

INDIANA COUNTY

Office of Planning and Development
801 Water Street
Indiana, PA 15701
(724) 465-3870 Fax (724) 465-3151

FOR OFFICE USE ONLY	
Permit #	_____
Date:	_____

Building Permit Application ___ Residential or ___ Commercial

~Solar Panels~

***** All Drawings Must be Sealed by an Architect or an Engineer *****

Name of Home Owner or Business _____

Site Address _____

City _____ Zip _____

Current Mailing Address _____
(if different from site address)

City _____ State _____ Zip Code _____

Municipality _____ Township / Borough _____

Contact Person _____

Phone Number _____ Cell Phone _____

Fax Number _____

Contact Person's E-mail Address: _____

Estimated cost of the project: \$ _____



**YOU MUST PROVIDE A TAX PARCEL
NUMBER FOR THE PROPERTY AT THE
SITE ADDRESS LISTED ABOVE**

Tax Parcel # _____

Contractor: _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____ Cell Phone _____

E-mail Address: _____

Electricity provider: _____

If existing commercial building, list prior occupancy permits issued:

Labor & Industry Occupancy Permit issued on (date) _____

Municipal permit issued by (name of municipality or third party firm) _____ on _____
(date) _____ using (code) _____

UCC permit issued by _____ on _____
(date) _____

Is this permit for a medical care facility regulated by the Health Care Facilities Act?

Yes No If "yes," please attach copy of plan approval issued by the PA Department of Health.

To be completed by the Design Professional in Responsible Charge

(Affix seal to the right of name and address)

Name: _____

Address: _____

PA License # _____

E-Mail: _____

Phone: _____

Fax: _____

Alternative Construction Method/Material

Will an alternative construction method or material be used on this project? Yes No

If "Yes," applicant or design professional must submit a signed statement indicating that the proposed method or material meets the requirements of 34 PA Code § 403.44.

Applicant:

Signature

Date

SUBMITTAL REQUIREMENTS FOR SOLAR PANEL PROJECTS

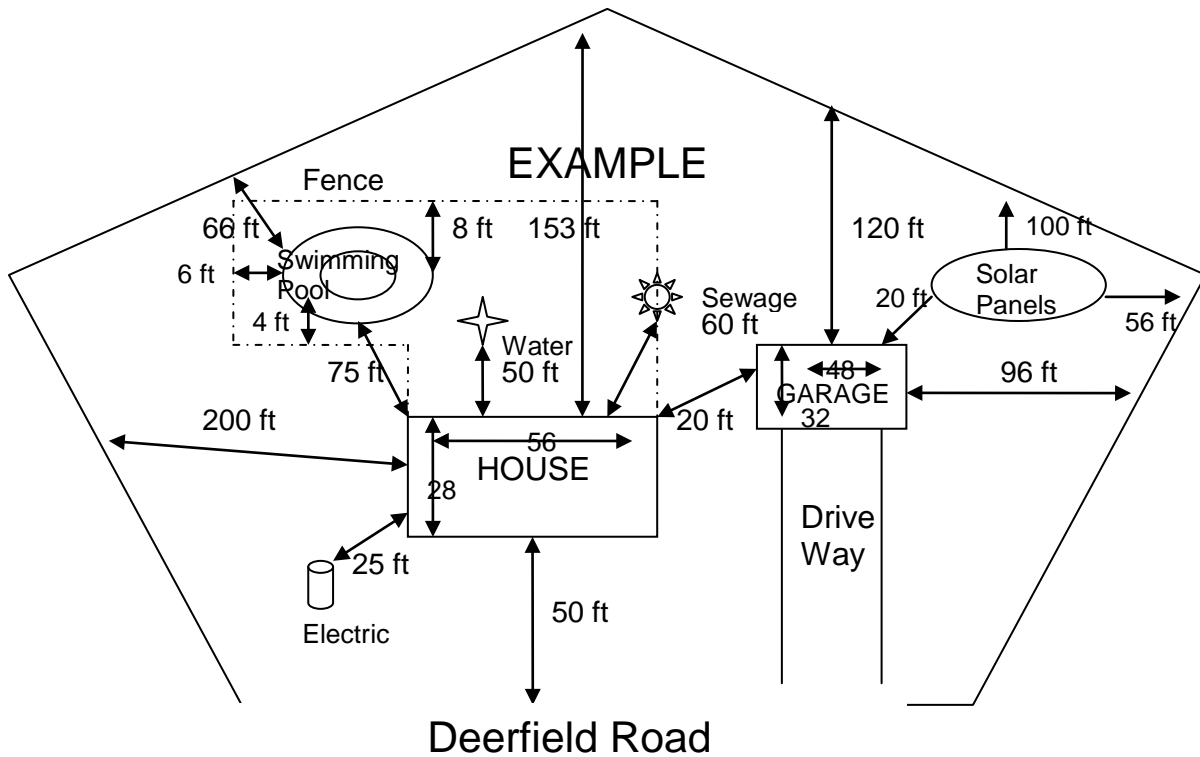
When submitting your application for a Solar Panel project please include the following:

