapter 31, Section 3109 of the California Building Code, Title 24, Part 2.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

31. HCD proposes to adopt Appendix H from the 2012 International Residential Code into the 2013 California Residential Code without amendment.

APPENDIX H
PATIO COVERS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

32. HCD proposes to NOT adopt Appendix I from the 2012 International Residential Code.

APPENDIX I
PRIVATE SEWAGE DISPOSAL

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

33. HCD proposes to NOT adopt Appendix J from the 2012 International Residential Code.

APPENDIX J
EXISTING BUILDINGS AND STRUCTURES

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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34. HCD proposes to NOT adopt Appendix K from the 2012 International Residential Code.

APPENDIX K
SOUND TRANSMISSION

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

(Note: See Section 1207 "Sound Transmission" of the California Building Code, Title 24, Part 2, for requirements applicable to structures in this code.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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35. HCD proposes to NOT adopt Appendix L from the 2012 International Residential Code.

APPENDIX L
PERMIT FEES

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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36. HCD proposes to NOT adopt Appendix M from the 2012 International Residential Code.

APPENDIX M
HOME DAY CARE— R-3 OCCUPANCY

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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37. HCD proposes to NOT adopt Appendix N from the 2012 International Residential Code.

APPENDIX N
VENTING METHODS

(This appendix is informative and is not part of the code. This appendix provides examples of various of venting methods.)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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38. HCD proposes to NOT adopt Appendix O from the 2012 International Residential Code.

APPENDIX O
AUTOMATIC VEHICULAR GATES

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

39. HCD proposes to NOT adopt Appendix P from the 2012 International Residential Code.

APPENDIX P
SIZING OF WATER PIPING SYSTEM

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

40. HCD proposes to NOT adopt Appendix Q from the 2012 International Residential Code.

APPENDIX Q
ICC INTERNATIONAL RESIDENTIAL CODE ELECTRICAL PROVISIONS/NATIONAL ELECTRICAL CODE CROSS REFERENCE

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

(This appendix is informative and is not part of the code. This table is a cross reference of Chapters 34 through 43 of this code, and the 2011 *National Electrical Code*, NFPA 70.)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

PART 2

NOTE: *The language in Part 2 is brought forward from the previous code adoption cycle without change, except for nonsubstantive editorial corrections, and is displayed for context and for the convenience of code users.*

41. HCD proposes to bring forward existing California Amendments in Chapter 1, Administration, Division I, California Administration from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

Part I — Administrative

CHAPTER 1
SCOPE AND APPLICATION

DIVISION I
CALIFORNIA ADMINISTRATION

SECTION 1.1
GENERAL

1.1.1 Title. (See Part 1)

1.1.2 Purpose. *The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation and energy conservation; safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to fire fighters and emergency responders during emergency operations.*

1.1.3 Scope. (See Part 1)

1.1.3.2 Regulated buildings, structures, and applications. *The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to detached one- and two-family dwellings, townhouses, and structures accessory thereto. State agencies with regulatory authority ~~are referenced in the Matrix Adoption Table and~~ as specified in Sections 1.2 through 1.14, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state legislature.*

Note: *See Preface to distinguish the model code provisions from the California provisions.*

1. *One- and two-family dwellings, townhouses, employee housing, factory-built housing~~,~~ and other types of dwellings containing sleeping accommodations with common toilets or cooking facilities. See Section ~~1.2.1.1.1~~ 1.8.2.1.1.*

2. *Permanent buildings and permanent accessory buildings or structures constructed within mobilehome parks and special occupancy parks regulated by the Department of Housing and Community Development. See Section ~~1.2.1.1.3~~ 1.8.2.1.3.*

1.1.4 Appendices. *Provisions contained in the appendices of this code shall not apply unless specifically adopted by a state agency or adopted by a local enforcing agency in compliance with Health and Safety Code Section 18901 et seq. for Building Standards Law, Health and Safety Code Section 17950 for State Housing Law and Health and Safety Code Section 13869.7 for Fire Protection Districts. See Section 1.1.8 of this code.*

1.1.5 Referenced codes. *The codes, standards and publications adopted and set forth in this code, including other codes, standards and publications referred to therein are, by title and date of publication, hereby adopted as standard reference documents of this code. When this code does not specifically cover any subject related to building design and construction, recognized architectural or engineering practices shall be employed. The National Fire Codes, standards and the Fire Protection Handbook of the National Fire Protection Association are permitted to be used as authoritative guides in determining recognized fire prevention engineering practices.*

1.1.6 ~~Non-building~~ Nonbuilding standards, orders and regulations. *Requirements contained in the International Residential Code, or in any other referenced standard, code or document, which are not building standards as defined in Health and Safety Code Section 18909, shall not be construed as part of the provisions of this code. For ~~non-building~~ nonbuilding standards, orders and regulations see other titles of the California Code of Regulations.*

1.1.7 Order of precedence and use.

1.1.7.1 Differences. *In the event of any differences between these building standards and the standard reference documents, the text of these building standards shall govern.*

1.1.7.2 Specific provisions*. Where a specific provision varies from a general provision, the specific provision shall apply.*

1.1.7.3 Conflicts. *When the requirements of this code conflict with the requirements of any other part of the California Building Standards Code, Title 24, the most restrictive requirements shall prevail.*

1.1.7.3.1 Detached one- and two-family dwellings. *Detached one-and two-family dwellings and townhouses not more than three stories above grade plane with a separate means of egress and their accessory structures shall not be required to comply with the more restrictive requirements contained in Title 24, Part 2, the California Building Code, unless the proposed structure(s) exceed the design limitations established in the California Residential Code and the code user is specifically directed to use the California Building Code.*

1.1.8 City, county, or city and county amendments, additions or deletions. *The provisions of this code do not limit the authority of city, county, or city and county governments to establish more restrictive and reasonably necessary differences to the provisions contained in this code pursuant to complying with Section 1.1.8.1. The effective date of amendments, additions or deletions to this code by a city, county, or city and county filed pursuant to Section 1.1.8.1 shall be the date filed. However, in no case shall the amendments, additions or deletions to this code be effective any sooner than the effective date of this code.*

Local modifications shall comply with Health and Safety Code Section 18941.5 for Building Standards Law, Health and Safety Code Section 17958 for State Housing Law or Health and Safety Code Section 13869.7 for Fire Protection Districts.

1.1.8.1 Findings and filings.

1. *The city, county, or city and county shall make express findings for each amendment, addition or deletion based upon climatic, topographical or geological conditions.*

   Exception*: Hazardous building ordinances and programs mitigating unreinforced masonry buildings.*

2. *The city, county, or city and county shall file the amendments, additions or deletions expressly marked and identified as to the applicable findings. Cities, counties, cities and counties, and fire departments shall file the amendments, additions or deletions, and the findings with the California Building Standards Commission at 2525 Natomas Park Drive, Suite 130, Sacramento, CA 95833.*

3. *Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and filed with the California Department of Housing and Community Development, Division of Codes and Standards, P.O. Box 1407, Sacramento, CA 95812-1407 or 1800 3rd Street, Room 260, Sacramento, CA 95811.*

***1.1.9 Effective date of this code**. Only those standards approved by the California Building Standards Commission that are effective at the time an application for building permit is submitted shall apply to the plans and specifications for, and to the construction performed under, that permit. For the effective dates of the provisions contained in this code, see the History Note page of this code.*

***1.1.10 Availability of codes.** At least one complete copy each of Titles 8, 19, 20, 24 and 25 with all revisions shall be maintained in the office of the building official responsible for the administration and enforcement of this code. Each state department concerned and each city, county, or city and county shall have an up-to-date copy of the code available for public inspection. See Health and Safety Code Section 18942(d) (1) and (2).*

***1.1.11 Format.** This part fundamentally adopts the International Residential Code by reference on a chapter-by-chapter basis. ~~Such adoption is reflected in the Matrix Adoption Table of each chapter of this part. When the Matrix Adoption Table makes no reference to a specific chapter of the International Residential Code, such chapter of the International Residential Code is not adopted as a portion of this code.~~ When a specific chapter of the International Residential Code is not printed in the code and is marked "Reserved", such chapter of the International Residential Code is not adopted as a portion of this code. When a specific chapter of the International Residential Code is marked "Not Adopted by the State of California" but appears in the code, it may be available for adoption by local ordinance.*

***Note:** Matrix Adoption Tables at the front of each chapter may aid the code user in determining which chapter or sections within a chapter are applicable to buildings under the authority of a specific state agency, but they are not considered regulatory.*

***1.1.12 Validity.** If any chapter, section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, contrary to statute, exceeding the authority of the state as stipulated by statutes or otherwise inoperative, such decision shall not affect the validity of the remaining portion of this code.*

SECTION 1.8
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)

1.8.1 Purpose. (See Part 1)

SECTION ~~1.8.1~~ 1.8.2
AUTHORITY AND ABBREVIATIONS

***~~1.8.1.1~~ 1.8.2.1 General.** The Department of Housing and Community Development is authorized by law to promulgate and adopt building standards and regulations for several types of building applications. ~~These applications are grouped and identified by abbreviation in the Matrix Adoption Tables to show which model code sections and amendments are applicable to each application.~~ The applications under the authority of the Department of Housing and Community Development are listed in Sections ~~1.8.1.1.1~~ 1.8.2.1.1 through ~~1.8.1.1.3~~ 1.8.2.1.3.*

***~~1.8.1.1.1~~ 1.8.2.1.1 Housing construction.** ~~Application~~*

***Application** –Hotels, motels, lodging houses, apartment houses, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities including accessory buildings, facilities, and uses thereto. Sections of this code which pertain to applications listed in this section are identified ~~in the Matrix Adoption Table~~ using the abbreviation "HCD 1."*

***Enforcing Agency**–Local building department or the Department of Housing and Community Development.*

***Authority Cited**–Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.*

***Reference**–Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.*

~~1.8.1.1.2~~ 1.8.2.1.2 Housing accessibility.

***Application** – ~~Covered multifamily dwellings~~ "COVERED MULTIFAMILY DWELLINGS" as defined in Chapter 11A of the California Building Code (CBC) including, but not limited to, lodging houses, dormitories, timeshares, condominiums, shelters for homeless persons, congregate residences, apartment houses, dwellings, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities.*

Disabled access regulations promulgated under HCD authority are located in Chapter 11A of the California Building Code (CBC) and are identified ~~in the Matrix Adoption Table~~ by the abbreviation "HCD 1-AC." The Aapplication of such provisions shall be in conjunction with other requirements of the Building Standards Code and apply only to newly constructed ~~"Covered multifamily dwellings"~~ "COVERED MULTIFAMILY DWELLINGS" as defined in CBC Chapter 11A. "HCD 1-AC" applications include, but are not limited to, the following:

1. *All newly constructed ~~"Covered multifamily dwellings"~~ "COVERED MULTIFAMILY DWELLINGS" as defined in CBC Chapter 11A.*

2. *New ~~"Common use areas"~~ "COMMON USE AREAS" as defined in CBC Chapter 11A serving existing covered multifamily dwellings.*

3. *Additions to existing buildings, where the addition alone meets the definition of "COVERED MULTIFAMILY DWELLINGS" as defined in CBC Chapter 11A.*

4. *Common use areas serving covered multifamily dwellings.*

5. *Where any portion of a building's exterior is preserved, but the interior of the building is removed, including all structural portions of floors and ceilings, the building is considered a new building for the purpose of determining the application of CBC Chapter 11A.*

"HCD 1-AC" building standards generally do not apply to public use areas or public accommodations such as hotels and motels or public housing. Public use areas, public accommodations, public housing and housing which is publicly funded as defined in the CBC are subject to the Division of the State Architect (DSA-AC) and are referenced in CBC Section 1.9.1.

***Enforcing Agency**–Local building department or the Department of Housing and Community Development.*

***Authority cited**–Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.*

***Reference**–Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.*

~~1.8.1.1.3~~ 1.8.2.1.3 Permanent buildings in mobilehome parks and special occupancy parks.

***Application**–Permanent buildings, and permanent accessory buildings or structures, constructed within mobilehome parks and special occupancy parks that are under the control and ownership of the park operator. Sections of this code which pertain to applications listed in this section are identified ~~in the Matrix Adoption Table~~ using the abbreviation "HCD 2."*

***Enforcing agency**–The Department of Housing and Community Development, ~~L~~local building department or other local agency ~~responsible~~ that has assumed responsibility for the enforcement of Health and Safety Code,*

Division 13, Part 2.1, commencing with Section 18200 for mobilehome parks and Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 for special occupancy parks~~; or the Department of Housing and Community Development~~.

***Authority cited**–Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.*

***Reference**–Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.*

SECTION ~~1.8.2~~ 1.8.3
LOCAL ENFORCING AGENCY

***~~1.8.2.1~~ 1.8.3.1 Duties and powers.** The building department of every city, county, or city and county shall enforce all the provisions of law, this code, and the other rules and regulations promulgated by the Department of Housing and Community Development pertaining to the installation, erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of apartment houses, hotels, motels, lodging houses and dwellings, including accessory buildings, facilities and uses thereto.*

The provisions regulating the erection and construction of dwellings and appurtenant structures shall not apply to existing structures as to which construction is commenced or approved prior to the effective date of these regulations. Requirements relating to use, maintenance and occupancy shall apply to all dwellings and appurtenant structures approved for construction or constructed before or after the effective date of this code.

