Solar (Photovoltaic) System Requirements Checklist

Application Requirements:
- All work shall comply with 2020 National Electric Code, 2018 International Residential Code, and 2018 International Fire Code
- Completed General Building Permit Application
  - A licensed Electrical Contractor must be indicated on the application
  - Complete application online or by emailing to bennettbuilding@bennett.co.us
- IREA approval letter
- Bennett Watkins Fire Department approval
  - Please submit plans directly to the Bennett/Watkins Fire Protection District at https://bennettwatkinsfire.colorado.gov/ or by calling for any specific requirements at 303-644-3572
- 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 (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 ridgeline
  - Colorado stamped engineer’s verification letter. For custom racking, a site specific engineered design is required
- Structural information:
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- 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:
  - The contractor must call for final Fire Inspection prior to calling for final building inspection when the system is complete
  - 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
    - Permit, approved plans and inspection card must be onsite