1. Completed Building Permit Application
2. If you don't know your tax parcel number for your property, to put on your application, please contact the Tax Office at 724-465-3812.
3. Please submit One (1) if they are 11x17 or smaller, if larger than 11x17 then Two (2) complete set(s) of sealed drawings for your building project.
4. Site Plan on 8 ½ x 11 sheet of paper – Only needed if it is not attached to an existing structure.
5. Your contractor's workman's compensation and liability insurance. If you are not using a contractor or your contractor doesn't have workman's compensation insurance, please complete the Workman's Comp form and have it notarized.
6. \$25.00 non-refundable application fee for Residential or a \$50.00 non-refundable application fee for Commercial – please make checks payable to **Indiana County Code Division**

SITE PLAN REQUIREMENTS FOR RESIDENTIAL PROJECTS

The Site Plan drawing shall be submitted on 8 ½ X 11 paper and shall include:

- Distance from property lines and roadway and any other structures on the property (setbacks) for all projects.
- Show the outside dimensions of the proposed dwelling.
- All utility layouts (including sewage, electric and water)
- Driveway layouts and specifics
- If this is for a proposed roof, show the existing structures outside dimensions.
- If this is for a proposed deck/porch, show the width and length of the deck, and where it will be placed on the existing structure along with its dimensions.
- If this is for a proposed swimming pool, show the proposed decks width and length, and where it will be placed on the swimming pool.
- If this is for a proposed fence, show the width and length of the fence.
- If this is for a proposed demolition of a structure, show the outside dimensions of the structure.