For additional information regarding the use and occupancy of existing buildings and appurtenant structures, see California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Article 1, Section 1.

***~~1.8.2.2~~ 1.8.3.2 Laws, rules and regulations.** Other than the building standards contained in this code, and notwithstanding other provisions of law, the statutory authority and location of the laws, rules and regulations to be enforced by local enforcing agencies are listed by statute in Sections ~~1.8.2.2.1~~ 1.8.3.2.1 through ~~1.8.2.2.5~~ 1.8.3.2.5 below:*

***~~1.8.2.2.1~~ 1.8.3.2.1 State Housing Law.** Refer to the State Housing Law, California Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1, for the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of apartment houses, hotels, motels, lodging houses and dwellings, including accessory buildings, facilities and uses thereto.*

***~~1.8.2.2.2~~ 1.8.3.2.2 Mobilehome Parks Act.** Refer to the Mobilehome Parks Act, California Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000 for mobilehome park administrative and enforcement authority, permits, plans, fees, violations, inspections and penalties both within and outside mobilehome parks.*

***Exception:** Mobilehome parks where the Department of Housing and Community Development is the enforcing agency.*

***~~1.8.2.2.3~~ 1.8.3.2.3 Special Occupancy Parks Act.** Refer to the Special Occupancy Parks Act, California Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000 for special occupancy park administrative and enforcement authority, permits, fees, violations, inspections and penalties both within and outside of special occupancy parks.*

***Exception:** Special occupancy parks where the Department of Housing and Community Development is the enforcing agency.*

~~*1.8.2.2.4*~~ *1.8.3.2.4* ***Employee Housing Act.*** *Refer to the Employee Housing Act, California Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600 for employee housing administrative and enforcement authority, permits, fees, violations, inspections and penalties.*

~~*1.8.2.2.5*~~ *1.8.3.2.5* ***Factory-Built Housing Law.*** *Refer to the Factory-Built Housing Law, California Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000 for factory-built housing administrative and enforcement authority, permits, fees, violations, inspections and penalties.*

SECTION ~~1.8.3~~ 1.8.4
PERMITS, FEES, APPLICATIONS AND INSPECTIONS

~~*1.8.3.1*~~ *1.8.4.1* ***Permits.*** *A written construction permit shall be obtained from the enforcing agency prior to the erection, construction, reconstruction, installation, moving or alteration of any building or structure.*

Exceptions:

1. *Work exempt from permits as specified in Chapter 1, Scope and Application, Division II, Administration, Section R105.2.*

2. *Changes, alterations or repairs of a minor nature not affecting structural features, egress, sanitation, safety or accessibility as determined by the enforcing agency.*

Exemptions from permit requirements shall not be deemed to grant authorization for any work to be done in any manner in violation of other provisions of law or this code.

~~*1.8.3.2*~~ *1.8.4.2* ***Fees.*** *Subject to other provisions of law, the governing body of any city, county, or city and county may prescribe fees to defray the cost of enforcement of rules and regulations promulgated by the Department of Housing and Community Development. The amount of the fees shall not exceed the amount reasonably necessary to administer or process permits, certificates, forms or other documents, or to defray the costs of enforcement. For additional information, see State Housing Law, Health and Safety Code, Division 13, Part 1.5, Section 17951 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, Article 3, commencing with Section 6.*

~~*1.8.3.3*~~ *1.8.4.3* ***Plan review and time limitations.*** *Subject to other provisions of law, provisions related to plan checking, prohibition of excessive delays and contracting with or employment of private parties to perform plan checking are set forth in State Housing Law, Health and Safety Code Section 17960.1, and for employee housing, in Health and Safety Code Section 17021.*

~~*1.8.3.3.1*~~ *1.8.4.3.1* ***Retention of plans.*** *The building department of every city, county, or city and county shall maintain an official copy, microfilm, electronic or other type of photographic copy of the plans of every building, during the life of the building, for which the department issued a building permit.*

Exceptions:

1. *Single or multiple dwellings not more than two stories and basement in height.*

2. *Garages and other structures appurtenant to buildings listed in Exception 1.*

3. *Farm or ranch buildings appurtenant to buildings listed in Exception 1.*

4. *Any one-story building where the span between bearing walls does not exceed 25 feet (7620 mm), except a steel frame or concrete building.*

All plans for common interest developments as defined in Section 1351 of the California Civil Code shall be retained. For additional information regarding plan retention and reproduction of plans by an enforcing agency, see Health and Safety Code Sections 19850 through 19852.

1.8.4.4 Inspections (See Part 1)

SECTION ~~1.8.4~~ 1.8.5
RIGHT OF ENTRY FOR ENFORCEMENT

~~1.8.4.1~~ 1.8.5.1 General. *Subject to other provisions of law, officers and agents of the enforcing agency may enter and inspect public and private properties to secure compliance with the rules and regulations promulgated by the Department of Housing and Community Development. For limitations and additional information regarding enforcement, see the following:*

1. *For applications subject to the State Housing Law as referenced in Section ~~1.8.2.2.1~~ 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.*

2. *For applications subject to the Mobilehome Parks Act as referenced in Section ~~1.8.2.2.2~~ 1.8.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.*

3. *For applications subject to the Special Occupancy Parks Act as referenced in Section ~~1.8.2.2.3~~ 1.8.3.2.3 of this Code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.*

4. *For applications subject to the Employee Housing Act as referenced in Section ~~1.8.2.2.4~~ 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.*

5. *For applications subject to the Factory-Built Housing Law as referenced in Section ~~1.8.2.2.5~~ 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Sections 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

SECTION ~~1.8.5~~ 1.8.6
LOCAL MODIFICATION BY ORDINANCE OR REGULATION

~~1.8.5.1~~ 1.8.6.1 General. *Subject to other provisions of law, a city, county, or city and county may make changes to the provisions adopted by the Department of Housing and Community Development. If any city, county, or city and county does not amend, add or repeal by local ordinances or regulations the provisions published in this code or other regulations promulgated by the Department of Housing and Community Development, those provisions shall be applicable and shall become effective 180 days after publication by the California Building Standards Commission. Amendments, additions and deletions to this code adopted by a city, county, or city and county pursuant to California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5, together with all applicable portions of this code, shall also become effective 180 days after publication of the California Building Standards Code by the California Building Standards Commission.*

~~1.8.5.2~~ 1.8.6.2 Findings, filings and rejections of local modifications. *Prior to making any modifications or establishing more restrictive building standards, the governing body shall make express findings and filings, as required by California Health and Safety Code Section 17958.7, showing that such modifications are reasonably necessary due to local climatic, geological or topographical conditions. No modification shall become effective or operative unless the following requirements are met:*

1. *The express findings shall be made available as a public record.*

2. *A copy of the modification and express finding, each document marked to cross-reference the other, shall be filed with the California Building Standards Commission for a city, county, or city and county and with the Department of Housing and Community Development for fire protection districts.*

3. *The California Building Standards Commission has not rejected the modification or change.*

Nothing in this section shall limit the authority of fire protection districts pursuant to California Health and Safety Code Section 13869.7(a).

SECTION ~~1.8.6~~ 1.8.7
ALTERNATE MATERIALS, DESIGNS, TESTS AND METHODS OF CONSTRUCTION

~~1.8.6.1~~ 1.8.7.1 General. *The provisions of this code, as adopted by the Department of Housing and Community Development, are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, design or method of construction not specifically prescribed by this code. Consideration and approval of alternates shall comply with Section ~~1.8.6.2~~ 1.8.7.2 for local building departments and Section ~~1.8.6.3~~ 1.8.7.3 for the Department of Housing and Community Development.*

~~1.8.6.2~~ 1.8.7.2 Local building departments. *The building department of any city, county, or city and county may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of an apartment house, hotel, motel, lodging house, dwelling or an accessory structure, except for the following:*

1. *Structures located in mobilehome parks as defined in California Health and Safety Code Section 18214.*

2. *Structures located in special occupancy parks as defined in California Health and Safety Code Section 18862.43.*

3. *Factory-built housing as defined in California Health and Safety Code Section 19971.*

~~1.8.6.2.1~~ 1.8.7.2.1 Approval of alternates. *The consideration and approval of alternates by a local building department shall comply with the following procedures and limitations:*

1. *The approval shall be granted on a case-by-case basis.*

2. *Evidence shall be submitted to substantiate claims that the proposed alternate, in performance, safety and protection of life and health, conforms to, or is at least equivalent to, the standards contained in this code and other rules and regulations promulgated by the Department of Housing and Community Development.*

3. *The local building department may require tests performed by an approved testing agency at the expense of the owner or owner's agent as proof of compliance.*

4. *If the proposed alternate is related to accessibility in covered multifamily dwellings or in facilities serving "COVERED MULTIFAMILY DWELLINGS" as defined in CBC Chapter 11A, the proposed alternate must also meet the threshold set for "EQUIVALENT FACILITATION" as defined in CBC Chapter 11A.*

For additional information regarding approval of alternates by a building department pursuant to the State Housing Law, see California Health and Safety Code Section 17951(e) and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1.

~~1.8.6.3~~ 1.8.7.3 Department of Housing and Community Development*. The Department of Housing and Community Development may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal or demolition of an apartment house, hotel, motel, lodging house, dwelling or an accessory thereto and permanent buildings in mobilehome parks and special occupancy parks. The consideration and approval of alternates shall comply with the following:*

1. *The department may require tests at the expense of the owner or owner's agent to substantiate compliance with the California Building Standards Code.*

2. *The approved alternate shall, for its intended purpose, be at least equivalent in performance and safety to the materials, designs, tests or methods of construction prescribed by this code.*

SECTION ~~1.8.7~~ 1.8.8
APPEALS BOARD

~~1.8.7.1~~ 1.8.8.1 General. *Every city, county, or city and county shall establish a process to hear and decide appeals of orders, decisions, and determinations made by the enforcing agency relative to the application and interpretation of this code and other regulations governing use, maintenance and change of occupancy. The governing body of any city, county, or city and county may establish a local appeals board and a housing appeals board to serve this purpose. Members of the appeals board(s) shall not be employees of the enforcing agency and shall be knowledgeable in the applicable building codes, regulations and ordinances as determined by the governing body of the city, county, or city and county.*

Where no such appeals boards or agencies have been established, the governing body of the city, county, or city and county shall serve as the local appeals board or housing appeals board as specified in California Health and Safety Code Sections 17920.5 and 17920.6.

~~1.8.7.2~~ 1.8.8.2 Definitions. *The following terms shall for the purposes of this section have the meaning shown.*

HOUSING APPEALS BOARD. *The board or agency of a city, county, or city and county which is authorized by the governing body of the city, county, or city and county to hear appeals regarding the requirements of the city, county, or city and county relating to the use, maintenance and change of occupancy of buildings and structures, including requirements governing alteration, additions, repair, demolition and moving. In any area in which there is no such board or agency, "Housing Appeals Board" means the local appeals board having jurisdiction over the area.*

LOCAL APPEALS BOARD. *The board or agency of a city, county, or city and county which is authorized by the governing body of the city, county, or city and county to hear appeals regarding the building requirements of the city, county, or city and county. In any area in which there is no such board or agency, "Local Appeals Board" means the governing body of the city, county, or city and county having jurisdiction over the area.*

~~1.8.7.3~~ 1.8.8.3 Appeals. *Except as otherwise provided in law, any person, firm or corporation adversely affected by a decision, order or determination by a city, county, or city and county relating to the application of building standards published in the California Building Standards Code, or any other applicable rule or regulation adopted by the Department of Housing and Community Development, or any lawfully enacted ordinance by a city, county, or city and county, may appeal the issue for resolution to the local appeals board or housing appeals board as appropriate.*

The local appeals board shall hear appeals relating to new building construction and the housing appeals board shall hear appeals relating to existing buildings.

