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Ground – Mounted Photovoltaic Solar Panel Checklist

Electrical Items

1. Provide the name, phone number, mailing address, license number and wet signature of a State of California licensed electrical engineer or electrical contractor on each sheet of the electrical plans. If the licensed electrical contractor holding the contract for the work proposed on these plans is also responsible for the design shown on these plans, provide a statement to that effect on each sheet of the plans along with the wet signature of the licensee.

2. Date all documents submitted, including each plan sheet.

3. Provide warning signs and special locations per 2013 CEC Article 690.5 Part C.

4. Maximum system voltage shall be calculated from the systems open-circuit voltage. Adjust maximum voltage per 2013 CEC Article 690.7.

5. Module connectors shall comply with 2013 CEC Article 690.33.

6. Show location of service equipment and size relative to the project panel locations.

7. Module grounding connections shall be per 2013 CEC Article 690.4(c).

8. Size grounding conductors per 2013 CEC Article 690.45.

9. All non-current-carrying metal parts of equipment shall be grounded per 2013 CEC Article 690.43.

10. Specify all grounding electrode conduit and conductor sizes. Reference 2013 CEC Article 250.94.

11. Grounding electrode conductor shall be sized and installed per 2013 CEC Article 690.47.

12. Provide a disconnecting mean for all current carrying conductors per 2013 CEC Article 690.13

13. Provide the manufacturer's specification sheets for inverters manufacturer's name, model designation, and listing (UL safety standard 1741) requirements (i.e., grid-tie or not).

14. Provide information indicating if the inverters contain current limiting devices that limits the output current to the maximum inverter input DC rating.

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15. Provide information indicating compliance with 2013 CEC Article 690.61 requirement, "Loss of Interactive System Power."

16. Clearly show all required electrical warning signs and address their locations on plans.

17. Indicate on plans the following information on the DC side of the inverter in PV system: a. Maximum Power Voltage (VMP); b. Open Circuit Voltage (VOC); c. Maximum Power Current (IMP); d. Short Circuit Current (ISC).

18. Indicate on plans the following AC output values of the PV system: a. Maximum Output Power. b. Operating Range, Utility Voltage. c. Maximum Continuous Output Current. d. Maximum Efficiency. e. Maximum allowable over current Protection.

19. Provide the maximum series fuse type and rating for each array when more than 2 strings are proposed per 2013 CEC Article 690.9 on plans.

20. Additional items on certain projects may be required on a case by case basis.

Architectural and Structural Items

1. Identify location of solar panels on site plan for ground mounted system.

2. Provide material, solar panel specifications on plans.

3. Solar panels shall meet class B roofing materials (class A in SFPA).

4. Provide connection details and calculations to prevent wind uplift of solar panels.

5. Use wind speed of 110 mph and exposure C in design of wind load. Design panels to meet Section 1609 of the 2013 CBC.

6. For roof mounted system, provide detail for water proofing and penetration into roofing materials. Call out metal flashing, counter flashing (min. 26 galvanized sheet metal gage) where required.

7. Call out additional roof framing members if required for connection of solar panels. Specify hangers where required.

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9. Identify weight of panels on plans and call out panel dimensions.

10. Provide structural calculations for loadings on building for roof mounted system if solar panel exceeds 3 psf and total area of arrays exceeds 250 square feet. Results of calculations shall be incorporated into the plans.

11. For ground mounted system, provide structural calculations, foundation plan, framing plan and all required details.

12. Plans and calculations shall be signed and stamped by a registered Civil/Structural Engineer or Architect.

13. Additional items on certain projects may be required on a case by case basis.

Zoning/Planning Items

1. Three (3) copies of a complete plot plan (see sample provided in Solar Permit Packet) showing the distance between the proposed panel location and the property lines as well as all other required items listed on the sample plot plan.

2. Must submit Homeowners Association Approval (see list of major HOAs provided in Solar Permit Packet).

3. Provide the Over the Counter Plan Check form completed and signed by the homeowner for release of plan check by Zoning.

4. Additional items on certain projects may be required on a case by case basis.