



City of El Cajon
Building and Fire Safety Division
200 Civic Center Way
El Cajon, CA 92020
Phone: (619) 441-1726

EXPEDITED PHOTOVOLTAIC APPLICATION

Job Address: _____ Permit # _____ Date: _____

Applicant Name: _____ Phone Number: _____

Contractor Name: _____ Phone Number: _____

Expedited Photovoltaic Applications are based on the specific criteria listed below. If your project **does not** meet this criteria, it must be submitted for further review, as a Standard Photovoltaic Plan Check Permit. Check off each item below to verify your project qualifies for the Expedited Process. Failure to comply with the criteria outlined below will result in a Stop Work Notice for your project and additional delays beyond standard review times.

Criteria for Expedited Photovoltaic Permit: (check below)

- 1. Maximum 10 kilowatt AC output.
- 2. System is roof mounted residential limited to two stories.
- 3. Only one central inverter or micro inverters are utilized. Inverter has integrated DC disconnect. Inverter has integrated DC Arc-fault Protection.
- 4. Minimum conduit size is 3/4 inch.
- 5. Two ground rods (grounding electrodes) and water bond required or a single ufer ground.
- 6. Proposed PV system is not a 2nd system, nor an addition to an existing system.

Step 1. Required Applicable Specification Sheets

Check the boxes for all Specification Sheets included in this submittal:

- 1. Inverter
- 2. Micro Inverter
- 3. Modules
- 4. Racking system/Roof attachment system
- 5. Optimizer
- 6. Rapid Shutdown

Step 2. Modules

Provide the following information from the PV Modules specification sheet.

Manufacturer: _____ Model: _____

Total Number of Modules = _____

Total Number of Strings = _____

Module I_{sc} rating = _____ Amps

Number of Modules per string (largest string) = _____

Do the following calculation and use the answer to determine wire size at location "A"

I_{sc} rating _____ X # Strings _____ X 1.25 = _____

If under 20 amps use #12 conductors at location "A" in wiring diagram.

If 20 to 30 amps use #10 conductors at location "A" in wiring diagram.

If 30 to 40 amps use # 8 conductors at location "A" in wiring diagram.

*Note – If wire run is over 100 feet increase by one wire size.

Calculate the following:

Voc rating _____ X # modules (per string) _____ X 1.1 = _____
(Maximum voltage per string connection at inverter cannot exceed 600 volts.)

Step 3. Inverter Type (Central or Micro)

Provide the following information for the Central Inverter.

Manufacturer: _____ Model: _____

Grounded or Ungrounded system: Grounded Ungrounded

Use Maximum Continuous AC Output Current rating = _____ Amps to determine wire size at location "B".

If under 20 amps use minimum #12 conductors at location "B" in wiring diagram.

If 20 to 30 amps use minimum #10 conductors at location "B" in wiring diagram.

If 30 to 40 amps use minimum #8 conductors at location "B" in wiring diagram.

*Note - System shall be configured for "Listed Rapid Shutdown" as per CEC 690.12.

Step 3. cont.

Micro Inverters

- Provide the following information for the Micro Inverters :

Manufacturer: _____ Model: _____

If under 20 amps, use minimum #12 conductors at location “A” in wiring diagram.

If 20 to 30 amps, use minimum #10 conductors at location “A” in wiring diagram.

*Note – If wire run is over 100 feet, increase by one wire size.

Step 4. Point of Connection to Utility (Check all that apply)