SECTION ~~1.8.8~~ 1.8.9
UNSAFE BUILDINGS OR STRUCTURES

~~1.8.8.1~~ 1.8.9.1 Authority to enforce. *Subject to other provisions of law, the administration, enforcement, actions, proceedings, abatement, violations and penalties for unsafe buildings and structures are contained in the following statutes and regulations:*

1. *For applications subject to the State Housing Law as referenced in Section ~~1.8.2.2.1~~ 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.*

2. *For applications subject to the Mobilehome Parks Act as referenced in Section ~~1.8.2.2.2~~ 1.8.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.*

3. *For applications subject to the Special Occupancy Parks Act as referenced in Section ~~1.8.2.2.3~~ 1.8.3.2.3 of this code, refer to Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.*

4. *For applications subject to the Employee Housing Act as referenced in Section ~~1.8.2.2.4~~ 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.*

5. *For applications subject to the Factory-Built Housing Law as referenced in Section ~~1.8.2.2.5~~ 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

~~1.8.8.2~~ 1.8.9.2 Actions and proceedings. *Subject to other provisions of law, punishments, penalties and fines for violations of building standards are contained in the following statutes and regulations:*

1. *For applications subject to the State Housing Law as referenced in Section ~~1.8.2.2.1~~ 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.*

2. *For applications subject to the Mobilehome Parks Act as referenced in Section ~~1.8.2.2.2~~ 1.8.3.2.2 of this code, refer to Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 and California Code of Regulations, Title 25, Division 1, Chapter 2, commencing with Section 1000.*

3. *For applications subject to the Special Occupancy Parks Act as referenced in Section ~~1.8.2.2.3~~ 1.8.3.2.3 of this code, refer to the Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 and California Code of Regulations, Title 25, Division 1, Chapter 2.2, commencing with Section 2000.*

4. *For applications subject to the Employee Housing Act as referenced in Section ~~1.8.2.2.4~~ 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.*

5. *For applications subject to the Factory-Built Housing Law as referenced in Section ~~1.8.2.2.5~~ 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960 and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.*

SECTION ~~1.8.9~~ 1.8.10
OTHER BUILDING REGULATIONS

~~1.8.9.1~~ 1.8.10.1 Existing structures. *Subject to the requirements of California Health and Safety Code Sections 17912, 17920.3, 17922, 17922.3, 17958.8 and 17958.9, provisions relating to existing structures (additions, alterations and repairs) shall only apply as identified in the California Building Code Chapter 34 Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections ~~1.8.1.1.1~~ 1.8.2.1.1 through ~~1.8.1.1.3~~ 1.8.2.1.3 of this code.*

~~1.8.9.2~~ 1.8.10.2 Moved structures. *Subject to the requirements of California Health and Safety Code Sections 17922.3 and 17958.9, provisions relating to a moved residential structure are located in CBC Chapter 34 and shall only apply as identified in the CBC Chapter 34 Matrix Adoption Table under the authority of the Department of Housing and Community Development as listed in Sections ~~1.8.1.1.1~~ 1.8.2.1.1 through ~~1.8.1.1.3~~ 1.8.2.1.3 of this code.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

42. HCD proposes to bring forward existing California Amendments in Division II from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

DIVISION II

ADMINISTRATION

Division II is not adopted by the Department of Housing and Community Development or the State Fire Marshal except where specifically identified ~~in the Matrix Adoption Table~~.

SECTION R105
PERMITS

R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed ~~200~~ *120* square feet (~~18.58~~ *11.15* m²).
2. Fences not over 7 feet (2134 mm) high.
3. …(No change to text)
4. …(No change to text)
5. …(No change to text)
6. …(No change to text)
7. …(No change to text)
8. …(No change to text)
9. …(No change to text)
10. …(No change to text)

SECTION R109
INSPECTIONS

R109.1 Types of inspections. (See Part 1)

R109.1.1 Foundation inspection. Inspection of the foundation *and footings* shall be made after poles or piers are set or trenches or basement areas are excavated and any required forms erected and any required reinforcing steel is in place and supported prior to the placing of concrete. The foundation *or footing* inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations. *Materials for the foundation shall be on the job site except where concrete is ready-mixed in accordance with ASTM C 94. Under this circumstance concrete is not required to be at the job site.*

R109.1.1.1 Concrete slab and under-floor inspection. *Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduits, piping or other ancillary building trade products or equipment are installed, but before any concrete is placed or floor sheathing is installed, including the subfloor.*

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry construction shall be made after the roof, masonry, all framing, firestopping, draftstopping and bracing are in place and after ~~the plumbing, mechanical and electrical rough inspections~~ *chimneys and vents to be concealed are completed and the rough electrical, plumbing, heating, wires, pipes, and ducts* are approved.

R109.1.4.1 Moisture content verification. (See Part 1)

~~R109.1.4.1~~ R109.1.4.2 Lath and gypsum board inspection. *Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.*

R109.1.5 Other inspections. … (No change to text)

R109.1.5.1 Fire-resistance-rated construction inspection. Where fire-resistance-rated construction is required between dwelling units or due to location on property, the building official shall require an inspection of such construction after all lathing and/or wallboard is in place, but before any plaster is applied, or before wallboard joints and fasteners are taped and finished. *Protection of joints and penetrations in fire resistance rated assemblies shall not be concealed from view until inspected and approved.*

R109.1.5.2 Special Inspections. *For special inspections, see California Building Code, Chapter 17.*

R109.1.6 Final inspection. … (No change to text)

R109.1.6.1 Elevation documentation. … (No change to text)

R109.1.6.2 Operation and maintenance manual. (See Part 1)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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43. HCD proposes to bring forward existing California Amendments in Part II, Chapter 2, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

Part II — Definitions

CHAPTER 2
DEFINITIONS

SECTION R201
GENERAL

R201.3 Terms defined in other codes. Where terms are not defined in this code such terms shall have meanings ascribed to them as in ~~other code publications of the International Code Council~~ *the California Building Standards Code, Title 24, California Code of Regulations.*

SECTION R202
DEFINITIONS

APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the building official. *(HCD 1 ~~& HCD 2~~) "Approved agency shall mean "Listing agency" and "Testing agency."*

APPROVED LISTING AGENCY. *Any agency approved by the enforcing agency, unless otherwise provided by statute, which is in the business of listing and labeling and which makes available at least an annual published report of such listings in which specific information is included that the product has been tested to recognized standards and found to comply.*

APPROVED TESTING AGENCY. *Any agency which is determined by the enforcing agency, except as otherwise provided by statute, to have adequate personnel and expertise to carry out the testing of systems, materials, and construction fixtures or appliances.*

BUILDING. Building shall mean any one- and two-family dwelling or portion thereof, including townhouses, that is used, or designed or intended to be used for human habitation, for living, sleeping, cooking or eating purposes, or any combination thereof, and shall include accessory structures thereto.

Exceptions: *For applications listed in Section ~~1.8.1~~ 1.8.2 regulated by the Department of Housing and Community Development, "Building" shall not include the following:*

1. *Any mobilehome as defined in Health and Safety Code Section 18008.*
2. *Any manufactured home as defined in Health and Safety Code Section 18007.*
3. *Any commercial modular as defined in Health and Safety Code Section 18001.8 or any special purpose commercial modular as defined in Section 18012.5.*
4. *Any recreational vehicle as defined in Section Health and Safety Code 18010.*
5. *Any multifamily manufactured home as defined in Section Health and Safety Code 18008.7.*

For additional information, see Health and Safety Code Section 18908.

DEPARTMENT. *The Department of Housing and Community Development.*

ENFORCEMENT. *Notwithstanding other provisions of law, the applicable section of the Health and Safety Code, Section 17920, is repeated here for clarity:*

"Enforcement" means diligent effort to secure compliance, including review of plans and permit applications, response to complaints, citation of violations, and other legal process. Except as otherwise provided in this part, "enforcement" may, but need not, include inspections of existing buildings on which no complaint or permit application has been filed, and effort to secure compliance as to these existing buildings.

ENFORCING AGENCY. *The designated department or agency as specified by statute or regulation.*

ENFORCEMENT AGENCY. *See "ENFORCING AGENCY."*

FAMILY. (HCD 1) *An individual or two or more persons who are related by blood or marriage; or otherwise live together in a dwelling unit.*

FENESTRATION. ~~Skylights, roof windows, vertical windows (whether fixed or moveable); opaque doors; glazed doors; glass block; and combination opaque/glazed doors. For definition applicable in Chapter 11, see Section 1101.9.~~ *See "Fenestration Product" as defined in Title 24, Part 6, the California Energy Code.*

LABELED. ***(HCD 1 ~~& HCD2~~)*** *Labeled means equipment or materials to which has been attached a label, symbol or other identifying mark of an organization, approved by the Department, that maintains a periodic inspection program of production of labeled products, installations, equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.*

LIMITED-DENSITY OWNER-BUILT RURAL DWELLINGS. *Any structure consisting of one or more habitable rooms intended or designed to be occupied by one family with facilities for living or sleeping, with use restricted to rural areas designated by local jurisdiction. Notwithstanding other sections of law, the applicable section of Health and Safety Code Section 17958.2 is repeated here for clarification purposes.*

Section 17958.2*. (a) Notwithstanding Section 17958, regulations of the department adopted for limited-density owner-built rural dwellings, which are codified in Article 8 (commencing with Section 74) of Subchapter 1 of Chapter 1 of Title 25 of the California Code of Regulations, shall not become operative within any city or county unless and until the governing body of the city or county makes an express finding that the application of those regulations within the city or county is reasonably necessary because of local conditions and the city or county files a copy of that finding with the department.*

(b) In adopting ordinances or regulations for limited-density owner-built rural dwellings, a city or county may make such changes or modifications in the requirements contained in Article 8 (commencing with Section 74) of Subchapter 1 of Chapter 1 of Title 25 of the California Code of Regulations that it determines are reasonably necessary because of local conditions, if the city or county files a copy of the changes or modifications and the express findings for the changes or modifications with the department. No change or modification of that type shall become effective or operative for any purpose until the finding and the change or modification has been filed with the department.

LISTED. ***(HCD1 ~~& HCD2~~)*** *All products that appear in a list published by an approved testing or listing agency. For additional information, see Health and Safety Code Section 17920(h).~~)~~*

LISTING AGENCY. *An agency approved by the department that is in the business of listing and labeling products, materials, equipment and installations tested by an approved testing agency, and that maintains a periodic inspection program on current production of listed products, equipment and installations, and that, at least annually, makes available a published report of these listings. For additional information, see Health and Safety Code Section 17920(i).*

MASONRY UNIT. Brick, tile, stone, glass block or concrete block conforming to the requirements specified in Section 2103 of the ~~International~~ *California Building Code*.

Clay. A building unit larger in size than a brick, composed of burned clay, shale, fire clay or mixtures thereof.

Concrete. A building unit or block larger in size than 12 inches by 4 inches by 4 inches (305 mm by 102 mm by 102 mm) made of cement and suitable aggregates.

Glass. Nonload-bearing masonry composed of glass units bonded by mortar.

Hollow. A masonry unit whose net cross-sectional area in any plane parallel to the loadbearing surface is less than 75 percent of its gross cross-sectional area measured in the same plane.

Solid. A masonry unit whose net cross-sectional area in every plane parallel to the loadbearing surface is 75 percent or more of its cross-sectional area measured in the same plane.

PASSIVE SOLAR ENERGY COLLECTOR. *Uses architectural components, rather than mechanical components, to provide heating or cooling for a building interior.*

TESTING AGENCY. *An agency approved by the department as qualified and equipped for testing of products, materials, equipment and installations in accordance with nationally recognized standards. For additional information, see Health and Safety Code Section 17920(m).*

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43-A. HCD proposes to delete and NOT adopt the following Chapter 2 definitions:

~~**ACCESSIBLE.** Signifies access that requires the removal of an access panel or similar removable obstruction.~~

~~**ACCESSIBLE, READILY.** Signifies access without the necessity for removing a panel or similar obstruction.~~

~~**AIR ADMITTANCE VALVE.** A one-way valve designed to allow air into the plumbing drainage system when a negative pressure develops in the piping. This device shall close by gravity and seal the terminal under conditions of zero differential pressure (no flow conditions) and under positive internal pressure.~~

~~**AIR BARRIER.** See Section N1101.9 for definition applicable in Chapter 11.~~

~~**AIR BREAK (DRAINAGE SYSTEM).** An arrangement in which a discharge pipe from a fixture, appliance or device drains indirectly into a receptor below the flood-level rim of the receptor, and above the trap seal.~~

~~**AIR CIRCULATION, FORCED.** A means of providing space conditioning utilizing movement of air through ducts or plenums by mechanical means.~~

AIR-CONDITIONING SYSTEM. A system that consists of heat exchangers, blowers, filters, supply, exhaust and return air systems, and shall include any apparatus installed in connection therewith.

AIR GAP, DRAINAGE SYSTEM. The unobstructed vertical distance through free atmosphere between the outlet of a waste pipe and the flood level rim of the fixture or receptor into which it is discharging.

AIR GAP, WATER-DISTRIBUTION SYSTEM. The unobstructed vertical distance through free atmosphere between the lowest opening from a water supply discharge to the flood-level rim of a plumbing fixture.

AIR-IMPERMEABLE INSULATION. An insulation having an air permanence equal to or less than 0.02 L/s-m^2 at 75 Pa pressure differential tested according to ASTM E 2178 or E 283.

ANTISIPHON. A term applied to valves or mechanical devices that eliminate siphonage.

APPLIANCE. A device or apparatus that is manufactured and designed to utilize energy and for which this code provides specific requirements.

BACKFLOW, DRAINAGE. A reversal of flow in the drainage system.

BACKFLOW PREVENTER. A device or means to prevent backflow.

BACKFLOW PREVENTER, REDUCED-PRESSURE ZONE TYPE. A backflow prevention device consisting of two independently acting check valves, internally force loaded to a normally closed position and separated by an intermediate chamber (or zone) in which there is an automatic relief means of venting to atmosphere internally loaded to a normally open position between two tightly closing shutoff valves and with means for testing for tightness of the checks and opening of relief means.

