



**COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION**

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2019 California Building Code (CBC) Changes

SUMMARY

Most of the significant changes are modifications to existing requirements or additional requirements. Several of the modification omitted code language and referenced various standards. There were also clarifications to align the CBC with the CRC and ADA.

SIGNIFICANT CHANGES

<i>NEW -CHANGE</i>	<i>CBC SECTION/TABLE NUMBER</i>	<i>COMMENTARY</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1.10.1 1.10.5	OSHPD. OSHPD 1R has been added. Non-conforming hospital buildings that have been removed from acute care services. OSHPD. OSHPD 5 has been added. Acute psychiatric hospital building.
<input checked="" type="checkbox"/> <input type="checkbox"/>	107.2.5	Exterior balconies and elevated walking surfaces. Where balconies or other elevated walking surfaces are exposed to water from direct or blowing rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, the construction documents shall include details for all elements of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.
<input checked="" type="checkbox"/> <input type="checkbox"/>	110.3.6	Weather-exposed balcony and walking surface waterproofing. Where balconies or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.

<input checked="" type="checkbox"/> <input type="checkbox"/>	Definitions	<p>Exterior Elevated Elements. Elevated balconies, decks, porches, stairways, landings, walkways, including their supports and railings, extending beyond exterior walls of a building or structure, with a walking surface, and designed for human occupancy or use.</p> <p>Greenhouse. A structure or thermally isolated area of a building that maintains a specialized sunlit environment used for an essential to the cultivation, production or maintenance of plants.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	Definitions	<p>Open-Air Assembly Seating. Seating served by means of egress that is not subject to smoke accumulation within or under a structure and is open to the atmosphere.</p> <p>Smoke-Protected Assembly Seating. Seating served by means of egress that is not subject to smoke accumulation within or under a structure for a specified design time by means of passive design or mechanical ventilation.</p> <p>Umbrella Structure. A structure, enclosure or shelter with or without sidewalls or drops, constructed of fabric or pliable material supported by a central pole or poles.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	302.1	Occupancy classification. Occupied roofs shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard.
<input type="checkbox"/> <input checked="" type="checkbox"/>	303.4	Assembly Group A-3. Greenhouses for the conservation and exhibition of plants that provide public access.
<input type="checkbox"/> <input checked="" type="checkbox"/>	309.1	Mercantile Group M. Greenhouses with public access that maintain plants for display and sale.
<input type="checkbox"/> <input checked="" type="checkbox"/>	312.1.1	Greenhouses. Greenhouses not classified as another occupancy shall be classified as Group U
<input type="checkbox"/> <input checked="" type="checkbox"/>	308.54	Six or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having six or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy. <i>Where occupants are not capable of responding to an emergency situation without physical assistance from the staff shall be classified as a Group I-4.</i>
<input checked="" type="checkbox"/> <input type="checkbox"/>	310.3.2	Residential Group R-2.2 (CDCR Only) Residential occupancies operated by CDCR in a community located facility that provides housing and community-based program services for non-transient ambulatory participants in a non-licensed facility with 24/7 supervision.
<input type="checkbox"/> <input checked="" type="checkbox"/>	310.3 & 310.4	<p>Residential Group R-2 & Residential Group R-3. Congregate living facilities such as dormitories and similar transient uses with occupant load is 16 or more is R-2.</p> <p>Congregate living facilities such as dormitories and similar non-transient uses with occupant load is 16 or less is R-3.</p> <p>Congregate living facilities such as dormitories and similar transient uses with occupant load is 10 or less is R-3.</p>

<input type="checkbox"/> <input checked="" type="checkbox"/>	311.2	Moderate-hazard storage, Group S-1. Self-service storage (mini storage)
<input type="checkbox"/> <input checked="" type="checkbox"/>	312.1	Utility and Miscellaneous Group U. Communication equipment structures with a gross floor area of less than 1,500 square feet.
<input type="checkbox"/> <input checked="" type="checkbox"/>	403.2.1.1	Type of Construction. The following was changed. 2. In other than Group F-1, H-2, H-3, H-5, M, and S-1 occupancies, the fire-resistance rating of the building elements in Type IB construction shall be permitted to be reduced to the fire-resistance ratings in Type IIA.
<input type="checkbox"/> <input checked="" type="checkbox"/>	403.4.8.4	Emergency power loads. The following has been added. 7. Power and lighting for the fire command center required by Section 403.4.6
<input type="checkbox"/> <input checked="" type="checkbox"/>	405.8.2	Emergency power loads. Fire pumps has been added to the list.
<input type="checkbox"/> <input checked="" type="checkbox"/>	404.6	Enclosure of Atriums. The following has been added as an exception. 4. A fire barrier is not required between the atrium and the adjoining spaces where atrium is not required to be provided with a smoke control system.
<input type="checkbox"/> <input checked="" type="checkbox"/>	406.6.2	Ventilation. The following code has been changed from an exception under Enclosed parking garages into its own section for clarification. A mechanical ventilation system and exhaust system shall be provided in accordance with Chapters 4 and 5 of the CMC
<input type="checkbox"/> <input checked="" type="checkbox"/>	407.2.6	Nursing home cooking facilities. The following numbers have been added to the criteria of this section. 5. The space containing the domestic cooking facility shall be arranged so as not to obstruct access to the required exit. 7. Cooktops and ranges shall be protected in accordance with Section 904.13 8. A shut off for the fuel and electrical power supply to the cooking equipment shall be provided in a location that is accessible only to the staff. 9. A timer shall be provided that automatically deactivates the cooking appliance within a period of not more than 120 minutes. 10. A portable fire extinguisher shall be provided. Installation shall be located within a 30-foot distance of travel from each domestic cooking appliance.
<input checked="" type="checkbox"/> <input type="checkbox"/>	407.4.2.1	Two means of egress. Any sleeping room of more than 1,000 square feet shall have no fewer than two exit access doors from the sleeping room located in accordance with section 1007.1. any room, other than sleeping rooms, with an area of more than 2,500 square feet shall have no fewer than two exit access doors from the room located in accordance with 1007.1
<input type="checkbox"/> <input checked="" type="checkbox"/>	419.1	Live/Work Units. General. The following exception has been added. Exception: Live/work units complying with the requirements of section 419 shall be permitted to be constructed as one- and two-family dwellings or townhouses in accordance with the California Residential Code as applicable.
<input type="checkbox"/> <input checked="" type="checkbox"/>	419.3	Means of egress. The following exception has been added to this section. Exception: Residential areas of live/work units constructed in accordance with the CRC shall not be required to comply with chapter 10.

<input type="checkbox"/> <input checked="" type="checkbox"/>	419.6	Structural. The following exception has been added to this section. Exception: Residential areas of live/work units constructed in accordance with the CRC shall not be required to comply with chapter 10.
<input checked="" type="checkbox"/> <input type="checkbox"/>	420.9	Group R cooking facilities. In Group R occupancies, cooking appliances used for domestic cooking operations shall be in accordance with Section 917.2 of the CMC
<input checked="" type="checkbox"/> <input type="checkbox"/>	420.10 420.10.1 420.10.2	Group R-2 dormitory cooking facilities. Domestic cooking appliances for use by residents of Group R-2 college dormitories shall be in accordance with Section 420.10.1 and 420.10.2 Cooking appliances. Where located in Group R-2 college dormitories, domestic cooking appliances for use by residents shall be in compliance with all the items listed in this section. Cooking appliances in sleeping rooms. Cooktops, ranges and ovens shall not be installed nor used in sleeping rooms.
<input type="checkbox"/> <input checked="" type="checkbox"/>	420.13	Electric Vehicle (EV) charging for new construction. Group R-1 has been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	423.4.1 & 423.4.2	Required occupant capacity. This section lists the requirements for the occupant capacity of a storm shelter and the location with the maximum distance of travel from one exterior door to the next.
<input checked="" type="checkbox"/> <input type="checkbox"/>	427	Medical Gas Systems. Medical gases at health care related facilities intended for patient or veterinary care shall comply with sections 427.2 through 427.2.3 in addition to requirements of Chapter 53 of the California Fire Code.
<input checked="" type="checkbox"/> <input type="checkbox"/>	503.1.4	Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by table 504.4 for the story immediately below the roof. The area of the occupied roof shall not be included in the building area as regulated by section 506. Two exceptions provided.
<input checked="" type="checkbox"/> <input type="checkbox"/>	503.1.4.1	Enclosures over occupied roof areas. Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches above the surface of the occupied roof.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Tables 504.3, 504.4, 506.2	Footnote. h. New Group R occupancies are required to be protected by an automatic sprinkler system in accordance with Section 903.2.8. Accessory dwelling units as defined in Government Code Section 65852.2(i)(4) are not required to have fire sprinklers if they are not required for the primary residence.

