

fastened to the foundation with an uplift capacity of not less than 4,200 pounds (18 480 N).

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud of the panel and the bearing studs at the other end of the opening. A strap with an uplift capacity of not less than 1,000 pounds (4400 N) shall fasten the header to the bearing studs. The bearing studs shall also have a tie-down device fastened to the foundation with an uplift capacity of not less than 1,000 pounds (4400 N).

The tie-down devices shall be an embedded strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom.

Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

\*Note: For figure 2308.9.3.2, structures assigned to Seismic Category D or E, sheathed on one face with 15/32 inch-minimum thickness wood structural panel sheathing nailed with 8d common nails spaced 6 inches on panel edges, 12 inches at intermediate supports.

**14.04.250. Section 2308.12.5 of the 2013 Edition of the California Building Code is amended to read as follows:**

**2308.12.5 Attachment of sheathing.** Fastening of braced wall panel sheathing shall not be less than that prescribed in Table 2308.12.4 or 2304.9.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.9.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

**Exception:** Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inches (6096 mm) intervals along the top plate of discontinuous vertical framing.

**14.04.258. Section 8-408 of the 2013 Edition of the California Building Code entitled 2013 Edition of the California Historical Building Code is amended by adding the following.**

4. The use of wood on the exterior side of exterior walls shall be prohibited in the Extreme, high and moderate fire hazard severity zones as identified by the Pasadena Fire Department.

Exception: In the moderate fire hazard severity zone, the fire code official may, upon a showing of good cause and necessity, approved the use of fire-resistive wood as part of class A listed assemblies, and may require additional mitigation as warranted, for the repair or maintenance of existing structures.

**G. Amendments to the 2013 California Residential Code - sections 14.04.260 through 14.04.400 to read as follows:**

**14.04.260. Section R301.1.3.2 of the 2013 Edition of the California Residential Code is amended to read as follows:**

**R301.1.3.2 Woodframe structures.** 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 located in Seismic Design Category A, B or C, notwithstanding other sections of law; the law establishing these provisions is found in Business and Professions Code Section 5537 and 6737.1.

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 one story in height or with a basement located in Seismic Design Category D<sub>0</sub>, D<sub>1</sub>, D<sub>2</sub> or E.

**14.04.265. Section R301.1.4 is added to Chapter 3 of the 2013 Edition of the California Residential Code to read as follows:**

R301.1.4 Seismic design provisions for buildings constructed on or into slopes steeper than one unit vertical in three units horizontal (33.3 percent slope). The design and construction of new buildings and additions to existing buildings when constructed on or into slopes steeper than one unit vertical in three units horizontal (33.3 percent slope) shall comply with Section 1613.9 of the Building Code.

**14.04.267. Section R301.2.2.3.8 is added to Chapter 3 of the 2013 Edition of the California Residential Code to read as follows:**

R301.2.2.3.8 Anchorage of Mechanical, Electrical, or Plumbing Components and Equipment. Mechanical, electrical, or plumbing components and equipment shall be anchored to the structure. Anchorage of the components and equipment shall be designed to resist loads in accordance with the International Building Code and ASCE 7, except where the component is positively attached to the structure and flexible connections are provided between the component and associated ductwork, piping, and conduit; and either

1. The component weighs 400 lb (1,780 N) or less and has a center of mass located 4 ft (1.22 m) or less above the supporting structure; or
2. The component weighs 20 lb (89N) or less or, in the case of a distributed system, 5 lb/ft (73 N/m) or less.

**14.04.270. Section R401.1 of the 2013 Edition of the California Residential Code is amended to read as follows:**

**R401.1 Application.** The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in areas prone to flooding as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA PWF.

**Exception:** The provisions of this chapter shall be permitted to be used for wood foundations only in the following situations:

1. In buildings that have no more than two floors and a roof.
2. When interior basement and foundation walls are constructed at intervals not exceeding 50 feet (15 240 mm).

Wood foundations in Seismic Design Category D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub> not be permitted.

**Exception:** In non-occupied, single-story, detached storage sheds and similar uses other than carport or garage, provided the gross floor area does not exceed 200 square feet, the plate height does not exceed 12 feet in height above the grade plane at any point, and the maximum roof projection does not exceed 24 inches.

**14.04.275. Sections R403.1.2, R403.1.3 and R403.1.5 of the 2013 Edition of the California Residential Code are amended to read as follows:**

**R403.1.2 Continuous footing in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>.** The braced wall panels at exterior walls of buildings located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> shall be supported by continuous footings. All required interior braced wall panels in buildings shall be supported by continuous footings.

