

Solar (Photovoltaic) System Requirements Checklist



welcome neighbors.

Application Requirements:

- All work shall comply with 2020 National Electric Code, 2018 International Residential Code, and 2018 International Fire Code
- Completed Residential - Solar Building Permit Application through Building Department Permit Portal
 - A licensed Solar Contractor must be indicated on the application
- Signed CORE Interconnection approval letter
- Site plan that locates all equipment on the drawing:
 - 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 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 (115 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 ridgeline
 - 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

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Installation Requirements:

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

Inspection Requirements:

- One final electrical/PV Meter Release 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
 - Each step or rung must be capable of supporting a single concentrated load of at least 250 pounds applied in the middle of the step or rung.
 - Attic access is required for systems that run through the attic space
 - Permit card and approved plans must be printed full size and onsite.