<input type="checkbox"/> <input checked="" type="checkbox"/>	505.2.1	<p>Area limitation. One exception has been added.</p> <p>Exception</p> <p>3. The aggregate area of a mezzanine within a dwelling unit that is located in a building equipped throughout with an approved automatic sprinkler system in accordance with section 903.3.1.1 or 903.3.1.2 shall not be greater than one-half of the floor area of the room, provided:</p> <p>3.1. Except for enclosed closets and bathrooms, the mezzanine shall be open to the room in which such mezzanine is located.</p> <p>3.2. The opening to the room shall be unobstructed except for walls not more than 42 inches in height, columns and posts; and</p> <p>3.3. Exceptions to Section 505.2.3 shall not be permitted.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	505.2.1.1	<p>Aggregate area of mezzanines and equipment platforms. Where a room contains both a mezzanine and an equipment platform, the aggregate area of the two raised floor levels shall be not greater than two-thirds of the floor area of that room or space in which they are located. The area of the mezzanine shall not exceed the area determined according to section 505.2.1</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	507.3	<p>Sprinklered, one-story buildings. The following exception has been added.</p> <p>2.3 The sprinkler omission permitted for indoor participant sport areas of Group A-4 buildings is now not applicable to storage rooms, press boxes, concession areas and other ancillary spaces.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	508.4.1	<p>Occupancy classification. The most restrictive provisions of Chapter 9 that apply to the separate occupancies shall apply to the total non-fire-barrier separated occupancy areas. Occupancy separations that serve to define fire area limits established in Chapter 9 fore requiring a fire protection system shall also comply with Section 901.7</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	510.2	<p>Horizontal building separation allowance. The following has been added to the first condition.</p> <p>Where vertical offsets are provided as part of a horizontal assembly, the vertical offset and the structure supporting the vertical offset shall have a fire-resistance rating of not less than 3- hours.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 601	<p>Footnote b.</p> <p>All portions of the roof construction, including primary structural frame members such as girders and beams, are now exempted from fire-resistance requirements where every portion of the roof construction is at least 20 feet above any floor below.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	602.3 & 602.4	<p>Type III. Type III construction is that type of construction in which the exterior ... fire-retardant- treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies of a 2-hour rating or less.</p> <p>Type IV. Fire-retardant-treated wood framing and sheathing...shall be permitted within exterior wall assemblies not less than 6 inches in thickness with a 2-hour rating or less.</p>

<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 602	<p>Footnote.</p> <p>h. For a building containing only a Group U occupancy private garage or carport, the exterior wall shall not be required to have a fire resistance rating where the fire separation distance is 5 feet or greater or when equipped with an automatic sprinkler system in accordance with Section 903.3 the fire- resistance shall not e required where the fire separation distance is 3 feet or greater. i. For a Group R-3 building of Type II-B or Type V-B construction, the exterior wall shall not be required to have a fire-resistance rating where the fire separation distance is 5 feet or greater or when equipped with an automatic sprinkler system in accordance with section 903.3 the fire-resistance shall not be required where the fire separation distance is 3 feet or greater.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	603.1	<p>Allowable materials. Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3.</p> <p>1. Fire-retardant-treated wood shall be permitted in:</p> <p>1.4. Balconies, porches, decks and exterior stairways not used as required exits on buildings three stories or less above grade plane.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	704.4.1	<p>Light-frame construction. Studs, columns, and boundary elements that are integral elements in loadbearing walls of light-frame construction and are located entirely between the top and bottom plates or tracks shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the load-bearing wall.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	704.6.1	<p>Secondary attachments to structural members. Where primary and secondary structural steel members require fire protection, secondary steel attachments to those structural members shall be protected with the same fire resistive material and thickness as required for the structural member.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 705.2	<p>Minimum distance of projection. This table has been updated for fire separation distance.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	705.2.3.2	<p>Vents. Vents required by section 2304.12.2.6 in fire-rated exterior balconies or elevated walkway surfaces shall be designed where the voids created at the intersection of the exterior curtain wall and the balcony floor are sealed with an approved material or system to retard the interior spread of flame, hot gases and products of combustion.</p> <p>Rated assemblies shall comply with section 715.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	706.1.1	<p>Party walls. The following exception has been added. Fire walls are not required on lot lines dividing a building for ownership purposes where the aggregate height and area of the portions of the building located on both sides of the lot line do not exceed the maximum height and area requirements of this code. For the code official's review and approval, he or she shall be provided with copies of dedicated access easements and contractual agreements that permit the owners of portions of the building located on either side of the lot line access to the other side for purposes of maintaining fire and life safety systems necessary for the operation of the building.</p>

<input type="checkbox"/>	<input checked="" type="checkbox"/>	706.2	<p>Structural stability. The following exception has been added.</p> <p>Exception: In Seismic Design Categories D through F, where double fire walls are used in accordance with NFPA 221, floor and roof sheathing not exceeding ¾ inch thickness shall be permitted to be continuous through the wall assemblies of light frame construction.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	713.8.1	<p>Prohibited penetrations. The following exception has been added to this section.</p> <p>Exception. Membrane penetrations shall be permitted on the outside of shaft enclosures. Such penetrations shall be protected in accordance with Section 714.4.2</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	714.5.2	<p>Membrane penetrations. The following exception has been added to this section. Exception.</p> <p>8. Ceiling membrane penetrations by listed luminaires (light fixtures) or by luminaires protected with listed materials, which have been tested for use in fire resistance-rated assemblies and are installed in accordance with the instructions included in the listing.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	707A.3	<p>Exterior walls. Heavy timber is now, “sawn lumber”</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	708A.2.22	<p>Operable Skylights. Operable skylights shall be protected a non-combustible mesh screen where the dimensions of the openings in the screen shall not exceed 1/8 inch.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	708A.4	<p>Garage door perimeter gap weather stripping. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the methods listed in this section.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	803.11	<p>Laminated products factory produced with a wood substrate. Laminated products factory produced with a wood substrate shall comply with one of the two criteria listed in this section.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	803.12	<p>Facing or wood veneers intended to be applied on site over a wood substrate. Facing or veneers intended to be applied on site over a wood substrate shall comply with one of the two criteria listed in this section.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	806.3	<p>Occupancy-based requirements. Occupancy-based requirements for combustible decorative materials, other than decorative vegetation, not complying with section 806.4 shall comply with section 807.5.1 through 807.5.6 of the California Fire Code.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	902.1.1	<p>Access. Automatic sprinkler system risers, fire pumps and controllers shall be provided with ready access. Where located in a fire pump room or automatic sprinkler system riser rom, the door shall be permitted to be locked provided that the key is available at all times.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	902.1.2	<p>Marking on access doors. Access doors for automatic sprinkler system riser rooms and fire pump rooms shall be labeled with an approved sign. The lettering shall be in contrasting color to the background. Letters shall have a minimum height of 2 inches.</p>

<input checked="" type="checkbox"/> <input type="checkbox"/>	902.1.3	Environment. Automatic sprinkler system riser rooms and fire pump rooms shall be maintained at a temperature of no less than 40 degrees Fahrenheit. Heating units shall be permanently installed.
<input checked="" type="checkbox"/> <input type="checkbox"/>	902.1.4	Lighting. Permanently installed artificial illumination shall be provided in the automatic sprinkler system riser rooms and fire pump rooms.
<input checked="" type="checkbox"/> <input type="checkbox"/>	902.1.5.1	Spaces under grandstands or bleachers. Enclosed spaces under grandstands or bleachers shall be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1 where one of the two criteria listed applies.
<input type="checkbox"/> <input checked="" type="checkbox"/>	903.2.3	Group E. Number 3 has been added to this section. 3. The Group E fire area has an occupant load of 300 or more.
<input checked="" type="checkbox"/> <input type="checkbox"/>	903.3.1.2.3	Attics. Attic protection shall be provided as follows: 1. Attics that are used or intended for living purposes or storage shall be protected by automatic sprinklers. 2. Where fuel-fired equipment is installed in an un sprinklered attic, not fewer than one quick response intermediate temperature sprinkler shall be installed above the equipment. 3. In Type III, IV, and V when the roof is over 55 feet above the lowest level of required fire department vehicle access provide one of the criteria listed in 3.1 through 3.4 4. Group R-4, condition 2 occupancy attics not required by Item 1 to have sprinklers shall comply with one of the criteria listed in 4.1 through 4.5
<input checked="" type="checkbox"/> <input type="checkbox"/>	905.11	Locking standpipe outlet caps. The fire code official is authorized to require locking caps on the outlets on dry standpipes where the responding fire department carries key wrenches for the removal that are compatible with locking FDC connection caps.
<input type="checkbox"/> <input checked="" type="checkbox"/>	909.5.3.1	Group I-2, I-2.1, R-2.1, and ambulatory care facilities. The following has been added to this section. In Group I-2, where swinging doors are installed across a corridor, such doors shall be opposite swinging pairs.
<input checked="" type="checkbox"/> <input type="checkbox"/>	917.1	College and university campuses. Prior to construction of a new building requiring a fire alarm system on a multiple-building college or university campus having a cumulative building occupant load of 1,000 or more, a mass notification risk analysis shall be conducted in accordance with NFPA 72. Where the risk analysis determines a need for mass notification, an approved mass notification system shall be provided in accordance with the findings of the risk analysis.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1004.3	Multiple function occupant load. Where an area under consideration contains multiple functions having different occupant load factors, the design occupant load for such areas shall be based on the floor area of each function calculated independently.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 1004.1.2	Maximum floor area allowances per occupant. Business areas occupant load factor is now 150 gross, see section 1004.8.

<input checked="" type="checkbox"/> <input type="checkbox"/>	1004.6	Concentrated business use areas. The occupant load factor for concentrated business use shall be applied to telephone call centers, trading floors, electronic data processing centers and similar business use areas with a higher density of occupants than would normally be expected in a typical business occupancy environment. where approved by the code official, the occupant load for concentrated business use shall be the actual occupant load, but not less than one occupant per 50 square foot gross of occupiable floor space.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1006.2.1	Egress based on occupant load and common path of egress travel distance. The following exceptions have been added. 1. The number of exits from foyers, lobbies, vestibules or similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the capacity of the exits from such spaces shall be based on applicable cumulative occupant loads. 2. Room and care suites in Group I-2 and I-2.1 occupancies complying with Section 407.4
<input type="checkbox"/> <input checked="" type="checkbox"/>	1006.3	Egress from stories or occupied roofs. The following has been added to this section for clarification. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required number of exits or access to exits serving that story.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1106.3.1	1006.3.1 Adjacent story. The path of egress travel to an exit shall not pass through more than one adjacent story. Exception: The path of egress travel to an exit shall be permitted to pass through more than one adjacent story in any of the following: 1. <i>In Group R-1, R-2 or R-3... exit access stairways ..connecting four stories or less serving and contained within an individual dwelling unit or sleeping unit or live/work unit.</i> 2. <i>Exit access stairways serving and contained within Group R-3 Group R-4 facility.</i> 3. <i>Exit access stairways ...open parking garages that serve only the parking garage.</i> 4. <i>Exit access stairways and ramps serving open-air assembly seating complying with the exit access travel distance requirements of Section 1029.7.</i> 5. <i>Exit access stairways and ramps between the balcony, gallery</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1008.2.3	Exit discharge. Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way. The following exception has been added. Exception: Illumination shall not be required where the path of the exit discharge meets both of the following requirements. 1. The path of exit discharge is illuminated from the exit to a safe dispersal area complying with section 1028.5 2. A dispersal area shall be illuminated to a level not less than 1 foot-candle (11 lux) at the walking surface.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1009.3 1009.3.1 1009.3.2 1009.3.3	Stairways. The following sections have been broken up into their own code for clarification. Exit access stairways Stairway width. Area of refuge.