**R403.1.3 Seismic reinforcing.** Concrete footings located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>, as established in Table R301.2(1), shall have minimum reinforcement. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

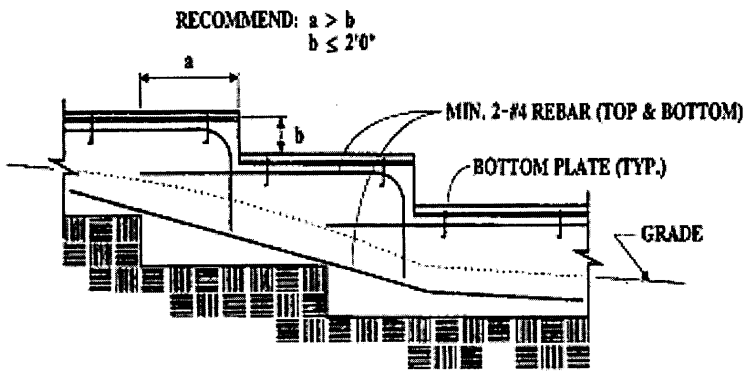
In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> masonry stem walls without solid grout and vertical reinforcing are not permitted.

**Exception:** In detached one and two-family dwellings located in Seismic Design Category A, B or C which are three stories or less in height and constructed with stud bearing walls, isolated plain concrete footings, supporting columns or pedestals are permitted.

**R403.1.5 Slope.** The top surface of footings shall be level. The bottom surface of footings shall be permitted to have a slope not exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in 10 units horizontal (10-percent slope).

For structures located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub>, stepped footings shall be reinforced with four No. 4 rebar. Two bars shall be placed at the top and bottom of the footings as shown in Figure R403.1.5.



STEPPED FOUNDATIONS

FIGURE R4.3.1.5 – STEPPED FOOTING

**14.04.280. Section R404.2 of the 2013 Edition of the California Residential Code is amended to read as follows:**

**R404.2 Wood foundation walls.** Wood foundation walls shall be constructed in accordance with the provisions of Sections R404.2.1 through R404.2.6 and with the details shown in Figures R403.1(2) and R403.1(3). Wood foundation walls shall not be used for structures located in Seismic Design Category D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub>.

**14.04.282. Section R501.1 of the 2013 Edition of the California Residential Code is amended to read as follows:**

**R501.1 Application.** The provisions of this chapter shall control the design and construction of the floors for all buildings including the floors of attic spaces used to house mechanical or plumbing fixtures and equipment. Mechanical or plumbing fixtures and equipment shall be attached (or anchored) to the structure in accordance with Section R301.2.2.3.8

**14.04.285. Lines 37 and 38 of Table R602.3(1) of the 2013 Edition of the California Residential Code are amended to read as follows:**

Staples shall not be used on other wall sheathing as fasteners in table R602.3(1).

**14.04.290. Footnote “b” of Table R602.3(2) of the 2013 Edition of the California Residential Code is amended to read as follows:**

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted. Use of staples in roof, floor, subfloor, and braced wall panels shall be prohibited in Seismic Design Category D<sub>0</sub>, D<sub>1</sub>, or D<sub>2</sub>.

**14.04.295. Figure R602.10.6.2 of the 2013 Edition of the California Residential Code is amended to read as follows:**

Minimum 15/32" thick wood structural panel sheathing, portal frame with hold downs at detached garage door openings shall be double portal frame (two braced wall panels) type at both ends. Single portal frame shall not be used. Minimum width of portal frame shall be 24 inches with 15/32" thick wood structural panel sheathing fastened to the frame.

**14.04.305. Section R602.10.9.1 of the 2013 Edition of the California Residential Code is deleted in its entirety.**

**14.04.315. Section R902.1.1.1 is added to the 2013 edition of the California Residential Code to read as follows:**

All roofing material in the very-high and moderate fire hazard severity zone must be class A. No wood roof covering material shall be installed on any structure located in the very high, high and moderate fire hazard zones as identified by the Pasadena Fire Department. All other roof covering materials in other zones shall be class A or B. Exception: In the moderate fire hazard zone, the fire code official may, upon a showing of good cause and necessity, approve the use of fire-resistive wood as part of Class A listed assemblies, and may require additional mitigation as warranted, for the repair or maintenance of existing structure.

**14.04.400. Section AG100.3.1 is added to the 2013 edition of the California Residential Code to read as follows:**

Enclosure (fence) required: In addition to the requirements in the California Residential Code, a barrier/enclosure is required to isolate the pool or any other bodies of water over 18 inches deep from neighboring properties and public ways.