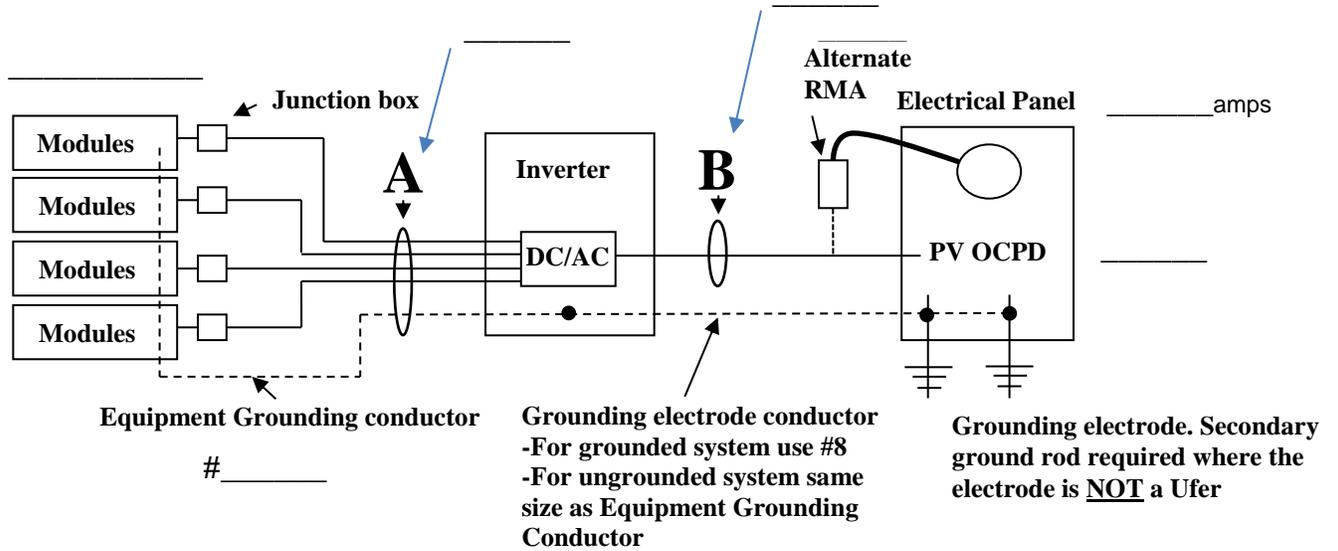
- This project will utilize the utility renewable meter adaptor (RMA) device.
- An electrical service upgrade to _____Amps is included as a part of this permit, **SDG&E Planner Sheet must be provided.**
- The existing electrical service is adequate for the PV installation (**CIRCLE BELOW**)

Maximum Supply (over current protection device) Based on Bus Bar Rating (Amps)										
Bus Bar Rating	100	125	125	150	200	200	200	225	225	225
Main Breaker Size	100	100	125	150	150	175	200	175	200	225
Max. Combined PV System (120%)	20	50	25	30	60*	60*	40	60*	60	45

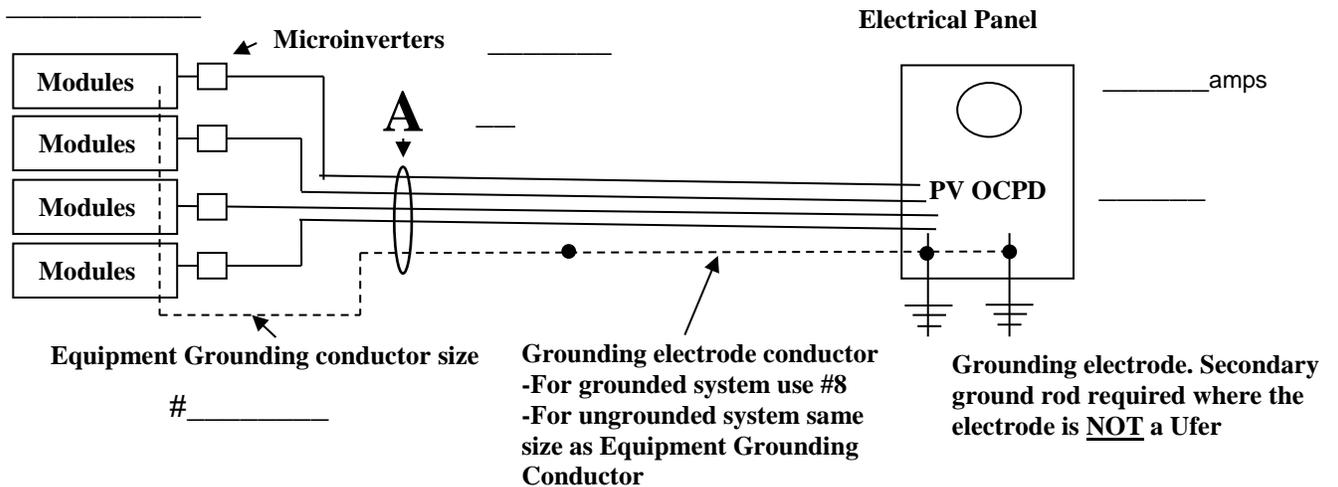
*This Value has been lowered to 60 amp from the calculated value to reflect 10 kw AC size Maximum.

Step 5. Typical Wiring Diagram (Inverter)

Fill in all applicable information or provide separate standard wiring diagram.