BACKFLOW, WATER DISTRIBUTION. The flow of water or other liquids into the potable water-supply piping from any sources other than its intended source. Backsiphonage is one type of backflow.

BACKPRESSURE. Pressure created by any means in the water distribution system, which by being in excess of the pressure in the water supply mains causes a potential backflow condition.

BACKPRESSURE, LOW HEAD. A pressure less than or equal to 4.33 psi (29.88 kPa) or the pressure exerted by a 10-foot (3048 mm) column of water.

BACKSIPHONAGE. The flowing back of used or contaminated water from piping into a potable water supply pipe due to a negative pressure in such pipe.

BACKWATER VALVE. A device installed in a drain or pipe to prevent backflow of sewage.

BATHROOM GROUP. A group of fixtures, including or excluding a bidet, consisting of a water closet, lavatory, and bathtub or shower. Such fixtures are located together on the same floor level.

BEND. A drainage fitting, designed to provide a change in direction of a drain pipe of less than the angle specified by the amount necessary to establish the desired slope of the line (see "Elbow" and "Sweep").

BOILER. A self-contained appliance from which hot water is circulated for heating purposes and then returned to the boiler, and which operates at water pressures not exceeding 160 pounds per square inch gage (psig) (1102 kPa gauge) and at water temperatures not exceeding 250°F (121°C).

BRANCH. Any part of the piping system other than a riser, main or stack.

BRANCH, FIXTURE. See "Fixture branch, drainage."

BRANCH, HORIZONTAL. See "Horizontal branch, drainage."

BRANCH INTERVAL. A vertical measurement of distance, 8 feet (2438 mm) or more in developed length, between the connections of horizontal branches to a drainage stack. Measurements are taken down the stack from the highest horizontal branch connection.

BRANCH, MAIN. A water distribution pipe that extends horizontally off a main or riser to convey water to branches or fixture groups.

BRANCH, VENT. A vent connecting two or more individual vents with a vent stack or stack vent.

BTU/H. The listed maximum capacity of an appliance, absorption unit or burner expressed in British thermal units input per hour.

BUILDING DRAIN. The lowest piping that collects the discharge from all other drainage piping inside the house and extends 30 inches (762 mm) in developed length of pipe, beyond the exterior walls and conveys the drainage to the building sewer.

BUILDING SEWER. That part of the drainage system that extends from the end of the building drain and conveys its discharge to a public sewer, private sewer, individual sewage disposal system or other point of disposal.

BUILDING THERMAL ENVELOPE. The basement walls, exterior walls, floor, roof and any other building element that enclose conditioned spaces.

CHIMNEY. A primary vertical structure containing one or more flues, for the purpose of carrying gaseous products of combustion and air from a fuel burning appliance to the outside atmosphere.

CHIMNEY CONNECTOR. A pipe that connects a fuel burning appliance to a chimney.

CHIMNEY TYPES Residential-type appliance. An approved chimney for removing the products of combustion from fuel burning, residential type appliances producing combustion gases not in excess of 1,000°F (538°C) under normal operating conditions, but capable of producing combustion gases of 1,400°F (760°C) during intermittent forces firing for periods up to 1 hour. All temperatures shall be measured at the appliance flue outlet. Residential type appliance chimneys include masonry and factory-built types.

CIRCUIT VENT. A vent that connects to a horizontal drainage branch and vents two traps to a maximum of eight traps or trapped fixtures connected into a battery.

CLEANOUT. An accessible opening in the drainage system used for the removal of possible obstruction.

COMBINATION WASTE AND VENT SYSTEM. A specially designed system of waste piping embodying the horizontal wet venting of one or more sinks, lavatories or floor drains by means of a common waste and vent pipe adequately sized to provide free movement of air above the flow line of the drain.

COMBUSTION AIR. The air provided to fuel burning equipment including air for fuel combustion, draft hood dilution and ventilation of the equipment enclosure.

COMMON VENT. A single pipe venting two trap arms within the same branch interval, either back-to-back or one above the other.

CONDENSATE. The liquid that separates from a gas due to a reduction in temperature, e.g., water that condenses from flue gases and water that condenses from air circulating through the cooling coil in air conditioning equipment.

CONDENSING APPLIANCE. An appliance that condenses water generated by the burning of fuels.

CONDITIONED AIR. Air treated to control its temperature, relative humidity or quality.

CONDITIONED AREA. That area within a building provided with heating and/or cooling systems or appliances capable of maintaining, through design or heat loss/gain, 68°F (20°C) during the heating season and/or 80°F (27°C) during the cooling season, or has a fixed opening directly adjacent to a conditioned area.

CONDITIONED FLOOR AREA. The horizontal projection of the floors associated with the conditioned space.

CONDITIONED SPACE. For energy purposes, space within a building that is provided with heating and/or cooling equipment or systems capable of maintaining, through design or heat loss/gain, 50°F (10°C) during the heating season and 85°F (29°C) during the cooling season, or communicates directly with a conditioned space. For mechanical purposes, an area, room or space being heated or cooled by any equipment or appliance.

CONTAMINATION. An impairment of the quality of the potable water that creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids or waste.

CONTINUOUS WASTE. A drain from two or more similar adjacent fixtures connected to a single trap.

CONTROL, LIMIT. An automatic control responsive to changes in liquid flow or level, pressure, or temperature for limiting the operation of an appliance.

CONTROL, PRIMARY SAFETY. A safety control responsive directly to flame properties that senses the presence or absence of flame and, in event of ignition failure or unintentional flame extinguishment, automatically causes shutdown of mechanical equipment.

CONVECTOR. A system incorporating heating element in an enclosure in which air enters an opening below the heating element, is heated and leaves the enclosure through an opening located above the heating element.

CROSS CONNECTION. Any connection between two otherwise separate piping systems whereby there may be a flow from one system to the other.

DAMPER, VOLUME. A device that will restrict, retard or direct the flow of air in any duct, or the products of combustion of heat producing equipment, vent connector, vent or chimney.

DEAD END. A branch leading from a DWV system terminating at a developed length of 2 feet (610 mm) or more. Dead ends shall be prohibited except as an approved part of a rough-in for future connection.

DEVELOPED LENGTH. The length of a pipeline measured along the center line of the pipe and fittings.

DIAMETER. Unless specifically stated, the term "diameter" is the nominal diameter as designated by the approved material standard.

DILUTION AIR. Air that enters a draft hood or draft regulator and mixes with flue gases.

DIRECT VENT APPLIANCE. A fuel burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

DRAFT. The pressure difference existing between the appliance or any component part and the atmosphere, that causes a continuous flow of air and products of combustion through the gas passages of the appliance to the atmosphere.

Induced draft. The pressure difference created by the action of a fan, blower or ejector, that is located between the appliance and the chimney or vent termination.

Natural draft. The pressure difference created by a vent or chimney because of its height, and the temperature difference between the flue gases and the atmosphere.

DRAFT HOOD. A device built into an appliance, or a part of the vent connector from an appliance, which is designed to provide for the ready escape of the flue gases from the appliance in the event of no draft, backdraft or stoppage beyond the draft hood; prevent a backdraft from entering the appliance; and neutralize the effect of stack action of the chimney or gas vent on the operation of the appliance.

DRAFT REGULATOR. A device that functions to maintain a desired draft in the appliance by automatically reducing the draft to the desired value.

DRAIN. Any pipe that carries soil and water-borne wastes in a building drainage system.

DRAINAGE FITTING. A pipe fitting designed to provide connections in the drainage system that have provisions for establishing the desired slope in the system. These fittings are made from a variety of both metals and plastics. The methods of coupling provide for required slope in the system (see "Durham fitting").

DUCT SYSTEM. A continuous passageway for the transmission of air which, in addition to ducts, includes duct fittings, dampers, plenums, fans and accessory air-handling equipment and appliances. For definition applicable in Chapter 11, see Section N1101.9.

DURHAM FITTING. A special type of drainage fitting for use in the Durham systems installations in which the joints are made with recessed and tapered threaded fittings, as opposed to bell and spigot lead/oakum or solvent/cemented or soldered joints. The tapping is at an angle (not 90 degrees) to provide for proper slope in otherwise rigid connections.

DURHAM SYSTEM. A term used to describe soil or waste systems where all piping is of threaded pipe, tube or other such rigid construction using recessed drainage fittings to correspond to the types of piping.

DWV. Abbreviated term for drain, waste and vent piping as used in common plumbing practice.

EFFECTIVE OPENING. The minimum cross-sectional area at the point of water supply discharge, measured or expressed in terms of diameter of a circle and if the opening is not circular, the diameter of a circle of equivalent cross-sectional area. (This is applicable to air gap.)

ELBOW. A pressure pipe fitting designed to provide an exact change in direction of a pipe run. An elbow provides a sharp turn in the flow path (see "Bend" and "Sweep").

EQUIPMENT. All piping, ducts, vents, control devices and other components of systems other than appliances that are permanently installed and integrated to provide control of environmental conditions for buildings. This definition shall also include other systems specifically regulated in this code.

EQUIVALENT LENGTH. For determining friction losses in a piping system, the effect of a particular fitting equal to the friction loss through a straight piping length of the same nominal diameter.

ESSENTIALLY NONTOXIC TRANSFER FLUIDS. Fluids having a Gosselin rating of 1, including propylene glycol; mineral oil; polydimenthy oil oxane; hydrochlorofluorocarbon, chlorofluorocarbon and hydrofluorocarbon refrigerants; and FDA approved boiler water additives for steam boilers.

ESSENTIALLY TOXIC TRANSFER FLUIDS. Soil, water or gray water and fluids having a Gosselin rating of 2 or more including ethylene glycol, hydrocarbon oils, ammonia refrigerants and hydrazine.

EVAPORATIVE COOLER. A device used for reducing air temperature by the process of evaporating water into an airstream.

EXCESS AIR. Air that passes through the combustion chamber and the appliance flue in excess of that which is theoretically required for complete combustion.

EXHAUST HOOD, FULL OPENING. An exhaust hood with an opening at least equal to the diameter of the connecting vent.

EXISTING INSTALLATIONS. Any plumbing system regulated by this code that was legally installed prior to the effective date of this code, or for which a permit to install has been issued.

FACTORY-BUILT CHIMNEY. A listed and labeled chimney composed of factory-made components assembled in the field in accordance with the manufacturer's instructions and the conditions of the listing.

FIXTURE. See "Plumbing fixture."

FIXTURE BRANCH, DRAINAGE. A drain serving two or more fixtures that discharges into another portion of the drainage system.

FIXTURE BRANCH, WATER-SUPPLY. A water supply pipe between the fixture supply and a main water distribution pipe or fixture group main.

FIXTURE DRAIN. The drain from the trap of a fixture to the junction of that drain with any other drain pipe.

FIXTURE FITTING.

Supply fitting. A fitting that controls the volume and/or directional flow of water and is either attached to or accessible from a fixture or is used with an open or atmospheric discharge.

Waste fitting. A combination of components that conveys the sanitary waste from the outlet of a fixture to the connection of the sanitary drainage system.

FIXTURE GROUP, MAIN. The main water distribution pipe (or secondary branch) serving a plumbing fixture grouping such as a bath, kitchen or laundry area to which two or more individual fixture branch pipes are connected.

FIXTURE SUPPLY. The water supply pipe connecting a fixture or fixture fitting to a fixture branch.

FIXTURE UNIT, DRAINAGE (d.f.u.). A measure of probable discharge into the drainage system by various types of plumbing fixtures, used to size DWV piping systems. The drainage fixture-unit value for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation and on the average time between successive operations.

FIXTURE UNIT, WATER-SUPPLY (w.s.f.u.). A measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures used to size water piping systems. The water-supply fixture-unit value for a particular fixture depends on its volume rate of supply, on the time duration of a single supply operation and on the average time between successive operations.

FLOOD-LEVEL RIM. The edge of the receptor or fixture from which water overflows.

FLOOR DRAIN. A plumbing fixture for recess in the floor having a floor-level strainer intended for the purpose of the collection and disposal of waste water used in cleaning the floor and for the collection and disposal of accidental spillage to the floor.

FLOOR FURNACE. A self-contained furnace suspended from the floor of the space being heated, taking air for combustion from outside such space, and with means for lighting the appliance from such space.

FLOW PRESSURE. The static pressure reading in the water-supply pipe near the faucet or water outlet while the faucet or water outlet is open and flowing at capacity.

FLUE. See "Vent."

FLUE, APPLIANCE. The passages within an appliance through which combustion products pass from the combustion chamber to the flue collar.

FLUE COLLAR. The portion of a fuel-burning appliance designed for the attachment of a draft hood, vent connector or venting system.

FLUE GASES. Products of combustion plus excess air in appliance flues or heat exchangers.

FLUSH VALVE. A device located at the bottom of a flush tank that is operated to flush water closets.

FLUSHOMETER TANK. A device integrated within an air accumulator vessel that is designed to discharge a predetermined quantity of water to fixtures for flushing purposes.

