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

NEW	CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES	NO
☐	☒	R101.2	**Scope.** All instances where the California Building Code permits construction under the CRC are now listed in the exception to the scope of the CRC. Additionally, three uses of care facilities for 5 or fewer persons receiving various levels of care was added.	☐	☒
☐	☒	R104.11	**Alternative Material and Methods of Construction.** A written application by the owner or owner's authorized agent is now required for all alternative material and methods requests. The Building Official has the authority to approve the request based on a prescriptive list of equivalencies.	☒	☐
☐	☒	R105.1, R110.1, R202	**Change in Occupancy.** A definition for a "Change of Occupancy" has been added and defined as "A change in the use of a building or portion of a building that involves a change in the application of the requirements of this code". Clarification has also been added regarding the requirement for a certificate of occupancy when there is a change of occupancy or use.	☐	☒
☐	☒	R106.1.5	**Exterior Balconies and Elevated Walking Surfaces.** Language revised for consistency with the criteria in the California Building Code. Requires details for all elements of the impervious moisture barrier system and manufacture installation instructions to be provided as part of the construction documents.	☒	☐
☒	☐	R202	**Definition for "Access (To)" and "Ready Access (To)".** A definition for "access (to)" and "ready access (to)" has been added and applies to equipment and devices that must be reached for service or replacement.	☒	☐
☒	☐	R202	**Definition for Crawl Space.** A definition for a "crawl space" has been added and defined as "An underfloor space that is not a basement."	☒	☐
☒	☐	R202	**Definitions for Carbon Monoxide Alarm and Carbon Monoxide Detector.** Separate definitions were added to differentiate between a carbon monoxide alarms and a carbon monoxide detector.	☒	☐
☐	☒	R202	**Definitions for Fenestration.** The definition for fenestration in the CRC directs the reader to the California Energy Code definition for "Fenestration	☒	☐

SIGNIFICANT CHANGES (cont'd)

NEW	CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES	MASTER PLAN IMPACT NO
			Product" which includes a new definition for vertical fenestration and modified the definition for skylights and sloped glazing.		
☒	☐	R202	**Definition of Live/Work Unit.** Definition added to clarify that a live/work unit is a dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use that is operated by the tenant or building owner.	☐	☒
☒	☐	R202	**Definitions for Solar Systems.** Three new solar definitions *("solar energy system", "solar thermal collector", "solar thermal system")* were added to help clarify the related provisions in Chapters 3 and 9.	☒	☐
☒	☐	Table R301.2(1)	**Climatic and Geographic Design Criteria.** Table was modified to include "Manual J Design Criteria" residential load calculations which requires a jurisdiction to set local values based on local data for consistent application of the standard.	☐	☒
☒	☐	R301.2.2.1.1	**Alternate Determination of Seismic Design Category.** A new alternative seismic map has been provided that could potentially lower a seismic design category based on certain soil conditions, if determined applicable by the Building Official.	☐	☒
☐	☒	R301.2.2.6	**Irregular Buildings.** The irregular building section of the seismic provisions of the CRC have been reformatted and rearranged for easier use. No technical changes were intended by the reformat.	☒	☐
☐	☒	R301.5	**Balcony (Exterior) and Deck Minimum Uniformly Distributed Live Loads.** The live load for exterior balconies and decks was increased from 40 psf to 60 psf loading.	☒	☐
☐	☒	R302.1	**Exterior Walls.** References to the California Building Code and different framing material options were added to offer additional options for the minimum fire resistance ratings requirements; and table footnotes were modified to clarify the code requirements for gable end vents and projections.	☒	☐
☐	☒	R302.2	**Townhouse Separation – Double Walls.** For code clarification, a second method for achieving the required fire-resistance separation between townhouse dwelling units was added: the use of two 1-hour wall assemblies to separate each townhouse.	☐	☒
☐	☒	R302.3	**Two-Family Dwelling Separation.** Language has been added to include CBC Section 703.3 as an option to determine fire-resistance ratings for two-family dwellings.	☐	☒
☐	☒	R302.4.2	**Membrane Penetrations.**	☒	☐

