



**Residential (Single Family)
Solar Photovoltaic (PV)
Systems**

**Permit Submittal
Requirements**

**Handout
235**

REV 06/17

ADOPTED CODES (with City Amendments per Ordinance 2017-31)

**2015 International Residential Code (IRC)
2014 National Electrical Code (NEC)
2012 International Fire Code (IFC)**

**Development & Engineering Department
Building Development**

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PERMIT SUBMITTAL REQUIREMENTS

Residential (Single-Family) Solar Photovoltaic (PV) Systems Contact Fire Prevention Division for additional requirements (623)773-7275

In an effort to promote uniformity under the purview of life safety, the following submittal requirements are required for securing necessary electrical/building permits for residential (single-family) photovoltaic (PV) systems:

1. By signing the permit application, installer verifies that they have visually inspected trusses for pre-existing damage. If damage is noted, repair requirements designed by a structural engineer must be submitted with the PV application.
2. Complete Solar Permit Application (400S) and submit with two (2) sets of plans and all supporting documentation.
3. Location of PV installation indicated on roof plans. Truss structural engineering analysis shall not be required for panels whose weight does not exceed 5 lbs. per square foot and point loads do not exceed 40 lbs. If any amount exceeds these values, a structural analysis will be required. Structural engineering will be required for any trusses constructed with less than 2x4 dimensional lumber. Roof rafters, not considered pre-manufactured trusses (flat roofs), shall provide structural analysis by an Arizona Registrant specifying point loads and dead loads.
4. Provide cut sheets and mounting details for racks per roof covering for PV panel installation. Show locations of points of attachment with distances apart and pounds per point on the plan. PV panels/modules shall be UL listed 1703 as stated in 2015 IRC Section R902.4. Cut sheets must be provided.
5. Provide electrical one-line and three-line (showing phases, neutral, and ground) diagram. Ungrounded PV systems must specify on the plans "Ungrounded"
6. Provide cut sheet and listing for inverter (DC to AC conversion). Inverters and micro inverters shall be UL listed 1741 as stated in 2015 IRC Section R324.3.
7. Note on plans that PV equipment shall be designed and installed in accordance with NEC 690 and posted with applicable warnings, signage and plaques per NEC 705-10, 690-17 & 690-56(C)
8. Arc-Fault Circuit Protection (DC) required per 2014 NEC Article 690.11.
9. Rapid Shutdown of PV Systems required per 2014 NEC Article 690.12.
10. Separate permit required for upgrade of panel, new solar ready panel, and de-rate of panels. Separate 400M application must be completed and submitted with two (2) copies of the following:
 - a) Manufactured specifications for solar ready panels
 - b) Electrical load calculations and panel schedule for de-rate of panels
11. Solar Photovoltaic submittals, if all required documents are properly completed and submitted, will be expedited with a first submittal turnaround time of 5 business days. Solar Photovoltaic submittals that do not exceed maximum PV breaker 40 amps may be eligible to participate in the Over-The-Counter Plan Review Process. Please contact OTC.building@peoriaaz.gov for further information.

****Separate requirements apply for Commercial designs. Please contact Building Development for more information.****