



City of Vacaville
Community Development
Building Division

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 2016 California Electrical Code (CEC) and the City of Vacaville Municipal Code

- Multiple meter and 400 AMP (or greater) service equipment requires city plan check.
- 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 in 12 slope, minimum 8 feet clearance. CEC 230.24 (A) Exception 2 & 3
 2. Greater than 4 in 12 slope minimum 3 feet. CEC 230.24 (A) Exception 2
 3. 10 feet above decks and balconies CEC 230.24 (B)(1)
 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 (C)
- 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)(C)
- 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. CEC 230.54 (G)
- Service equipment rated at 1000 volts or less shall be labeled as suitable for use as such. CEC 250.66

- 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 (A)(1)
- Service equipment disconnecting means shall not be installed in a bathroom. CEC 230.70 (A)(2)
- 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 (A)(1)
- 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) shall be run with the supply conductors and be connected to the building or structure disconnecting means and to the grounding electrodes. CEC 250.32 (B)(1)
- Sized EGC according to CEC table 250.122.
- Isolate neutral from EGC at subpanel. CEC 250.21 (B)(1) (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
- Terminal bar for EGC required. CEC 408.40
- Purpose of breakers legibly and permanently marked. CEC 408.4