



Blue Springs, Missouri

Community Development Codes Administration Division

CHECK-LIST FOR PHOTOVOLTAIC SYSTEMS

This may not be an all inclusive list as special designs for these systems may be submitted.

COMMERCIAL & RESIDENTIAL SYSTEMS

Four (4) sets of sealed plans are required with the ICC Codes listed on the Cover sheet, the manufacture's cut sheets for components, label requirements for electrical, and mounting hardware types.

Provide the following information:

- ___ Sealed Plans drawn to scale with a minimum size of 18" x 24"
- ___ Show location of PV array on the building/property.
- ___ Identify the roof system
- ___ Show modifications to the existing structure to accommodate the PV mounting system.
- ___ Indicate loads that apply to the structure including modifications of dead load, uniform distributed live load, concentrated load, roof loads, snow load, wind loads as per following form.
- ___ Design calculations shall include all design factors along with Engineering of loads and truss/rafter structures which apply.
- ___ A one line diagram of the electrical system shall be submitted on the plans along with the array configuration, electrical grounding, labeling, and points of interconnection with non-reversible grounding connections.
- ___ The permit application must be completed along with the General Contractor and all the Sub-contractors and their licenses in the City of Blue Springs.
- ___ A Third-Party Inspection requirement may be required with a list of items requiring that inspection.

If array is roof mounted:

This section is for evaluating roof structural members that are site built or engineered trusses. Manufactured truss and roof joist systems, when installed with proper spacing, will meet the structural requirements provided a structural engineering seal has been affixed to this document.

1. Roof Construction: **RAFTERS** **TRUSSES** **OTHER:**_____
2. Roof mounted arrays can not be mounted on engineered trusses unless the following items are noted:
 - A. Age of roof structure_____
 - B. Roof type_____
 - C. Weight of solar arrays per square foot (can not exceed 5 psf on engineered trusses).
 - D. Imposed weight of solar system must be less than 45 psf point load in any direction.
 - E. Maximum Spacing between attachment point on a rail _____inches at maximum

- spacing allowed based on maximum design wind speed.(90 mph/3 sec. gusts)
- F. Total surface area of PV Modules (sq.f.)_____.
 - G. Type of panel mounting hardware_____.
 - H. Detail of hardware must be shown with attachments designed for a windload of 90 mph/3 sec. gusts.
 - I. Structural calculations shall include wind uplift and downdraft.

3. Describe site-built rafter or engineered truss system:

- A. Rafter size;_____X_____inches.
- B. Rafter spacing:_____inches.
- C. Maximum unsupported span:_____feet, _____inches.
- D. Check for over-span of rafters. **Yes** **No**
- E. If **yes**, provide an Engineering Fix with seal.

If array is ground mounted:

- 1. A site plan is required showing location of future array and all buildings on the lot.
- 2. Show array supports, framing members, and foundation posts along with footings.
- 3. Provide information on mounting structural construction. If the mounting structure is unfamiliar to the local jurisdiction and is more than six (6) feet above grade, it will require engineering calculations certified by a design professional showing sufficient support, uplift and windload calculations for 90 mph/3 sec. gusts.
- 4. Show detail on module attachment method to mounting structure.

