

## POLES AND TEMPORARY CONSTRUCTION POWER

### A. POLES

The minimum size of a wood pole used to support low voltage (below 600 Volts) conductors in conformance with Article 225 of the California Electrical Code (C.E.C.) shall be 6 inches by 6 inches (nominal) if square, or have a diameter of at least 5 inches if round, and be of sufficient length to maintain all required overhead clearances specified in Section 225.18, but it shall not be less than 20 feet in length, except as required over track rails of railroads, it shall not be less than 28 feet. The lower end of the pole shall be embedded not less than 4 feet in the ground. An approved self-supporting pole of a material other than wood, if of equivalent strength, may be used. The minimum size of pole arrangement, type, strength and construction requirement used to support high voltage (over 600 V) conductors, and the required overhead line clearance and method of compliance shall be in accordance to the State of California Rules for Overhead Electric Line Construction, General Order No. 95 as well as applicable provisions of Article 399.

EXCEPTION: For low voltage distribution poles used to support temporary wiring in conformance with Article 590 of the C.E.C. and located in areas accessible to pedestrians only, a 4-inch x 4-inch (nominal) wood pole, or equivalent, embedded not less than 4 feet in the ground, may be permitted.

### B. PROVISIONS FOR TEMPORARY CONSTRUCTION SERVICES.

The following applies to the construction and installation of temporary construction electric services intended to provide temporary low voltage (below 600 volts) power for general building construction purposes:

- 1. Service Equipment and Panelboards.** The service equipment including meter enclosures and panelboards shall be of the approved type and shall be identified for the purposes.
- 2. Wiring Methods.** Raceways on temporary construction service poles shall be minimum 3/4 inch rigid metal conduit, intermediate metal conduit, electrical metallic tubing, rigid Polyvinyl Chloride conduit schedule 80, or Reinforced Thermosetting Resin conduit marked as above ground (AG), type XW. The raceways shall be supported at intervals not to exceed 3 feet. Metallic raceways shall be enclosed by wood molding or nonmetallic conduit not less than 8 feet below the service head, supported as required for the raceway.
- 3. Protective Wood Block.** A 4-inch x 4-inch protective wood block shall be through bolted to wooden poles immediately above metallic service heads or open uninsulated conductors. The block shall be placed in a 1/2-inch gain on round wood poles.
- 4. Overcurrent Protection.** Panelboards shall have overcurrent protection not exceeding the rating of the panelboards. (See Section 408.36 of the C.E.C. for more detail)
- 5. Grounding Electrode.** A No. 8 AWG minimum copper grounding electrode conductor shall be installed in a metallic raceway or cable armor connected to one or more grounding electrodes complying with Article 250 of the C.E.C.

One of the following grounding electrodes providing less than or equal to 25 ohms of ground resistance or a combination of these electrodes shall be provided.

- a. 5/8-inch minimum diameter stainless steel and copper or zinc coated steel.
- b. 3/4-inch minimum inside diameter galvanized rigid steel pipe or conduit.
- c. Other electrodes as permitted in sec 250.52 of C.E.C.

The grounding electrode(s) shall be driven vertically at least 8 feet in contact with soil and shall not be less than 18 inches from the pole. Multiple rod or pipe electrodes shall not be installed at less than 6 feet apart from one another.

- 6. Bonding of Metallic Parts.** Metallic raceway(s) containing service conductors or grounding electrode conductor shall be bonded by one of the following methods:
  - a. Threaded couplings and threaded bosses on enclosures with joints made up wrench-tight where metallic raceways are involved.
  - b. Bonding-type locknuts and bushings, approved for the purpose.
  - c. Bonding jumpers used with approved grounding bushings. Bonding jumpers shall be used around concentric and eccentric knockouts.
  - d. Bonding jumpers used with approved ground lugs or ground terminals.
- 7. Receptacle Outlets.** 120-volt, single-phase, 15, 20 and 30 ampere receptacle outlets shall have ground-fault interrupters for personnel protection. Receptacles of different voltage and current ratings shall not be interchangeable. The receptacles outlet shall be provided with listed weather resistance extra-duty type cover hood.
- 8. Feeder Pole Grounding.** Where open wiring on feeder poles are used for power distribution, a continuous grounding conductor shall be run with the customers overhead circuit conductors throughout the system and shall be sized according to the Code.
- 9. Service Pull Box.** Where a service pull box is required, it shall comply with the latest edition of the Los Angeles Department of Water and Power (DWP) Electric Service Requirement.
- 10. Miscellaneous Pole Equipment.** No luminaires, signs, ropes or similar equipment shall be attached to the poles.
- 11. Deteriorated Equipment.** Service equipment, panelboards, overcurrent protection devices, conductors, raceways, etc, that have deteriorated shall be replaced.

**C.** DWP may have additional requirements for temporary service. Contact DWP for their guidelines.