



RESIDENTIAL ELECTRICAL SERVICE UPGRADE CHECKLIST

An electrical permit and inspections are required to upgrade the main electrical service panel of homes; no plans are required. Requirements for the upgraded electrical service panel are outlined below:

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

If you are a current residential customer and you are planning to upgrade your residential service panel, you will need to first request a “Utility Meter Spot” by email at electricdevelopment@riversideca.gov. This is required to ensure that the electric meter panel location meets RPU’s currents standards. Contact RPU for same day disconnect/reconnect procedure.

Failure to complete items below prior to requesting final inspection may result in a re-inspection fee.

INSPECTIONS REQUIRED:

Inspections	Code
Grounding	400
Service Utility Release	405
Electrical Final	930

- Internal parts of electrical equipment, including bus bars, wiring, terminals, insulators, and other surfaces, shall not be damaged or contaminated by foreign materials such as paint, plaster, cleaners, abrasives, or corrosive residues **CEC 110.12(B)**
- Overhead service risers in excess of 36” above the roof surface or supporting service drops must be braced. **(CEC 230.28)**
- Circuit breakers shall be listed to be used with panel (per the manufacturer).
- All unused circuit breaker opening shall be closed. **(CEC 408.7)**
- Unused knock outs and openings shall be sealed with listed plugs **CEC 110.12 (A)**
- Provide bollards to protect electrical equipment from physical damage. **(110.26 E.2)**
- Disconnect switches and breakers shall be installed so that the center of the operating handle at its highest position is not more than 6’-7” above the floor or working platform and shall be in a readily accessible location. **[CEC 240.24A]**
- Overcurrent protection devices shall not be located oversteps of a stairway. **CEC 240.24(F)**
- Provide the required minimum working clearance in front of the service panel. (30” wide X 36” deep) **(CEC Table 110.26 A1)**
- Grounds and neutrals located at subpanel and panels at separate structures shall be on a separate bus bar **CEC 250.6 & CEC 250.32(D)(1)**

- The grounded conductor (neutral) sized #6 AWG or smaller shall be marked its entire length.
- Ground rod (UFER) connection to grounding electrode conductor shall be accessible **250.68(A)**
- The grounding electrode conductor shall be installed in one continuous length without a splice or joint. **(250.64C)**
- The grounding electrode conductor shall be sized per table **(CEC250.66.)**
- Protect grounding electrode conductor in accordance with **(CEC 250.64B)**
- Metal raceways used to protect the GEC shall be properly bonded at each end. **(250.64 E.1)**
- Both metallic water piping and gas piping inside the building are required to be bonded. **(CEC 250.104)**
- An intersystem bonding termination is required. Provide a listed terminal at the meter enclosure or a bonding bar near the service equipment enclosure or near the GEC. Bonding bar connection is a minimum 6 AWG. Termination is required to have a minimum of three positions and shall remain accessible. **(CEC 250. 94)**
- Overhead service entrance conductors shall be equipped with a rain tight service head or gooseneck. The service head shall be listed for use in wet locations. **(CEC 230.54B)**
- Install roof flashing at riser. It must be sealed/watertight.
- Service entrance conductors must be a minimum of 3 feet away from all sides of openable windows. **(CEC 230.9A)**
- Service entrance conductor vertical clearance above grade or a walking surface is required to be minimum 10ft. **(CEC 230.24 B 1)**
- The service entrance conductor vertical clearance above driveways is required to be a minimum 12 ft. **(CEC 230.24 B2)**
- The service drop conductor's vertical clearance above pool water is 22 ½ feet. **[CEC 680.8A]**
- Where the roof slope is less than 4 in 12 the service drop conductor's vertical clearance above the roof surface is required to be a minimum 8ft. **[CEC 230.24 A; Read EXC. 2&3]**
- Where the roof slope is greater than 4 in 12 a minimum 3 feet is required from the service drop conductors to the roof surface. **(CEC 230.24 A; EXC. 2)**