Exception: When the swimming pool or any other bodies of water over 18 inches deep is fully enclosed around its perimeter by an enclosure per section AG100.3 of the California Residential Code.

**I. Amendments to the 2013 California Green Building Standards Code – section 14.04.500 through 14.04.526 to read as follows:**

**14.04.500. Section 101.3 of the 2013 edition of the California Green Buildings Standards Code is amended to read as follows:**

Scope. The provisions of this code shall apply to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure, additions or alterations to existing buildings, unless otherwise indicated in this code, throughout the State of California.

It is not the intent that this code substitute or be identified as meeting the certification requirement of any green building program.

**14.04.501. Section 301.1.1 of the 2013 edition of the California Green Buildings Standards Code is amended to read as follows:**

301.1.1 Additions and alterations. The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of permitted work.

**14.04.502. Section 301.3 of the 2013 edition of the California Green Buildings Standards Code is amended to read as follows:**

Nonresidential additions and alterations. The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions and/or building alterations (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings {N} or to additions and alterations {AA}. When the code section applies to both, no banner will be used.

**14.04.504. Section 307.1 and section 307.2 is added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

307.1 Buildings required to comply with Tier 1 include the following:

1. Municipal buildings of 5,000 square feet or more of new construction,
2. Nonresidential buildings with 25,000 square feet or more of new construction,
3. Tenant improvements of 25,000 square feet or more,
4. Mixed use and multi-family residential buildings of four stories in height or more.

307.2 Buildings required to comply with Tier 2 include the following:

1. New Municipal buildings,
2. Municipal building renovations of 15,000 square feet or more,
3. New commercial type buildings of over 50,000 square feet or more.

Note: Where there are practical difficulties involved in complying with the threshold levels of a Tier, the enforcing agency may grant modifications for individual cases. The enforcing agency shall first find that a special individual reason makes the strict letter of the Tier impractical and that modification is in conformance with the intent and purpose of the measure. The details of any action granting modification shall be recorded and entered in the files of the enforcing agency.

**14.04.506. Sections 4.106.5.1 through 4.106.5.4 are added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

**4.106.5.1. Cool Roof.** For new buildings and additions or alterations to existing roof framing, roofing materials must comply with sections 4.106.5.2 – 4.106.4 and table 4.106.5.

**4.106.5.2. Cool Roof for Reduction of Heat Island Effect.** Roofing material shall comply with the following:

**4.106.5.3. Solar Reflectance.** Roofing material shall have a minimum 3-year aged solar reflectance equal to or greater than the values specified in Table 4.106.5.

**4.106.5.4. Thermal Emittance.** Roofing materials shall have a Cool Roof Rating Council (CRRC) initial or aged thermal emittance equal to or greater than those specified in Table 4.106.5.

Solar reflectance values shall be based on the aged reflectance value of the roofing product or the equation in Section A4.106.5.1 if the CRRC certified aged solar reflectance are not available. Certified thermal emittance used in the Solar Reflectance Index Calculation Worksheet (SRI-WS) developed by the Energy Commission may be either the initial value or the aged value listed by the CRRC.

**EXCEPTIONS:**

1. Roof repair;
2. Roof replacement when the roof area being replaced is equal to or less than 50% of the total roof area; or
3. Building-integrated photovoltaic (BIPV).

**TABLE 4.106.5**

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
< 2:12	0.65	0.75
> 2:12	0.23	0.75

**14.04.508. Section 4.106.6 – 4.106.6.2.3 is added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

**4.106.6. Electric Vehicle (EV) Charging [N].** New residential buildings shall comply with the following requirements for the future installation of electric vehicle supply equipment (EVSE).

**4.106.6.1. One-and Two-Family Dwellings and Townhomes.** Install a listed raceway to accommodate a dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1 inch inside diameter). The raceway shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure. Raceways are required to



be continuous at enclosed or concealed areas and spaces. A raceway may terminate in an attic or other approved location when it can be demonstrated that the area is accessible and no removal of materials is necessary to complete the final installation. Sufficient conductor sizing and service capacity to install Level 2 EVSE shall be provided.

**4.106.6.1.1. Labeling Requirement.** A label stating “EV CAPABLE” shall be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

**4.106.6.2. Multifamily Dwellings.** At least 5 percent of the total parking spaces, but not less than one, shall be capable of supporting future electric vehicle supply equipment (EVSE).