<input checked="" type="checkbox"/> <input type="checkbox"/>	1010.1.4.4	<p>Locking arrangements in educational occupancies. <i>In Group E & B educational occupancies, doors shall be lockable from within to keep intruders out. All the following conditions shall apply:</i></p> <p><i>1. The door shall be unlockable and openable from within. 2. The door shall be operable from outside by the use of a key or other approved means.</i></p> <p><i>3. Modification shall not affect panic hardware, door fire rating, etc.</i></p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1010.1.9.8	<p>Delayed egress. The following exception has been changed for clarification.</p> <p>Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving a Group A courtroom in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and approved automatic smoke or heat detection system installed in accordance with Section 907.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	1010.1.9.10	<p>Door hardware release of electrically locked egress doors. Door hardware release of electric locking systems shall be permitted on doors in the means of egress in any occupancy except Group H where installed and operated in accordance with items 1-6 listed in this section.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	1010.3.2	<p>Security access turnstiles. Security access turnstiles that inhibit travel in the direction of egress utilizing a physical barrier shall be permitted to be considered as a component of the means of egress, provided that all of the criteria listed in this section are met.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1023.3.1	<p>Extension. The following exception has been added</p> <p>3. Separation between an interior exit stairway and the exit passageway extension shall not be required when the interior exit stair and the exit passageway extension are pressurized in accordance with Section 909.20.5.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1027.6	<p>Exterior exit stairway and ramp protection. The following exception has been added.</p> <p>4. In Group R-3 occupancies not more than four stories in height, exterior exit stairways and ramps serving individual dwelling units are not required to be separated from the interior of the building where the exterior exit stairway or ramp discharges directly to grade.</p>

<input type="checkbox"/> <input checked="" type="checkbox"/>	1030.1	<p>Emergency escape and rescue. General. This section has been updated and exceptions have been added.</p> <p>Exceptions: 2. Group R-2.1 Occupancies, meeting the requirements for delayed egress in accordance with Section 1010.1.9.8 may have operable windows that are breakable in sleeping rooms permanently restricted to a maximum of 4-inch open position.</p> <p>6. Within R-2 and R-3, ...with NFPA 13, 13R, 13D, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following: 6.1. One means of egress and one emergency escape and rescue opening 6.2. Two means of egress. 6.3. In R-2.2 occupancies a certified fire escape is acceptable as a secondary means of egress for existing buildings for this section of the code.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	11B-206.2.19	<p>Pedestrian street crossing. Where walks or sidewalks are provided, a curb ramp, blended transition or a combination of curb ramps and blended transitions complying with Section 11B-406 shall connect the walks or sidewalks at each pedestrian street crossing. The curb ramp (excluding any flared sides) or blended transition shall be contained wholly within the width of the pedestrian street crossing served.</p> <p>Exception: Compliance with section 11B-206.2.19 shall not be required where pedestrian crossing is prohibited by the appropriate administrative authority.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	11B-608.5.1 & Figure 11B-608.5.1	<p>Transfer type shower compartments. In transfer type shower compartments, the controls, faucets, and shower spray unit shall be installed on the side wall opposite the seat 38 inches minimum and 48 inches maximum above the shower floor and shall be located on the control wall 15 inches maximum from the center line of the seat toward the shower opening.</p> <p>Transfer type shower compartment control location. A figure has been added as well</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	11B-608.7	<p>Thresholds. The following exception has been added to this section. Exception. A threshold 2 inches high maximum shall be permitted in transfer type shower compartments in existing facilities where provisions of a ½ inch high threshold would disturb the structural reinforcement of the floor slab.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	11B-813	<p>Adult changing facilities. This entire section is new to Chapter 11B. This is to provide the technical provisions for adult changing facilities. 11B-813 through 11B813.2.11</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1507.1.1	<p>Underlayment. 4 exceptions have been added to this section.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	Table 1507.1.1(1) (2) & (3)	<p>Underlayment Types, Underlayment Application, Underlayment Attachment. All three tables have been added.</p>

<input checked="" type="checkbox"/> <input type="checkbox"/>	1507.18	Building- integrated photovoltaic panels (BIPV) This entire section has been added. 1507.18.1 <i>Deck requirements: solid deck</i> 1507.18.2 <i>Deck slope: 2:12 or greater</i> 1507.18.3 <i>Underlayment</i> 1507.18.5 <i>Material standards: UL 1703</i> 1507.18.6 <i>Attachment: per manuf. installation</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1604.3.7	Framing supporting glass. This section has been added to 1604.3. <i>Limits to the deflection of framing which supports glazing has been added to Section 1604.3.</i> <ul style="list-style-type: none"> • 1/175 of the length of span of the framing member < 13'-6" • 1/240 of the length of span + 1/4" of the framing member > 13'-6"
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 1607.1	Minimum uniformly distributed live loads and minimum concentrated live loads. The table has updated Balconies and Decks uniform LL to be 1.5 times LL for area served, not to exceed 100.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1607.15.2	Fire walls. In order to meet the structural stability requirements of Section 706.2 where the structure on either side of the wall has collapsed, firewalls and their support shall be designed to withstand a minimum horizontal allowable stress load of 5 psf.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1704.6.1	Structural observations for structures. Structural observations shall be provided for those structures where one or more of the following conditions exist. <ol style="list-style-type: none"> 1. The structure is classified as Risk Category IV. 2. The structure is a high-rise building. 3. Such observation is required by the registered design professional responsible for the structural design. 4. Such observation is specifically required by the building official.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1705.5.2	Metal-plate connected wood trusses. The following language has been added to this section. Five-foot or taller wood trusses requiring permanent bracing now require a periodic special inspection to verify that the required bracing has been installed.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1811	Prestressed Rock and Soil Foundation Anchors [OSHDP 1R, 2, & 5] This entire section has been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1812	Earth Retaining Shoring [OSHDP 1R, 2, & 5] This entire section has been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1813	Vibro Stone Columns for Ground Improvement. [OSHDP 1R, 2, & 5] This entire section has been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	2104.2	Grouted masonry [OSHDP 1R, 2 & 5] This entire section has been added. It provides general conditions, and guidelines.
<input checked="" type="checkbox"/> <input type="checkbox"/>	2104.3	Aluminum equipment [OSHDP 1 R, 2 & 5] Grout shall not be handled nor pumped utilizing aluminum equipment unless it can be demonstrated with the materials and equipment to be used that there will be no delirious effect on the strength of the grout.

<input type="checkbox"/> <input checked="" type="checkbox"/>	2105	<p>Quality Assurance. Many sub sections have been added under this section.</p> <p>2105.2 Compressive strength, f'_m. [OSHPD 1R, 2 & 5]</p> <p>2105.3 Mortar and grout tests. [OSHPD 1R, 2 & 5]</p> <p>2105.4 Masonry core testing. [OSHPD 1R, 2 & 5]</p> <p>2105.5 Masonry prism method testing. [OSHPD 1R, 2 & 5]</p> <p>2105.6 Unit strength method testing. [OSHPD 1R, 2 & 5]</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	2211.1.1.2	<p>Seismic Design Categories D through F. In cold formed steel light frame construction assigned to Seismic Design Category D, E, or F, the seismic force-resisting system shall be designed and detailed in accordance with AISI S400.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 2304.11	<p>Minimum Dimensions of Heavy Timber Structural Members. This table has been updated.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	2603.7	<p>Foam plastic insulation in plenums as interior finish or interior trim. Where exposed to the airflow in plenums, foam plastic insulation in plenums used as interior wall or ceiling finish, or interior trim, shall exhibit a flame spread index of 25 (down from 75) or less, and a smoke-developed index of 50 or less (down from 450).</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	2701.1.2	<p>Fuel-line piping protection. Fuel lines supplying a generator set inside a building shall be separated from areas of the building</p> <ul style="list-style-type: none"> - <i>By an assembly that has a fire-resistance rating of not less than 2 hours.</i> - <i>By an assembly that has a fire-resistance rating of not less than 1 hour, if protected by NFPA 13.</i>



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2019 California Residential Code (CRC) Changes

SUMMARY

The following checklist includes the relevant changes in the 2019 CRC from the previous 2016 CRC.

SIGNIFICANT CHANGES

<i>NEW - CHANGE</i>	<i>CRC SECTION/TABLE NUMBER</i>	<i>COMMENTARY</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	1.1.3.1	Classification. Note. Live/work units complying with the requirements of CBC section 419 shall be classified as group R-2 occupancy and are permitted to be constructed as one-and two-family dwellings or townhouses.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R101.2	Scope. Three exceptions involving care facilities have been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R106.1.5	Exterior Balconies and Elevated Walking Surfaces. Balconies or other elevated walking surfaces exposed to water from direct or blowing rain, snow or irrigation shall include details for all elements of the impervious moisture barrier system.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R109.1.5.3	Weather-Exposed Balcony and Walking Surface Waterproofing. A balcony or elevated walking surface exposed to water from direct or blowing rain, snow or irrigation shall not be concealed until inspected and approved

<input checked="" type="checkbox"/> <input type="checkbox"/>	R202	Definitions added. Access (to). Approved Source. Building-Integrated Photovoltaic Roof Panel (BIPV Roof Panel) Carbon Monoxide Alarm. Change of Occupancy. Collapsible Soils. Compressible Soil. Crawl Space Expansive Soils. Impact Protective System. Live/Work Unit. Ready Access (to). Roof Coating. Solar Energy System. Solar Thermal Collector. Solar Thermal System. Vapor Diffusion Port.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R301.2.2.1.1	Alternate Determination of Seismic Design Category. If soil conditions are determined by the building official to be Site Class A, B, or D, the seismic design category and short-period design spectral response accelerations for a site shall be allowed to be determined in accordance with figure R301.2(3) or Section 1613.2 of CBC
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R301.2(1)	Climatic and Geographic Design Criteria. Manual J Design Criteria has been added.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R301.2.2.4	Masonry Construction. In Seismic Design Categories D ₀ , and D ₁ , shall comply with the requirements of Section R606.12.1. Seismic Design Category D ₂ shall comply with the requirements of Section R606.12.4
<input checked="" type="checkbox"/> <input type="checkbox"/>	R302.2.1	Double Walls. Each townhouse shall now be separated by two 1-hour fire-resistance- rated wall assemblies.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 302.1(1)	Exterior Walls. The minimum distance has been updated to 0, for fire-resistance rated walls.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R302.1(2)	Exterior walls-Dwelling and ADU's with Automatic Fire Sprinkler Protection. The walls and Projections minimum fire-resistance rating in the table has been updated.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R302.4.2	Membrane Penetrations. Exception 4 has been added for ceiling membrane penetrations.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R302.5.1	Opening Protection. For the 20-minute fire rated door it shall be equipped with self-closing <u>or automatic-closing</u> and self-latching device.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R302.7	Under-Stair Protection. "Enclosed space under stairs that is accessed by a door or access panel" has been added for clarification for under stair protection.

