



# CITY OF TORRANCE

## COMMUNITY DEVELOPMENT DEPARTMENT

### BUILDING & SAFETY DIVISION

### CHECKLIST FOR SOLAR PANEL INSTALLATIONS

**REQUIREMENTS FOR RESIDENTIAL PERMIT SUBMITTAL:**

Before approval and issuance of permit(s) for solar panel/photovoltaic systems, the applicant shall submit: five (5) sets of plans (3 for Fire Prevention, 2 for Building & Safety) which are drawn to scale, readable, and legible on 11x17.

**Complete and attach this checklist to each set of drawings**  
 Note drawing page number for each item below or mark N/A

**General:**

- 1) Title Sheet must include:
  - a. Project address
  - b. Owner's name, address, and phone number
  - c. Name, address, phone number of firm making the plans
  - d. Scope of work statement
  - e. Sheet index with each sheet title and number
  - f. Legend for used symbols, abbreviations, and notations
- 2) Provide a site plan with the property lines, approximate location of all structures and panels, the main service location, and the north arrow. Page \_\_\_\_\_
- 3) Provide a **separate** site plan, same as item 3, on 8½"x11" paper, adding the owner's name and project address. Page \_\_\_\_\_
- 4) Provide Note: All work to comply with the 2013 CBC, CMC, CPC, CEC ART. 690, and 2012 NDS. Page \_\_\_\_\_
- 5) Provide the overall building height with the solar panels (overall height may not exceed zoning limits). Page \_\_\_\_\_
- 6) **Provide completed BMP form with each plan set** Page \_\_\_\_\_

**Electrical:**

- 7) Solar panel system kW rating? \_\_\_\_\_ Page \_\_\_\_\_
- 8) Provide an electrical line diagram: panel layout, panel power source short circuit current rating, conductor size, type, locations and length of runs, wiring methods, grounding points, inverter location, disconnect locations, battery locations (if applicable), point of connection to existing electrical system. Include the existing service size and number of meters. Page \_\_\_\_\_
- 9) Specify the locations of all the equipment (i.e., west wall indicate any interior locations) \_\_\_\_\_ Page \_\_\_\_\_
- 10) Provide manufacturer's specification on all components including but not limited to inverters and panels, include the make, model, listing, size, weight, etc. Page \_\_\_\_\_
- 11) Provide residential load calculations, on de-rating breaker Page \_\_\_\_\_

**Fire:**

- 12) Roof access points shall be located in areas that do not require the placement of ground ladders over opening such as windows or doors, and located at strong point of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.
- 13) Panels and modules installed with roof hips and valleys shall be located no closer than 18" to a hip or a valley where panels and modules are to be placed on both sides of a hip or valley.
- 14) For pitched roofs, provide 5' clearance on at least one side of ridge and 3' clear at opposite side
- 15) Materials used for marking shall be reflective, weather

- 16) resistant and suitable for the environment. Shall have all letters capitalized with a minimum height of 3/8" inch white on red background.
- 17) Marking content **"WARNING PHOTOVOLTAIC POWER SOURCE"**, shall be placed on interior and exterior DC conduit, raceways, enclosures and cable assemblies every 10' feet and in a clearly visible location adjacent to main service disconnect.

**Structural:**

- 18) For rooftop panels, specify types roofing \_\_\_\_\_ Page \_\_\_\_\_
- 18) Provide roof plan, showing roof slope, rafter size, spacing, span and direction of existing framing. Page \_\_\_\_\_
- 19) Indicate the weight, in psf, for completely installed system. If the system weight exceeds 5 psf, provide seismic calculations (building & anchorage). Page \_\_\_\_\_
- 20) Indicate the pitch of the solar panels \_\_\_\_\_ Page \_\_\_\_\_
- 21) **If spans exceed allowable in table 1, provide an analysis showing that the existing framing is not overstressed by the panel mounts (wind analysis) if required, provide strengthening details and include improvements in the description of work.** Page \_\_\_\_\_
- 22) Indicate fasteners type, diameter, and embedment depth (i.e., 5/16" lag screws with 2½" min. embed.) Page \_\_\_\_\_
- 23) Indicate max fastener spacing \_\_\_\_\_ Page \_\_\_\_\_

**Table 1**  
Allowable Roof Rafter Spans

Roof Rafters		Allowable Span	
Size	Spacing	Comp. Shingle Roofing	Clay or Conc. Tile Roofing
2x4	16"	9'-10"	8'-6"
	24"	8'-0"	6'-11"
2x6	16"	14'-4"	12'-5"
	24"	11'-9"	10'-2"
2x8	16"	18'-2"	15'-9"
	24"	14'-10"	12'-10"

Applicable only if **all** following conditions are met:

1. Panels are < 30' above grade and not in the hillside
2. Support spacing does not exceed 64"
3. Panel slope matches roof slope and less than 6:12
4. Not within 600 feet of coastline

**Address:** \_\_\_\_\_  
**Case #:** \_\_\_\_\_

# CITY OF TORRANCE

## COMMUNITY DEVELOPMENT DEPARTMENT

### BEST MANAGEMENT PRACTICES FOR ALL FOR CONSTRUCTION ACTIVITIES\*

Project Address: \_\_\_\_\_ Case No. \_\_\_\_\_

#### The Following are Minimum Water Quality Protection Requirements for All Development Construction Projects:

- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
- Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
- Non-stormwater runoff from equipment and vehicle washing and any other activity shall be contained at the project site.
- Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
- Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
- Other: \_\_\_\_\_

As the project owner or authorized agent of the owner, I have read and understand the requirements listed above, necessary to control storm water pollution from sediments, erosion, and construction materials, and I certify that I will comply with these requirements.

Print Name \_\_\_\_\_  
(Owner or authorized agent of the owner)

Signature \_\_\_\_\_  
(Owner or authorized agent of the owner)

Date \_\_\_\_\_

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\*The above Best Management Practices are detailed in the California Storm Water Best Management Practices Handbook, January 2003.  
www.cabmphandbooks.com