



# CITY OF NEWPORT BEACH

## COMMUNITY DEVELOPMENT DEPARTMENT

### BUILDING DIVISION

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## RESIDENTIAL SERVICE EQUIPMENT CHECKLIST

**This is to be used as a general checklist; it is not inclusive of all code requirements and inspection criteria.**

### According to the 2010 California Electrical Code (CEC)

- Multiple meter and 400 AMP (or greater) service equipment requires city plan check.
- Verify service equipment location (Per Southern California Edison).
- A building or other structure served shall be supplied by ONLY ONE SERVICE per NEC 230.2 (with some exceptions).
- Service conductors supplying a structure shall not pass through interior of another structure [CEC 230.3]
- Verify service drop conductor clearance
  1. 10 feet –Over area accessible to pedestrians/sidewalk. Also at the lowest point of the drip loop. [CEC 230.24 B 1]
  2. 12 feet – Over residential property and driveways. [CEC 230.24 B 2]
  3. 18 feet – Over public street and alleys, roadways [CEC 230.24 B 4]
  4. 22 ½ feet – Above pool water in any direction [CEC 680.8 A]
- Service drop clearance above roofs and building features:
  1. Less than 4 in12 slope, minimum 8 feet clearance. CEC 230.24 A; Read EXC. 2 &3
  2. Greater than 4 in12 slope minimum 3 feet. CEC 230.24 A; EXC. 2
  3. 10 feet above decks and balconies [CEC 230.9 B]
  4. 3 feet from horizontal projections [CEC 230.9 B]
  5. 3 feet minimum service drop clearance: Below and to sides of openable windows, and doors [CEC 230.9 A]
- Underground service and line voltage conductor burial depth and cover per table 300.5
- Protect USE conductors where exposed to 8 feet above grade. [CEC 300.5 D1]
- USE conductors shall have warning ribbon in trench 12 inches above lateral. [CEC 300.5 D 3]
- All service entrance conductors shall be protected from physical damage in accordance with CEC 300.5 and 230.50 A-B
- Service Entrance Conductors may be protected by any of the following:
  1. Rigid metal conduit - RMC
  2. Intermediate metal conduit – IMC
  3. Schedule 80 rigid non-metallic conduit – RNMC
  4. Electrical metallic tubing – EMT [CEC 230.50 A]
- Overhead service entrance conductors shall be equipped with a raintight service head or gooseneck. [CEC 230.54 B]
- Raintight service heads shall have conductors of different potential brought out through separately bushed openings. [CEC 230.54 E]
- Install drip loop in service entrance conductors. [CEC 230.54 F]

- Service drop conductors and service entrance conductors shall be arranged so that water will not enter service raceway or equipment.
- Service equipment shall be labeled as suitable for use as such. [CEC 230.62]
- Service equipment shall have a disconnecting means to disconnect all conductors in a building from service entrance conductors [CEC 230.70]
- Service disconnect shall be installed at a readily accessible location, either outside the building or inside at the nearest point of entrance. [CEC 230.70 A1]
- Service equipment disconnecting means shall not be installed in a bathroom. [CEC 230.70 A2]
- Single family dwelling service equipment disconnecting means shall be minimum of 100 AMP 3 wires. [CEC 230.79 C]
- Service equipment with more than 6 switches or sets of circuit breakers mounted in a single enclosure requires a main disconnect. [CEC 230.71 A]
- Service disconnect shall simultaneously disconnect all ungrounded service conductors. [CEC 230.74]
- Provide working space in front of service panel (30" wide X 36" deep) [CEC Table 110.26 A1]
- Maximum height of breakers 6 feet 7 inches. [CEC 240.24 A]
- Circuit breakers match service equipment manufacturer. [CEC 110.3 B]
- Each building requires its own Grounding Electrode System (GES) [CEC 250.32 A]
- Building with only on branch circuit with Equipment Ground Conductor (EGC) No GES required [CEC 250.32 A (exception)]
- Multiwire circuit considered one circuit. [CEC 250.32 A (exception)]
- A service disconnecting means shall have a rating not less than the load to be carried. [CEC 230.79]
- Each building requires a building disconnect. [CEC 225.31]
- Equipment Grounding Conductor (EGC) (4 wire feeder) required between buildings. [CEC 250.32 B1]
- Sized EGC according to table 250.122.
- Isolate neutral from EGC at subpanel. [CEC 250.21 B1] (4 wire installation)
- #6 AWG or smaller shall not be re-identified for grounding nor grounded conductors [CEC 200.6 A] *unless in a cable assembly*
- Subpanels working clearance minimum 30" wide X 36" deep [CEC 110.26 A]
- Surface mounted enclosure in wet location shall be weatherproof and ¼ inch space from wall. [CEC 312.2 A]
- Open knockouts must be filled. [CEC 110.12 A]
- Maximum plaster ring setback in non-combustible materials (drywall) ¼ inch, Combustible finishes require plaster ring flush or protruding. [CEC 240.24 D, E]
- Maximum plaster gap at side of flush mount panel is 1/8 inch. [CEC 312.4]
- Secure cables entering panel. [CEC 312.5 C]
- Terminal bar for EGC required. [CEC 408.40]
- Purpose of breakers legibly and permanently marked. [CEC 408.4]