**4.106.6.2.1. Single Charging Space Required.** When only a single charging space is required, install a listed raceway capable of accommodating a dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1 inch inside diameter). The raceway shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure. Sufficient conductor sizing and service capacity to install Level 2 EVSE shall be provided.

**4.106.6.2.2. Multiple Charging Spaces Required.** When multiple charging spaces are required, plans shall include the location(s) and type of the EVSE, raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all the electrical vehicles at all designated EV charging spaces at their full rated amperage. Plan design shall be based upon Level 2 EVSE at its maximum operating ampacity. Only underground raceways and related underground equipment are required to be installed at the time of construction.

**4.106.6.2.3. Labeling Requirement.** A label stating “EV CAPABLE” shall be posted in a conspicuous place at the service panel or subpanel and the EV charging space.

**14.04.510. Sections 4.202 – 4.202.1.1 are added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

**Section 4.202 Renewable Energy.** Sections 4.202.1 and 4.202.1.1 shall apply to residential, multifamily, mixed use buildings.

**4.202.1. Space for Future Electrical Solar System Installation [N].** Comply with Section 110.10 of the California Energy Code.

**4.202.1.1. Future Access for Electrical Solar System [N].** For new buildings or when an existing service is relocated to new construction area, a minimum of one inch electrical conduit shall be provided from the electrical service equipment to an accessible location in the attic or other location suitable for future connection to a solar system. The conduit shall be labeled as future access for electrical solar system. The

electrical panel shall be sized to accommodate the installation of a future electrical solar system.

**Exception:** Buildings not required to provide a solar zone per Section 110.10 of the California Energy Code.

**14.04.512. Section 5.106.5.3 is added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

**5.106.5.3. Electric Vehicle Charging [N].** At least 5 percent of the total parking spaces, but not less than one, shall be capable of supporting installation of future electric vehicle supply equipment (EVSE).

**14.04.514. Section 5.106.5.3.1 is added to the 2013 edition of the California Green Buildings Standards Code to read as follows:**

**5.106.5.3.1. Single Charging Space Requirements.** When only a single charging space is required, install a listed raceway capable of accommodating a dedicated branch circuit. The raceway shall not be less than trade size 1 inch. The raceway shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure. Sufficient conductor sizing and service capacity to install Level 2 EVSE shall be provided.

**14.04.516. Section A4.106.5.3 of the 2013 edition of the California Green Building s Standards Code is deleted and Tables A4.106.5.1(1) through A4.106.5.1(4) of the 2013 California Green Buildings Standards Code are amended to read as follows:**

**A4.106.5.3 Solar Reflectance index alternative.** Solar Reflectance index (SRI) equal to or greater than the values

**TABLE A4.106.5.1 (1)  
TIER 1-LOW RISE RESIDENTIAL**

<b>ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>
≤ 2 : 12	0.68	0.85
> 2 : 12	0.28	0.85

**TABLE A4.106.5.1 (2)  
TIER 2-LOW-RISE RESIDENTIAL**

<b>ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>
≤ 2 : 12	0.70	0.85
> 2 : 12	0.34	0.85

**TABLE A4.106.5.1(3)  
TIER 1 - HIGH-RISE RESIDENTIAL BUILDINGS, HOTELS, AND MOTELS**

<b>ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>
≤ 2 : 12	0.68	0.85
>2 : 12	00.28	0.85

**TABLE A4.106.5.1(4)  
TIER 2 - HIGH-RISE RESIDENTIAL BUILDINGS, HOTELS, AND MOTELS**

<b>ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>
≤ 2 : 12	0.70	0.85
>2 : 12	0.34	0.85

**14.04.518 Section A4.106.8.2 of the 2013 edition of the California Green Buildings Standards Code is amended to read as follows:**

**A4.106.8.2. Multifamily Dwellings.** At least 10 percent of the total parking spaces, but not less than one, shall be capable of supporting future electric vehicle supply equipment (EVSE).

**14.04.522. Section A5.106.5.3.3 of the 2013 edition of the California Green Building Standards Code is amended to read as follows:**

**A5.106.5.3.3 Tier 1.** At least 7 percent of the total parking spaces, but not less than one, shall be capable of supporting installation of future electric vehicle supply equipment (EVSE).

**14.04.524 Section A 5.106.5.3.4 of the 2013 edition of the California Green Building Standards Code is amended to read as follows:**

**A5.106.5.3.4. Tier 2.** At least 10 percent of the total parking spaces, but not less than two, shall be capable of supporting installation of future EVSE.

