

**City of Laguna Niguel
Building Division**
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PV Submittal Requirement

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Basic Information Required for Photovoltaic Plan Check Submittal

Informational Purposes Only

ADMINISTRATIVE

1. The following clearances or approvals are required before a building permit can be issued:
 - a. Planning Department
 - b. Building and Safety

SITE PLAN

2. Provide full dimensioned site plan. Show lot size, street, alley, easements, parking spaces, location, size and use of all structures on the lot, and property line. Identify property lines, lot dimensions, and distance to property line.
3. Show size and location of the service meter, location of all solar photovoltaic system

LINE DIAGRAMS

4. Provide a minimum of a single line diagram showing:
 - a. Array configuration
 - b. Array wiring identified
 - c. Combiner/junction box identified
 - d. Conduit/wiring from array to inverter identified
 - e. DC grounding system specified
 - f. Disconnecting means specified
 - g. Inverter specified
 - h. Conduit/wiring from inverter to Utility point of connection identified
 - i. AC grounding and system grounding specified
 - j. Point of connection attachment method identified

INVERTER INFORMATION

5. Provide inverter manufacturer specification sheet

PV MODULE INFORMATION

6. Provide module manufacturer specification sheet

ARRAY INFORMATION

7. Show the following on the plan:
 - a. Number of module in series
 - b. Number of parallel source circuits
 - c. Total number of modules
 - d. Operating voltage
 - e. Operating current
 - f. Maximum system voltage
 - g. Short-circuit current

WIRING AND OVERCURRENT PROTECTION

8. Center-Fed panels are not allowed.
9. Show the following on plan:
 - a. Wire type shall be 90° C wet and continuous rated
 - b. Overcurrent protection on inverter output circuit is sufficient

ROOF INFORMATION (ROOF TOP SYSTEM)

10. Show the following information on plan:
 - a. Weight of the arrays (pounds per square foot including mounting hardware)
 - b. Describe and show the roof structural elements
 - c. Identify roof type
 - d. Provide detail of photovoltaic panel mounting hardware attachment to the roof framing members
 - e. Provide mounting hardware manufacturer specification
 - f. Provide engineering calculations and details demonstrating adequacy of supporting members, including wind uplift effects

REQUIRED PHOTOVOLTAIC SIGNS

1. **DC COMBINER/ JUNCTION BOX:**
 - a. "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to ground due to leakage paths and/or ground faults."
2. **DC DISCONNECT:**
 - a. "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to ground due to leakage paths and/or ground faults."
 - b. "PV system- DC disconnect"
 - c. *At accessible location*

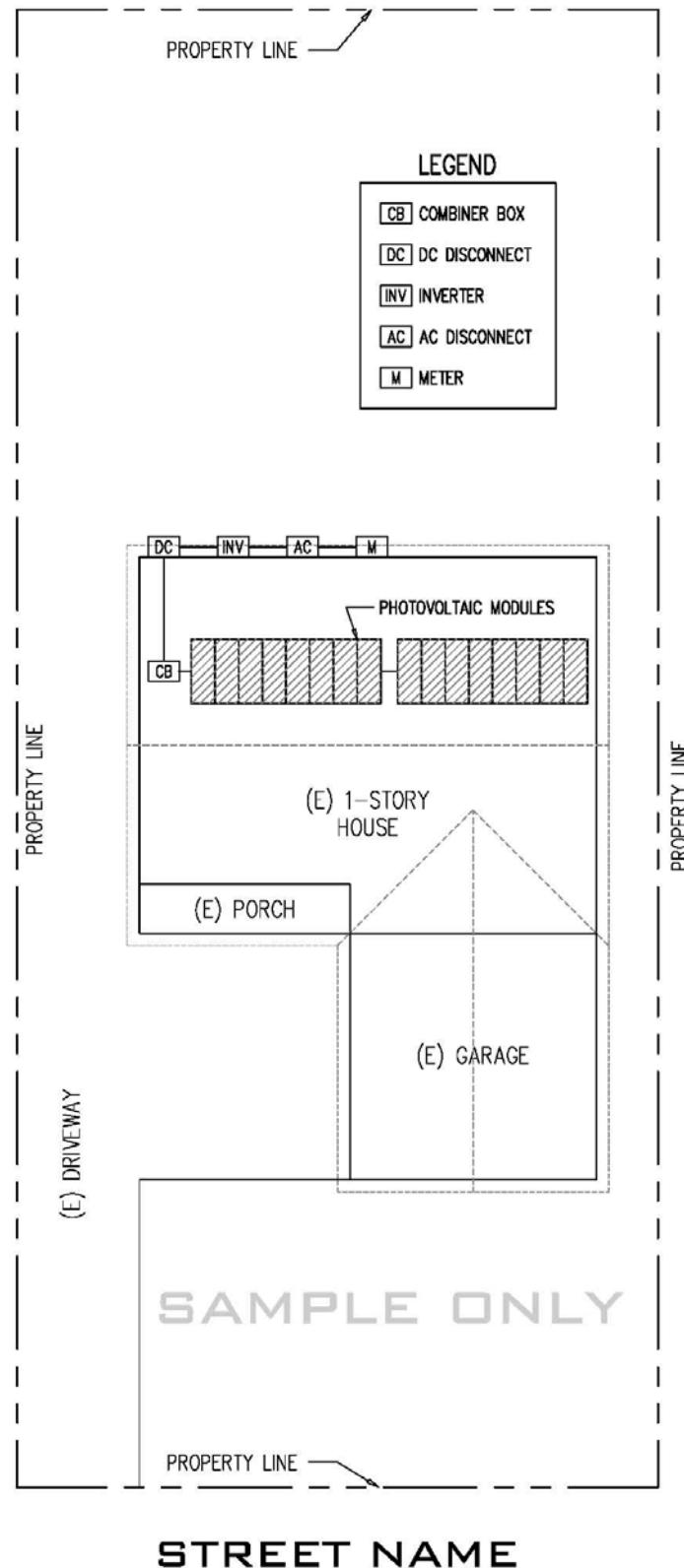
1) Operating current	3) Maximum system voltage
2) Operating voltage	4) Short-circuit current
3. **INVERTER:**
 - a. "If a ground fault is indicated, the normally grounded conductors may be energized and ungrounded."
 - b. "Warning. Electrical shock hazard. Do not touch terminals. Terminals on both the line and load sides may be energized in the open position."
 - c. "The maximum AC output operating current _____"
 - d. "The operating AC voltage _____"
 - e. PV power source (DC)