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
		Exception #4 was added for listed luminaires that have been tested for fire-resistant-rated ceiling. The new exception recognizes listed luminaires for penetrating the ceiling membrane or fire-resistant-rated floor/ceiling assemblies, provided the luminaire has been tested as part of that assembly.	
☐ ☒	R302.5	**Dwelling – Garage Opening Protection.** An *automatic*-closing/self-latching device is now permitted as an alternative to a self-closing/self-latching device for the door between the garage and dwelling.	☒ ☐
☐ ☒	R302.10	**Insulation Flame Spread.** The language was modified to clarify that the testing of insulating materials for flame spread and smoke-developed ratings also applies to facings including vapor retarders, vapor permeable membranes, and other similar coverings. The exception for facings in concealed locations and in substantial contact with the back side of finish materials, such as drywall, has not changed.	☒ ☐
☐ ☒	R302.13	**Fire Protection of Floors above Crawl Spaces.** The code was modified to now include fire-resistant membrane protection for floor assemblies located directly over a crawl space that contains electric-powered heating appliances, in addition to the previously required protection for floor assemblies located directly over a crawl space that contains fuel-fired [heating] appliances.	☒ ☐
☐ ☒	R308.4.2	**Glazing Adjacent to Doors.** The code was modified to now indicate that glazing within 24 inches of the hinge side of an in-swinging door now requires safety glazing where the glazing is at an angle less than 180 degrees from the plane of the door.	☒ ☐
☐ ☒	R308.4.4	**Glazing in Guards and Railings.** The code was modified to require an attached top rail or handrail for guards with structural glass balusters.	☒ ☐
☐ ☒	R308.4.7	**Glazing Adjacent to the Bottom Stair Landing.** Figure R308.4.7 was updated and the caption for the figure was revised to more accurately reflect the related code provision. Additionally the verbiage of the exception was revised for clarification.	☒ ☐
☐ ☒	R310.1	**Emergency Escape and Rescue Openings in Basements.** Language was modified to no longer require emergency escape and rescue openings for bedrooms/sleeping rooms ***when*** the dwelling unit is protected with an automatic fire sprinkler system ***and*** all other conditions of this section are met.	☒ ☐
☐ ☒	R310.3	**Basement Area Wells for Emergency Escape and Rescue Doors.**	☒ ☐

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
		The term "bulkhead enclosure" term was replaced with "area wells" in the code language. The code now also prescribes minimum area well dimensions and provisions were added for ladders and steps in these 'area wells'.	
☐ ☒	R311.7.1, R311.7.8	**Handrail Protection.** The handrail projection provisions were removed from the stairways section and added into the handrails section. Additionally, an exception was added to the handrail projection limitations that provides for adequate clearance behind the handrail when it passes a projection of a floor, landing or tread return.	☒ ☐
☐ ☒	R311.7.3	**Maximum Vertical Stair Rise between Floor Levels or Landings.** The maximum rise of a flight of stair increased by 4 inches, from 147 to 151 inches.	☒ ☐
☐ ☒	R311.7.5.3	**Stair Nosings.** The revised code language clarifies that nosings must be consistent throughout the stairway, which includes treads, landings and floors of the stairway. The language referring to nosing projections between stories has been removed for clarification.	☒ ☐
☐ ☒	R311.7.11, R311.7.12	**Alternating Tread Devices and Ships Ladders.** Alternating tread devices and ships ladders are now permitted as an element of a means of egress for serving lofts, mezzanines, or similar areas that do not exceed 200 gross square feet in area, when such devices do not provide exclusive access to a kitchen or a bathroom.	☒ ☐
☐ ☒	R312.1	**Guards.** The code language was changed to clarify that guard requirements only apply to the ***specific portion*** of an open-sided walking surface, (including stairs, ramps, and landings) that is located more than 30 inches above grade.	☒ ☐
☐ ☒	R315	**Carbon Monoxide Alarms.** The code was modified to require carbon monoxide alarms be interconnected, where multiple carbon monoxide alarms are required, in a dwelling unit through wiring or wireless connections	☒ ☐
☐ ☒	R315.5	**Carbon Monoxide Alarms Exceptions.** This section was modified to clarify the application of carbon monoxide alarms when access into the dwelling is restricted	☒ ☐
☐ ☒	R317.1 R317.1.6	**Balcony or Elevated Surface Moisture Protection.** To mitigate moisture damage, code language was added to require natural ventilation for enclosed framing members beneath exterior balconies and elevated walking surfaces.	☒ ☐
☐ ☒	R317.3	**Fasteners in Treated Wood.**	☒ ☐

SIGNIFICANT CHANGES (cont'd)

