

# SAFEbuilt

## PHOTOVOLTAIC SYSTEM SUBMITTAL REQUIREMENTS SOLAR PANEL INSTALLATION/REPLACEMENT SUBMITTAL

1. Permit application (emailed to town) or online application must be filled out completely. Describe work completely, valuation of work to be based on total cost to customer (contract price) including material, items and labor whether provided by the contractor or the property owner.
2. Plan reviews are required for each building on a property (Separate permits may be required) or address that will require separate permits.
3. Applicable current codes are the 2020 NEC, 2018 International Codes.
4. Provide structural engineers stamped letter for added additional weight of the solar panels on the roof and the additional wind load created by the solar panels. The letter will be based on and will state on the letter that it has been designed to a minimum ground snow load of 30psf, wind speed of 115mph Vult, wind exposure C and seismic design category B. Type of roof connection to roof with embedment will be required.
5. Systems that are ground mounted will require an engineer stamped letter for support of the PV system and for wind load of the PV system. The letter will be based on and will state on the letter the ground snow load of 30psf, wind speed of 115mph Vult, wind exposure C and seismic design category B.
6. Zoning requirements are set by individual jurisdictions and applicant should contact the jurisdiction directly to verify compliance.

### ELECTRICAL PLANS

1. Provide four-line diagram showing the number of modules, number of modules on a circuit, wire sizes and insulation type, conduit sizes, junction boxes, inverter (AC or DC), combiner panel, disconnect, meter, fuses, breakers type of connection to system and grounding.
2. Specify the equipment to be used in the installation. Include the ampacities, volts, and wattage.
3. Provide calculations used to determined wire sizes, disconnect sizes and fuse or breaker sizes. Roof mount systems are to use worse case ambient temperature of 56-60 degrees C to adjust temperature rating ampacity of conductors.
4. Provide calculation used to show how DC inverter was selected.
5. Provide cut sheets for all the equipment to be used. All equipment cut sheets are to have current certificates and are to be based on current codes.
6. Provide location on plans of all the equipment (inside and outside of the building).
7. Provide all labeling, directories, and plaques to be used on the project.
8. Provide all general notes and comments to the current code.
9. Provide engineered stamped letter and plans for all commercial projects.

### BUILDING AND STRUCTURAL PLANS

1. Provide roof layout with location of solar panels. Show dimensions of roof.

2. Provide fire pathways, setbacks, and protection of equipment per the IRC or IFC as required by the type of structure.
3. Provide connection detail to the roof. Provide manufacturer and line of equipment to be used. (If this equipment is specified and designed by the engineer, the plans must be stamped. The equipment and attachment detail on the plan must match the engineer letter and cut sheets provided).
4. Provide detail for any repairs that are required by the engineer and stamp the letter and plans.
5. Provide a site plan, show location of equipment, distances to property lines and any other surrounding structures.
6. The color red is not to be used on the plan by the architect, engineer, designer, contractor or other entity preparing the plans. The color red is reserved by the plans examiner for comments.
7. Provide design criteria for the plan based on the current codes as noted above.

## **RESUBMITTALS**

1. Provide detail of plans that have been changed. Areas that have been changed by the plans are to be clouded.
2. Provide letter or explanation on plans of what the changes are. Be detailed and complete in the explanation.
3. Provide any additional costs that are incurred due to the revision.
4. Resubmittals are to be sent to [coloradoplanreview@safebuilt.com](mailto:coloradoplanreview@safebuilt.com) not to the plans examiner directly.