

*Working with Oregonians
to ensure safe building
construction while
supporting a positive
business climate.*

**No: 08-02
Dental Office Patient Care Areas**

Code Section: 517.13**Code Edition:** 2008 Oregon Electrical Specialty Code**Date:** Re-issued April 1st, 2008**Subject:** Grounding Requirements for Branch Circuits in Patient Care Areas**Question:** **Are the receptacles serving dental chairs and their rooms required to have a ground path for fault current by installation of an additional equipment grounding conductor?****Answer:** **Yes, the wiring method provisions of 517.13(A) apply to all branch circuits serving patient care areas. Additionally, 517.13(B) requires the installation of an insulated copper equipment grounding conductor as the second component of the redundant grounding approach to protection for the patient.****Analysis:** Section 517.2 of the 2008 NEC does not specifically address a dental chair as one of the ordinary appliances in a patient care area. However, the definition of Health Care Facilities includes buildings or portions of buildings in which dental care is provided.

The language in the definition of Patient Care Vicinity implies a concern for conductive surfaces that can be contacted by the patient, or an attendant who can touch the patient.

All fixed equipment and receptacles within 1.8 m (6 ft) of dental chairs shall be installed in accordance with article 517.13 (A) and (B). The use of a non-conductive raceway and two equipment grounding conductors is not recognized as meeting these requirements.

To insure patient safety, the code requires all receptacles that serve utilization equipment likely to come in contact with a patient during the process of examination or treatment to comply with the provisions of article 517.13.

Contact: Dennis Clements, Electrical Program Chief, State of Oregon
www.dennis.l.clements@state.or.us
(503) 378-4459