

CITY OF PALM
DESERT
Building & Safety
Department

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09/22/15

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SOLAR PHOTOVOLTAIC SYSTEMS PERMITTING GUIDELINES

This information bulletin is published to guide applicants through a standardized permitting process for all commercial and residential solar photovoltaic systems that do not qualify for the “Small Rooftop Residential Solar Program (AB2188).”

This bulletin provides information about submittal requirements, plan review, fees, and a general summary of mandatory field inspections for the following types of projects:

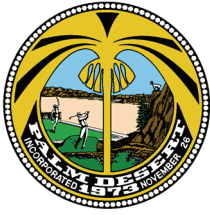
- Commercial rooftop systems
- Residential rooftop systems (Over 10kw)
- Ground mounted and carport systems
- Additions or modifications to existing solar photovoltaic systems

Note: *This publication does not conform to the California Solar Initiative (AB2188) for qualifying small rooftop photovoltaic systems. Refer to the Building and Safety Department’s website for further information on that program.*

1. Required Approvals

The following approvals are required for installation of photovoltaic system within the City of Palm Desert:

- Planning Department approval is required at the time of plan review submittal. Please coordinate directly at (760) 776-6483.
- Fire Marshall approval is required for all commercial solar photovoltaic installations. Please coordinate directly at (760) 346-1870.
- Building Department approval in the issuance of a Photovoltaic System Permit.



SUBMITTAL REQUIREMENTS

Standard Solar Photovoltaic Permitting Guidelines

2. **Building Permit Application Form**

A permit application can be obtained in person or downloaded from the Department's website at:

www.cityofpalmdesert.org

3. **Project Submittal**

All projects can be submitted in person at:

City of Palm Desert
Department of Building and Safety
73-510 Fred Waring Drive
Palm Desert, California 92260
(760)776-6420
(760) 776-6392 (Fax)

Courier or mailed photovoltaic submittals are accepted and will be only be reviewed when all plan check fees have been received and processed. The plan review process does not begin until the project is cleared by the City's Finance Department of all fees. Please coordinate with department staff for receivable procedures.

4. **Plan Review Timeframes**

All solar photovoltaic and thermal plan reviews are conducted within fifteen (15) working days from the date of approved receipt (fees paid and cleared / all submittal Information Included). All necessary rechecks and/or revisions occur within ten (10) working days of the project re-submittal.

5. **Plan Review and Permit Fees**

Residential and Commercial Plan Review Fees are \$203 / Permit Fees are approximately \$266 depending on the required number of archived documents.

6. **Minimum Plan Sets Requirements:**

- **Number of Plans**

Provide two (2) complete sets of photovoltaic plans (Minimum 11"X17" to Maximum of 24"X36"). Include a separate Site and Roof Layout Plan for the Riverside County Assessor's Office.



SUBMITTAL REQUIREMENTS

Standard Solar Photovoltaic Permitting Guidelines

- Site Plan

Provide a fully dimensioned site plan showing property lines, all structures, and the location of the main electrical service, all photovoltaic inverters and disconnects, etc.

- Roof Plan

Provide a roof plan showing the location of the photovoltaic panels and the required setbacks. Include all walkways to roof mounted equipment (including any roof mounted heating and air conditioning equipment, etc.). Roof plans should also identify the size and spacing of the existing roof framing members and the slope of the roof plus any required roof framing alterations needed.

- Ground Mounted Systems

Provide a Ground System Site Plan showing the location of the arrays. Include all electrical layouts, existing slope, and site drainage, if altered. Ground mounted systems designed for steep embankments or retained areas require a licensed design professional stamp and signature.

- Attachment Details

Provide an attachment detail demonstrating how the photovoltaic panels and array will be secured to the racking system and roof structure.

- Engineering Calculations

Engineering calculations may be required on some photovoltaic systems to show that the existing roof is strong enough to support the added weight of the system.