FLUSHOMETER VALVE. A flushometer valve is a device that discharges a predetermined quantity of water to fixtures for flushing purposes and is actuated by direct water pressure.

FUEL-PIPING SYSTEM. All piping, tubing, valves and fittings used to connect fuel utilization equipment to the point of fuel delivery.

FULLWAY VALVE. A valve that in the full open position has an opening cross-sectional area equal to a minimum of 85 percent of the cross-sectional area of the connecting pipe.

FURNACE. A vented heating appliance designed or arranged to discharge heated air into a conditioned space or through a duct or ducts.

GRADE, PIPING. See "Slope."

GRIDDED WATER DISTRIBUTION SYSTEM. A water distribution system where every water distribution pipe is interconnected so as to provide two or more paths to each fixture supply pipe.

GROUND-SOURCE HEAT PUMP LOOP SYSTEM. Piping buried in horizontal or vertical excavations or placed in a body of water for the purpose of transporting heat transfer liquid to and from a heat pump. Included in this definition are closed loop systems in which the liquid is recirculated and open loop systems in which the liquid is drawn from a well or other source.

HANGERS. See "Supports."

HAZARDOUS LOCATION. Any location considered to be a fire hazard for flammable vapors, dust, combustible fibers or other highly combustible substances.

HEAT PUMP. An appliance having heating or heating/cooling capability and that uses refrigerants to extract heat from air, liquid or other sources.

HEATING DEGREE DAYS (HDD). The sum, on an annual basis, of the difference between 65°F (18°C) and the mean temperature for each day as determined from "NOAA Annual Degree Days to Selected Bases Derived from the 1960-1990 Normals" or other weather data sources acceptable to the code official.

HIGH-EFFICACY LAMPS. See Section N1101.9 for definition applicable in Chapter 11.

HIGH-TEMPERATURE (H.T.) CHIMNEY. A high temperature chimney complying with the requirements of UL 103. A Type H.T. chimney is identifiable by the markings "Type H.T." on each chimney pipe section.

HORIZONTAL BRANCH, DRAINAGE. A drain pipe extending laterally from a soil or waste stack or building drain that receives the discharge from one or more fixture drains.

HORIZONTAL PIPE. Any pipe or fitting that makes an angle of less than 45 degrees (0.79 rad) with the horizontal.

HOT WATER. Water at a temperature greater than or equal to 110°F (43°C).

HYDROGEN GENERATING APPLIANCE. A self contained package or factory-matched packages of integrated systems for generating gaseous hydrogen. Hydrogen generating appliances utilize electrolysis, reformation, chemical, or other processes to generate hydrogen.

IGNITION SOURCE. A flame, spark or hot surface capable of igniting flammable vapors or fumes. Such sources include appliance burners, burner ignitions and electrical switching devices.

INDIRECT WASTE PIPE. A waste pipe that discharges into the drainage system through an air gap into a trap, fixture or receptor.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. A system for disposal of sewage by means of a septic tank or mechanical treatment, designed for use apart from a public sewer to serve a single establishment or building.

INDIVIDUAL VENT. A pipe installed to vent a single fixture drain that connects with the vent system above or terminates independently outside the building.

INDIVIDUAL WATER SUPPLY. A supply other than an approved public water supply that serves one or more families.

MACERATING TOILET SYSTEMS. A system comprised of a sump with macerating pump and with connections for a water closet and other plumbing fixtures, that is designed to accept, grind and pump wastes to an approved point of discharge.

MAIN. The principal pipe artery to which branches may be connected.

MAIN SEWER. See "Public sewer."

MANIFOLD WATER DISTRIBUTION SYSTEMS. A fabricated piping arrangement in which a large supply main is fitted with multiple branches in close proximity in which water is distributed separately to fixtures from each branch.

MANUFACTURED HOME. Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is 8 body feet (2438 body mm) or more in width or 40 body feet (12,192 body mm) or more in length, or, when erected on site, is 320 square feet (30m^2) or more, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning and electrical systems contained therein; except that such term shall include any structure that meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the secretary (HUD) and complies with the standards established under this title. For mobile homes built prior to June 15, 1976, a label certifying compliance to the Standard for Mobile Homes, NFPA 501, in effect at the time of manufacture is required. For the purpose of these provisions, a mobile home shall be considered a manufactured home.

MASS WALL. Masonry or concrete walls having a mass greater than or equal to 30 pounds per square foot (146 kg/m^2), solid wood walls having a mass greater than or equal to 20 pounds per square foot (98 kg/m^2), and any other walls having a heat capacity greater than or equal to 6 Btu/ft^2 • °F (266 J/(m^2 • K)).

MECHANICAL DRAFT SYSTEM. A venting system designed to remove flue or vent gases by mechanical means, that consists of an induced draft portion under nonpositive static pressure or a forced draft portion under positive static pressure.

Forced-draft venting system. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under positive static pressure.

Induced draft venting system. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under nonpositive static vent pressure.

Power venting system. A portion of a venting system using a fan or other mechanical means to cause the removal of flue or vent gases under positive static vent pressure.

MECHANICAL EXHAUST SYSTEM. A system for removing air from a room or space by mechanical means.

MECHANICAL SYSTEM. A system specifically addressed and regulated in this code and composed of components, devices, appliances and equipment.

NATURAL DRAFT SYSTEM. A venting system designed to remove flue or vent gases under nonpositive static vent pressure entirely by natural draft.

NONCONDITIONED SPACE. A space that is not a conditioned space by insulated walls, floors or ceilings.

OFFSET. A combination of fittings that makes two changes in direction bringing one section of the pipe out of line but into a line parallel with the other section.

PELLET FUEL-BURNING APPLIANCE. A closed combustion, vented appliance equipped with a fuel feed mechanism for burning processed pellets of solid fuel of a specified size and composition.

PELLET VENT. A vent listed and labeled for use with a listed pellet fuel-burning appliance.

PITCH. See "Slope."

PLENUM. A chamber that forms part of an air-circulation system other than the occupied space being conditioned.

PLUMBING. For the purpose of this code, plumbing refers to those installations, repairs, maintenance and alterations regulated by Chapters 25 through 33.

PLUMBING APPLIANCE. An energized household appliance with plumbing connections, such as a dishwasher, food waste grinder, clothes washer or water heater.

PLUMBING APPURTENANCE. A device or assembly that is an adjunct to the basic plumbing system and demands no additional water supply nor adds any discharge load to the system. It is presumed that it performs some useful function in the operation, maintenance, servicing, economy or safety of the plumbing system. Examples include filters, relief valves and aerators.

PLUMBING FIXTURE. A receptacle or device that is connected to a water supply system or discharges to a drainage system or both. Such receptacles or devices require a supply of water; or discharge liquid waste or liquid-borne solid waste; or require a supply of water and discharge waste to a drainage system.

PLUMBING SYSTEM. Includes the water supply and distribution pipes, plumbing fixtures, supports and appurtenances; soil, waste and vent pipes; sanitary drains and building sewers to an approved point of disposal.

POLLUTION. An impairment of the quality of the potable water to a degree that does not create a hazard to the public health but that does adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use.

PORTABLE-FUEL-CELL APPLIANCE. A fuel cell generator of electricity, which is not fixed in place. A portable fuel cell appliance utilizes a cord and plug connection to a grid-isolated load and has an integral fuel supply.

POTABLE WATER. Water free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming in bacteriological and chemical quality to the requirements of the public health authority having jurisdiction.

PRESSURE-RELIEF VALVE. A pressure-actuated valve held closed by a spring or other means and designed to automatically relieve pressure at the pressure at which it is set.

PUBLIC SEWER. A common sewer directly controlled by public authority.

PUBLIC WATER MAIN. A water-supply pipe for public use controlled by public authority.

PURGE. To clear of air, gas or other foreign substances.

QUICK-CLOSING VALVE. A valve or faucet that closes automatically when released manually or controlled by mechanical means for fast action closing.

R-VALUE, THERMAL RESISTANCE. The inverse of the time rate of heat flow through a building thermal envelope element from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area ($h \cdot ft^2 \cdot °F/Btu$).

RECEPTOR. A fixture or device that receives the discharge from indirect waste pipes.

REFRIGERANT. A substance used to produce refrigeration by its expansion or evaporation.

REFRIGERANT COMPRESSOR. A specific machine, with or without accessories, for compressing a given refrigerant vapor.

REFRIGERATING SYSTEM. A combination of interconnected parts forming a closed circuit in which refrigerant is circulated for the purpose of extracting, then rejecting, heat. A direct refrigerating system is one in which the evaporator or condenser of the refrigerating system is in direct contact with the air or other substances to be cooled or heated. An indirect refrigerating system is one in which a secondary coolant cooled or heated by the refrigerating system is circulated to the air or other substance to be cooled or heated.

RELIEF VALVE, VACUUM. A device to prevent excessive buildup of vacuum in a pressure vessel.

RETURN AIR. Air removed from an approved conditioned space or location and recirculated or exhausted.

ROOM HEATER. A freestanding heating appliance installed in the space being heated and not connected to ducts.

ROUGH-IN. The installation of all parts of the plumbing system that must be completed prior to the installation of fixtures. This includes DWV, water supply and built in fixture supports.

SANITARY SEWER. A sewer that carries sewage and excludes storm, surface and groundwater.

SEPTIC TANK. A water-tight receptor that receives the discharge of a building sanitary drainage system and is constructed so as to separate solids from the liquid, digest organic matter through a period of detention, and allow the liquids to discharge into the soil outside of the tank through a system of open joint or perforated piping or a seepage pit.

SEWAGE. Any liquid waste containing animal matter, vegetable matter or other impurity in suspension or solution.

SEWAGE PUMP. A permanently installed mechanical device for removing sewage or liquid waste from a sump.

SIDE VENT. A vent connecting to the drain pipe through a fitting at an angle less than 45 degrees (0.79 rad) to the horizontal.

SLIP JOINT. A mechanical type joint used primarily on fixture traps. The joint tightness is obtained by compressing a friction-type washer such as rubber, nylon, neoprene, lead or special packing material against the pipe by the tightening of a (slip) nut.

SLOPE. The fall (pitch) of a line of pipe in reference to a horizontal plane. In drainage, the slope is expressed as the fall in units vertical per units horizontal (percent) for a length of pipe.

SOIL STACK OR PIPE. A pipe that conveys sewage containing fecal material.

SOLAR HEAT GAIN COEFFICIENT (SHGC). The solar heat gain through a fenestration or glazing assembly relative to the incident solar radiation (Btu/h • ft^2 • °F).

STACK. Any main vertical DWV line, including offsets, that extends one or more stories as directly as possible to its vent terminal.

STACK VENT. The extension of soil or waste stack above the highest horizontal drain connected.

STACK VENTING. A method of venting a fixture or fixtures through the soil or waste stack without individual fixture vents.

STANDARD TRUSS. Any construction that does not permit the roof/ceiling insulation to achieve the required R-value over the exterior walls.

STATIONARY FUEL CELL POWER PLANT. A self-contained package or factory-matched packages which constitute an automatically operated assembly of integrated systems for generating useful electrical energy and recoverable thermal energy that is permanently connected and fixed in place.

STORM SEWER, DRAIN. A pipe used for conveying rainwater, surface water, subsurface water and similar liquid waste.

SUBSOIL DRAIN. A drain that collects subsurface water or seepage water and conveys such water to a place of disposal.

SUMP. A tank or pit that receives sewage or waste, located below the normal grade of the gravity system and that must be emptied by mechanical means.

SUMP PUMP. A pump installed to empty a sump. These pumps are used for removing storm water only. The pump is selected for the specific head and volume of the load and is usually operated by level controllers.

SUPPLY AIR. Air delivered to a conditioned space through ducts or plenums from the heat exchanger of a heating, cooling or ventilating system.

SWEEP. A drainage fitting designed to provide a change in direction of a drain pipe of less than the angle specified by the amount necessary to establish the desired slope of the line. Sweeps provide a longer turning radius than bends and a less turbulent flow pattern (see "Bend" and "Elbow").

TEMPERATURE- AND PRESSURE-RELIEF (T AND P) VALVE. A combination relief valve designed to function as both a temperature relief and pressure relief valve.

TEMPERATURE-RELIEF VALVE. A temperature-actuated valve designed to discharge automatically at the temperature at which it is set.

THERMAL ISOLATION. Physical and space conditioning separation from conditioned space(s) consisting of existing or new walls, doors and/or windows. The conditioned space(s) shall be controlled as separate zones for heating and cooling or conditioned by separate equipment. For definition applicable in Chapter 11, see Section N1101.9.

THERMAL RESISTANCE, R-VALUE. The inverse of the time rate of heat flow through a body from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area ($h \cdot ft^2 \cdot °F/Btu$) ($m^2 \cdot K/W$).

THERMAL TRANSMITTANCE, U-FACTOR. The coefficient of heat transmission (air to air) through a building envelope component or assembly, equal to the time rate of heat flow per unit area and unit temperature difference between the warm side and cold side air films ($Btu/h \cdot ft^2 \cdot °F$) $W/(m^2 \cdot K)$.