<input checked="" type="checkbox"/> <input type="checkbox"/>	R308.4.4.1	Structural Glass Baluster Panels. Guards with structural glass baluster panels shall be installed with an attached top rail or handrail. The rail shall be supported by no less than three glass baluster panels or supported to remain in place should one glass baluster panel fail. Exception. Top rail is not required where glass baluster panels are laminated glass with two or more plies of equal thickness
<input type="checkbox"/> <input checked="" type="checkbox"/>	R310.1	Emergency Escape and Rescue Opening Required. Exception has been added. Where the dwelling or townhouse is equipped with an automatic sprinkler system, sleeping rooms in basements shall not be required to have emergency escape and rescue openings.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R310.3.2R310.3.2.2	Area Wells. Area wells shall have a width of no less than 36 inches. The area well shall be sized to allow the emergency escape and rescue door to be fully opened.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R310.7.3	Vertical Rise. A flight of stairs shall not have a vertical rise larger than 151 inches between floor levels or landings.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R311.7.8.2	Handrail Projection. Handrails shall not project more than 4 ½ inches on either side of the stairway. Exception. Where nosing of landings, floors r passing flights project into the stairway reducing the clearance at passing handrails, handrails shall project not more than 6 ½ inches into the stairway, provided the stair width and handrail clearance are not reduced to less than required.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R311.7.11	Alternating Tread Devices. Exception has been added. Alternating tread devices are allowed to be used as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross square feet or less where such devices do not provide exclusive access to a kitchen or bathroom.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R311.7.12	Ships ladders. Exception has been added. Ship ladders are allowed as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross square feet or less that does not provide exclusive access to a kitchen or bathroom.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R315.2.2	Alterations, Repairs and Additions. Exceptions have been added.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R315.5	Interconnectivity. Physical interconnection of alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R316.2.1	Labeling of Polystyrene Foam Insulation Without Flame Retardants. In addition of requirements of 2603.2 of the CBC, polystyrene foam insulation boards manufactured with no flame retardants added shall be labeled in accordance with this section.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R316.3	Surface Burning Characteristics. Exception added. Polystyrene foam insulation boards with a maximum thickness of 2 inches where installed below a minimum 3.5-inch-thick concrete slab on grade.

<input type="checkbox"/> <input checked="" type="checkbox"/>	R317.1	Location Required. Location number 6 has the following addition. The impervious moisture barrier system protecting the structure supporting floors shall provide positive drainage of water that infiltrates the moisture permeable floor topping.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R317.1.6	Ventilation Required Beneath Balcony or Elevated Walking Surfaces. Enclosed framing in exterior balconies and elevated walking surfaces that are exposed to rain, snow or drainage from irrigation shall be provided with openings that provide a net-free cross-ventilation area not less than 1/150 of the area of each separate space.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R322.3.4	Concrete Slabs. Concrete slabs used for parking, floors of enclosures, landings, decks, walkways, patios and similar that are located beneath structures, or slabs that are located such that if undermined or displaced during base flood conditions could cause structural damage to the building foundation, shall be designed and constructed in accordance with this section.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R322.3.7	Stairways and Ramps. Criteria for stairway and ramps provided in this section.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R322.3.8	Decks and Porches. Attached decks and porches shall meet the elevation requirements and shall either meet the foundation requirements of this section or shall be cantilevered from the knee braced to the building structure.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R324.4.1.1	Roof Load. Portions of roof structures not covered with PV panel systems shall be designed for dead loads and roof loads in accordance with Section R301.4 and R301.6. Portions of roof structures covered with pv panel systems shall be designed for the cases listed in this section.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R324.4.2	Fire Classification. Rooftop-mounted pv panel systems shall have the same fire classification as roof assembly required in R902.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R324.4.3	Roof Penetrations. Roof penetrations shall be flashed and sealed in accordance with Chapter 9.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R324.6- R324.6.2.2	Roof Access and Pathways. Location of the panels on the roof has been updated for pathways, setback and emergency escape and rescues.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R325.3	Area Limitation. Exceptions have been added. The aggregate area within a dwelling unit equipped with a fire sprinkler system shall not be greater than one-half of the floor area of the room, provided that the mezzanine meets the requirements listed.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R325.6	Habitable Attic. A habitable attic shall not be considered a story where complying with the four requirements listed in this section.

<input checked="" type="checkbox"/> <input type="checkbox"/>	R327 R327.2 R327.3 R327.4 R327.5 R327.6	<p>Stationary Storage Battery Systems. Stationary storage battery systems shall comply with the provisions in this section.</p> <p>Equipment Listings. Stationary storage battery systems shall be listed and labeled for residential use in accordance with UL 9540.</p> <p>Installation. Stationary battery systems shall be installed in accordance with the manufacturer's instructions and their listing. They shall not be installed within habitable space.</p> <p>Electrical Installation. Stationary storage battery systems shall be installed in accordance with the CEC Inverters shall be listed and labeled in accordance with UL 01741 or provided as part of the UL 9540 listing.</p> <p>Ventilation. Indoor installations that produce hydrogen or other flammable gases, shall be provided with ventilation in accordance with CMC</p> <p>Protection from Impact. Systems that are installed in a location subject to vehicle damage shall be protect by approved barriers.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	R337.8.4	<p>Garage Door Perimeter Gap. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and openings at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by the methods listed in this section.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R408.3	<p>Unvented Crawl Space. Number 2.4 has been added. Dehumidification sized to provide 70 pints of moisture removal per day for every 1,000 square feet of crawl space floor area.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R505.2.6.2	<p>Web Hole Reinforcing. Part of this code has been reworded for clarification. The settle reinforcing shall not be thinner than the thickness of the receiving member and shall extend not less than 1 inch beyond all edges of the hole.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R507	<p>Decks. Sections have been moved and added for clarification in this section.</p> <p>Materials used for decks shall comply with this section. Details are now provided for materials and engineered wood products, Fasteners and Connectors, Flashing, Footings with minimum size and depth, and Deck beams.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	Table R507.2.3	<p>Fastener and Connectors Specifications for Decks. New table with footnotes.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Figure R507.7.1	<p>Deck Beam to Deck Post. This figure has been separated into two figures and updated to show Beam over Post Cap and Beam over Post.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	Figure R507.5.1(2)	<p>Notched Post-to Beam-Connection. This figure was part of Deck Beam to Deck Post. It now provides more examples.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Figure R507.6	<p>Typical Deck Joist Spans. This figure has been updated to provide more examples. There are images for Cantilevered Joists with Dropped Beam, Joists with Flush Beam, Joists on Free-Standing Deck with Dropped Beam, and joists on Free-Standing Deck with Flush Beam.</p>

<input type="checkbox"/> <input checked="" type="checkbox"/>	Figure R507.5	Deck Joist Spans for Common Lumber. This table has been updated.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R602.11	Structural Insulated Panels. Structural insulated panels shall be manufactured and identified in accordance with ANSI/APA PRS 610.1
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.3(1)	Fastening Schedule. This table has been updated.
<input checked="" type="checkbox"/> <input type="checkbox"/>	Table 602.3(6)	Alternate Wood Bearing Wall Stud Size, Height and Spacing. New Table provided with 11 foot and 12-foot stud heights.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 602.7	Girder Spans and header Spans for Bearing Walls. The two tables have been updated and now provide images in girders and headers supporting column.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.10.3(1)	Bracing Requirements Based on Wind Speed. Foot note, c has been updated. Where three or more parallel braced wall lines are present and the distance between adjacent braced wall lines are different, the average dimension shall be permitted to be used for braced wall line spacing.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.10.3(1)	Wind Adjustment Factors to the Required Length of Wall Bracing. Item number 8 has been added for Horizontal Blocking. Foot note, d has also been added. The same adjustment factor shall be applied to all braced wall lines on all floors of the structure, based on the worst- case exposure category.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.10.3(4)	Seismic Adjustment Factors to the Required Length of Wall Bracing. Item numbers 8 and 10 have been added for Walls with stone or masonry veneer, detached one- and two-family dwellings in SDC D ₀ -D ₂ ^{df} , and Horizontal Blocking.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.10.4	Bracing Methods. This table has been updated.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R602.10.5	Minimum Length of Braced Wall Panels. Table has been updated.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R603.3.1.1(1)	Gable End wall to Floor Connection Requirements. Table has been updated with new Exposure Category numbers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R603.3.1.1(2)	Gable End wall Bottom Track to Foundation Connection Requirements. Table has been updated with new Exposure Category numbers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R603.3.2 (2)-(16)	24-Foot-Wide Building Supporting Roof and Ceiling only. Table has been updated with new Exposure Category numbers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R603.8	Head and Sill Track Span. Table has been updated with new Exposure Category numbers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R603.9.4.1	Ultimate design wind speeds greater than 130mph. Where ultimate design wind speed exceeds 130 miles per hour, Exposure Category C walls shall be provided.