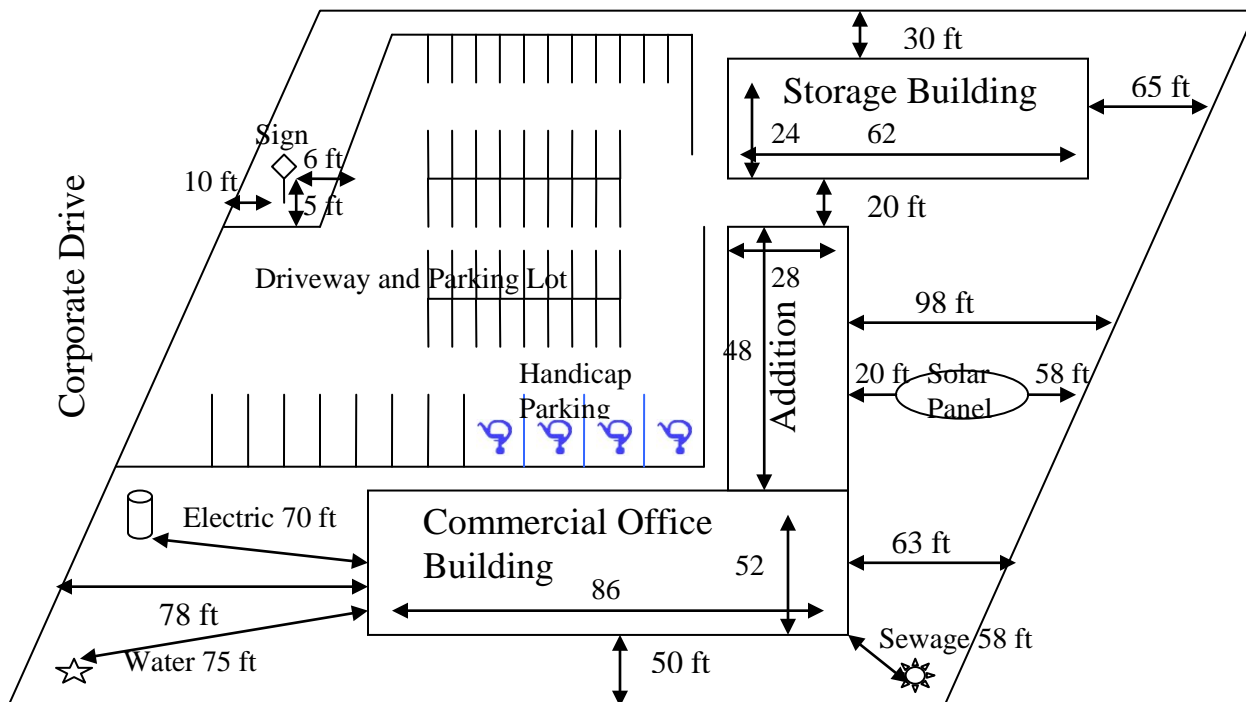


SITE PLAN REQUIREMENTS FOR COMMERCIAL PROJECTS

The following is the requirements for all commercial projects. Drawings should be drawn to 1/4" or 1/8" scale and shall provide the necessary information to verify compliance with the building code. **All drawings shall bear the stamp of the design professional responsible for the design, with their signature on the first page of each set of drawings.**

Three (3) sets of Site Plan drawings (1 of these drawings must be on 8 1/2 X 11 paper to allow for faxing to the municipality) shall be submitted and shall include:

- Distance from property lines and roadway and any adjacent structures (setbacks).
- Show the outside dimensions of the proposed structure.
- Handicap parking and access (with dimensions, markings and signage indicated per ICC/ANSI A117.1 and the IBC).
- Designated fire lanes.
- Show all existing and proposed utility layouts (including water, sewage, and electric).
- Show all existing and proposed driveway layouts and specifics.
- Show all required parking and loading spaces and calculations.
- Show established street grades and proposed finished grades.
- Show accessible curb cuts, ramps and access ways to the building.
- If this is for a proposed demolition of a structure show the outside dimensions of the structure.
- If this is for a proposed fence, show the width and length of the fence.
- If this is for a proposed addition, show the outside dimensions of the addition, where it will be placed on the existing structure and the outside dimensions of the existing structure.
- If this is for a proposed roof, show the existing structures outside dimensions.
- If this is for a proposed site development, show where work will be performed.
- If this is for a proposed ground mounted sign, show the outside dimensions of the sign.
- If this is for a proposed mounted sign on a building, show the outside dimensions of the building that the sign will be mounted on.



SOLAR PANEL SUBMITTAL AND CHECKLIST

Uniform Construction Code (UCC)

- _____ System Description
 - _____ Type of PV and Inverter
 - _____ How is it wired
 - _____ How is it mounted
- _____ Specification sheets for all equipment
 - _____ PV module
 - _____ Inverter
 - _____ PV mounting system
 - _____ AC & DC disconnect
 - _____ Combiner box
 - _____ Battery
 - _____ Charge controller
- _____ Mechanical drawings
- _____ Electrical drawings
- _____ Wind loading calculations
- _____ Weight of array
- _____ Structural information about roof
- _____ PV layout on roof
- _____ Rack drawing from manufacturer
- _____ Attachment plan
- _____ Attachment detail (if attaching to a truss it requires approval of a registered design professional)
- _____ electrical 3-line diagram

Is the array to be mounted on a defined, permitted roof structure? Yes No

If No due to non-compliant roof or a ground mount, submit completed worksheet for structure.