TRAP. A fitting, either separate or built into a fixture, that provides a liquid seal to prevent the emission of sewer gases without materially affecting the flow of sewage or waste water through it.

TRAP ARM. That portion of a fixture drain between a trap weir and the vent fitting.

TRAP PRIMER. A device or system of piping to maintain a water seal in a trap, typically installed where infrequent use of the trap would result in evaporation of the trap seal, such as floor drains.

TRAP SEAL. The trap seal is the maximum vertical depth of liquid that a trap will retain, measured between the crown weir and the top of the dip of the trap.

TYPE L VENT. A listed and labeled vent conforming to UL 641 for venting oil-burning appliances listed for use with Type L vents or with gas appliances listed for use with Type B vents.

U-FACTOR, THERMAL TRANSMITTANCE. See Section N1101.9 for definition applicable to Chapter 11.

VACUUM BREAKERS. A device which prevents backsiphonage of water by admitting atmospheric pressure through ports to the discharge side of the device.

VENT. A passageway for conveying flue gases from fuel-fired appliances, or their vent connectors, to the outside atmosphere.

VENT COLLAR. See "Flue collar."

VENT CONNECTOR. That portion of a venting system which connects the flue collar or draft hood of an appliance to a vent.

VENT DAMPER DEVICE, AUTOMATIC. A device intended for installation in the venting system, in the outlet of an individual, automatically operated fuel burning appliance and that is designed to open the venting system automatically when the appliance is in operation and to close off the venting system automatically when the appliance is in a standby or shutdown condition.

VENT GASES. Products of combustion from fuel-burning appliances, plus excess air and dilution air, in the venting system above the draft hood or draft regulator.

~~**VENT STACK.** A vertical vent pipe installed to provide circulation of air to and from the drainage system and which extends through one or more stories.~~

~~**VENT SYSTEM.** Piping installed to equalize pneumatic pressure in a drainage system to prevent trap seal loss or blow back due to siphonage or back pressure.~~

~~**VENTING SYSTEM.** A continuous open passageway from the flue collar of an appliance to the outside atmosphere for the purpose of removing flue or vent gases. A venting system is usually composed of a vent or a chimney and vent connector, if used, assembled to form the open passageway.~~

~~**VERTICAL PIPE.** Any pipe or fitting that makes an angle of 45 degrees (0.79 rad) or more with the horizontal.~~

~~**WASTE.** Liquid-borne waste that is free of fecal matter.~~

~~**WASTE PIPE OR STACK.** Piping that conveys only liquid sewage not containing fecal material.~~

~~**WATER DISTRIBUTION SYSTEM.** Piping which conveys water from the service to the plumbing fixtures, appliances, appurtenances, equipment, devices or other systems served, including fittings and control valves.~~

~~**WATER HEATER.** Any heating appliance or equipment that heats potable water and supplies such water to the potable hot water distribution system.~~

~~**WATER MAIN.** A water supply pipe for public use.~~

~~**WATER OUTLET.** A valved discharge opening, including a hose bibb, through which water is removed from the potable water system supplying water to a plumbing fixture or plumbing appliance that requires either an air gap or backflow prevention device for protection of the supply system.~~

~~**WATER SERVICE PIPE.** The outside pipe from the water main or other source of potable water supply to the water distribution system inside the building, terminating at the service valve.~~

~~**WATER SUPPLY SYSTEM.** The water service pipe, the water distributing pipes and the necessary connecting pipes, fittings, control valves and all appurtenances in or adjacent to the building or premises.~~

~~**WET VENT.** A vent that also receives the discharge of wastes from other fixtures.~~

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

44. HCD proposes to bring forward existing California Amendments in Part III, Chapter 3, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

Part III—Building Planning and Construction

CHAPTER 3
BUILDING PLANNING

SECTION R301
DESIGN CRITERIA

R301.1 Application. Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets all requirements for the transfer of all loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

R301.1.1 Alternative provisions. As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the ~~International~~ *California Building Code*.

1. AF&PA *Wood Frame Construction Manual* (WFCM).
2. AISI *Standard for Cold-Formed Steel Framing—Prescriptive Method for One- and Two-Family Dwellings* (AISI S230).

3. ICC *Standard on the Design and Construction of Log Structures (ICC 400)*.

R301.1.1.1 Alternative provisions for limited-density owner-built rural dwellings. *The purpose of this subsection is to permit alternatives that provide minimum protection of life, limb, health, property, safety and welfare of the general public and the owners and occupants of limited-density owner-built rural dwellings as defined in Chapter 2 of this code. For additional information see Chapter 1, Subchapter 1, Article 8, of Title 25, California Code of Regulations, commencing with Section 74.*

To meet compliance with the requirements of this code, provisions of Section R301.1.1.1, Items 1 though 5 may be utilized for limited-density owner-built rural dwellings when the materials, methods of construction, or appliances are determined appropriate or suitable for their intended purpose by the local enforcing agency.

1. *A limited-density owner-built rural dwelling 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 in Section 17920.3 of the Health and Safety Code.*

2. *There shall be no requirements for room dimensions as required in Chapter 3, provided there is adequate light and ventilation and means of egress.*

3. *There shall be no specified requirement for heating capacity or for temperature maintenance. The use of solid-fuel or solar heating devices shall be deemed as complying with the requirements of Chapter 3. If nonrenewable fuel is used in these dwellings, rooms so heated shall meet current installation standards.*

4. *Pier foundations, stone masonry footings and foundations, pressure-treated lumber, poles or equivalent foundation materials or designs may be used provided that bearing is sufficient.*

5. *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.*

R301.1.3 Engineered design. When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the ~~International~~ *California Building Code* is permitted for all buildings and structures, and parts thereof, included in the scope of this code.

R301.1.3.1 California licensed architect or engineer. *When any portion of any structure deviates from substantial compliance with conventional framing requirements for woodframe construction found in this code, the building official shall require the construction documents to be approved and stamped by a California licensed architect or engineer for that irregular or non-conforming portion of work. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537 and 6737.1.*

R301.1.3.2 Woodframe structures greater than two-stories. *The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than two stories and basement in height. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537 and 6737.1.*

R301.1.3.3 Structures other than woodframe. *The building official shall require floor, wall or roof-ceiling structural elements in dwellings designed of cold-formed steel, concrete, masonry or structural insulated panels prescribed by this code to be approved and stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537 and 6737.1.*

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRRIER UNDER-LAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)	Topographic Effects[k]		Weathering[a]	Frost line depth[b]	Termite[c]					

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map (Figure R301.2(3)). The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map (Figure R301.2(4)A).Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
e. ~~The outdoor design dry-bulb temperature shall be selected from the columns of 971/2-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures~~ *Temperatures* shall be permitted to reflect local climates or local weather experience as determined by the building official.
f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)" at www.ncdc.noaa.gov/fpsf.html.
j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)" at www.ncdc.noaa.gov/fpsf.html.
k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

R301.2.1.1 Wind limitations and wind design required. The wind provisions of this code shall not apply to design of buildings where wind design is required in accordance with Figure R301.2(4)B or where the basic wind speed from Figure R301.2(4)A equals or exceeds 110 miles per hour (49 m/s).

Exceptions:

1. For concrete construction, the wind provisions of this code shall apply in accordance with the limitations of Sections R404 and R611.
2. For structural insulated panels, the wind provisions of this code shall apply in accordance with the limitations of Section R613.

In regions where wind design is required in accordance with Figure R301.2(4)B or where the basic wind speed shown on Figure R301.2(4)A equals or exceeds 110 miles per hour (49 m/s), the design of the buildings for wind loads shall be in accordance with one or more of the following methods:

1. AF&PA *Wood Frame Construction Manual* (WFCM); or
2. ICC *Standard for Residential Construction in High Wind Regions* (ICC-600); or
3. ASCE *Minimum Design Loads for Buildings and Other Structures* (ASCE-7); or
4. AISI *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings* (AISI S230); or
5. ~~*International*~~ *California Building Code*.

The elements of design not addressed by the methods in Items 1 through 5 shall be in accordance with the provisions of this code. When ASCE 7 or the ~~*International*~~ *California Building Code* is used for the design of the building, the wind speed map and exposure category requirements as specified in ASCE 7 and the ~~*International*~~ *California Building Code* shall be used.

R301.2.2.1.1 Alternate determination of seismic design category. The Seismic Design Categories and corresponding Short Period Design Spectral Response Accelerations, SDS shown in Figure R301.2(2) are based on soil Site Class D, as defined in Section 1613.3.2 of the ~~International~~ *California Building Code*. If soil conditions are other than Site Class D, the Short Period Design Spectral Response Accelerations, SDS, for a site can be determined according to Section 1613.3 of the ~~International~~ *California Building Code*. The value of SDS determined according to Section 1613.3 of the ~~International~~ *California Building Code* is permitted to be used to set the seismic design category according to Table R301.2.2.1.1, and to interpolate between values in Tables R602.10.1.2(3), R603.9.2(1) and other seismic design requirements of this code.

R301.2.2.1.2 Alternative determination of Seismic Design Category E. Buildings located in Seismic Design Category E in accordance with Figure R301.2(2) are permitted to be reclassified as being in Seismic Design Category D_2 provided one of the following is done:

1. A more detailed evaluation of the seismic design category is made in accordance with the provisions and maps of the ~~International~~ *California Building Code*. Buildings located in Seismic Design Category E per Table R301.2.2.1.1, but located in Seismic Design Category D per the ~~International~~ *California Building Code*, may be designed using the Seismic Design Category D_2 requirements of this code.

2. Buildings located in Seismic Design Category E that conform to the following additional restrictions are permitted to be constructed in accordance with the provisions for Seismic Design Category D_2 of this code:

   2.1. All exterior shear wall lines or braced wall panels are in one plane vertically from the foundation to the uppermost story.

   2.2. Floors shall not cantilever past the exterior walls.

   2.3. The building is within all of the requirements of Section R301.2.2.2.5 for being considered as regular.

R301.2.2.3.7 Anchorage of water heaters. Water heaters shall be anchored against movement and overturning in accordance with ~~Section M1307.2~~ *the California Plumbing Code*.

R301.2.2.4 Seismic Design Category E. Buildings in Seismic Design Category E shall be designed to resist seismic loads in accordance with the ~~International~~ *California Building Code*, except when the seismic design category is reclassified to a lower seismic design category in accordance with Section R301.2.2.1. Components of buildings not required to be designed to resist seismic loads shall be constructed in accordance with the provisions of this code.

R301.3 Story height. The wind and seismic provisions of this code shall apply to buildings with story heights not exceeding the following:

1. For wood wall framing, the laterally unsupported bearing wall stud height permitted by Table R602.3(5) plus a height of floor framing not to exceed 16 inches (406 mm).

   Exception: For wood framed wall buildings with bracing in accordance with Tables R602.10.3(1) and R602.10.3(3), the wall stud clear height used to determine the maximum permitted story height may be increased to 12 feet (3658 mm) without requiring an engineered design for the building wind and seismic force resisting systems provided that the length of bracing required by Table R602.10.3(1) is increased by multiplying by a factor of 1.10 and the length of bracing required by Table R602.10.3(3) is increased by multiplying by a factor of 1.20. Wall studs are still subject to the requirements of this section.

2. For steel wall framing, a stud height of 10 feet (3048 mm), plus a height of floor framing not to exceed 16 inches (406 mm).

3. For masonry walls, a maximum bearing wall clear height of 12 feet (3658 mm) plus a height of floor framing not to exceed 16 inches (406 mm).

   Exception: An additional 8 feet (2438 mm) is permitted for gable end walls.

4. For insulating concrete form walls, the maximum bearing wall height per story as permitted by Section R611 tables plus a height of floor framing not to exceed 16 inches (406 mm).

5. For structural insulated panel (SIP) walls, the maximum bearing wall height per story as permitted by Section 613 tables shall not exceed 10 feet (3048 mm) plus a height of floor framing not to exceed 16 inches (406 mm).

Individual walls or walls studs shall be permitted to exceed these limits as permitted by Chapter 6 provisions, provided story heights are not exceeded. Floor framing height shall be permitted to exceed these limits provided the story height does not exceed 11 feet 7 inches (3531 mm). An engineered design shall be provided for the wall or wall framing members when they exceed the limits of Chapter 6. Where the story height limits of this section are exceeded, the design of the building, or the noncompliant portions thereof, to resist wind and seismic loads shall be in accordance with the ~~International~~ *California Building Code*.

SECTION R302
FIRE-RESISTANT CONSTRUCTION

R302.2 Townhouses. Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exception: A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with ~~Chapters 34 through 43~~ *the California Electrical Code.* Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

R302.6 Dwelling/garage fire separation. The garage shall be separated as required by Table R302.6. Openings in garage walls shall comply with Section R302.5. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. *A separation is not required between the dwelling unit and a carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.*

R302.13 Combustible insulation clearance. Combustible insulation shall be separated a minimum of 3 inches (76 mm) from recessed luminaires, fan motors and other heat-producing devices.

