

ELECTRICAL SERVICE PANEL - POST ON JOB SITE



COMMUNITY DEVELOPMENT DEPARTMENT
Building & Safety Division
12700 Norwalk Blvd., Room 12
Norwalk, CA
Phone (562) 929-5733
<http://norwalk.edgesoftinc.com/cap>

JOB CARD

ELECTRICAL SERVICE PANEL CHANGE-OUT TYPICAL CORRECTIONS

*References to 2022 California Electrical Code and Southern Edison regulations

Job Address: _____

Upon completion of the work authorized by this permit, the permittee shall notify the Building & Safety Division of such completion by requesting the final inspection. All inspections and their results can be scheduled and viewed by calling (562) 484-9660 or visiting the City's website at www.ci.norwalk.ca.us. The permittee is hereby advised that they may be entitled to reimbursement of the permit fees if the City fails to conduct an inspection of the permitted work within 60 days of the request for final inspection. For more information, please call (562) 929-5733.

Please, visit the Citizen Access Portal to schedule, review, or cancel an inspection - <http://norwalk.edgesoftinc.com/cap>

- 1. Southern California Edison specifies the location for meter. The mounting height is between 6 ft. 3 ins. and 4 ft. centered to the meter socket. (Edison regulations)
- 2. **DO NOT** install a new panel board directly over an existing panel box. This will render necessary conductor splices in the existing panel inaccessible and the joint between the panels will not be weather tight. (CEC 314.29, 312.2)
- 3. **DO NOT** recess a surface mount type panel box into the wall cavity. Use a recess type panel. (CEC 110.3(B))
- 4. For a one-family dwelling, the service panel and disconnecting means shall have a rating of not less than 100 amperes 3 wire (CEC 230.79©)
- 5. Only listed or labeled equipment shall be installed, and shall be used in accordance with their instructions. Circuit breakers must be compatible with panel installed. (CEC 110.3(B))
- 6 A one-piece combination service panel/meter socket is commonly used for new service equipment. A new or upgraded panel board may not be teamed with an old, existing, unidentified

and/or unlisted meter socket. Separate panel boxes and meter sockets are not commonly used for residential service equipment in this area. If used, both panel board and meter socket shall be listed for use as a unit and all service equipment and component parts must be deemed as suitable and be listed for the use intended (CEC 110.3)

7. The old panel box is usually used as a junction box with jumpers run to the new panel. Securely close off the old meter socket with durable weatherproof material. (CEC 312.2)

8. No double-lugging is allowed unless the terminal is listed for more than one conductor. (CEC 110.14(A))

9. An intersystem bonding termination is required. Provide a listed terminal at the meter enclosure or a bonding bar that is either located near the service equipment enclosure or near the grounding electrode conductor (GEC). The bonding bar connection must have a minimum wire size of 6AWG. The termination is required to have a minimum of three positions and shall remain accessible. (CEC 250.94)

10. Provide a bonding jumper where a metal service raceway terminates to an enclosure with a ringed knockout. The bonding jumper must be sized per CEC Table 250.66 and CEC 250.92 (B)(4).

11. Bond the cold/hot/gas piping at the water heater. (CEC 250.104)

12. Water pipe must be bonded within 5' of where it enters the building. (CEC 250.68(C))

13. Nonconductive coatings, such as paint, shall be removed prior to installing the ground clamp on the water pipe. (CEC 250.12)

14. Verify that the underground gas pipe is not being used as a grounding electrode. (CEC 250.52(B)(1))

15. Verify that new buildings and remodels have at least one of the following primary grounding electrode systems: A Ufer ground that is made up of 20ft of #4 rebar (CEC 250.52 (A)(3)) Make sure that ground clamps, install on rebar, are marked as "RB", which means that they are listed for rebar (CEC 110.3 (B)) o 20' of minimum 4 AWG bare copper wire (placed 3" from the bottom of the footing) o Two 5/8" by 8' ground rods spaced a minimum of 6' apart (CEC 250.3 (A)(3))

♣ Exception: Accessory structures and detached garages require only one ground rod or a Ufer ground connection when the main electric service is on the main house. Both ground rods should be placed as close as practicable to the service location. The ground rod shall be driven flush to the earth and a cover/enclosure shall be installed with the lid identified as "GROUND" or "ELECTRICAL." (CEC 250.10, CEC 314.30(D))

- 16. In addition to the primary grounding electrode systems, verify that a required supplemental electrode is installed. In this case, a metal water pipe must be connected with a minimum 4 AWG copper wire and connected at the exterior hose bib within 5' of where the water service enters the building. (Refer to CEC Table 250.66 for proper sizing of the ground electrode conductor services.) (CEC 250.52)
- 17. Verify that all grounding electrode conductor connections are accessible. Access to the Ufer ground connection, within a wall, shall have a suitable opening. A minimum 3 gang opening is required. (CEC 250.68(A))
- 18. When more than one branch circuit supplies a separate structure, a grounding electrode system is required at each structure (i.e. ground rod and water service bond). (CEC 250.32(A))
- 19. Provide grounding electrodes and grounding electrode conductors per CEC Table 250.66, CEC Article 250.64, CEC Article 250.70.
- 20. When the ground conductor (neutral) is a 6 AWG or smaller, it shall be identified its entire length. Ground conductors that are larger than 6 AWG are allowed to only be identified at each termination. (CEC 200.6)
- 21. Grounds and neutrals located at the sub panels shall be on separate bus bars. (CEC 250.6, CEC 250.32 (D)(1))
- 22. Surge protector required on new Main electrical panel (CEC 230.67)
- 23. Grounding conductors must be protected from physical damage. A No. 6 solid copper conductor without armored cable may be used to ground a 100-amp service if it is run tight to the building and is not exposed to physical damage. It may be buried and its clamp may be buried if listed for direct burial (such as an "acorn" clamp). (CEC 250.8, 250.10, 250.70, 250.64(B), 270.70)
- 24. Proper clamps must be used on the grounding conductor where it enters the panel except that a solid No. 6 copper may be run through the 1/8" grounding conductor knockout without a clamp on panel boxes with that knockout feature. (CEC 320.40)
- 25. A bond bushing is required where the metallic raceway or armor enclosing a grounding electrode conductor enters the panel. Bonding applies to each end and all intervening points in the raceway or armor. (CEC 250.92)
- 26. Close unused knockout openings in panel box with approved knock out seals. (CEC 110.12(A))
- 27. Close unused opening in the dead front with approved knockout seals. (CEC 110.27) □ 20. Identify each circuit breaker as to its purpose with an indelible marker. The identification must be specific such as "Kitchen Circuit 1," "Furnace," "Master Bedroom, and not general as in "Plugs," "Lights." (CEC 110.22)

28. The permit issued is for a main service change-out, only. Obtain a supplemental permit for additional outlets, wiring, circuits, subpanels added or altered. (CEC 89.108.4)

29. Branch circuits supplying bedrooms shall be protected by listed combination type arc-fault circuit interrupters. New circuit breakers supplied with panel change-out must comply. (CEC 210.12)

30. Branch circuits supplying Kitchens shall be protected by listed combination type GFCI and arc-fault circuit interrupters. New circuit breakers supplied with panel change-out must comply. (CEC 210.12)

PLEASE POST THIS CARD AT THE JOB SITE AVAILABLE TO THE INSPECTOR

Release to EDISON, Above Corrections Pending, Recall Inspection When Ready

ROUGH ELECTRICAL INSPECTION

_____ **Inspector** _____ **Date**

FINAL APPROVAL AND RELEASE TO EDISON

_____ **Inspector** _____ **Date**