<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R603.9.2(1)	Minimum Percentage of Full-Height Structural Sheathing on Exterior Walls. Table has been updated with new Exposure Category numbers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R609.2	Performance. For exterior windows and doors tested in accordance with Sections R609.3 and R609.5, required design wind pressures determined from ASCE 7 using the ultimate strength design (USD) are permitted to be multiplied by 0.6
<input checked="" type="checkbox"/> <input type="checkbox"/>	R609.6.2	Impact protective systems- testing and labeling. Requirements for Impact protective system testing and labeling are provided in this new section.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Figure R610.5 (1) Figure R610.5.2	All of the figures have been updated with new details.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Figure R610.8	Typical Sip Wall Panel-to Panel connection Details. Figure has been updated. Continuous sealant has been added to detail.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R702.1(3)	Cement Plaster Proportions, Part by Volume. Hydraulic Cement Type GU, HE, MS, HS or MH has been added to materials in table
<input checked="" type="checkbox"/> <input type="checkbox"/>	R702.3.1.1	Adhesives. This code has been added under Materials for Gypsum Board and Gypsum panel products. Expandable foam adhesives for the installation of gypsum board and gypsum panel products shall conform to ASTM C6464. Other adhesives for the installation of gypsum board and gypsum panel products shall conform to ASTM C557. Supports and fasteners used to attach gypsum board and gypsum panel products shall comply with Table R702.3.5 or other approved method.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R703.3.1	Soffit Installation. Soffits shall comply with Section R703.3.1.1, Section R703.3.1.2 or the manufacturer's installation instructions.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R703.3.1.1	Wood Structural Panel Soffit. The minimum nominal thickness for wood structural panel soffits shall be 3/8 inch and shall be fastened to framing or nailing strips with 2 inch by 0.099-inch nails. Fasteners shall be in spaced not less than 6 inches on center at panel edges and 12 inches on center at intermediate supports.,
<input checked="" type="checkbox"/> <input type="checkbox"/>	R703.3.1.2	Vinyl Soffit Panels. Soffit panels shall be fastened at fascia and wall needs and to intermediate nailing strips as necessary to ensure that there is no unsupported span greater than 16 inches or as specified by the manufacturer's instructions.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R703.7.1	Lath. The following exception has been added. Lath is not required over masonry, cast-in-place concrete, precast concrete or stone substrates prepared in accordance with ASTM C1063.

<input type="checkbox"/> <input checked="" type="checkbox"/>	R703.7.2	<p>Plaster. The following has been added to this code. Plastering with cement plaster shall be in accordance with ASTM C926. Cement materials shall be accordance with one of the following:</p> <ol style="list-style-type: none"> 1. Masonry cement conforming to ASTM C91 Type M, S or N 2. Portland cement conforming to ASTM C150 Type I, II, or III 3. Blended hydraulic cement conforming to AASTM C595 Type IP, IS, IL, or IT 4. Hydraulic cement conforming to ASTM C1157 Type GU, HE, MS, HS, or MH 5. Plastic (stucco) cement conforming to ASTM C1328.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R703.11.2	<p>Installation Over Foam Plastic Sheathing. Where Vinyl siding or insulated vinyl siding is installed over foam plastic sheathing, the vinyl siding shall comply with R703.11 and shall have a design wind pressure resistance in accordance with Table R703.11.2. Exceptions 2 and 3 have been added to this section.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.1.5.4	<p>Labeling. In addition to the labels required by Section 802.1.1 for sawn lumber and Section 803.2.1 for wood structural panels, each piece of fire-retardant treated lumber and wood structural panel shall be labeled.</p>
<input checked="" type="checkbox"/> <input type="checkbox"/>	R802.1.8	<p>Prefabricated wood I-Joists. The following has been added to Chapter 8. Structural capacities and design provisions for prefabricated wood I-joists shall be established and monitored in accordance with ASTM D5055.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.4.3	<p>Hips and Valleys. A new section for hip and valleys has been added for clarification. Hip and valley rafters shall be no less than 2 inches nominal in thickness and not less in depth and the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.4.4	<p>Rafter Supports. Where roof pitch is less than 3:12 (25 percent slope), structural members that support rafters, such as ridges, hips and valleys, shall be designed as beams, and bearing shall be provided for rafters in accordance with Section R802.6</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.4.6	<p>Collar Ties. A section for collar ties has been added for clarification. Where collar ties are used to connect opposing rafters, they shall be located in the upper third of the attic space and fastened in accordance with Table R602.3(1). Collar ties shall not be less than 1 inch by 4 inches nominal, spaced not more than 4 feet on center. Ridge straps in accordance with Table R602.3(1) shall be permitted to replace collar ties.</p>
<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.5.2.2	<p>Rafter Ties. A section for rafter ties has been added for clarification. Wood rafter ties shall be not less than 2 inches by 4 inches installed in accordance with Table R802.5.2 at each rafter. Other approved rafter tie methods shall be permitted.</p>

<input type="checkbox"/> <input checked="" type="checkbox"/>	R802.2.3	Installation. Wood structural panel roof sheathing in accordance with Table R503.2.1.1(1) shall not cantilever more than 9 inches beyond the gable end wall unless supported by gable overhang framing.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R804.3.1.1 (1) & (2)	Ceiling Joist Spans. Both tables have been updated.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R804.3.2.1 (1)	Roof Rafter Spans. The table has been updated with new allowable spans measured horizontally.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R804.3.2.1(2)	Ultimate Design Wind Speed to Equivalent Snow Load. The wind speed and exposure column has been updated.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R804.3.7.1	Required Lengths for Ceiling Diaphragms at Gable End walls Gypsum Board Sheathed, Ceiling Height = 8 feet. Ultimate design wind speed has been updated
<input type="checkbox"/> <input checked="" type="checkbox"/>	R806.1	Ventilation. Required ventilation openings shall open directly to the outside air and shall be protected to prevent the entry of birds, rodents, snakes and other similar creatures.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R806.5 5.2	Unvented attic and unvented enclosed rafter assemblies. A new section has been added at 5.2 for Climate Zones 3-15, air-permeable insulation installed in unvented attics. 5.2.1 – 5.2.10 list the requirements.
<input type="checkbox"/> <input checked="" type="checkbox"/>	R905.1.1	Underlayment. One exception has been added. As an alternative, two layers of underlayment complying with ASTM D226 Type II or ASTM D4869 Type III or Type IV shall be permitted to be installed as stated in 3.1-3.4 listed under this exception.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R905.1.1(1)	Underlayment Types. Table has been updated. Photovoltaic shingles has been added.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table R905.1.1(2)	Underlayment Application. Table has been updated. Underlayment for photovoltaic shingles has been added.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.11.2.1	Base Sheet. A base sheet that complies with the requirements of Section 1507.11.2 of the California Building Code, ASTM D1970, or ASTM D4601 shall be permitted to be used with a modified bitumen cap sheet.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17	Building-integrated Photovoltaic (BIPV) roof panels applied directly to the roof deck. The installation of BIPV roof panels shall comply with the provisions of this section, Section R324 and NFPA 70.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.1	Deck Requirements. BIPV roof panels shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.2	Deck slope. BIPV roof panels shall be used only on roof slopes of two units vertical in 12 units horizontal (17-percent slope) or greater.

<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.3	Underlayment. Underlayment shall comply with Section 905.1.1
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.3.1	Ice Barrier. Where required, an ice barrier shall comply with section R905.12
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.4	Ice Barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water, as designated in Table R301.2(1), an ice barrier that consists of not less than two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches inside the exterior wall line of the building. Exception: Detached accessory structures that do not contain conditioned floor area.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.5	Material standards. BIPV roof panels shall be listed and labeled in accordance with UL 1703.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.6	Attachment. BIPV roof panels shall be attached in accordance with the manufacturer's installation instructions.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R905.17.7	Wind resistance. BIPV roof panels shall be tested in accordance with UL 1897. BIPV roof panel packaging shall bear a label to indicate compliance with UL 1897.
<input checked="" type="checkbox"/> <input type="checkbox"/>	R1005.8	Insulation shield. Where factory-build chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to the combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.
<input checked="" type="checkbox"/> <input type="checkbox"/>	Appendix Q	<p>Tiny Houses. Appendix Q has been added on tiny house requirements. Below are some basic requirements that are listed in this section.</p> <p>AQ101. General. Appendix Q shall be applicable to tiny houses used as single dwelling units.</p> <p>AQ103.1 Minimum ceiling height. Habitable space and hallways in tiny houses shall have a ceiling height of not less than 6 feet 8 inches. Bathrooms, toilet rooms, and kitchens shall have a ceiling height of not less than 6 feet 4 inches. Obstructions shall not extend below these minimum ceiling heights.</p>

		AQ104 Lofts. Minimum loft areas used as sleeping or living space shall be not less than 35 square feet, and not less than 5 feet in any horizontal direction.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Appendix R	Light Straw-Clay Construction. Figures of walls and tables for mixtures have been added to clarify the requirements of the light straw-clay construction.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Appendix S	<p>Strawbale Construction. There are many new figures provided that show details on the different components of the wall and connections.</p> <p>Figures provided</p> <ul style="list-style-type: none"> - Typical strawbale wall systems - Bale orientations - Typical base of plastered strawbale wall on concrete slab and footing - Typical base of plastered strawbale wall over raised floor - Typical top of loadbearing strawbale wall - Typical top of post-and beam wall with plastered strawbale infill
<input checked="" type="checkbox"/> <input type="checkbox"/>	Appendix T T103.5	Shading. The solar-ready zone shall be set back from any existing or new, permanently affixed object on the building or site that is located south, east or west of the solar zone a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include by are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees and roof planting.
<input checked="" type="checkbox"/> <input type="checkbox"/>	Appendix T T103.6	Capped roof penetration sleeve. A capped roof penetration sleeve shall be provided adjacent to a solar-ready zone located on a roof slope of not greater than 1:12, or 8 percent slope. The capped roof penetration sleeve shall be sized to accommodate the future photovoltaic system conduit but shall have an inside diameter of not less than 1 ¼ inches.



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2019 California Mechanical Code (CMC) Changes

SUMMARY

Below show all the significant changes that were made to the 2019 California Mechanical Code. A few requirements have been added.

Additionally, several code sections have been reorganized, meaning the previous requirements have been included in other or new sections. A 'Section Relocation' Table has been provided on pages xviii-xxi.

