

2019 California Electrical Code (CEC) Changes

SUMMARY

The major changes in the 2019 CEC code cycle are almost evenly distributed between new requirements and revisions of existing requirements. About one-quarter of the changes affected master plan dwellings.

SIGNIFICANT CHANGES

NEW - CHANGE	CEC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO	
<input checked="" type="checkbox"/> <input type="checkbox"/>	210.8	New language added to clarify how measurements are to be determined for GFCI receptacles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.8(A)(7)	Measurement criteria at dwelling unit sinks revised for clarity in determination of which receptacles are to be GFCI protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	210.8(E)	GFCI protection for lighting outlets in crawl spaces	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	210.11(C)(4)	New requirement added for minimum rated 120-volt, 20-ampere branch circuit for dwelling unit garage receptacles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	210.12(C)	New provisions added requiring AFCI protection for guest rooms/guest suits of hotels/motels	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.52(A)(2)(1)	Fixed cabinets "that do not have countertops or similar work surfaces" was added as an item that will constitute a break in a wall space for receptacle spacing requirements at dwelling units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.52(B)(1)	An individual branch circuit supplying a receptacle outlet for any specific appliance (not just a refrigerator) at a dwelling unit is allowed to be rated at 15-ampere or greater (Previously was required to be rated 20-ampere). Commentary clarifies that GFCI protection is not required for refrigerator receptacles located more than 1.8 m (6 ft.) from a sink.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.52(G)	Receptacle requirements for dwelling unit garages, basements, and accessory buildings expanded to two-family dwellings (not just one-family dwellings)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	210.52(G)(1)	At least one receptacle outlet is required to be installed "in each vehicle bay" and not more than 1.7 m (5 1/2ft) above the floor in dwelling unit garages.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.30(A)(4) and (A)(5)	The use of metal water piping or building steel as first options as a grounding electrode system for a separately derived system has been removed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CEC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input type="checkbox"/> <input checked="" type="checkbox"/>	250.52(A)(2)	The title of a "Metal Frame of a Building" grounding electrode renamed "metal In-Ground Support Structure." Conditions for this grounding electrode have been revised.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	300.5(D)(4)	Electrical metallic tubing (EMT) was added as an acceptable wiring method to afford protection from physical damage for conductor installed underground and subject to physical damage.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	312.5(C) Exception, Item(G)	A new sentence was added to 312.4(C), Exception, Item (G) to indicate that Note 2 to the tables in chapter 9 does not apply to this "sleeve" of conduit or tubing required if 312.5(C), exception is employed.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	312.8(B)	Power monitoring equipment is now required to be listed for the application when installed in free space of cabinets and cutout boxes.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	314.17(B)	The outside sheath of Type NM or Type UF cable used with a metal box must now extend not less than 6 mm (1/4 in.) inside the box and beyond any clamp as currently required for nonmetallic boxes.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	358.10	The "uses Permitted" for EMT have been revised for consistency with other steel conduit articles. (Type IMC and RMC)	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	366.20	Language was added to address how to install conductors in parallel in an auxiliary gutter.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	422.16(B)(2)	Maximum length of flexible cord for built-in dishwashers increased from 1.2m (4 ft.) to 2 m (6.5 ft.) while the receptacle outlet for a built-in dishwasher can only be located in the space adjacent to the dishwasher.	<input checked="" type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	424.45	New requirements were added for the installation of heating cables installed under floor coverings.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	430.53(D)(4)	New tap rule for a single motor allows 7.5 m (25 ft.) taps with the same conditions as is allowed in other areas of the NEC	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	440.9	A new requirement was added requiring a wire-type equipment grounding conductor for non-threaded conduit systems on rooftops supplying such things as HVAC equipment.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	525.23(D)	New requirements for listed, labeled, and identification of portable GFCI protection for branch circuits fed by flexible cords at Carnivals, Circuses, fairs, and similar events	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	600.34, 600.2	A new definition for photovoltaic (PV Powered) sign was added to 600.2 and new provisions for PV powered signs were added to 600.34	<input type="checkbox"/> <input checked="" type="checkbox"/>

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CEC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input type="checkbox"/> <input checked="" type="checkbox"/>	605.9(C)	Revision clarifies that thirteen duplex receptacles are the maximum number of receptacles permitted in office furnishings	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	660.5	Disconnecting means for industrial-type x-ray equipment is required to be located "within sight" of the X-ray controls and readily accessible.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	680.22(B)(7)	New requirements were added for low-voltage gas-fired luminaires, decorative fireplaces, fire pits, and similar equipment.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	680.28	New requirements were added for GFCI protection for swimming pool and spa gas-fired water heaters.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	690.7	Maximum voltage requirements for PV systems were revised for clarity; three first level subdivisions remain.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	690.8(A)(1)	The revision allows for engineering supervision to be used in calculating source circuit maximum current	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	690.12	The requirements for rapid shutdown for PV systems have been revised and divided into four subsections.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	690.56(C)	Provisions for identifying a PV "Rapid Shutdown System" have been extensively revised. Two new figures with illustrated labels have been added to indicate to first responders that rapid shutdown is provided.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	706	The new article, "Energy Storage System" applies to all permanently installed energy storage systems (ESS) operating at over 50 volts ac or 60 volts dc that may be stand-alone or interactive with other electric power production sources.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	770.49	All metallic conduit (not just RMC and IMC) enclosing optical fiber entrance cable must be connected by a bonding connector or grounding electrode conductor to a grounding electrode.	<input type="checkbox"/> <input checked="" type="checkbox"/>