**14.04.526 Section A5.106.11.2.3 of the 2013 edition of the California Green Building Standards Cods is deleted and Tables A5.106.11.2.2 {BSC} and A5.106.11.2.3 of the 2013 edition of the California Green Building Standards Code are amended to read as follows:**

**TABLE A5.106.11.2.2 [BSC]**

**TIER 1**

<b>ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>	<b>SRI</b>
< 2 : 12	0.68	0.85	
>2 : 12	0.28	0.85	

**TABLE A5.106.11.2.3**

<b>TIER 2 ROOF SLOPE</b>	<b>MINIMUM 3-YEAR AGED SOLAR REFLECTANCE</b>	<b>THERMAL EMITTANCE</b>	<b>SRI</b>
< 2 : 12	0.70	0.85	
>2 : 12	0.34	0.85	

**SECTION 4.** Chapter 14.28 of the Pasadena Municipal Code is amended as follows:

**A.** By amending section 14.28.010 to read as follows:

**14.28.010** - California Fire Code adopted.

Except as is otherwise provided for in this chapter by specific provision, the minimum standards, provisions and requirements for the safe construction and maintenance of property, facilities, conditions, materials, equipment, fire prevention and alarm systems, and the general supervision thereof for the purpose of combating and control of fire and fire hazards and abatement of same, within the corporate limits of the city, shall be in accordance with the provisions and in the manner prescribed by the California Fire Code, 2013 Edition ("California Fire Code") in its entirety, as published by the International Code Council and including Appendix Chapter 4 and Appendices B through D, and I, all as compiled, adopted, and subsequently amended by the International Code Council, California State Fire Marshal's Office, California Building Standards Commission, or City of Pasadena. One copy of the above publications is on file for public inspection and they are adopted and incorporated herein as if fully set forth in this chapter.

**B.** By adding section 14.28.015 to read as follows:

**14.28.015 Fees.**

The council shall by resolution adopt a schedule of fees for the permits issued pursuant hereto.

**A.** Work commencing before permit issuance

Any person who commences any work requiring a permit under this Code before obtaining the necessary permits, unless otherwise approved by the fire code official in writing or as part of an approved phased permit approval process, shall be subject to double the permit and inspection fees adopted pursuant to section 14.28.015.

C. By amending Section 14.28.020 to read as follows:

**14.28.020 - Changes and additions to the adopted code.**

1. Section 101.1 of Chapter 1 of the California Fire Code is amended to read as follows:

These regulations shall be known as the Fire Code of the City of Pasadena, herein referred to as "this code."

2. Section 104 of Chapter 1 of the California Fire Code is amended by adding Section 104.12, entitled "Cost Recovery," to read as follows:

Where an emergency situation is caused or exacerbated by a willful act, a negligent act, or a violation of the Fire Code, Building Code, or any other applicable law, ordinance or regulation, the cost of mitigating and securing any emergency that is within the responsibility of the Fire Chief is a charge against the person who caused the emergency or who caused the circumstances leading to the creation of the emergency. Damages and expenses incurred by any public agency providing mutual aid shall constitute a debt of such person and shall be collectible by the Fire Chief for proper distribution in the same manner as in the case of an obligation under contract expressed or implied. Expenses as stated above shall include, but not be limited to, equipment and personnel committed and any payments required by the public agency to outside business firms requested by the public agency to mitigate or secure the emergency, monitor remediation, and clean up.

3. The exception in Section 105.6.27, item 1, of Chapter 1 of the California Fire Code is amended to read as follows:

Exception: A permit is not required for individual containers with a 20-gallon (45.5 L) water capacity or less, or 40 gallons (75.7 L) cumulatively, serving occupancies in Group R-3.

4. Section 105 of Chapter 1 of the California Fire Code is amended by changing Section 105.7.4, entitled "Cryogenic Fluids," to read as follows:

A construction permit is required for installation, alteration or closure of cryogenic fluid storage systems where the system capacity exceeds the amounts listed in Table 105.6.1 0. Maintenance performed in accordance with this code is not considered an alteration and does not require a permit.

5. Section 108 of Chapter 1 of the California Fire Code is deleted in its entirety.

6. Section 109.4 of Chapter 1 of the California Fire Code is amended to read as follows:

All sections in the codes referenced in Section 14.28.010 herein pertaining to violations are amended in their entirety to read as follows:

It shall be unlawful for any person, firm or corporation to erect,

construct, enlarge, alter, repair, move, improve, remove, convert, or demolish, equip, use, occupy, or maintain any building, occupancy, premises, system or structure in the City, or cause same to be done, contrary to or in violation of any of the provisions of this chapter. Any person, firm, or corporation violating any of the provisions of this Ordinance, shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Ordinance is committed, continued, or permitted, and upon conviction of any such violation such persons shall be punished by a fine of not more than one thousand dollars (\$1,000) or by imprisonment for not more than one (1) year, or by both such fine and imprisonment.