Roof Information:

1. Is the roofing type lightweight (Yes = composition, lightweight, masonry, metal, etc.) Yes No
If No, submit completed worksheet for roof structure (No = heavy masonry, slate, etc.)
2. Does the roof have a single roof covering? Yes No
If No, submit completed worksheet for roof structure
3. Provide method and type of weatherproofing roof penetrations (flashing, caulk) _____

Mounting System Information:

1. Is the mounting structure an engineered product designed to mount PV modules? Yes No
If No, provide details of structural attachment certified by a design professional.

2. For manufactured mounting systems, fill out information on the mounting system below:
 - a. Mounting System Manufacturer _____ Product Name and Model # _____
 - b. Total Weight of PV Modules and Rails _____ lbs
 - c. Total Number of Attachment Points _____
 - d. Weight per Attachment Point (b / c) _____ lbs (if greater than 45 lbs, see worksheet)
 - e. Maximum Spacing Between Attachment Points on a Rail _____ inches (see product manual for maximum spacing allowed based on maximum design wind speed)
 - f. Total Surface Area of PV Modules (square feet) _____ ft²
 - g. Distributed Weight of PV Module on Roof (b / c) _____ lbs/ft²
If distributed weight of the PV system is greater than 5 lbs/ft², see worksheet.

Ground Mounts:

- _____ PA One Call
- _____ Find customer-owned underground utilities (septic, phone, electric wiring (yard lights, pool, etc.), pool plumbing)
- _____ Rack manufacturer can supply footer designs based on your soil conditions and wind zone.
- _____ For multiple ground-mounts, space them far enough apart to avoid shading each other.

PV ARRAY INFORMATION (Guide Sec. 6)
 NUMBER OF MODULES IN SERIES _____
 NUMBER OF PARALLEL CIRCUITS _____
 LOWEST EXPECTED AMBIENT TEMP _____ °C
 HIGHEST CONTINUOUS TEMPERATURE _____ °C

MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____
 MODULES IN SERIES SOURCE-CIRCUIT _____

FOR UNUSED SERIES STRINGS PUT "N/A" IN BLANK ABOVE
 SEE GUIDE SECTION 10 FOR INFORMATION ON MODULE AND ARRAY GROUNDING

PV MODULE RATINGS @ STC (Guide Sec. 5)
 MODULE MANUFACTURER _____
 MODULE MODEL # _____
 MAX POWER-POINT CURRENT (Imp) = _____ A
 MAX POWER-POINT VOLTAGE (Vmp) = _____ V
 OPEN-CIRCUIT VOLTAGE (Voc) = _____ V
 SHORT-CIRCUIT CURRENT (Isc) = _____ A
 MAX SERIES FUSE (OCPD) = _____ A
 MAXIMUM POWER (Pmax) = _____ W
 MAX SYSTEM VOLTAGE (typ 600Vdc) = _____ V
 Voc TEMP COEFF = _____ mV/°C or %/°C
 (IF SUPPLIED, CIRCLE TYPE OF COEFF)

OCPD = OVERCURRENT PROTECTION DEVICE (IF NO OCPD-PUT "N/A" IN RELEVANT BLANKS)
 NATIONAL ELECTRICAL CODE® REFERENCES SHOWN AS (NEC XXX.XX)

SOURCE-CIRCUIT COMBINER RATINGS (IF USED)
 MAX OCPD RATING = _____ A
 OCPD AMP RATING = _____ A
 OCPD VOLT RATING = _____ V