NEW	CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES	NO
			Code language was added to required staples in preservative-treated wood and fire-retardant-treated wood to be made of stainless steel.		
☐	☒	R324.4	**Structural Requirements for Rooftop Mounted Photovoltaic Systems.** Structural requirements for rooftop-mounted photovoltaic panel systems have been revised and consolidated into a new section titled "R324.4.1 Structural requirements." This new section includes wind load and fire classification requirements that were previously found in Section R907, as well as roof load and roof penetration requirements.	☒	☐
☐	☒	R325.3	**Mezzanine Area Limitation Exception.** An exception was added to this section that allows an increase of the mezzanine area, to one-half of the area of the room containing the mezzanine, under certain conditions.	☒	☐
☐	☒	R325.6, R202	**Habitable Attics.** The definition of habitable attic has been revised and the technical requirements have been placed in a new sub-section of "Section R325 Mezzanines".	☒	☐
☐	☒	Table R403.4	**Crushed Stone Footings.** Table R403.4 previously did not include minimum width criteria. The table has been revised to now include both minimum crushed stone footing depths and widths for a precast concrete wall. The table also now includes criteria for 2500 psi and 3500 psi soil bearing values.	☒	☐
☐	☒	R408.3	**Dehumidifiers in Unvented Crawl Spaces.** Code language was added to not require under-floor space ventilation if an adequately-size dehumidifier is provided.	☒	☐
☐	☒	Table R505.3.2	**Cold-Formed Steel Joist Spans.** The maximum spans for cold-formed steel joists have been revised. Also, footnote f was added to clarify that Table R505.3.2 does not apply to continuous joists members with the following joist designations: 800S162-33 and 1000S162-43.	☐	☒
☐	☒	R507	**Decks.** Section R507 was reorganized for ease of use. Post to beam connections, beam requirements, and joist requirements were clarified through new text, figures, and updated tables.	☒	☐
☐	☒	R507.2, Table R507.2.3	**Deck Materials.** Design specifications for wood, fasteners, flashing, and other common deck materials were added. A section for alternate materials was also added. Table R507.2.3 "Fastener and Connector Specifications for Decks" was added.	☒	☐

SIGNIFICANT CHANGES (cont'd)

NEW	CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES	NO
☒	☒	R507.3, Table 507.3.1	**Deck Footings.** This new section was added to provide minimum prescriptive deck footing sizes based on snow load, soil quality, as well as footing shape and size. Table R507.3.1 "Minimum Footing Size for Decks" was added.	☒	☐
☐	☒	R507.4	**Deck Posts.** This section was revised to clarify the code intent and additional prescriptive options were added.	☒	☐
☐	☒	R507.5	**Deck Beams.** Additional framing member sizes and associated maximum deck beam spacing with total span lengths have been added to the Deck Beam Span Lengths table. Additionally, a footnote was added to clarify beam cantilever span limitations.	☒	☐
☐	☒	R507.6	**Deck Joists.** Maximum joist spacing and total span length have been clarified. In Table R507.6, maximum span length is listed followed by maximum cantilever length.	☒	☐
☐	☒	R507.7, R507.8, R507.9, R507.9.1.4	**Decking, Vertical and Lateral Support.** Decking material options and fastener systems are clarified. Vertical and horizontal support of an exterior deck is updated, while additional details on support and attachment of ledgers are added.	☒	☐
☒	☐	R602.3.1, Table R602.3(6)	**Alternate Stud Height.** A prescriptive requirement was added for studs greater than 10 feet in height, in a new exception to section R602.3.1, as well as a reference to a new Table R602.3(6) that applies to 11 and 12 foot tall walls in one and two-story buildings.	☒	☐
☐	☒	Tables R602.7(1), R602.7(2)	**Girder and Header Spans.** Girder and header spans are updated assuming No. 2 Southern pine rather than No. 1 Southern pine. Building widths listed in tables R602.7(1) and R602.7(2) were changed to 12, 24 and 36 feet to address shorter hip roof spans. Additionally, a footnote was added to clarify that headers and girders are assumed to be braced. For headers with pony walls above, a further reduction in span is taken for 2x8 and larger headers.	☒	☐
☐	☒	Table R602.7.5	**Lateral Support for Headers.** The "Minimum Number of Full Height Studs at Each End of Headers in Exterior Walls" table, R602.7.5, has been significantly altered to simplify the full-height stud, or king stud. Also the maximum stud on-center spacing information was removed from the table and replaced with ultimate design wind speed and exposure category criteria.	☒	☐
☐	☒	Table R602.10.3(4)	**Seismic Adjustment Factors.**	☒	☐

