City of Atascadero
Community Development Department

PUBLIC INFORMATION - BUILDING SERVICES

Community Development Department 6500 Palma Avenue Atascadero, CA 93422 (805) 461-5035 fax (805) 461-7612

SOLAR PHOTOVOLTAIC INSTALLATION SUBMITTAL CHECKLIST

SEISMIC DESIGN CATEGORY C, D or E - CLIMATE ZONE 4 - WIND ZONES 92 M.P.H - EXPOSURE ZONE "B" OR "C"
ZONING ORDINANCE - NATIVE TREE ORDINANCE - ATASCADERO MUNICIPAL CODE - 2022 CBC - 2022 CRC - 2022 CEC 2022 CPC - 2022 CMC - 2022 CGBSC – 2022 CALIFORNIA ENERGY CODE

PERMIT SUBMITTALS ARE ACCEPTED BY IN-PERSON APPOINTMENT OR EMAILED TO PERMITCENTER@ATASCADERO.ORG

Incomplete submittals will not be accepted at the permit counter

- ❑ **Complete Application**: Must be signed by **Owner**, **Agent** (with approved written authorization), or **Licensed A, B, C-46 or C-10 Contractor.**

- ❑ **Permit Fee:** $510.63 for Residential Roof-mount under 10 kW
  $680.48 for Ground Mount; Commercial; and larger residential systems
  The Permit Fee covers two rounds of plan check if necessary and inspections; tree protection may be required on ground-mount systems.

- ❑ **Site Plan (2 sets) –** Provide fully dimensioned site plan. Show property lines and location, size and use of all structures. Show location of array, size and location of service panel, subpanels and inverters. Site plans for ground mount systems shall show distance from the array to property lines (10' min. per CFC 605.11.2) and to buildings (20' min. per AMC), easements, location of underground utilities after the meter (non-USA elements), building sewers, all elements of private sewage disposal systems, and locations of all native trees having drip lines within 20' of proposed footings and trenching excavations. The site plan/title sheet, or a separate title sheet, is to have the project address, DC system size, owner information, contractor information, reference conformance with the California Building Code (2022 CBC), California Electrical Code 2022 CEC, California Fire Code (2022 CFC), the Atascadero Municipal Code (AMC), and have a sequentially numbered complete sheet index.

- ❑ **Structural Design Package (2 sets) – <u>Roof Mount</u>:** Describe and show roof structural elements including rafter type, size, span and species. Conventional residential light-frame rafter roof framing consistent with Part 3, Table 2, of the California Solar Permitting Guidebook may have horizontal anchor spacing consistent with Table 1 with lag screw attachments per Figure 3, Typical Anchor with Lag Screw Attachment. This is 6' for 24" rafter spacing on slopes up to 6:12. *Manufactured plated wood truss horizontal anchor spacing is 4' maximum on-center with adjacent rows staggered (Table 1, Note 3).* Other roof constructions and greater horizontal anchor spacing requires analysis by a design professional. Provide a detail for mounting hardware attachment to roof framing members and flashing. Provide manufacturer's information on rail-type systems including allowable span, cantilever and allowable rail splice locations. Show a job specific (not "typical") layout of arrays, attachment points, rail splices and cantilevers. Dimension spans and cantilevers. Provide module manufacturer's allowable top down clamp locations and show rail spacing accordingly. **<u>Ground Mount</u>:** Provide engineering calculations demonstrating the adequacy of footings and supporting members, including seismic and wind uplift effects. Provide footing detail showing size and reinforcement.

- ❑ **Electrical Line Drawing –** Provide a complete single line diagram. Show the number of modules in series, number of parallel source circuits, and total number of modules, DC operating voltage, operating current and short-circuit current. Show Isc corrected for continuous load. Show series Voc corrected for temperature per module specification sheet or Table 690.7 (21F, factor of 1.14 for Atascadero, CA). Show conductor types and sizes and conductor ampacity corrected for number of current carrying conductors in a raceway, ambient temperature (use 108F for Atascadero, CA). Show all calculations. For circuits over 250 volts to ground, the electrical continuity of metallic raceways shall be ensured by connections using threaded couplings or listed devices such as bonding type locknuts or bushings with bonding jumpers. Size AC conductors from the inverter to panel at 125% of maximum rated inverter output.

  - ❑ **Mounting System Grounding –** Provide detail. All hardware is to be stainless steel or listed for direct burial.

  - ❑ **Module Information and Grounding –** Provide module manufacturer specification sheet. Modules are to be listed to UL 1703 standard. Provide grounding detail per manufacturer's grounding instructions and/or the electrical code. Provide the module manufacturer's top down clamps locations with the structural package above.

  - ❑ **Inverter Information and Grounding –** Provide inverter manufacturer specification sheet. Inverters to be listed to UL 1741 standard. Show a #8Cu grounding electrode conductor installed from the inverter to the service panel or grounding per manufacturer. Show AC and DC disconnects in a readily accessible location on the outside of the building. Inverter integral AC/DC disconnects must allow for the removal of the inverter for service or replacement. Exterior mounted inverters in not-readily-accessible locations shall have AC and DC disconnects located within sight of the inverter.

  - ❑ **Service Panel –** Show the PV source circuit breakers sized at a minimum of 125% of the maximum inverter output and the total value of all circuit breakers supplying the panel not to exceed 120% of the bus bar rating of the panel. PV source circuits, including breakers feeding sub-panels with PV source circuits, are to be at the opposite end of end-fed panels and at either, but not both, ends of center-fed panels. In order to downsize a main breaker to allow for a larger PV source circuit a service load calculation per Article 220 is to be submitted showing that the downsized breaker is adequate for the calculated service load.

  - ❑ **Labeling –** Marking to be placed on all interior and exterior DC conduit, raceways, enclosures and cable assemblies, every 10', at turns and above and/or below penetrations and all DC combiner and junction boxes. Marking content: CAUTION: SOLAR CIRCUIT in red background, white lettering, minimum 3/8" letter height, all capital letters, Arial or similar font, non-bold, reflective, weather resistant material suitable for the environment (durable adhesives meet this requirement). Provide all other labeling per CEC Articles 690 and 705.

- ❑ **Roof Access –** Access pathways consistent with CFC 1205 shall be provided on all buildings except non-habitable buildings and those with a roof slope of less than 2:12. Pathways shall be over areas capable of supporting firefighters accessing the roof. No portion of a pathway shall be located on a portion of a gable roof overhanging the gable rafter or truss. Pathways shall be located in areas with minimal obstructions such as vent pipes, conduit or mechanical equipment. Panels and modules installed on Group R-3 buildings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway of not less than 36 inches (914mm) wide shall be provided from the emergency escape and rescue opening to the eave directly below and, consistent with 36 inch wide (914mm) shall be provided directly in front of the full length of the wall line containing the emergency escape and rescue opening(s).