



CITY OF MISSION VIEJO

Building Division

200 Civic Center
Mission Viejo, CA 92691
(949) 470-3054
www.cityofmissionviejo.org

2013 CALIFORNIA CODES
CODE CYCLE

09/30/2015
EFFECTIVE DATE

Eligibility Checklist for Expedited Solar Photovoltaic Permitting Under 10 KW for One- and Two-Family Dwellings

GENERAL REQUIREMENTS

- A. System size is 10 kW AC CEC rating or less? If "No" **Stop** this project does not qualify Y N
- B. The solar array is roof-mounted on one- or two-family dwelling or accessory structure Y N
- C. The solar panel/module arrays will not exceed the maximum legal building height Y N
- D. Solar system is utility interactive and without battery storage Y N
- E. Permit application is completed and attached Y N

ELECTRICAL REQUIREMENTS

No more than four photovoltaic module strings are connected to each Maximum PowerPoint

- Tracking (MPPT) input where source circuit fusing is included in the inverter Y N
- 1) No more than two strings per MPPT input where source circuit fusing is not included Y N
- 2) Fuses (if needed) are rated to the series fuse rating of the PV module Y N
- 3) No more than one noninverter-integrated DC combiner is utilized per inverter Y N
- A. For central inverter systems: No more than two inverters are utilized Y N
- B. The PV system is interconnected to a single-phase AC service panel of nominal 120/220 Vac with a bus bar rating of 225 A or less Y N
- C. The PV system is connected to the load side of the utility distribution equipment Y N
- D. Mission Viejo PV Standard Plan and supporting documentation is completed and attached Y N

STRUCTURAL REQUIREMENTS

- A. A completed Structural Criteria and supporting documentation is attached (if required) Y N

FIRE SAFETY REQUIREMENTS

- A. Clear access pathways provided Y N
- B. Fire classification solar system is provided Y N
- C. All required markings and labels are provided Y N
- D. A diagram of the roof layout of all panels, modules, clear access pathways and approximate locations of electrical disconnecting means and roof access points is completed and attached Y N

Notes:

1. These criteria are intended for expedited solar permitting process.
2. **If any items are checked NO, revise design to fit within Eligibility Checklist, otherwise permit application may go through standard process.**



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Structural Criteria for Residential Rooftop Solar Energy Installations

1. ROOF CHECKS

A. Visual Review/Contractor's Site Audit of Existing Conditions:

- 1) Is the roof a single roof without a reroof overlay? Y N
- 2) Does the roof structure appear structurally sound, without signs of alterations or significant structural deterioration or sagging, as illustrated in Figure 1? Y N

B. Roof Structure Data:

- 1) Is roof slope: Flat to 6:12 (0 to 26 degree)? Y N
- 2) Measured rafter size & spacing: 2x _____ @ _____ " o.c.
- 3) Type of roof framing (rafter or manufactured truss): Rafter Truss

2. SOLAR ARRAY CHECKS

A. Flush-mounted Solar Array:

- 1) Is the plane of the modules (panels) parallel to the plane of the roof? Y N
- 2) Is there a 2" to 10" gap between underside of module and the roof surface? Y N
- 3) All modules are within and not over-hanging roof edges (ridges, hips, gable ends, eaves)? Y N

B. Do the modules plus support components weigh no more than:

- 4 psf for photovoltaic arrays or 5 psf for solar thermal arrays? Y N

C. Does the array cover no more than half of the total roof area (all roof planes)? Y N

D. Are solar support component manufacturer's project-specific completed worksheets, tables with relevant cells circled, or web-based calculator results attached? Y N

E. Is a roof plan of the module and anchor layout attached? (see Figure 2) Y N

3. DOWNWARD LOAD and WIND UPLIFT CHECKS

(Anchor Layout & Fastener Checks, see figure 2 & 3)

A. Is proposed anchor horizontal spacing less than or equal spaces per figure 2? Y N

B. Are 5/16" diameter lag screws with 2.5" embedment into the rafter used at 4 ft. o. c. to 6 ft. o. c.? Y N

- OR does the anchor fastener meet the manufacturer's guidelines? Y N

4. SUMMARY

A. All items above are checked YES. No additional calculations are required.

B. One or more items are checked NO. Attach project-specific drawings and calculations stamped and signed by a California-licensed Civil or Structural Engineer.