- Electrical Single Line Diagram

Provide a complete electrical single line diagram showing all electrical equipment, conductor size and type, conduit sizes, overcurrent protection location and ratings, grounding electrode type and location, point of interconnection to existing service panel (i.e. backfed breaker), etc.

- Product Specifications and Literature

Provide all manufacturer's specifications on all inverters, solar panels, combiner and disconnect boxes and solar panel anchorage system to be used.

- Signage Specifications

Provide a legend showing locations and wording of all required signs or placards at various photovoltaic system components.



SUBMITTAL REQUIREMENTS

Standard Solar Photovoltaic Permitting Guidelines

5. When is a California Licensed Design Professional Required?

- When an observation is made (in plan review or field inspection) that the additional dead load from the photovoltaic system panels and related roof mounted equipment exceeds or calls into question the capacity of the existing roof framing.
- Where photovoltaic panels are mounted on an existing permitted patio, carport, or detached structure.
- When a custom designed, altered, or fabricated photovoltaic attachment method is used.
- All ballast mounting systems.
- Ground Mounted Systems which utilize steep embankments and/or retained surface area.

6. California Accessible Access Review

An accessible access review may be necessary in the event a solar photovoltaic system is proposed for a carport or other public area structure. The required accessible parking space(s), loading zone(s), and path of travel under the new covered parking area must be demonstrated to evaluate clearances and alterations.





FIELD INSPECTIONS

Standard Solar Photovoltaic Permitting Guidelines

All standard solar photovoltaic systems require two (2) inspections:

- First inspection is of all rooftop mounting attachments—unflashed with the positive mechanical attachments visible.
- Second inspection may be completed rough electrical and final inspections.
- Residential projects are required to comply with Smoke Detector and Carbon Monoxide Alarm requirements on or before the final inspection.
- All inspections are required to be scheduled twenty-four (24) hours in advance by contacting the Building Department at:

(760) 776- 6420

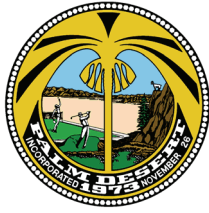
Monday through Friday (8AM to 4PM)

Same day inspection are not provided.

Permit holders must be prepared to show conformance with all technical requirements in the field at the time of inspection. The inspector will verify that the installation is in conformance with applicable code requirements and with the approved plans. An OSHA approved ladder must be provided by the contractor of record or property owner at the time of inspection or provide an OSHA approved access (stairway).

Here are some common points of inspection you should be prepared to show:

- **Number of PV modules and model number match plans and specification sheets**
- **Array conductors and components are installed in a neat and workman-like manner**
- **PV array is properly grounded**
- **Electrical boxes are accessible and connections are suitable for environment**
- **Array is fastened and sealed according to attachment detail**
- **Conductor's ratings and sizes match plans**
- **Appropriate signs are properly constructed, installed, and displayed**
- **Smoke Detector and Carbon Monoxide Alarms are required at Final Inspection**



QUICK TIPS

Standard Solar Photovoltaic Permitting Guidelines

QUICK TIPS FOR CONTRACTORS & PROPERTY OWNERS WHEN APPLYING FOR A PERMIT

Permit applicants can save time and money by following these tips.

- **Take time to review permit requirements of the local jurisdiction**

Permitting rules and processes differ among different cities and counties. Understanding all local requirements will allow permit applicants to submit a complete and accurate permit application packet the first time.

- **Contact the local electric utility early in the permitting process (solar PV installations)**

Local electric utilities have a completely separate approval process from the local jurisdiction's permitting process. Some electric utilities may require that the solar project be reviewed before the local jurisdiction issues a building permit. Pursuing utility approval early in the permit process enables the solar PV system to become operational as soon as possible.

- **Make sure that the solar installation that is built matches the submitted plans**

The on-site inspector will verify that the installation aligns with proposed plans and any changes may require corrections and additional inspections.