SIGNIFICANT CHANGES

<i>NEW - CHANGE</i>	<i>CMC SECTION/TABLE NUMBER</i>	<i>COMMENTARY</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	303.10	Appliances and their vent connectors shall be installed with clearances from combustible material, so their operation does not create a hazard.
<input type="checkbox"/> <input checked="" type="checkbox"/>	303.10.1	Clearance Reduction added the following sections; Type I Hood Exhaust System, Product, Conveying Ducts, Solid Fuel Burning Appliances
<input checked="" type="checkbox"/> <input type="checkbox"/>	303.13	Pit Location. Where excavation is necessary to install an appliance, it shall extend to 6 inches below and 12 inches on all sides of appliance.
<input type="checkbox"/> <input checked="" type="checkbox"/>	404.3.2	Secondary-Recirculation System: For Secondary recirculation systems where the supply air or portion to each vent zone is recirculated air (air that has not been directly mixed with outdoor air)
<input checked="" type="checkbox"/> <input type="checkbox"/>	504.4.2.3	Exhaust Duct Power Ventilators. Dryer exhaust duct power ventilators for single residential dryers shall comply with UL 705
<input checked="" type="checkbox"/> <input type="checkbox"/>	505.3.2 & 505.3.3	Ovens and Furnaces. & Deflagration Higher concentrations shall be permitted for ovens and furnaces designed and protected in accordance with NFPA 68.

<input checked="" type="checkbox"/> <input type="checkbox"/>	505.4	Air-Moving Devices shall be sized to establish the velocity required to capture, control, and convey materials through the exhaust system.
<input type="checkbox"/> <input checked="" type="checkbox"/>	505.5	Generating Flames, Sparks, or Hot Materials. Shall not be manifolded into an exhaust system that air conveys flammable or combustible.
<input type="checkbox"/> <input checked="" type="checkbox"/>	505.6	Fire dampers. Shall be permitted to be installed in exhaust system in accordance with this section.
<input checked="" type="checkbox"/> <input type="checkbox"/>	505.7	Fire Detection and Alarm System Fire detection and alarm systems shall not be interlocked to shut down air-moving devices. Automatic Extinguishing System. Where shutdown is necessary for the effective operation of extinguishing system, it shall interlock systems to shut down air-moving devices. Shut Down Permitted. Where an acceptable risk analysis shows the risk of damage from the fire would be higher with air-moving, it shall be permitted to interlock fire detection and alarm systems.
<input type="checkbox"/> <input checked="" type="checkbox"/>	505.7.1	
	505.7.2	
<input type="checkbox"/> <input checked="" type="checkbox"/>	506.10	Duct clearances has been updated. Sections 506.10 now has sub sections of 506.10.1-506.10.5 for clarifications.
<input checked="" type="checkbox"/> <input type="checkbox"/>	519.6	Makeup air shall be provided in accordance with Section 511.3
<input type="checkbox"/> <input checked="" type="checkbox"/>	601.2	Sizing Requirements. Ducts shall be in accordance with ACCA manual D listed in Table 1701.1
<input checked="" type="checkbox"/> <input type="checkbox"/>	603.13	Air Dispersion System shall be completely in exposed locations in duct systems under positive pressure, and not pass through or penetrate fire-resistant construction.
<input checked="" type="checkbox"/> <input type="checkbox"/>	802.2.8	Incinerators commercial incinerators shall be vented in accordance with NFPA 82.
<input type="checkbox"/> <input checked="" type="checkbox"/>	802.6	Gas vents the installation of gas vents shall meet the requirements listed in this section.
<input type="checkbox"/> <input checked="" type="checkbox"/>	802.6.2.2	Vent offsets. Type B and L vents shall extend in a generally vertical direction with offsets not exceeding 45 degrees except that a vent system having not more than one <i>60-degree</i> offset shall be permitted. Any angle greater than 45 degrees from the vertical is considered horizontal.
<input checked="" type="checkbox"/> <input type="checkbox"/>	803.2.6	Elbows in Connectors section shows the criteria for elbows in connectors.
<input checked="" type="checkbox"/> <input type="checkbox"/>	902.7	Use of Air or Oxygen Under Pressure. Where air or oxygen under pressure is used in connection with gas supply, effective means such as back pressure regulator and relief valve shall be provided to prevent air or oxygen from passing back through piping.
<input checked="" type="checkbox"/> <input type="checkbox"/>	902.15	Gas appliance pressure regulators. Where the gas supply pressure is higher than that at which the appliance is designed to operate or varies beyond the design pressure limits of the appliance, a gas appliance pressure regulator shall be installed.
<input type="checkbox"/> <input checked="" type="checkbox"/>	918.5	Combustible Material Adjacent to Cooking. Listed and unlisted food service ranges shall be installed to provide clearance to combustible material of not less than 18 inches horizontally for a distance of up to 2 feet above the surface.

<input checked="" type="checkbox"/> <input type="checkbox"/>	1002.5	Dual Purpose Water Heater. Water heaters utilized for combined space- and water heating applications shall be listed or labeled in accordance with the standards referenced in Table 1203.2
<input checked="" type="checkbox"/> <input type="checkbox"/>	1102.2	Ammonia Refrigeration Systems. Refrigeration systems using ammonia as refrigerant shall comply with IAR 2, IAR3, IAR4, and IAR5 and shall not be required to comply with chapter 11.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1103.1	Classification of Refrigerants. Refrigerants shall be classified in accordance with Table 1102.3 or ASHRAE 34.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1103.1.1	Safety Group. Table 1102.3 classifies refrigerants by toxicity and flammability and assigns safety groups using combinations of toxicity class and flammability class. Each refrigerant is assigned into not more than one group.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1106.2-1106.2.5.2	Refrigeration Machinery Room, General Requirements.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1112.5	Hydrostatic Expansion. Pressure rise resulting from hydrostatic expansion due to temperature rise of liquid refrigerant trapped in or between closed valves.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1202.3	Compatibility. Fluids used in hydronic systems shall be compatible with all components that will contact the fluid.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1205.2	Pressure Testing. Exception has been added.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1209.0	Expansion Tanks. This section has been broken down into General, installation, open-type expansion tanks, closed- type tanks, and sizing.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 1210.1	Materials for Hydronic System Piping, Tubing and Fittings. This table has been updated with new materials.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1211.3	CPVC/AL/CPVC Plastic Pipe and Joints shall be installed in accordance with one of the methods listed in this section.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1214.6	Air-Removal Device. Exception has been added. Drain back type solar thermal systems shall not require an air-removal device.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1214.7	Air-Separation Device. To assist with removal of entrained air, an air-separation device shall be installed in hydronic system.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1217.2	Radiant Under-Floor Heating. 85°F in general occupied applications. 90°F in bathrooms, foyers, distribution areas. 88°F in industrial spaces 93°F in radiant panel perimeter areas.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1217.3	Radiant Cooling System. This system shall be designed to minimize the potential for condensation. The water temperature shall not be less than 3°F above the anticipated space dewpoint temperature.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1217.5.3	Joint systems and Subfloors. An airspace of not less than 1 inch and not more than 2 shall be maintained between the top of the insulation and the underside of the floor unless a conductive plate is installed.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1308.5.10	Flange Specification. The following sub sections have been added: steel flanges, non-ferrous flanges, ductile iron flanges, and dissimilar flange connections.

<input type="checkbox"/> <input checked="" type="checkbox"/>	1308.5.11	Flange Gaskets. The following sub sections have been added: flange gasket materials, metallic flange gaskets, nonmetallic flange gaskets, full-face flange gasket and separated flanges.
<input checked="" type="checkbox"/> <input type="checkbox"/>	1308.8	Overpressure Protection. The following sections have been added for over pressure protection: pressure limitation requirements, overpressure protection required, overpressure protection devices, detection of failure, and flow capacity
<input type="checkbox"/> <input checked="" type="checkbox"/>	1310.1.3	Protection Against Corrosion. This section has been updated with subsections zinc coating, underground piping criteria, cathodic protection system criteria, sacrificial anodes, system failing tests, documentation, dissimilar metals, and steel risers.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1311.2	Bonding of CSST Gas Piping. The following sub sections have been added: bonding jumper connection, bonding jumper size, bonding jumper length, bonding connections, and devices used for bonding.
<input type="checkbox"/> <input checked="" type="checkbox"/>	1315.6	Variable Gas Pressures. The following has been added for clarification. Where the supply gas pressure exceeds 5 psi for natural gas and 10 psi for undiluted propane or is less than 6 inches of water column...



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2019 California Electrical Code (CEC) Changes

SUMMARY

Below are the significant changes to the 2019 California Electrical Code. A few requirements have been added. The biggest changes in this cycle are in the Photovoltaic systems. Article 690 has changed and 691 has been added.

SIGNIFICANT CHANGES

NEW- CHANGE	CEC SECTION/TABLE NUMBER	COMMENTARY
<input type="checkbox"/> <input checked="" type="checkbox"/>	100	Building exception added.
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.3(c)	Listing. Product testing, evaluation, and listing requirements.
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.21(A)(2)	Reconditioned equipment marking
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.26(A)(6)	Limited access above suspended ceilings.
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.26(A)(5)	Separation from high-voltage equipment. Where switches, cutouts, or other equipment operating at 1000 volts or less.
<input checked="" type="checkbox"/> <input type="checkbox"/>	110.41	Pre-energization and operating tests & test reports.
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.8(E)	GFCI lighting outlet in crawl space.
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.11(C)(4)	At least one 120volt, 20-amp garage branch circuits.
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.71	Meeting rooms in hotels less than 1000 square feet, shall have outlets, 15- or 20-amp in accordance with 210.71(B)
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.30(A)(4)	Building or structure grounding electrode system
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.52(A)(2)	Metal in-ground support structure(s)
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.122(F)(1)	Conductor installations in raceways, auxiliary gutters, or cable trays
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.94	Other means for intersystem bonding termination device.
<input type="checkbox"/> <input checked="" type="checkbox"/>	314.27(2)(E)	Separable attachment fittings.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	358.10(B) & (C)	Galvanized steel and stainless steel EMT, elbows, and fittings. Supplementary protection of aluminum EMT, and cinder fill requirements.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	406.12	Tamper resistant receptacles location list expanded.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	422.5	GFCI protection for appliances list expanded.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Article 425	Fixed resistance and electrode industrial process heating equipment. Applies to food processing facilities and factories.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	445.13(B)	Overcurrent protection provided.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	445.18(A),(B)& (C)	Disconnecting means, shutdown of prime mover, and generators installed in parallel.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	445.20(A) & (B)	Unbonded & bonded neutral generators.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	511.3(C)& (D)	Commercial garages, major and minor repairs. Table 511.3(C) & (D) added.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Article 690	Solar photovoltaic (PV) systems has new sections and extensive changes throughout the whole article.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Article 691	Large-scale photovoltaic electric power production facility. PV electric power production facilities with a generating capacity of no less than 5000 kW.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	700.25	Branch circuit emergency lighting transfer switch.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Article 706	Energy storage systems operating over 50 volts ac or 60 volts dc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Article 710	Electric power production sources operating in standalone mode.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Article 712	Direct current microgrids.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	725.144	Transmission of power and data for class 2 and 3 circuits that transmit power and data.



