

# Solar (Photovoltaic) System Requirements Checklist



welcome neighbors.

**All work shall comply with 2020 National Electric Code, 2018 International Residential Code, and 2018 International Fire Code.**

## Application Requirements:

- Completed General Building Permit Application.
  - A licensed Electrical Contractor must be indicated on the application.
- Submitted CORE/IREA application.
- Site plan that locates all equipment on the drawing:
  - X2 11" x 17" plan is acceptable, show PV array, combiner/junction boxes, disconnects, inverters, meter and service panel/tie-in locations, show general footprint of structure and relation to property lines, show a roof plan with location and physical size of all PV panels, b-vents, attic vents, and plumbing vents.
- Manufacturer specification sheets for PV panels and PV inverter.
- Complete 3-line electrical diagram. Electrical specifications shall indicate:
  - System size (DC - STC "nameplate" rating);
  - Module manufacturer and model number;
  - Module specs (@ STC) including VOC, VMP, ISC, and IMP;
  - Array specs (@ STC) show max VOE (w/ temp corrections), VMP, ISC, and IMP;
  - Number of strings;
  - String fuse rating (if appropriate);
  - Current carrying conductors show size and type (i.e. USE-2);
  - Grounding (equip grounding conductor) indicate size and type;
  - Over current protection/disconnects with voltage rating, current rating, and indicate if "integrated" in inverter;
  - Inverter, note manufacturer, model number, rated AC output (wattage), AC voltage, and max AC current;
  - Grid interconnection location shall show AC load panel with back feed

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- breaker rating (voltage and amperage), panel rating (bus bar rating and main breaker rating), and line/ load side tap.
- Mounting/ racking system details:
  - Shall include manufacturer's spec sheets with uplift capacity for wind loads (120 mph, 3 second gust), snow loads (30 psf), attachment details (type, size, and spacing of fasteners), 2' setback from eaves and 3' setback from the ridge line.
  - Colorado stamped engineer's verification letter. For custom racking, a site specific engineered design is required.
- Structural information:
  - Size, type and spacing of roof framing members, type and thickness of roof sheathing, type and number of layers of roofing materials, and indicate whether array is flush or tilt mounted.
  - Specify method of locating framing members.
  - Additional information or engineering may be required for unique situations.

## Installation Requirements:

- **All electrical work must be completed by a currently licensed electrician.**
- Approved, stamped plans must be on site at all times that work is being done.

## Inspection Requirements:

- Must have CORE/IREA approval before requesting final inspection and meter release.
- One final electrical/system building inspection is required once all work is completed.
  - A licensed electrician must be on site for the inspection.
  - Ladders must be installed and properly secured for the inspection.
  - Attic access is required for systems that run through the attic space.