Exception: Where heat-producing devices are listed for lesser clearances, combustible insulation complying with the listing requirements shall be separated in accordance with the conditions stipulated in the listing.

Recessed luminaires installed in the building ~~thermal~~ envelope shall meet *or exceed* the requirements ~~of Section N1102.4.4 of this code~~ *specified in the California Energy Code for recessed luminaires installed in insulated ceilings.*

SECTION R303
LIGHT, VENTILATION AND HEATING

R303.8 Required glazed openings. (Formerly R303.7) Required glazed openings shall open directly onto a street or public alley, or a yard or court located on the same lot as the building.

Exceptions:

1. Required glazed openings may face into a roofed porch where the porch abuts a street, yard or court and the longer side of the porch is at least 65 percent unobstructed and the ceiling height is not less than 7 feet (2134 mm).

2. Eave projections shall not be considered as obstructing the clear open space of a *yard* or court.

3. Required glazed openings may face into the area under a deck, balcony, bay or floor cantilever provided a clear vertical space at least 36 inches (914 mm) in height is provided.

4. *Glazed openings covered by a passive solar energy collector in accordance with Section R303.1, Exception 5.*

R303.8.1 Sunroom additions. (Formerly R303.7.1) Required glazed openings shall be permitted to open into sunroom additions or patio covers that abut a street, yard or court if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening, and the ceiling height of the sunroom is not less than 7 feet (2134 mm).

~~R303.7.1.1~~ R303.8.1.1 Passive solar energy collectors. *When a passive solar energy collector is designed as a conditioned area it shall comply with the California Energy Code, Title 24, Part 6. Nonconditioned passive solar energy collectors are exempt from Title 24, Part 6.*

R303.9 Required heating. (**Formerly R303.8)** When the winter design temperature in Table R301.2(1) is below 60°F (16°C), every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

SECTION R304
MINIMUM ROOM AREAS

R304.3 Minimum dimensions. Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.

Exceptions:

1. Kitchens.
2. *Limited-density owner-built rural dwellings. See Section R301.1.1.1.*

SECTION R305
CEILING HEIGHT

R305.1 Minimum height. Habitable space, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling height of at least 7 feet (2134 mm) and no portion of the required floor area may have a ceiling height of less than 5 feet (1524 mm).

2. Bathrooms shall have a minimum ceiling height of 6 feet 8 inches (2032 mm) at the center of the front clearance area for fixtures ~~as shown in Figure R307.1~~. The ceiling height above fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches (2032 mm) above a minimum area 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.

SECTION R307
TOILET, BATH AND SHOWER SPACES

R307.1 Space required. Fixtures shall be spaced in accordance with the ~~requirements of Section P2705.1~~ *California Plumbing Code.*

FIGURE R307.1
MINIMUM FIXTURE CLEARANCES
(*NOT ADOPTED IN CA*)

SECTION R308
GLAZING

R308.5 Site built windows. Site built windows shall comply with Section 2404 of the ~~International~~ *California Building Code.*

SECTION R309
GARAGES AND CARPORTS

R309.4 Automatic garage door openers. Automatic garage door openers, if provided, shall be listed and labeled in accordance with UL 325. *See Health and Safety Code Sections 19890 and 19891 for additional provisions for residential garage door openers.*

~~R309.5~~ ***R309.6*** ***Extension garage door springs.*** *Every extension garage door spring sold or offered for sale, whether new or sold as a replacement, or installed in any garage or carport which is accessory to a dwelling covered by this code, shall conform to the requirements for garage door springs located in Section 1211 of the California Building Code.*

SECTION R312
GUARDS AND WINDOW FALL PROTECTION

R312.1.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than ~~36~~ *42 inches (1067 mm)* high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Exceptions:

1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.

2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

SECTION R315
CARBON MONOXIDE ALARMS

~~**R315.1 Carbon monoxide alarms.** For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.~~

~~**R315.2 Carbon monoxide detection systems.** Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720, shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner and shall be monitored by an approved supervising station.~~

~~**Exception:** Where carbon monoxide alarms are installed meeting the requirements of Section R315.1, compliance with Section 315.2 is not required.~~

~~**R315.3 Where required in existing dwellings.** Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1.~~

~~**R315.4 Alarm requirements.** Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.~~

R315.1 Carbon monoxide alarms in new construction. *For new construction, an approved carbon monoxide alarm shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions.*

R315.1.1 Carbon monoxide detection systems. *Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.*

R315.1.2 Power supply. *Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.*

Exceptions:

1. *Where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.*
2. *Other power sources recognized for use by NFPA 720.*

R315.1.3 Interconnection. *Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.*

R315.1.4 Alarm requirements. *No person shall install, market, distribute, offer for sale or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.*

Carbon monoxide alarms required by Section R315.1 shall be installed and maintained in the following locations:

1. *Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).*
2. *On every level of a dwelling unit including basements.*

R315.1.5 Multiple-purpose alarms. *Carbon monoxide alarms combined with smoke alarms shall comply with Section R315, all applicable standards, and requirements for listing and approval by the Office of the State Fire Marshal, for smoke alarms.*

R315.2 Carbon monoxide alarms in existing dwelling units and sleeping units. *An approved carbon monoxide alarm shall be installed in existing dwellings having a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions.*

R315.2.1 Carbon monoxide detection systems. *Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms andNFPA720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.*

R315.2.2 Existing dwellings or sleeping units requiring a permit. *When a permit is required for alterations, repairs or additions with a total cost or calculated valuation exceeding one thousand dollars ($1,000), existing dwellings or sleeping units with a fossil fuel-burning heater or appliance, fireplace, or an attached garage shall have a carbon monoxide alarm installed in accordance with Section R315.2.Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained.*

R315.2.3 Existing dwellings or sleeping units not requiring a permit (no construction taking place). *Pursuant to Health and Safety Code Section 17926, a carbon monoxide alarm(s) shall be installed in every existing dwelling unit or sleeping unit with a fossil fuel-burning heater or appliance, fireplace, or an attached garage as follows:*

R315.2.3.1 Carbon monoxide alarms on or after July 1, 2011. *Carbon monoxide alarms shall be installed in accordance with Section R315.2 in existing detached single-family dwellings or sleeping units intended for human occupancy that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.*

R315.2.3.2 Carbon monoxide alarms on or after January 1, 2013. *Carbon monoxide alarms shall be installed in accordance with Section R315.2 in all other existing dwelling units intended for human occupancy as defined in Health and Safety Code Section 13262(b) that have a fossil fuel-burning heater or appliance, fireplace or an attached garage. Carbon monoxide alarms in existing buildings are permitted to be solely battery operated or plug-in type with battery back-up in areas where no construction is taking place.*

R315.2.4 Power supply. *Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.*

Exceptions:

1. *In existing dwelling units where there is no commercial power supply, the carbon monoxide alarm may be solely battery operated.*

2. *In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or alterations do not result in the removal of wall and ceiling finishes.*

3. *In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*

4. *In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated or plug-in with battery back-up when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.*

5. *Other power sources recognized for use by NFPA 720.*

R315.2.5 Interconnection. *Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.*

Exceptions:

1. *In existing dwelling units, interconnection is not required where repairs do not result in the removal of wall and ceiling finishes and no previous method for interconnection existed.*

2. *In existing dwelling units, carbon monoxide alarms are not required to be interconnected where no construction is taking place.*

3. *In existing dwelling units, carbon monoxide alarms are not required to be interconnected where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.*

4. *In existing dwelling units, carbon monoxide alarms are not required to be interconnected when work is limited to the installation, alteration or repair of plumbing or mechanical systems or the installation, alteration or repair of electrical systems, which do not result in the removal of interior wall or ceiling finishes exposing the structure.*

R315.2.6 Alarm requirements. *No person shall install, market, distribute, offer for sale, or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.*

Carbon monoxide alarms required by Section R315.2 shall be installed in the following locations:

1. *Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).*
2. *On every level of a dwelling unit including basements.*

SECTION R320
ACCESSIBILITY

R320.1 Scope. ~~Where there are four or more dwelling units or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.~~ *Dwelling units in a building consisting of three or more dwelling units or four or more condominium units shall meet the requirements of the California Building Code Chapter 11A. Covered Multifamily Dwellings include but are not limited to dwelling units listed in Section ~~1.8.1.1.2~~ 1.8.2.1.2. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.*

SECTION R322
FLOOD-RESISTANT CONSTRUCTION

R322.1.6 Protection of mechanical and electrical systems. Electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the elevation required in Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones). If replaced as part of a substantial improvement, electrical systems, equipment and components; heating, ventilating, air conditioning and plumbing appliances and

plumbing fixtures; duct systems; and other service equipment shall meet the requirements of this section. Systems, fixtures, and equipment and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

Exception: Locating electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment is permitted below the elevation required in Section R322.2 (flood hazard areas Including A Zones) or R322.3 (coastal high-hazard areas including V Zones) provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided they conform to the provisions of the ~~electrical part of this code for~~ *California Electrical Code* for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. ~~New and replacement w~~ Water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the ~~systems in accordance with the plumbing provisions of this code~~ *water supply and distribution* system. ~~New and replacement s~~Sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into *sanitary drainage* systems and discharges from *sanitary drainage* systems into floodwaters ~~in accordance with the plumbing provisions of this code and Chapter 3 of the International Private Sewage Disposal Code~~.

R322.1.9 Manufactured homes. **(*NOT ADOPTED IN CA)*** New or replacement manufactured homes shall be elevated in accordance with Section R322.2 (flood hazard areas including A Zones) or Section R322.3 in coastal high hazard areas (V Zones). The anchor and tie-down requirements of Sections AE604 and AE605 of Appendix E shall apply. The foundation and anchorage of manufactured homes to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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45. HCD proposes to bring forward existing California Amendments in Part III, Chapter 4, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R401.4.1.1 through R401.4.1.1.5 (See Part 1)

SECTION R403
FOOTINGS

R403.1.8 Foundations on expansive soils. Foundation and floor slabs for buildings located on expansive soils shall be designed in accordance with Section 1808.6 of the ~~International~~ *California Building Code*.

SECTION R404
FOUNDATION AND RETAINING WALLS

R404.5 Precast concrete foundation walls.

R404.5.1 Design. Precast concrete foundation walls shall be designed in accordance with accepted engineering practice. The design and manufacture of precast concrete foundation wall panels shall comply with the materials requirements of Section R402.3 or ACI 318. The panel design drawings shall be prepared by a registered design professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

SECTION R408
UNDER-FLOOR SPACE

R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation; and

2. One of the following is provided for the under-floor space:

    2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m^2) of crawlspace floor area, including an air pathway to the common area (such as a duct or transfer grille)~~, and~~ *Crawl space* perimeter walls *shall be* insulated in accordance with ~~Section N1103.2.1 of this code;~~ *the minimum insulation requirements established in the California Energy Code. Crawl space insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm)*.

    2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m^2) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille)~~, and~~. *Crawl space* perimeter walls *shall be* insulated in accordance with ~~Section N1102.2 of this code;~~ *the minimum insulation requirements established in the California Energy Code. Crawl space insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm).*

    2.3. Plenum in ~~existing~~ structures complying with ~~Section M1601.5~~ *the California Mechanical Code*, if under-floor space is used as a plenum.

R408.4 Access. Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). When any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches (407 mm by 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See ~~Section M1305.1.4~~ *the California Mechanical Code* for access requirements where mechanical equipment is located under floors.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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46. HCD proposes to bring forward existing California Amendments in Part III, Chapter 5, from the 2010 California Residential Code for adoption into the 2013 California Residential Code as follows:

CHAPTER 5
FLOORS

SECTION R502
WOOD FLOOR FRAMING

R502.1 Identification. Load-bearing dimension lumber for joists, beams and girders shall be identified by a grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

R502.11.1 Design. Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal plate connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered *design* professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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47. HCD proposes to bring forward existing California Amendments in Part III, Chapter 6, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

CHAPTER 6
WALL CONSTRUCTION

SECTION R602
WOOD WALL FRAMING

R602.1 Identification. Load-bearing dimension lumber for studs, plates and headers shall be identified by a grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with

DOC PS 20. In lieu of a grade mark, a certification of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

TABLE R602.10.3(3) (Formerly TABLE R602.10.1.2(2)
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

• SOIL CLASS D • WALL HEIGHT = 10 FEET • 10 PSF FLOOR DEAD LOAD • 15 PSF ROOF/CEILING DEAD LOAD • BRACED WALL LINE SPACING ≤ 25 FEET			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE[a]			
Seismic Design Category	**Story Location**	**Braced Wall Line Length (feet)**	**Method LIB[c]**	**Methods DWB, SFB, PBS, PCP, HPS, CS-SFB[d]**	**Method WSP**	**Methods CS-WSP, CS-G**
… No proposed changes to body of model code table. …						

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 pound per square foot = 0.0479 kPa.

a. Linear interpolation shall be permitted.
b. Wall bracing lengths are based on a soil site class "D." Interpolation of bracing length between the S_{ds} values associated with the Seismic Design Categories shall be permitted when a site-specific S_{ds} value is determined in accordance with Section 1613.3 of the ~~International~~ *California Building Code*.
c. Method LIB shall have gypsum board fastened to at least one side with nails or screws per Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches.
d. Method CS-SFB applies in SDC C only.