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2019 California Plumbing Code (CPC) Changes

SUMMARY

Below show all the significant changes that were made to the 2019 California Plumbing Code. A few requirements have been added.

Additionally, several code sections have been reorganized, meaning the previous requirements have been included in other or new sections. A 'Section Relocation' Table has been provided on pages xix-xxi.

SIGNIFICANT CHANGES

NEW - CHANGE	CPC SECTION/TABLE NUMBER	COMMENTARY
<input type="checkbox"/> <input checked="" type="checkbox"/>	1.10.1 & 1.10.5	OSHDP 1R. This is an addition to OSHDP 1. This is for Non-conforming hospital buildings that have been removed from acute care services. OSHDP 5. A second addition is OSHDP 5 for Acute psychiatric hospital buildings.
<input type="checkbox"/> <input checked="" type="checkbox"/>	Definitions	The following definitions have been updated: Category 1, 2, 3, Combustible Material, Critical Care Area, Medical Air, Patient Care Space for Category 1, 2, 3, and 4,
<input checked="" type="checkbox"/> <input type="checkbox"/>	Definitions	The following definitions have been added: Joint Press Connect, Minimal Sedation (Anxiolysis), Standard Cubic Feet per Minute (SCFM), and Toilet Facility
<input type="checkbox"/> <input checked="" type="checkbox"/>	Table 313.3	Hangers and Supports. Table has been updated.
<input checked="" type="checkbox"/> <input type="checkbox"/>	322.0	Psychiatric Services. Projects associated with provision of psychiatric services, special design considerations with fixtures shall be considered to prevent injury.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	402.4	Wall-Hung Fixtures. Floor-affixed supports for off- the floor plumbing fixtures for public use shall comply with ASME A112.6.1M. Framing-affixed supports for off-the floor water closets with concealed tanks shall comply with ASME A112.6.2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	404.1	Waste Fittings. Waste fittings shall comply with ASME A112.18.2/CSA B125.2, ASTM F409 or Table 701.2 for aboveground drainage piping and fitting.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	407.2.4	Metering faucets. Now require a maximum of 0.2 gallons per metering cycle.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	408.2	Water Consumption. Showerheads are required to have a maximum flow rate of no more than 1.8 gpm at 80 psi
<input type="checkbox"/>	<input checked="" type="checkbox"/>	408.5	Finished Curb or Threshold. The finished floor of the receptor shall slope uniformly from the sides towards the drain not less than 1/8 inch per foot.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	411.2.2	Flushometer maximum flush volume lowered to 1.28.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	411.4	Personal Hygiene Devices. Water closets with integral personal hygiene devices shall comply with ASME A112.4.2/CSA B45.16.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	416.2	Water Supply. The temperature of hot and cold water for emergency shower or eye wash stations shall be controlled by a temperature actuated mixing valve and comply with ASSE 1071
<input checked="" type="checkbox"/>	<input type="checkbox"/>	422.2.1	Single Use Toilet Facilities. Single use toilet facilities and family assigned or use toilet facilities shall be identified with a sign indicating use by either sex.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 4-2	Minimum Plumbing Facilities. Spaces have been added under minimum plumbing facilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	507.27	Clearance to Combustible Materials. Appliances and their vent connectors shall be installed with clearances from combustible material, so their operation does not create a hazard. Minimum clearances and vent connectors specified in Section 509.0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	509.6	Gas Vents. (2)Type B-W vent shall have a listed capacity of no less than that of the listed vented wall furnace to which it is connected. (3) Gas vents installed within masonry chimneys shall be installed in accordance with manufacturer's installation instructions. There shall also be a permanent label with the following language, "This gas vent is for appliances that burn gas. Do not connect to solid or liquid fuel—burning appliances or incinerators."

<input checked="" type="checkbox"/>	<input type="checkbox"/>	601.2.1	Newly constructed multiunit residential structures or residential portion of newly constructed mixed-use residential and commercial structures will be required to provide measurement of the quantity of water supplied to each individual unit by either individual water meters or submeters.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	604.5	Flexible Connectors. Flexible water connectors with an excess flow shutoff device shall comply with CSA B125.5/IAPMO Z600.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	604.10.1	Tracer Wire. Plastic materials for building supply piping outside underground shall have an <i>electrically continuous corrosion-resistant</i> blue insulated copper tracer wire. The tracer wire size shall not be less than 14 AWG, and the insulation type shall be suitable for direct burial.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	605.2.1.1- 605.3.2.1	Push Fit Fittings. Removable and non-removable push fit fittings that employ a quick assembly push fit connector shall comply with ASSE 1061
<input type="checkbox"/>	<input checked="" type="checkbox"/>	60512	PVC Plastic Pipe and Joints. PVC piping shall not be exposed to direct sunlight unless the piping does not exceed 24 inches and is wrapped with no less than 0.04 of an inch-thick tape or otherwise protected from UV degradation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	609.4	Testing. Exception added. Exception: PEX, PP, or PE-RT tube shall be permitted to be tested with air where permitted by the manufacturer's instructions.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	701.2	Drainage Piping. (2) Tests shall comply with all requirements of the standards to include the sample size, both for width and length. Plastic pipe shall not be tested filled with water (6) Cast-iron and fittings and the stainless-steel couplings used to join these products shall be listed and tested in accordance with table 701.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 701.2	Materials for Drain, Waste, Vent Pipe and Fittings. Table has been updated. PVC (Sewer and Drain), PVC PSM have been added
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 702.1	Drainage Fixture Unit Valves (DFU). Table has been updated.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	705.5-705.1.3	Polyethylene (PE) Sewer Pipe.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	705.7.1	Mechanical Joints. Mechanical joints between stainless steel pipe and fittings shall be of the compression, grooved coupling, hydraulic press connect fittings, or flanged.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	903.1 (2)	<p>Applicable Standards. ABS and PVC DWU piping shall now be installed per the firestop protection requirements in the California Building Code.</p> <p>Tests shall comply with all requirements of standards including the sample size, for width and length. Plastic pipe shall not be tested filled with water.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	906.1	<p>Roof Termination. ABS and PVC piping exposed to sunlight shall be protected by water based synthetic latex paints.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1007.2	<p>Trap Seal Primers. Potable water supply trap seal primer valves shall comply with ASSE 1018. Drainage and electronic design shall comply with ASSE 1044</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 1014.2.1	<p>Hydromechanical Grease Interceptor Sizing Using Gravity Flow Rates. Table has been updated.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1106.0	<p>Engineered Storm Drainage System.</p> <p>General. The design and sizing of a storm drainage system shall be permitted to be determined by accepted engineering practices.</p> <p>Siphonic Roof Drainage systems. Shall comply with ASPE 45.</p> <p>Siphonic Roof Drains. Shall comply with ASME A112.6.9.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1201.1	<p>Applicability. Clarification, 5 pounds-force per square inch for natural gas and 10 psi for undiluted propane.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1202.3	<p>Applications. Numbers 17-20 have been added as items the code shall not apply.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1208.6.5	<p>Plastic pipe, Tubing, and Fittings. Polyvinyl chloride (PVC) and chlorinated polyvinyl chloride (PCVC) plastic pipe, tubing, and fitting shall not be used to supply fuel gas.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1208.6.13.11208.13.5	<p>Cast Iron Flanges shall be in accordance with ASME B16.1</p> <p>Steel Flanges shall be in accordance with ASME B16.5 or ASME B16.47</p> <p>Non-Ferrous Flanges shall be in accordance with ASME B16.24</p> <p>Ductile Iron Flanges shall be in accordance with ASME B16.42</p> <p>Dissimilar Flange Connections. Raised-face flanges shall not be joined to flat-faced cast iron, ductile iron or nonferrous material flanges.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1208.9-1210	<p>Overpressure Protection Devices. An overpressure protection device shall be installed when the serving gas supplier delivers gas at a pressure greater than 2 psi for piping systems serving appliances designed to operate at a pressure of 14 inches water column or less.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1210.3-1210.1.3.9	<p>Protection Against Corrosion. Steel pipe and steel tubing installed underground shall be installed in accordance with Section 1210.1.3.1 through 1210.1.3.9</p>