Job Address: _____ Permit #: _____

Contractor/Installer: _____ License # & Class: _____

Signature: _____ Date: _____ Phone #: _____

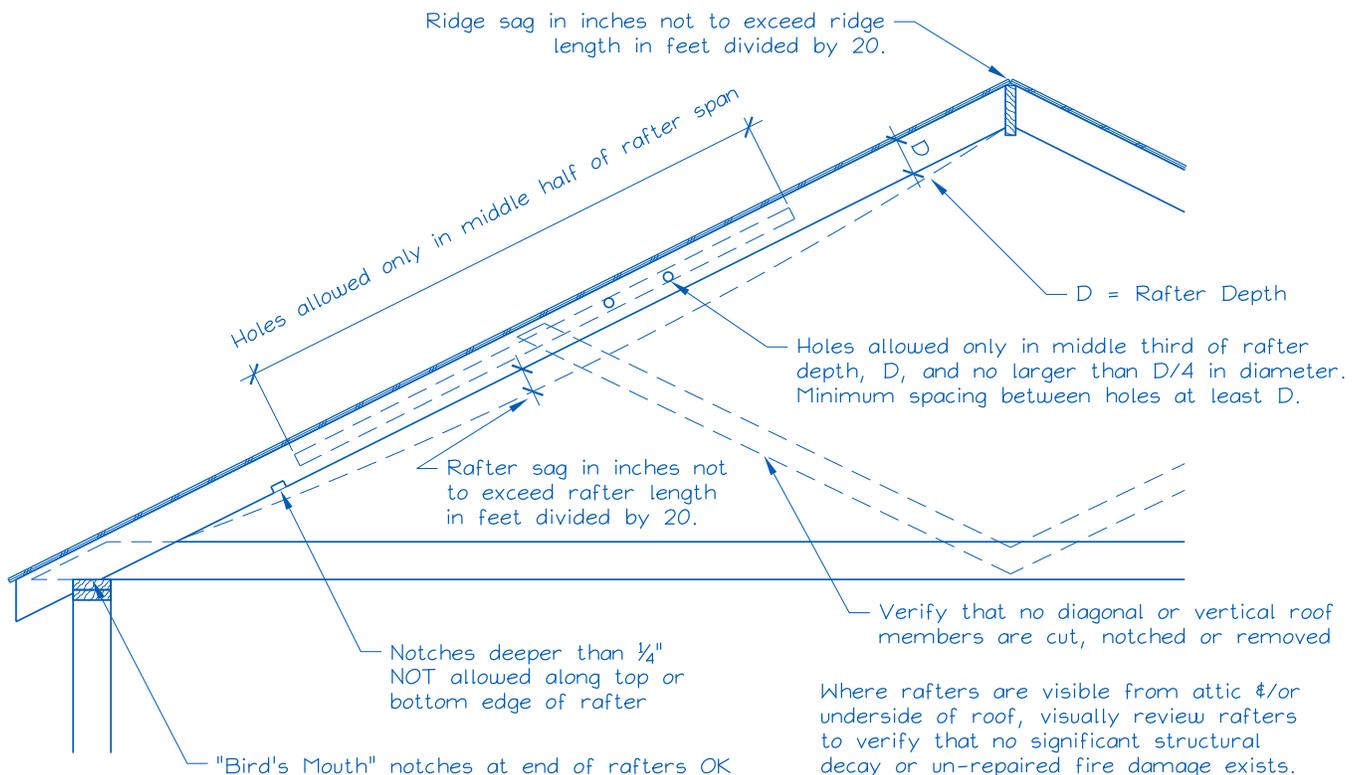


Figure 1. Roof Visual Structural Review of Existing Conditions. (Site Audit)

The site auditor should verify the following:

1. No visually apparent disallowed rafter holes, notches and truss modifications as shown above.
2. No visually apparent structural decay or un-repaired fire damage.
3. Roof sag, measured in inches, is not more than the rafter or ridge beam length in feet divided by 20.

Rafters that fail the above criteria should not be used to support solar arrays unless they are first strengthened.