In addition to the above penalty provisions, violation of any of the provisions of this chapter may be subject to the administrative proceedings set forth in Chapter 1.25 of this code.

7. Section 111.4 of Chapter 1 of the California Fire Code is amended to read as follows:

Any person who continues any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be guilty of a misdemeanor and subject to the penalties specified in Section 109.4 of this code.

8. Section 510 of the California Fire Code is amended by adding Section 510.1.1, entitled "Disruption of Radio Communications," to read as follows:

The intentional installation or use of materials, devices or other building design features which disrupt or otherwise decreases the effectiveness of radio communications shall be prohibited.

9. Section 903 of the California Fire Code is amended by adding Section 903.1.2, entitled "Minimum Fire Suppression Protection for New Construction," to read as follows:

All new construction shall be provided with an approved automatic fire suppression system throughout the building, without regard to the criteria listed in section 903.2 et seq.

Exception: The following types of construction may be exempt from this section when approved by the fire code official:

1. Garages, carports and similar structures provided no portion of the structure is located more than 150 feet (45720 mm) from approved fire department access;
2. Utility sheds, gazebos, and similar structures of less than 120 square feet (11.15 m<sup>2</sup>) provided no portion of the structure is located more than 150 feet (45720 mm) from approved fire department access;
3. Fences and open trellises; and,
4. Other similar structures as deemed appropriate by the fire code official.

10. Section 903 of the California Fire Code is amended by adding Section 903.1.3, entitled "Partial Automatic Fire Suppression Systems Prohibited," to read as follows:

Whenever an automatic fire suppression system is installed for any portion of any building or structure, an automatic fire suppression system shall be installed for the entire building or structure.

11. Section 903 of the California Fire Code is amended by adding a sentence at the end of Section 903.3.5, entitled "Water supplies", to read as follows:

Hydraulic calculations shall include a 10% reduction from the source.

12. Section 903.3.5.1.2 of the California Fire Code, entitled "Residential combination services", is amended to read as follows:

Combination services are not allowed for NFPA 13R systems.

13. Section 907 of the California Fire Code is amended by changing the first paragraph of Section 907.2, entitled "When required—new buildings and structures," to read as follows:

For new construction of 10,000 square feet (929 m<sup>2</sup>) or more, an approved automatic fire alarm system shall be installed in compliance with this code and NFPA 72. At a minimum, smoke detectors, or other listed and approved detection devices, shall be installed in all electrical, mechanical, storage, conference or similar rooms. Listed and approved alarm notification appliances providing both audible and visual notification shall be installed throughout the building in compliance with this code and NFPA 72.

14. Section 908 of the California Fire Code is amended by adding section 908.8, entitled "Requirements", to read as follows:

All emergency alarm control panels shall be UL 201 7 or UL 864 Listed. All sensors shall be UL 2075 Listed. All Detection and Alarm systems shall be powered and supervised as required for fire alarm systems NFPA 72. Secondary power supplies shall be calculated for 24-hours equipment standby time plus emergency standby duration calculated for the longest modeled release rate or 5-minutes, whichever is the longest duration. Visual alarms shall be blue.

15. Section 1103.2 of the California Fire code, entitled "Emergency responder radio coverage in existing buildings," is amended by changing Item 2 and adding Items 3 through 6 to read as follows:

Existing occupancies shall comply with section 510.1 where one of the following conditions exist:

1. Wherever existing wired communication system cannot be repaired or is being replaced, or where not approved in accordance with Section 510.1, Exception 1

2. Whenever the fire code official determines that compliance is required

for the protection of the health and safety of the public or emergency responders.

3. Whenever additions result in an additional level above or below grade, or a total increase of more than 1000 square feet (92.9 m<sup>2</sup>) or an increase of more than fifty percent (50%) in the total floor area including mezzanines and additional stories, whichever is less, regardless of ownership. Additions shall be cumulative with each application for building permit from January 1, 2008;

4. Whenever the value of alterations exceed fifty percent (50%) of the replacement value of the structure, excluding the value of property and contents. Alteration values shall be cumulative with each application for a building permit from January 1, 2008. Expenditures for maintenance and repairs such as interior and exterior painting, carpeting, interior window coverings, drapes, movable partitions, surface re-roofing or plumbing, mechanical and electrical repairs shall not be considered when calculating the percentage of alterations;

5. Whenever there is an occupancy classification change to a more hazardous use, as determined by the fire code official; or,

6. Whenever any existing Group R Division 1 occupancy is subdivided to condominium or any non-residential occupancy is converted, in part or whole, to a residential occupancy.