DC DISCONNECT RATINGS (See Guide Appendix B)
 DISCO AMP RATING = _____ A
 DISCO VOLT RATING = _____ V

INVERTER RATINGS (Guide Sec. 4)
 INVERTER MAKE _____
 INVERTER MODEL # _____
 MAX DC VOLT RATING = _____ V
 MAX POWER @ 40°C = _____ W
 NOMINAL AC VOLTAGE = _____ V
 MAX AC CURRENT = _____ A
 MAX OCPD RATING = _____ A

SEE NOTE 3 FOR INVERTER CIRCUITS (Guide Sec. 8—disregard if integral with inverter)
 CONDUIT TYPE _____
 CONDUIT SIZE _____
 CONDUCTOR TYPE _____
 CONDUCTOR SIZE _____ AWG (NEC 250.166, Guide Sec. 10)
 NUMBER OF CONDUCTORS _____
 (____ Red, ____ White, 1 Green)
 EGC SIZE _____ AWG (NEC 250.122)

SEE NOTES FOR ARRAY CIRCUIT WIRING (Guide Sec. 8)
 CONDUIT TYPE _____
 CONDUIT SIZE _____
 CONDUCTOR TYPE (SEE BELOW)
 CONDUCTOR SIZE _____ AWG
 NUMBER OF CONDUCTORS _____
 (____ Red, ____ White, 1 Green)
 EGC SIZE _____ AWG (NEC 250.122)

ROOFTOP JUNCTION BOX
 NEMA 3R MINIMUM REQUIRED WITH WATERPROOF SPLICES OR OTHER APPROVED TERMINATION METHOD (NEC 110.14; 300.6; 314)

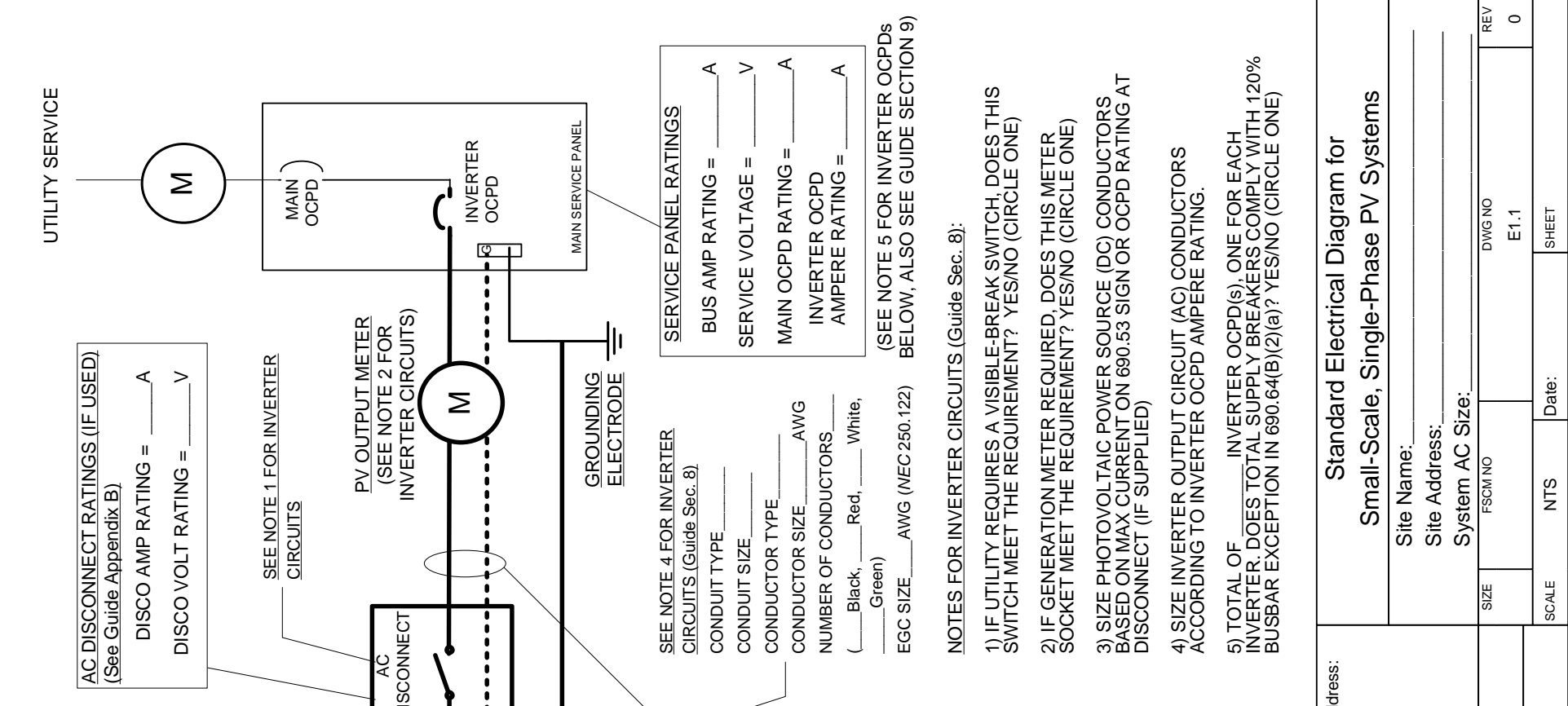
SOURCE-CIRCUIT CONDUCTORS
 OUTSIDE CONDUIT—MINIMUM 12 AWG AND TWO TYPE OPTIONS—(CIRCLE ONE)
 USE-2; PV WIRE/CABLE