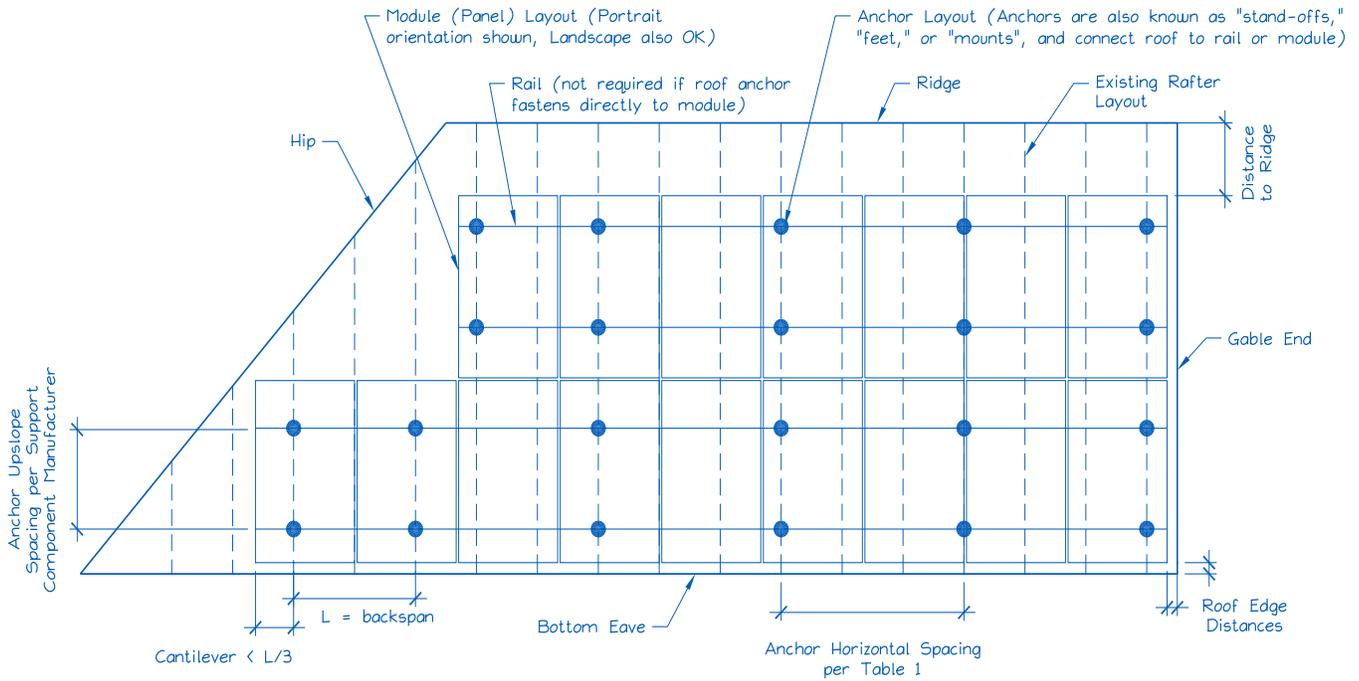


Figure 2. Sample Solar Panel Array and Anchor Layout Diagram (Roof Plan).

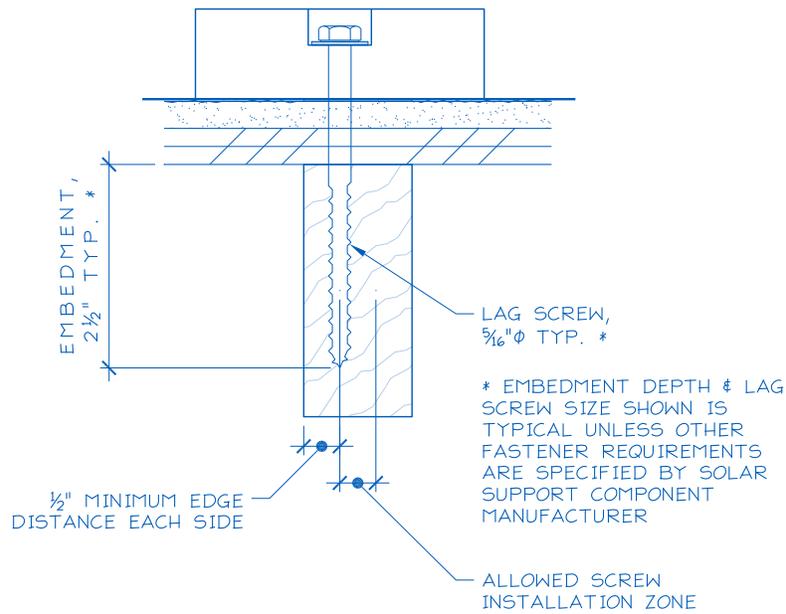


Figure 3. Typical Anchor with Lag Screw Attachment.