1) Operating current	3) Maximum system voltage
2) Operating voltage	4) Short-circuit current
4. **AC DISCONNECT:**
 - a. "PV system- AC disconnect" PV Signage
5. **METER:**
 - a. "The maximum AC output operating current _____"
 - b. "The operating AC voltage _____"
 - c. "Dual sources: Second source is Photovoltaic"

6. Permanent directory or plaque providing location of service disconnecting means and photovoltaic system disconnecting means, if not located at the same location.

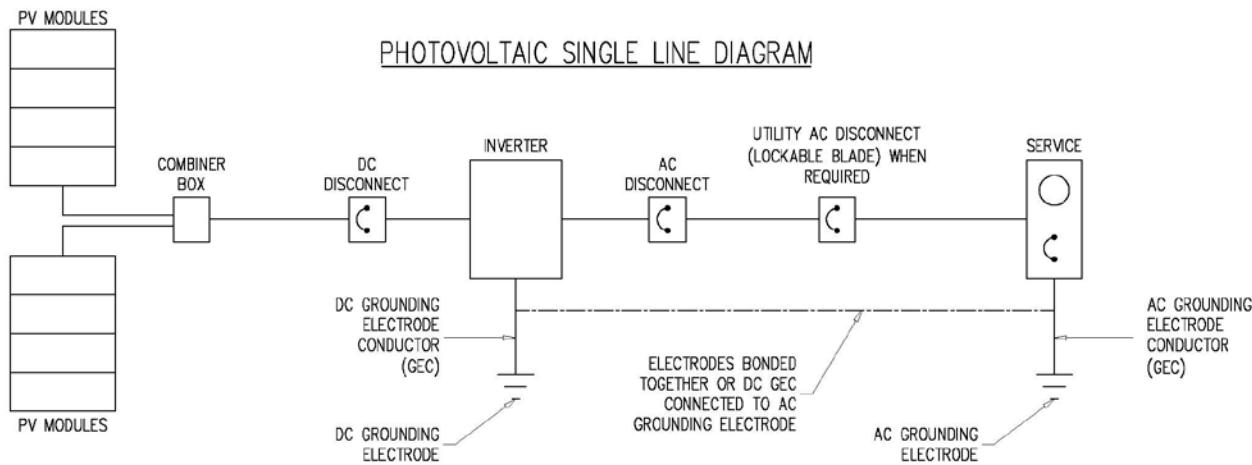
SAMPLE SITE PLAN

Site plan shown is to illustrate the necessary information required for full plan review. Complete and accurate site plan is required for review and approval.



SAMPLE LINE DIAGRAM

For informational purposes only



- ALL WIRING IN A SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IDENTIFIED
- FOR INFORMATIONAL PURPOSES ONLY.