16. Section 1103.5 of the California Fire Code is amended by adding Section 1103.5.3, entitled "Existing Occupancies," to read as follows:

Existing occupancies, with the exception of R-3.1 and R-4 occupancies, shall comply with section 903.1.2 where one of the following conditions exists:

1. Whenever additions result in an additional level above or below grade, or a total increase of more than 1000 square feet (92.9 m<sup>2</sup>) or an increase of more than fifty percent (50%) in the total floor area including mezzanines and additional stories, whichever is less, regardless of ownership. Additions shall be cumulative with each application for building permit from January 1, 2008. R-3 occupancies shall not be required to comply with this condition solely due to the addition of an additional level, unless one of the criteria for an increase of total floor area is also exceeded;

2. Whenever the value of alterations exceed fifty percent (50%) of the replacement value of the structure, excluding the value of property and contents, as determined by the Building Official. Alteration values shall be cumulative with each application for a building permit from January 1, 2008. Expenditures for maintenance and repairs such as interior and exterior painting, carpeting, interior window coverings, drapes, movable partitions, surface re-roofing or plumbing, mechanical and electrical repairs shall not be considered when calculating the percentage of alterations;

3. Whenever there is an occupancy classification change to a more



hazardous use, as determined by the fire code official; or,  
4. Whenever any existing Group R Division 1 occupancy is subdivided to condominium or any non-residential occupancy is converted, in part or whole, to a residential occupancy.

17. Section 1103 of the California Fire Code is amended by adding Section 1103.7.0.1, entitled "Existing Occupancies," to read as follows:

Existing occupancies shall comply with section 907.2 where one of the following conditions exists:

1. Whenever additions result in an additional level above or below grade, or a total increase of more than 1000 square feet (92.9 m<sup>2</sup>) or an increase of more than fifty percent (50%) in the total floor area including mezzanines and additional stories, whichever is less, regardless of ownership. Additions shall be cumulative with each application for building permit from January 1, 2008;

2. Whenever the value of alterations exceed fifty percent (50%) of the replacement value of the structure, excluding the value of property and contents, as determined by the Building Official. Alteration values shall be cumulative with each application for a building permit from January 1, 2008. Expenditures for maintenance and repairs such as interior and exterior painting, carpeting, interior window coverings, drapes, movable partitions, surface re-roofing or plumbing, mechanical and electrical repairs shall not be considered when calculating the percentage of alterations;

3. Whenever there is an occupancy classification change to a more hazardous use, as determined by the fire code official; or,

4. Whenever any existing Group R Division 1 occupancy is subdivided to condominium or any non-residential occupancy is converted, in part or whole, to a residential occupancy.

5. Where required by Chapter 11.

18. Section 4901 of the California Fire Code is amended by adding Section 4901.1.1, entitled "Referenced standard," to read as follows:

The International Wildland-Urban Interface Code, 2012 edition, is adopted as a referenced standard for the enforcement of this chapter and other related sections of the Fire Code. Where conflicts occur between the provisions of adopted codes and the referenced standard, the provisions of adopted codes shall apply.

19. Section 4905 of the California Fire Code is amended by adding Section 4905.2.1 entitled "Wood Roof Covering Prohibited," to read as follows:

No wood roof covering material shall be installed on any structure located in the Extreme Hazard, High Hazard, or Moderate Hazard Fire Severity Zones as identified by the Pasadena Fire Department.