R602.10.11. Cripple wall bracing. Cripple walls shall be constructed in accordance with Section R602.9 and braced in accordance with this section. Cripple walls shall be braced with the length and method of bracing used for the wall above in accordance with Tables R602.10.3(1) and R602.20.3(3), and the applicable adjustment factors in Table R602.10.3(2) or R602.10.3(4), ~~repspectively~~ respectively, except that the length of the cripple wall bracing shall be multiplied by a factor of 1.15. The distance between adjacent edges of braced wall panels shall be reduced from 20 feet (6096 mm) to 14 feet (4267 mm).

SECTION R606
GENERAL MASONRY CONSTRUCTION

R606.1 General. … (No change to text)

R606.1.1 Professional registration ~~not required~~. ~~When the e~~ Empirical design provisions of Chapter 5 of TMS 402/ACI 530/ASCE 5, the provisions of TMS 403, or the provisions of this section used to design masonry, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the~~ *jurisdiction* ~~having authority~~ *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

TABLE R606.12.2.1
MINIMUM SOLID WALL LENGTH ALONG EXTERIOR WALL LINES

SESIMIC DESIGN CATEGORY	MINIMUM SOLID WALL LENGTH (percent)[a]		
	One story or top story of two story	Wall supporting light-framed second story and roof	Wall supporting masonry second story and roof
Townhouses in C	20	25	35
D_0 or D_1	25	NP	NP
D_2	30	NP	NP

NP = Not permitted, except with design in accordance with the ~~International~~ *California Building Code*.

a. For all walls, the minimum required length of solid walls shall be based on the table percent multiplied by the dimension, parallel to the wall direction under consideration, of a rectangle inscribing the overall building plan.

SECTION R611
EXTERIOR CONCRETE WALL CONSTRUCTION

R611.1 General. Exterior concrete walls shall be designed and constructed in accordance with the provisions of this section or in accordance with the provisions of PCA 100 or ACI 318. PCA 100, ACI 318 or the provisions of this section used to design concrete walls, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority~~. *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

SECTION R613
STRUCTURAL INSULATED PANEL WALL CONSTRUCTION

R613.1 General. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this section. ~~When~~ *T*he provisions of this section used to design structural insulated panel walls, project drawings, typical details and specifications ~~are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the~~ *jurisdiction* ~~having authority~~ *shall not exempt construction documents from the requirement to be stamped by a California licensed architect or engineer. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Sections 5537.1 and 6737.1.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

48. HCD proposes to bring forward existing California Amendments in Part III, Chapter 7, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

CHAPTER 7
WALL COVERING

SECTION R702
INTERIOR COVERING

R702.7 Vapor retarders. (Formerly R601.3) Class I or II vapor retarders are required on the interior side of frame walls in Climate Zones ~~5, 6, 7, 8 and Marine 4~~ *14 and 16. See Title 24, Part 6, ~~Figure 101-A~~ FIGURE 100.1-A — California Climate Zones.*

Exceptions:

1. Basement walls.
2. Below grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

R702.7.1 Class III vapor retarders. (Formerly R601.3.1) Class III vapor retarders shall be permitted where any one of ~~the conditions in Table R702.7.1 is met~~ *the following materials are used. The material options include vented cladding over fiberboard, vented cladding over gypsum, or insulated sheathing with an R value equal to or greater than R-4. If insulated sheathing is used the R-value shall be included as part of the compliance toward Title 24, Part 6 Building Energy Efficiency Standards.*

Spray foam with a minimum density of 2 lb/ft^3 applied to the interior cavity side of OSB, plywood, fiberboard, insulated sheathing or gypsum is deemed to meet the insulated sheathing requirement where the spray foam R-value meets or exceeds the specified insulated sheathing R-value.

~~**TABLE R702.7.1**~~
~~**CLASS III VAPOR RETARDERS**~~

~~CLIMATE ZONE~~	~~CLASS III VAPOR RETARDERS PERMITTED FOR:[a]~~
~~Marine 4~~	~~Vented cladding over wood structural panels.~~ ~~Vented cladding over fiberboard.~~ ~~Vented cladding over gypsum.~~ ~~Insulated sheathing with R-value ≥ 2.5 over 2 x 4 wall.~~ ~~Insulated sheathing with R-value ≥ 3.75 over 2 x 6 wall.~~
~~5~~	~~Vented cladding over wood structural panels.~~ ~~Vented cladding over fiberboard.~~ ~~Vented cladding over gypsum.~~ ~~Insulated sheathing with R-value ≥ 5 over 2 x 4 wall.~~ ~~Insulated sheathing with R-value ≥ 7.5 over 2 x 6 wall.~~
~~6~~	~~Vented cladding over fiberboard~~ ~~Vented cladding over gypsum~~ ~~Insulated sheathing with R-value ≥ 7.5 over 2 x 4 wall~~ ~~Insulated sheathing with R-value ≥ 11.25 over 2 x 6 wall~~
~~7 and 8~~	~~Insulated sheathing with R-value ≥ 10 over 2 x 4 wall~~ ~~Insulated sheathing with R-value ≥ 15 over 2 x 6 wall~~

~~For SI: 1 pound per cubic foot = 16 kg/m^3~~

~~a. Spray foam with a minimum density of 2 lb/ft^3 applied to the interior cavity side of wood structural panels, fiberboard, insulating sheathing or gypsum is deemed to meet the insulating sheathing requirement where the spray foam R-value meets or exceeds the specified insulating sheathing R-value.~~

SECTION R703
EXTERIOR COVERING

R703.1 General. … (No change to text)

R703.1.1 Water resistance. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as required by Section R703.2 and a means of draining to the exterior water that enters the assembly. Protection against condensation in the exterior wall assembly shall be provided in accordance with ~~Section R702.7 of this code~~ *the California Energy Code.*

Exceptions:

… (No change to text)

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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49. HCD proposes to bring forward existing California Amendments in Part III, Chapter 8, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R802
WOOD ROOF FRAMING

R802.1 Identification. Load-bearing dimension lumber for rafters, trusses and ceiling joists shall be identified by a grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

Note: *See Section R301.1.1.1 for limited-density owner-built rural dwellings.*

… (No change to text)

R802.1.3.4 Labeling. Fire-retardant-treated lumber and wood structural panels shall be labeled. The label shall contain:

1. The identification mark of an approved agency in accordance with Section 1703.5 of the ~~International~~ *California Building Code*.
2. Identification of the treating manufacturer.
3. The name of the fire-retardant treatment.
4. The species of wood treated.
5. Flame spread index and smoke-developed index.
6. Method of drying after treatment.
7. Conformance to applicable standards in accordance with Sections R802.1.3.5 through R802.1.3.8.
8. For FRTW exposed to weather, or a damp or wet location, the words “No increase in the listed classification when subjected to the Standard Rain Test” (ASTM D 2898).

SECTION R806
ROOF VENTILATION

R806.5 Unvented attic and unvented enclosed rafter assemblies. **(Formerly R806.4)** Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) and unvented enclosed rafter assemblies (spaces between ceilings that are applied directly to the underside of roof framing members/rafters and structural roof sheathing at the top of the roof framing members/rafters) shall be permitted if all the following conditions are met:

1. The unvented attic space is completely contained within the building thermal envelope.

2. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed rafter assembly.

3. Where wood shingles or shakes are used, a minimum 1/4 inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.

4. In ~~Climate Zones 5, 6, 7 and 8~~ *California Climate Zones 14 and 16*, any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class III vapor retarder coating or covering in direct contact with the underside of the insulation. *See Title 24, Part 6, ~~Figure 101-A~~ FIGURE 100.1-A —California Climate Zones.*

5. Either Items 5.1, 5.2, or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. *No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous layer shall be considered to exist if sheathing, roofing paper or any continuous layer which has a perm rate of no more than one perm under the dry cup method.*

   5.1 Air-impermeable insulation only. Insulation shall be applied in direct contact to the underside of the structural roof sheathing.

   5.2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation *with an R-value of R-4* shall be installed directly above the structural roof sheathing ~~as specified in Table R806.5~~ for condensation control.

   5.3. Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact to the underside of the structural roof sheathing ~~as specified in Table R806.5~~ for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

   5.4 Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

~~TABLE R806.5~~ (Formerly Table R806.4)
~~INSULATION FOR CONDENSATION CONTROL~~

~~CLIMATE ZONE~~	~~MINIMUM RIGID BOARD ON AIR-IMPERMEABLE INSULATION R-VALUE~~[a]
~~2B and 3B tile roof only~~	~~0 (none required)~~
~~1, 2A, 2B, 3A, 3B, 3C~~	~~R-5~~
~~4C~~	~~R-10~~
~~4A, 4B~~	~~R-15~~
~~5~~	~~R-20~~
~~6~~	~~R-25~~
~~7~~	~~R-30~~
~~8~~	~~R-35~~

~~a. Contributes to but does not supersede the requirements in Section N1103.2.1.~~

SECTION R807
ATTIC ACCESS

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet (2.8 m^2) and have a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high (559 mm wide by 762 mm high). When the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See ~~Section M1305.1.3~~ *the California Mechanical Code* for access requirements where mechanical equipment is located in attics.

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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50. HCD proposes to bring forward existing California Amendments in Part III, Chapter 9, from the 2010 California Residential Code for adoption into the 2013 California Residential Code with editorial corrections as follows:

CHAPTER 9
ROOF ASSEMBLIES

SECTION R903
WEATHER PROTECTION

R903.4.1 ~~Overflow drains and scuppers.~~ Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with ~~Sections 1106 and 1108 as applicable of~~ the ~~International~~ *California Plumbing Code*.

~~Overflow drains shall discharge to an *approved* location and shall not be connected to roof drain lines.~~

SECTION R905
REQUIREMENTS FOR ROOF COVERINGS

R905.10.3 Material standards. Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with the ~~International~~ *California Building Code*. Metal-sheet roof coverings installed over structural decking shall comply with Table R905.10.3(1). The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table R905.10.3(2).

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.

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51. HCD proposes to bring forward existing California Amendments in Part III, Chapter 10, from the 2010 California Residential Code for adoption into the 2013 California Residential Code as follows:

CHAPTER 10
CHIMNEYS AND FIREPLACES

SECTION R1001
MASONRY FIREPLACES

R1001.3 Seismic reinforcing. Masonry or concrete chimneys in *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 shall be reinforced. Reinforcing shall conform to the requirements set forth in Table R1001.1 and Section R609, Grouted Masonry

R1001.4 Seismic anchorage. Masonry or concrete chimneys in *all structures regulated by this code assigned to* Seismic Design Categories *C,* D_0, D_1 or D_2 shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the requirements of Section R1001.4.1.

TABLE R1001.1
SUMMARY OF REQUIREMENTS FOR MASONRY FIREPLACES AND CHIMNEYS

ITEM	LETTER[a]	REQUIREMENTS
Hearth slab thickness	A	4”
Hearth extension (each side of opening)	B	8” fireplace opening < 6 square foot. 12” fireplace opening ≥ 6 square foot.
...	…	…
NO CHANGE TO BODY OF TABLE		
…	…	
Footing Thickness Width	T	 12” min. 6” each side of fireplace wall.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 square foot = 0.0929m^2.

Note: This table provides a summary of major requirements for the construction of masonry chimneys and fireplaces. Letter references are to Figure R1001.1, which shows examples of typical construction. This table does not cover all requirements, nor does it cover all aspects of the indicated requirements. For the actual mandatory requirements of the code, see the indicated section of text.

a. The letters refer to Figure R1001.1.
b. Not required in Seismic Design Category ~~A, B or C~~ *A or B*.

SECTION R1003
MASONRY CHIMNEYS

R1003.3 Seismic reinforcing. Masonry or concrete chimneys shall be constructed, anchored, supported and reinforced as required in this chapter. In *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 masonry and concrete chimneys shall be reinforced and anchored as detailed in Section R1003.3.1, R1003.3.2 andR1003.4. In Seismic Design Category ~~A, B or C~~ A *or* B, reinforcement and seismic anchorage is not required.

R1003.4 Seismic anchorage. Masonry and concrete chimneys and foundations in *all structures regulated by this code assigned to* Seismic Design Category *C,* D_0, D_1 or D_2 shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the requirements in Section R1003.4.1.

R1003.11.3 Gas appliances. Flue lining systems for gas appliances shall be in accordance with ~~Chapter 24~~ *the California Mechanical Code.*

R1003.14 Flue area (appliance). Chimney flues shall not be smaller in area than that of the area of the connector from the appliance (see Tables R1003.14(1) and R1003.14(2)). The sizing of a chimney flue to which multiple appliance venting systems are connected shall be in accordance with ~~Section M1805.3~~ *the California Mechanical Code.*

NOTE:
Authority cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17927, 17928, 17959.6, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, 18873.5, 18938.3, 18944.11 and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.