

Camp Grounds and RV Parks - Electrical Systems Additional Information

The 2008 National Electrical Code and Comm 16, Wisconsin Electrical Code, are the codes referenced here. Comm 16 is available free online, <http://commerce.wi.gov/SB/SB-DivCodesListing.html>. The NEC is available from the National Fire Protection Association, <http://www.nfpa.org/index.asp>.

The Wisconsin electrical code applies generally to camp grounds and camping operations. Adopted NEC article # 551 applies to recreational vehicle parks and # 552 to park trailers intended for seasonal use, camping trailers, and camping sites in general.

- NEC 110.3(A) and Comm 16.009: All electrical power and communication equipment and lines shall be constructed, installed, operated and maintained so as to minimize hazards to life and propriety.
- NEC 110.7, 110.11 and Comm 16.010: All electrical installations and equipment shall be cleaned and inspected at intervals as experience has shown to be necessary. Any equipment or electrical installations know to be defective so as to endanger life of propriety shall be promptly repaired, permanently disconnected, or isolated until repairs can be made. Construction, additions and changes to electrical equipment and conductors shall be made by qualified persons only.
- Comm 16.920: The Department of Commerce safety and Buildings Electric is granted authority and jurisdiction over the inspections of electrical systems.
- NEC 250.32: Four-wire systems shall be supplied by feeders or branch circuits shall have a grounding electrode at the service and then an equipment grounding conductor with the circuits installed. This is imperative for safe system operation and use by the public.
- NEC 250.50: Where proper grounding systems do not exist, grounding electrodes specified in 250.52 shall be installed.
- NEC 250.110: Exposed non-current -carrying metal parts of fixed equipment likely to become energized shall be connected to the equipment grounding conductor.
- NEC 240.4: Conductors shall be protected against over current in accordance with their specified ampacities in 310.15.
- NEC 240.21: Overcurrent protection (OCP) shall be provided in each ungrounded circuit conductor and shall be located at the point where the conductor receives its supply.
- NEC240.24(A) and (C): OCP devices shall be readily accessible and will not be exposed to physical damage.
- NEC 240.42 and 312.2: Enclosure in damp and wet locations shall be listed for such installations.

- NEC 210.8(B)(4) and 551.71: All 125 volt, single phase 15- and 20-ampere receptacles shall have listed GFCI protection, (Ground-fault circuit-interrupter protection for personnel). This requirement would apply to any replacement receptacles installed as a repair or maintenance change.
- NEC 225.18 and 551.79: The vertical clearance below overhead conductors varies (from 18 feet to 10 feet) according to the voltage of the conductors and the use of the area below.
- NEC 225.26: Vegetation such as trees shall not be used for support of overhead conductors and spans.
- NEC 410.36(G): Outdoor luminaries and associated equipment shall be permitted to be supported by trees. See 300.5(D) for protection of conductors used to provide power.
- NEC 300.5(A) and 551.80(A) and (B): Proper burial depths for conductors and cables shall be provided. Conductors and cables entering and leaving trenches shall be protected. All such protection shall extend from 18 inches below finished grade up to a point at least 8 feet above finished grade.
- NEC 551.76(A) at camping and RV sites disconnecting means, or cord and plug type connections, shall be such that the disconnection or removal of a receptacle or other device will not interfere with, or interrupt, the grounding continuity
- NEC 406.8(A) and (B): Bubble receptacle cover - in damp and wet locations proper receptacle covers shall be install for the environment and condition, and shall be of a weather-resistant type.
- NEC 250.146: The equipment bonding jumper shall be used to connect the grounding terminal of a grounding type receptacle to a grounded box.
- NEC 410.6: All luminaries and lamp holders shall be listed.
- NEC 110.12 and 13: All electrical equipment shall be firmly and securely mounted, and installed in a neat and workmen like manner.
- NEC 551.71: Sites with electric supply shall be equipped with at least one 20-ampere, 125 volt receptacle. A minimum of 20 percent of all RV sites with electrical supply shall each be equipped with a 50-ampere, 125/250 volt receptacles. A minimum of 70 percent of all RV sites shall be equipped with a 30-ampere, 125 volt receptacle. The remainder of all sites with electrical supply shall be equipped with one or more of the approved type receptacles indicated in Section 551.81. Dedicated tent sites with a 15- or 20-ampere electrical supply shall be permitted to be excluded when determining the percentages noted above. Note: All 125 volt singl- phase 15- and 20-ampere receptacles shall have listed GFCI protection required.
- NEC 551.76: The grounded conductor (neutral) shall not be used as an equipment grounding conductor for RV or equipment at the sites.
- NEC 551.77(D): The mounting height of site supply equipment shall be located not less than two feet or more than six feet above ground.
- NEC 551.78(A): All switches, circuit breakers, control equipment, and metering devices located in wet locations shall be of the weatherproof type.

- NEC 551.77(E): Sufficient clear working space shall be provided and maintained about all electrical equipment to permit ready and safe operation of the system in accordance with Section 110.26

Campground swimming pools or other bodies of water

- NEC680.6 Grounding, (1) to (7): Provides information as to what must be grounded.

- NEC 680.8 and 680.10: Provides clearances of overhead conductors and underground wiring locations

- NEC 680.22: Addresses area lighting, receptacles and equipment adjacent to pool areas.

NEC 680.26: Gives directions on equipotent bonding on parts of the system and pool water.

NEC 680.40: Deals with spas and hot tubs.

NEC 680.50, and 422.10 and 422.30. Specifically provides requirements should a fountain be permanently or a self-contained unit be present.

NEC 682.can be referred to if any electrical wiring or equipment requirements should they be placed in or adjacent, natural or artificially made bodies of water. Due to the unique nature of the water and electricity interaction it is advisable to have a qualified electrician / contractor install and or maintain these systems.