20. Section 4906.2 is amended by changing Item 2 to read as follows:  
Land designated as Moderate, High and Very-High Fire Hazard Severity Zone by cities and other local agencies.
21. Section 5001 is amended by adding Section 5001.6.1.1, entitled "Temporary Facility Closure," to read as follows:  
Unless otherwise specified, a temporary facility closure shall last not more than 180 calendar days. The fire code official may authorize one 180 calendar day extension.
22. Section 5003 of the California Fire Code is amended by adding Section 5003.2.9.3, entitled "Minimum Testing," to read as follows:  
At a minimum, all tanks, primary storage, secondary containment, monitoring systems, release prevention and mitigation systems, and other safety equipment or systems for the storage, use or handling of any hazardous material shall be tested for proper function as described by manufacturer's or design specification, whichever is more stringent, prior to the introduction of a hazardous material.
23. The first paragraph of Section 5704.2.7.4 of the California Fire Code is amended to read as follows:  
Stationary, above-ground tanks shall be equipped with additional venting that will relieve excessive internal pressure caused by exposure to fires. This requirement shall also apply to each compartment of a compartmentalized tank, the interstitial space (annulus) of a secondary containment-type tank and the enclosed space of tanks of closed-top dike construction. Emergency venting devices shall be listed and approved. Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings. Additionally, this requirement shall apply to spaces or enclosed volumes, such as those intended for insulation, membranes or weather shields that can contain liquid because of a leak from the primary vessel or can inhibit venting during fire exposure. The insulation, membrane or weather shield shall not interfere with emergency venting. The venting shall be installed and maintained in accordance with Section 22.7 of NFPA 30.
24. Section 5704.2.7.5.8 of the California Fire Code is amended, by deleting the exception.
25. Section 5704.2.8.14 of the California Fire Code is amended to read as follows:  
Emergency vents shall be vapor tight and shall not be allowed to discharge inside the vault. Long-bolt manhole covers shall not be allowed for this purpose.

26. Section 5704.2.9.6.1 of the California Fire Code is amended to read as follows:  
Storage of Class I and II liquids in above-ground storage tanks outside of buildings is prohibited within the City of Pasadena.
27. Section 5706.2.4.4 of the California Fire Code is amended to read as follows:  
The storage of Class I and II liquids in above-ground storage tanks outside of buildings is prohibited within the City of Pasadena.
28. Section 5806.2 of the California Fire Code is amended to read as follows:  
Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited within the City of Pasadena.
29. Section 6101.3 of the California Fire Code is amended to read as follows:  
Where a single container is more than 20 gallons (75.7 L) in water capacity, or the aggregate water capacity of LP-gas containers is more than 40 gallons (151 L), the installer shall submit construction documents for such installation.
30. Section 6101 of the California Fire Code is amended by adding Section 6101.4, entitled "Minimum Testing," to read as follows:  
At a minimum, all tanks, primary storage, secondary containment, monitoring systems, release prevention and mitigation systems, and other safety equipment or systems for the storage, use or handling of any hazardous material shall be tested for proper function as described by manufacturer's or design specification, whichever is more stringent, prior to the introduction of a hazardous material.
31. Section 6104.2 of the California Fire Code is amended to read as follows:  
Within the City of Pasadena, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).
32. Appendix A of the California Fire Code is deleted in its entirety.
33. Exception 1 in Section B105.2 of Appendix B of the California Fire Code is amended to read as follows:  
1. A reduction in required fire-flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting fire flow shall not be less than 1,500 gallons per hour (5678 L/min) for the prescribed duration as specified in Table B105.1.
34. Section D103.6 of Appendix D of the California Fire Code is amended to read as follows:  
Where required by the fire code official, fire apparatus access roads shall

be marked with permanent NO PARKING-FIRE LANE signs complying with the current specifications maintained by the Pasadena Department of Public Works.

35. Appendix J is deleted in its entirety.

D. By adding section 14.28.040 to read as follows:

**14.28.040 Board of appeals.**

All sections in the respective codes pertaining to the Board of Appeals are hereby amended in their entirety to read as follows:

In order to hear and decide appeals or orders and determine the suitability of alternate materials and methods of construction and to provide for reasonable interpretations of the provisions of these Codes, there shall be and there is hereby created a Board of Appeals, composed of the Mayor and the City Council. The city clerk shall be the secretary to the Board. The Board may adopt reasonable rules and regulations for conducting its investigations and shall render all its decisions and findings on contested matters, in writing to the building official, with a duplicate copy thereof to any appellant or contestant affected by any such decision of findings, and may recommend to the City Council such new legislation, if any, as is consistent therewith.

The City Council may prescribe by resolution, to employ at the cost and expense of the City, such qualified individuals as the Board, in its discretion, may deem reasonably necessary in order to assist it in its investigations and in making its findings and decisions.

**SECTION 5.** This ordinance shall take effect 30 days after its publication.

Signed and approved this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
Bill Bogaard  
Mayor of the City of Pasadena

I HEREBY CERTIFY that the foregoing ordinance was adopted by the City Council of the City of Pasadena at its meeting held this \_\_\_ day of \_\_\_\_\_, 2013, by the following vote:

Ayes

Noes

Absent

Abstain

Date Published:

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Mark Jomsky, CMC  
City Clerk

Approved as to form:



Frank L. Rhemrev  
Assistant City Attorney