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
		This table was modified to clarify roof and ceiling dead loads in the top story of a multi-story dwelling. An alternative to use BV-WSP bracing method was added. Additionally, the table now allows use of methods WSP and CS-WSP with brick veneer in the second story of a dwelling.	
☐ ☒	R602.10.4.1	**Mixing Bracing Methods.** Mixing of continuous sheathing methods with an intermittent alternate bracing method was clarified to indicate that braced wall line(s) containing an intermittent alternate method must have sufficient bracing length for the alternate method, not just for the continuous sheathing method.	☒ ☐
☐ ☒	R602.10.6.4	**Method CS-PF – Continuously Sheathed Portal Frame.** A note was added to Figure R602.10.6.3 to indicate that when a single CS-PF is built, the side of the portal frame that has a post must have continuous sheathing beyond that end of the portal frame.	☒ ☐
☐ ☒	R602.10.6.5	**Method BV-WSP.** This section was modified to include an exception that allows for the use of BV-WSP method when the second story has veneer on a quarter or less of the story.	☒ ☐
☐ ☒	Tables R603.3.1 and R603.3.1.1(2)	**Cold-Formed Steel Wall Construction.** The wind speeds were updated in the Cold-formed steel connection tables. Values in the CRC tables now match AISI S230, the Standard for cold-formed steel framing-prescriptive method for one- and two-family dwellings.	☒ ☐
☐ ☒	R602.1.11, R610	**Structural Insulated Panels.** The structural insulated panels section was reorganized. Information on facers, core, and adhesive requirements are now located in APA PRS 610.1 not the CRC.	☒ ☐
☐ ☒	R703.2	**Water-Resistive Barrier.** Language was added to indicate that water-resistive materials other than No. 15 asphalt felt must be installed following the manufacture's installation instructions. The exemption for detached accessory building has been deleted.	☒ ☐
☐ ☒	R703.3.1	**Soffit Installation.** A new section was added titled "R703.3.1 Soffit Installation." This section includes requirements for wood structural panel soffits and clarifies vinyl soffit requirements.	☒ ☐
☐ ☒	Table R703.8.4	**Masonry Veneer Anchorage through Insulation into Structural Panels.** Table R703.8.4(2), "Required Brick Tie Spacing for Direct Application to Wood Structural Panel Sheathing", was added. Language was also added to allow masonry	☒ ☐

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
		veneer tie spacing attachment through insulation for 7/16-inch or thicker wood structural panels rather than studs.	
☐ ☒	Table R703.8.4(1)	**Airspace Requirements.** Footnote "c" was added to Table R703.8.4(1), "Tie Attachment and Airspace Requirements", to allow the airspace that provides drainage to contain some mortar spills from construction.	☒ ☐
☐ ☒	R703.11.2	**Vinyl Siding Installation Over Foam Plastic Sheathing.** Table 703.11.2, "Adjusted Minimum Design Wind Pressure Requirement for Vinyl Siding", was added to provide design wind pressures for vinyl siding resisting all wind loads without reliance on wood structural panel sheathing below. Additionally, a requirement was added for foam sheathing and its attachment to be rated for wind pressure resistance per Section R316.8	☒ ☐
☐ ☒	R802.1.5.4	**Labeling.** Language was modified to clarify that fire-retardant-treated lumber and fire-retardant treated wood structural panels require two labels: one label for general grading and identification of the lumber or panel; and a second label for fire-retardant treatment that includes eight specific items of information.	☒ ☐
☐ ☒	R802.3, R802.4, R802.5, R802.5.2.1	**Roof Framing.** The design and construction criteria for roofs in Section R802 was divided into three separate sections: roof ridges, rafters, and ceiling joists. Additionally, language was added to section R802.5.2.1 to allow wood structural panel roof sheathing to cantilever up to 9 inches beyond the gable end wall without support.	☒ ☐
☐ ☒	R806.2	**Minimum Vent Area.** This section was modified to clarify that net free ventilation may be less than 1/150 only if **both** required conditions are met. Language was added to indicate that lower vents must be located in the bottom 1/3 of the attic space.	☒ ☐
☐ ☒	R806.5	**Unvented Attics.** An alternative path for unvented attic and rafter assemblies in climate zones 3-15 was added, specifically Section 5.2, and includes ten requirements.	☒ ☐
☐ ☒	Tables R905.1.1(1) and R905.1.1(2)	**Underlayment Requirements for Photovoltaic Shingles.** Requirements for photovoltaic shingle underlayment were revised for consistency with other roofing types and moved to Tables R905.1.1(1) and R905.1.1(2).	☒ ☐
☐ ☒	R905.17	**Building Integrated Photovoltaic Panels** This new section addresses building-integrated photovoltaic roof panel installation and attachment. *(Building-integrated shingles are regulated in another portion of the code.)* Additionally a definition has been	☒ ☐

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CRC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
		added to Chapter 2 and new text in R324 points to the technical requirements in this section.	
☐ ☒	R1005.8	**Chimney Insulation Shield** This new section was added to require factory-built chimneys to have an insulation shield.	☒ ☐