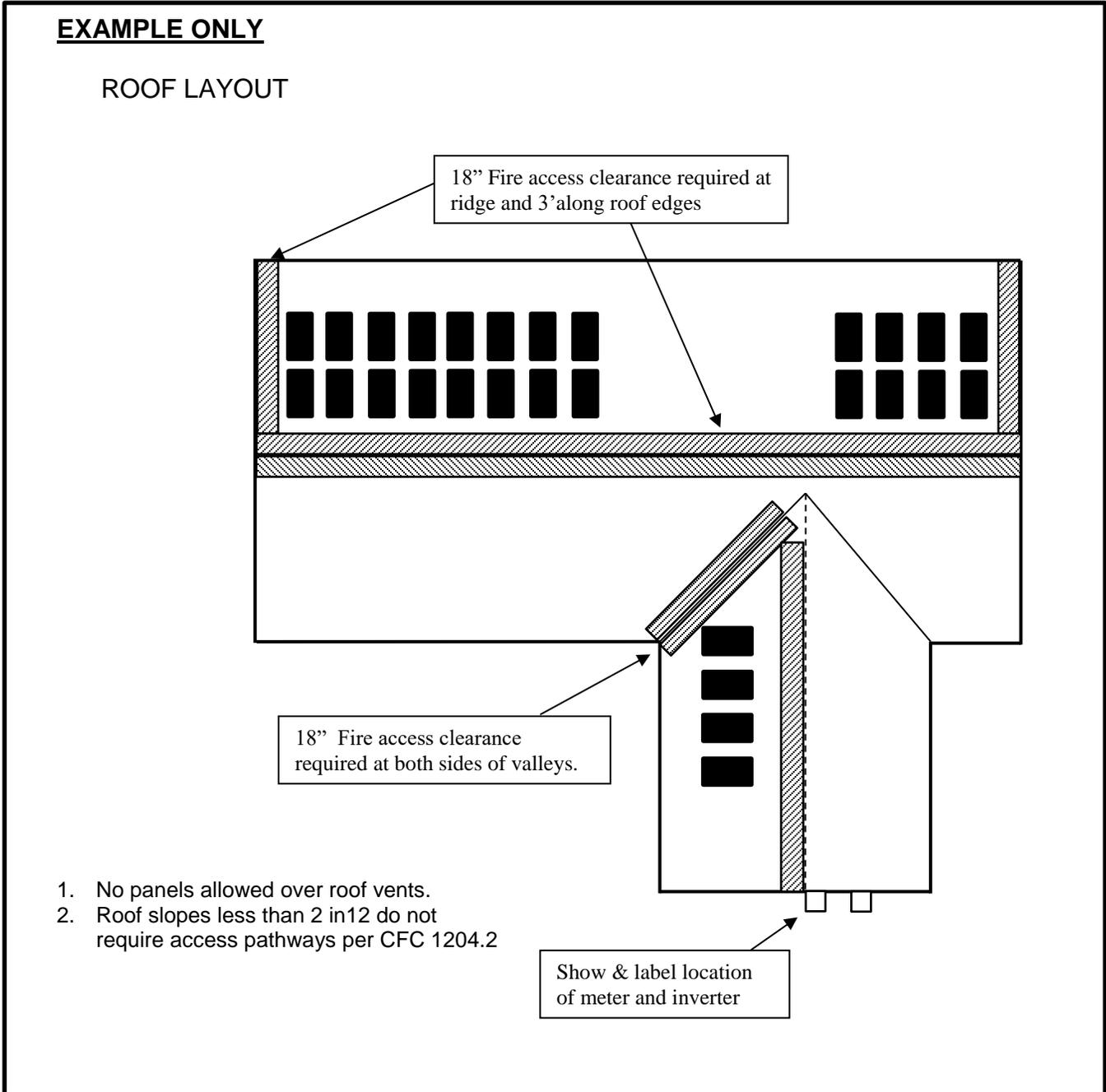


Typical Wiring Diagram (Micro-inverters)



Step 6. Fire Clearance at Roof

Draw a site plan in the space provided with this application or attach a separate site plan showing the Fire Department roof access and ridge clearances.



Step 6. Fire Clearance at Roof (cont.)

SITE PLAN & ROOF LAYOUT

Step 7. Labeling

The following minimum labels must be installed for final inspection.

