

Receptacle Outlets Below Countertops in a Residential Kitchen

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Code reference: 2023 Oregon Electrical Specialty Code (OESC)—Section 210.52(C)
Date: Aug. 1, 2024
Subject: Receptacle outlets installed below the countertop in a residential kitchen

Background:

The Oregon Electrical Specialty Code (OESC) requirements found in Section 210.52(C) for the installation of receptacle outlets intended to serve countertops has changed over the past few code cycles. The changes to this section in the 2023 edition of the National Electrical Code (NEC) were in response to a Consumer Product Safety Council (CPSC) report detailing injuries and fatalities from cooking appliances on countertops with the power supply cord draped over the edge of the countertop. The 2023 NEC was changed to limit the locations a receptacle outlet can be installed to serve the countertop. NEC Section 210.52(C)(3) limits the locations for outlets intended to serve the countertop to locations that are in, on, or above the countertop.

Questions:

1. Does the installation of a receptacle outlet on the side of a cabinet below a kitchen countertop serve the countertop?
2. Can I install a receptacle outlet on the side of a cabinet for a kitchen countertop that doesn't serve the countertop as a convenience outlet or required outlet per Section 210.52(A)(2)(3)?
3. What are the provisions for a future receptacle outlet and where does it need to be located?
4. Is this interpretation limited to island and peninsular countertops or does it apply to all kitchen countertops? Does it apply to all countertops in the dwelling unit?
5. How does this affect accessibility and ADA requirements?

Answers:

1. No. All receptacle outlets serving a kitchen countertop shall be installed in accordance with Section 210.52(C)(3). No receptacle outlets shall be installed less than or equal to 24 inches below the countertop. The 24-inch measurement was chosen because it is used to determine countertop wall space in Section 210.52(C)(1) and is a common cord length for portable kitchen appliances.

2. Yes. Receptacle outlets installed below the countertop shall be installed more than 24 inches below the countertop. Receptacle outlets installed more than 24 inches below the countertop are not considered to be serving the countertop and would not need to comply with Section 210.52(C)(3). Convenience outlets and outlets required by Section 210.52(A)(2)(3) are allowed as long as they are installed more than 24 inches below the countertop.
3. Approved wiring methods found in Chapter 3 of the OESC shall be used for the provisions and can vary depending on the construction methods used to build the building and other factors. The provisions shall be installed at an accessible location at the island or peninsular space.. The provisions shall be capable of being supplied by a 20 amp small-appliance branch circuit. The provisions that use a raceway or conduit shall have a pull string installed. The provisions that use a cable assembly, or a raceway with conductors shall comply with OESC Section 300.15, which requires a box for conductor termination points.
4. OESC Section 210.52(C) requires receptacle outlets installed in kitchens and similar areas to comply with the requirements in Sections 210.52(C)(1) through (C)(3). Countertops and work surfaces found in kitchens, pantries, breakfast rooms, dining rooms, and similar areas where food prep and portable kitchen appliances are used shall comply with this interpretation. See Section 210.52(D) for bathroom countertops.
5. Reach and height requirements are not affected by this interpretation. See Informational note No. 2 of OESC Section 210.52(C)(3).

Analysis:

Kitchen appliances with power supply cords draped over the countertop edge connected to receptacle outlets installed on the side of the countertop have contributed to burn injuries and fatalities when the person uses the cord to pull the appliance and its hot contents off of the countertop and onto them or someone around them. Eliminating the location of receptacle outlets installed below the countertop will help prevent these types of accidents from happening in the State of Oregon.

Provisions is not a defined term in the OESC and the installer can choose a code compliant wiring method or raceway that works best for the installation. Examples of provisions range from PVC conduit embedded in a concrete slab to NM cable connected from a kitchen wall receptacle outlet box and ran to the island or peninsular space. The code requirement is to provide them at an accessible location, at the island or peninsular space.

The effective date of this statewide code interpretation is Aug. 1, 2024. Work performed on electrical permits issued after this date are subject to the requirements of this interpretation.

Contact: Visit the division website to [contact a building code specialist](#).