

## **General Information**

A permit is required to install Solar Panel / PV systems. All Solar Panel (PV) installations must comply with the requirements of the Building, Mechanical, Electrical, Plumbing and Fuel Gas codes adopted by the Town of Addison. For additional information, please see the Solar Panel / PV system installation handout notes for material and installation requirements.

This work must be performed by a Texas licensed Electrical Contractor that is registered with the Town of Addison.

**NOTES:** All of the equipment, array modules, inverters, racking, combiner boxes, disconnects, fittings, etc. must be installed per approved plans and manufacturer's installation instructions. All material and equipment must be listed and labeled by an approved testing agency.

## **Plan Review**

1. Submit a site plan (a survey plat is required) showing the proposed location of the solar panels with respect to the property lines, easements, and house.
2. Submit a letter from a Texas PE indicating:
  - a. The existing structure will support the additional weight of the solar equipment.
  - b. The proposed solar equipment will be attached in such a way that it will withstand a 115 mph wind load.
3. The electrical drawings and calculations must be sealed by a Texas PE.

Please see the Solar Panel / PV Check List for additional details related to Plan Review submittal requirements.

## **Fees**

A permit fee is required. Fees are charged based on the fee schedule currently adopted by the Addison Town Council.

## **Inspections**

Inspections will be required prior to and upon completion of work. The permit must remain posted at the work site until the approved Rough Electric, Framing/roof Array and Bond, and Final Inspection have been completed and the project is considered complete.

1. Rough Electrical (for concealed wiring, if applicable)
2. Framing/Roof array and Bond (for integrated systems or tile roofs)
3. Final Inspection (may be combined into one inspections)

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## INSTALLATION HANDOUT NOTES/ 2023 NATIONAL ELECTRICAL CODE

1. Contact the Town of Addison Building Safety Division prior to beginning construction.
2. A rough electrical inspection must be performed prior to installing panels on roofs.
3. Approved plans, and manufacturer's installation instructions must be available on-site.
4. Installation of equipment shall be as per approved plans. If the installation differs from approved plans, and additional plan review may be required.
5. A ladder complying with OSHA requirements shall be made available and secured in place for inspection.
6. All required working clearances for electrical equipment must be provided and maintained.
7. Provide an independent PV disconnect ahead of the inverter.
8. Equipment grounding conductors used for grounding arrays smaller than is #6 AWG. Copper shall be installed in a suitable raceway. All exposed equipment grounding and bonding conductors shall be solid copper or UV rated.
9. Devices (lugs) used for grounding arrays shall be suitable for use in wet locations (tin plated copper) and attachment hardware shall be stainless steel with star washers.
10. Provide all appropriate warning labels at disconnects and equipment.
11. Plastic UV rated cable ties shall not be used to secure exposed wiring between modules. Approved clips, stainless steel cable ties, or stainless steel pipe clamps with rubber inserts are acceptable.
12. Conductors and conduits run on rooftops may require additional ambient temperature adjustments per table 310.15(B)(3)(c).
13. Residential interior PV direct current system conductors shall be identified by system to comply with NEC 2014 section 690.4 (B). Direct Current ungrounded conductors shall be Orange or Yellow. The grounded conductor shall be identified by the color Gray.
14. PV source and output circuits run inside the building shall not be installed within 10" of the roof decking unless installed directly below the roof surface covered by PV modules and associated equipment. 690.31(E)(1). Metal junction boxes, raceways, or other wiring methods supplying dc circuit wiring shall be labeled designating "Photovoltaic Power Source". 690.31. (E)(3) &(4)
15. The service equipment and its verifiable bus rating shall be adequate and properly sized for the designed back feed from the photovoltaic (PV) system.
16. Check approved plans to verify if the main circuit breaker is required to be de-rated to accommodate the new PV circuit.
17. The service grounding and bonding connections shall be located and verified.

**Note: Installers should carefully review articles 690 and 705 of the 2023 NEC prior to installing photovoltaic systems. This guideline is not an all-inclusive list of photovoltaic system requirements and should only be used for reference.**

This handout is for informational purposes only and should not be relied on in place of official regulations and/or policies. The Town of Addison makes no representations, guarantees, or warranties as to the accuracy, completeness, currency, or suitability of the information provided via the handout. Contractors, customers and citizens are personally responsible for complying with all local, state and federal laws pertaining to projects within the Town. Copies of the Town of Addison adopted codes and Zoning Ordinances can be found on the city website at <http://www.addisontx.gov>.

## Solar Panel - PV Check List

Please fill out the Solar Panel Self-Checklist and please sign below that all information is correct. Your self-checklist must be submitted along with your Solar Panel plans and application.

Permit Application

Copy of inverter manufacturer information sheets

Copy of module manufacturer information sheets

Copy of rail/racking system manufacturer information sheets and method of attachment.

Sealed letter from structural engineer stating that the existing structure will support the weight of the solar equipment and that all equipment will be attached such that it will withstand a 115 mph wind.

Electrical drawings and calculations sealed by a Texas PE

How many modules will be installed? \_\_\_\_\_

Where will modules be installed?      Roof      Accessory Structure      Ground

Site plan showing system installed on property. Site plan must include the following: modules, inverter(s), combiner boxes, all ac & dc disconnects, utility disconnect and meter(s), service panelboard

Copy of one-line or three-line diagrams

Connection to utility grid      Supply Side Connection      Load Side Connection

Panelboard ampere rating      \_\_\_\_\_ amps      Main breaker      Back feed Breaker      \_\_\_\_\_ amps

System configuration      Positive ground      Negative ground      Ungrounded

Are batteries being installed?      Yes      No

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_