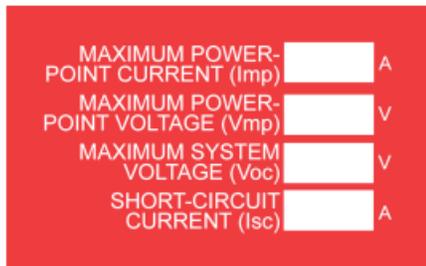
- 1. At the PV breaker location



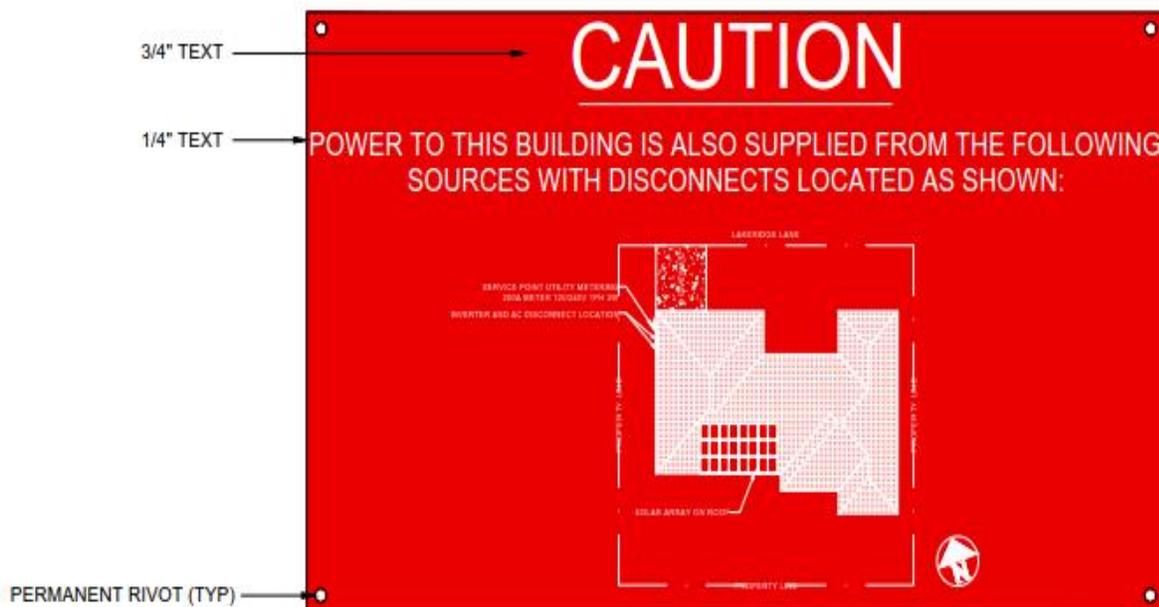
- 2. At junction boxes and on conduit at 10 foot intervals



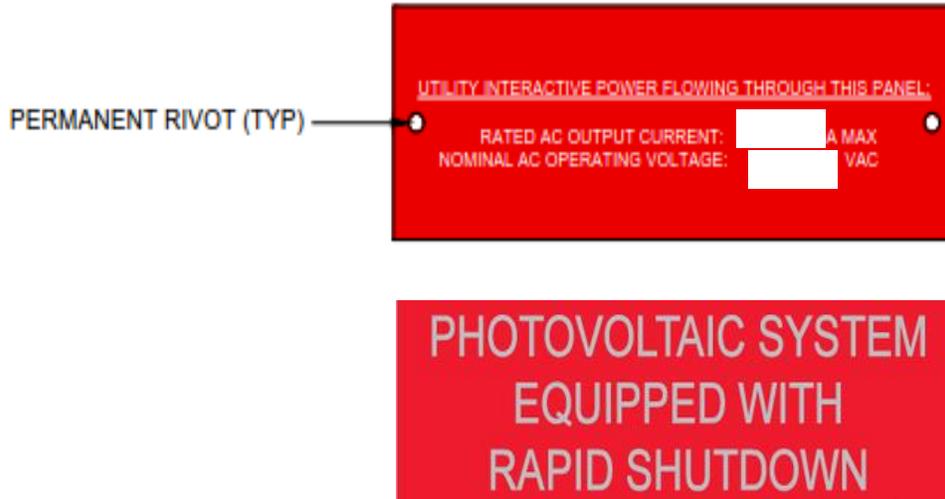
- 3. At the Inverter (Contractor to fill in appropriate information)



- 4. At the electrical service (Example only, replace with actual roof layout) (Contractor to fill in appropriate information)



Step 7. Labeling (cont.)



Step 8. General Notes/System Notes

Please be advised. The following notes concerning the installation of this photovoltaic system are required and are considered a part of this plan and approval.

1. All photovoltaic panels shall be listed and labeled in accordance with U.L. 1703.
2. Installation shall be installed per plan and in accordance with all manufacturer installation instructions.
3. The amperage of strings at connection to the inverter cannot exceed the inverter short circuit input rating.
4. System shall be configured for "Listed Rapid Shutdown" as per CEC 690.12.
5. For service upgrades the utility approved service order must be provided to the inspector at the time of inspection.
6. Any deviations from the information provided on this form will render your permit null and void.

I declare under penalty of perjury that the foregoing is true and correct.

Printed Name: _____ Signature: _____

Contractor Owner Executed on (Date): _____