<input checked="" type="checkbox"/>	<input type="checkbox"/>	1210.2.4.3	Piping in Buildings. Gas piping installed on roof surfaces shall be elevated above the roof surface and shall be supported in accordance with Table 1210.2.4.1.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1210.12.1	Required Components. A central premix system with flammable mixture in the blower or compressor shall consist of the components listed in this section.
		1210.12.2	Optional Components. Components listed in this section shall also be permitted to be utilized in any type of central premix system.
		1210.12.3	Additional Requirements. Gas-mixing machines shall have non sparking blowers and shall be constructed so that a flashback does not rupture machine casings.
		1210.12.4	Special Requirements for Mixing Blowers.
		1210.12.5	Installation of Gas-Mixing Machines. Gas-mixing machines shall comply with the list provided in this section.
		1210.12.6	Use of Automatic Fire checks, Safety Blowouts or Backfire Preventors. Automatic fire checks, safety blowouts or backfire preventors.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1211.2.3	Bonding Jumper Length. The length shall not exceed 75 feet.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1212.4	Injection (Bunsen)Burners. Burners used in laboratories and educational facilities shall be permitted to be connected to the gas supply by an unlisted hose.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 1215.2(2) & Table 1215.2(3)	Schedule 40 Metallic Pipe. Tables have been updated
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1302.2	Patient Care Spaces. Patient Care Rooms has been eliminated. They are now considered Categories. Category 4 spaces has been added.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1304.3 – 1304.4	Category 2 Piped Medical Gas and Medical Vacuum. Requirements listed for Category 2 Category 3 Piped Medical Gas and Medical Vacuum. Requirements listed for Category 3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1308.6	Category 3 Systems. This section lists exceptions for Category 3 systems.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1311	Valves. New or replacement valves shall follow the conditions in section 1311. Security. All valves, except those in zone valve box assemblies shall comply with 1311.1.1 Accessibility. Zone valves shall be installed in valve boxes with removeable covers.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1311.7	Emergency Shutoff Valves. Exceptions have been added to emergency shutoff valves for Category 3.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	1312.2	Materials. Two additional requirements listed for materials used in central supply systems.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1314.5.1 (2)	Location. At least 25 feet from any door, window, air intake, or other openings in buildings or places of public assembly
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1315.2	Pressure Relief Valves. All pressure relief valves shall comply with the requirements in 1315.2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1501.9.1	The following language was added to Commercial, industrial, institutional, and residential restroom. Signs shall contain 1/2 of an inch letters of a highly visible color on a contrasting background. The sign must be visible to all users and approved by the authority having jurisdiction.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1503.4	Potable water can temporarily be connected for testing the untreated graywater system.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1505.8.2	Warning signs for reclaimed (recycled) water valves shall have 3/8" letters on purple background.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1505.9	Hose Bibbs are approved for use in cemeteries supplied with reclaimed water. It must be equipped with a sign marking it as non-potable recycled water.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1505.12.2	A permanent sign shall be installed for tank-type toilets that are flushed with recycled water.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1603.5	Tanks may be installed directly on grade as an exception to location above grade
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A105.1(5)(6)(7)	Chart A. Charts added to Appendix A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Appendix L	Reverse Osmosis Reject Water. Definition added. Water that does not pass through a membrane of a reverse osmosis system.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	L408.1.1	Condensate Drainage Recovery. Condensate from air-conditioning, boiler and steam systems shall be in accordance with Section 1506.0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Table 503.3.2	Performance Requirements for Water-Heating Equipment Minimum Efficiency Requirements. Data in the table has been updated and added.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Appendix M	Peak Water Demand Calculator. Appendix M has been added



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2019 CalGreen Building Standards Code (CGBSC) Changes

SUMMARY

There are minor changes a few new definitions and one new section added to the 2019 California Green Building Standards Code.

SIGNIFICANT MANDATORY MEASURE CHANGES

<i>NEW - CHANGE</i>	<i>CGBSC SECTION/TABLE NUMBER</i>	<i>COMMENTARY</i>
<input checked="" type="checkbox"/> <input type="checkbox"/>	202	Definitions. Two definitions have been added. Accessory Dwelling Unit. And Junior Accessory Dwelling Unit.
<input type="checkbox"/> <input checked="" type="checkbox"/>	302.1	Mixed Occupancy Buildings. Accessory structures and live/work units have been added to Exceptions.
<input type="checkbox"/> <input checked="" type="checkbox"/>	4.106.2	Storm water drainage and retention during construction. A note has been added with the following link for projects which disturb one acre or more of soil https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html
<input type="checkbox"/> <input checked="" type="checkbox"/>	4.106.4	Electric vehicle (EV) charging for new construction. ADU's and JADU's without additional parking, have been added to the exceptions of EV charging.
<input type="checkbox"/> <input checked="" type="checkbox"/>	4.106.4.2	New multi-family dwellings. Ten percent of the total number of parking spaces on a building site, provided for all types of parking facilities shall be EV spaces.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	5.106.12	<p>Shade Trees. A percentage of shade trees and landscape irrigation necessary shall be provided. Surface parking area. Shade trees shall be provided to shade over 50 percent of parking area within 15 years.</p> <p>Landscape areas. Shade tree planting shall be installed to provide shade of 20 percent of landscape within 15 years.</p> <p>Hardscape areas. Shade trees shall be installed to provide shade of 20 percent of hardscape area within 15 years</p>
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2019 California Energy Code (CEC) Changes

SUMMARY

Many sections in the residential requirements have been updated in new and altered homes with minor changes, below lists all the significant changes. Joint Appendix 11 has many changes for the Photovoltaic system requirements. The most changes to the nonresidential requirements are in lighting. There are many minor changes and additions.

SIGNIFICANT CHANGES

<i>NEW -CHANGE</i>	<i>CEC SECTION/TABLE NUMBER</i>	<i>COMMENTARY (RESIDENTIAL)</i>
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.5	Natural Gas Central Furnaces, Cooking Equipment, and Pool Spa Heaters, and Fireplaces: Pilot Lights Prohibited. Indoor and outdoor fireplaces have been added to this list. Natural gas is available for new construction if gas service line can be connected to the site without a gas main extension. For additions, natural gas is available if a gas service line is connected to the existing building
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.10(b)	Interconnection Pathways. Drawings must indicate a location for future inverters/ metering equipment/pathway for conduit between solar zones and electrical service. Central water heating system drawings need to indicate a reserved pathway for plumbing between solar zones and water heater.
<input type="checkbox"/> <input checked="" type="checkbox"/>	150.0(c)	Wall Insulation. The following has changed. <ul style="list-style-type: none"> • Wood-framed walls: 2 x 4 = U-factor 0.102 (R-13); 2 x 6 = U-factor 0.071 (R-20) • Non-framed walls: U-factor = 0.102 • Mass (masonry) walls: Above-grade: To meet the Prescriptive requirements of Table 150.1-A or Table 150.1-B as a Mandatory measure (this does not apply to below-grade mass walls for which there are no Mandatory requirements).

<input type="checkbox"/> <input checked="" type="checkbox"/>	150.0(e)	Installation of fireplaces, decorative gas appliances and gas logs. Language has been added referring to section 110.5. and Title 24, Part 11, Section 4.503. exception allowing for continuous pilot lights in any situation removed.
<input type="checkbox"/> <input checked="" type="checkbox"/>	150.0(m)12	Air-Distribution and Ventilation System Ducts, Plenums and Fans. Changes were made to the air filtration requirements. Filters are required for heating/cooling and ventilation systems. List provided in section for when an air filter is required. Exception has been added, heat and energy recovery vent system filter location may be down stream of thermal conditioned system if ancillary filtration is located upstream.
<input type="checkbox"/> <input checked="" type="checkbox"/>	150.0(c)	Prescriptive Standards/Component Package. <ul style="list-style-type: none"> • Table 150.1-B for multifamily buildings has been added. • Exterior framed, mass, and unframed walls must meet criteria found in Table 150.1-A or 150.1-B. • Climate Zones 1-5 and 8-16 are now 0.048 in single family dwelling units. • Doors must have a NFRC-rated U-factor ≤ 0.20. Except for swinging doors between the garage and house that need to be fire rated. • QII is now a prescriptive requirement for all single-family dwellings in all the climate zones, and multifamily buildings in all climate zones except for CZ7. • There are new requirements for heat pump water heaters in new construction, additions and alterations. • Photovoltaic system (PV) must meet the requirements per JA11.
<input type="checkbox"/> <input checked="" type="checkbox"/>	110.6, NA6	Fenestration Products & Exterior doors. U-factor, SHGC and VT Exception 1 has dropped the maximum square footage for the Reference Nonresidential Appendix NA6 COG formula to 200 square feet.
<input checked="" type="checkbox"/> <input type="checkbox"/>	120.1(b)	High -rise residential buildings. New ventilation requirements for high-rise residential dwelling units. Must be balanced system or a continuously operated supply or exhaust system. HERS blower door testing required for continuously operating ventilation systems.
<input checked="" type="checkbox"/> <input type="checkbox"/>	120.1(b)1	High-rise residential buildings. Air Filtration has been added with requirements for mechanical systems, system design and installation, air filter efficiency, air filter pressure drop, and air filter product labeling. There is also a section on Attached Dwelling Units. This must meet the requirements of ASHRAE standard 62.2 with the criteria from this section met.

<input checked="" type="checkbox"/> <input type="checkbox"/>	120.1(c)	Non -Residential and hotel/motel buildings. Naturally ventilated spaces must also use mechanical ventilation unless ventilation openings are permanently open or controlled to stay open during times the space is occupied. Mechanical ventilation must comply with Table 120.1A. Exhaust ventilation shall comply with Table 120.1 D.
<input type="checkbox"/> <input checked="" type="checkbox"/>	120.1	Requirements for Ventilation and Indoor Air Quality. Table 120.1-A has been updated to include minimum ventilation rate for more spaces. Table 120.1B added to list minimum exhaust rate for certain spaces.
<input type="checkbox"/> <input checked="" type="checkbox"/>	120.2(i)	Required Controls or Space Conditioning Systems. All cooling systems over 54,000 Btuh with an air economizer shall include a stand-alone or integrated FDD system in accordance with this section.
<input type="checkbox"/> <input checked="" type="checkbox"/>	120.6	Condensers. Section 120.6(a)4c through 120.6(a)4g, have been added to this section. This provides requirements for saturated condensing temperature, all condenser fans, minimum condensing setpoint, condensing temperature reset, and condenser efficiency. New efficacy and system control requirements for adiabatic condensers serving refrigerated warehouses and supermarkets.
<input type="checkbox"/> <input checked="" type="checkbox"/>	130.0(c)	Lighting systems and equipment, and electrical power distribution systems. Revised luminaire classification and wattage requirements. Updated sections 130.0(c) numbers 2 through 5. 130.0(c)6, an exception has been added, for power-over-Ethernet lighting systems, power provided to installed non-lighting devices may be subtracted from the total power rating of the power-over-Ethernet system.
<input type="checkbox"/> <input checked="" type="checkbox"/>	130.1	Mandatory indoor lighting controls. Manual area controls, multi-level lighting controls, and automatic daylighting control requirements updated. New occupancy sensor requirements for bathrooms. New requirements about accessibility of sensors. A new section for indoor lighting control interactions.
<input type="checkbox"/> <input checked="" type="checkbox"/>	130.2(c)	Controls for outdoor lighting. Controls for outdoor lighting has been updated. Automatic scheduling controls, you must be able to reduce outdoor lighting power 50%-90%, turn the lighting off during times it is not occupied and have at least two scheduling options for each luminaire with a 2-hour override function. Motion sensing must be able to reduce outdoor lighting power 50%-90% and turn the lighting off when unoccupied.
<input type="checkbox"/> <input checked="" type="checkbox"/>	140.3(d) & 140.6(a)2L	Daylighting Design Power Adjustment Factors (PAFs) New prescriptive requirements and power adjustment factors (PAF) for daylighting devices including horizontal slats, light shelves and clerestory fenestrations.