SIGNS—SEE GUIDE SECTION 7

SIGN FOR DC DISCONNECT	SIGN FOR AC DISCONNECT (if used)
PHOTOVOLTAIC POWER SOURCE	SOLAR AC DISCONNECT
RATED MPP CURRENT = _____ A	AC OUTPUT CURRENT = _____ A
RATED MPP VOLTAGE = _____ V	NOMINAL AC VOLTAGE = _____ V
MAX SYSTEM VOLTAGE = _____ V	SIGN FOR INVERTER OCPD
MAX CIRCUIT CURRENT = _____ A	AC POINT OF CONNECTION
WARNING: ELECTRICAL SHOCK HAZARD—LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION	AC OUTPUT CURRENT = _____ A
	NOMINAL AC VOLTAGE = _____ V

NOTES FOR ARRAY CIRCUIT WIRING (Guide Sec. 8):

- THREE OPTIONS FOR SOURCE CIRCUIT CONDUCTOR TYPE (INSIDE CONDUIT—CIRCLE ONE)
 THWN-2; XHHW-2; RHW-2
- 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.1°C). FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES).
 a) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 7.68 AMPS OR LESS WHEN PROTECTED BY A 12-AMP OR SMALLER FUSE.
 b) 10 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE.



SERVICE PANEL RATINGS
 BUS AMP RATING = _____ A
 SERVICE VOLTAGE = _____ V
 MAIN OCPD RATING = _____ A
 INVERTER OCPD AMPERE RATING = _____ A

(SEE NOTE 5 FOR INVERTER OCPDs BELOW, ALSO SEE GUIDE SECTION 9)

NOTES FOR INVERTER CIRCUITS (Guide Sec. 8):

- IF UTILITY REQUIRES A VISIBLE-BREAK SWITCH, DOES THIS SWITCH MEET THE REQUIREMENT? YES/NO (CIRCLE ONE)
- IF GENERATION METER REQUIRED, DOES THIS METER SOCKET MEET THE REQUIREMENT? YES/NO (CIRCLE ONE)
- SIZE PHOTOVOLTAIC POWER SOURCE (DC) CONDUCTORS BASED ON MAX CURRENT ON 690.53 SIGN OR OCPD RATING AT DISCONNECT (IF SUPPLIED)
- SIZE INVERTER OUTPUT CIRCUIT (AC) CONDUCTORS ACCORDING TO INVERTER OCPD AMPERE RATING.
- TOTAL OF _____ INVERTER OCPD(S), ONE FOR EACH INVERTER: DOES TOTAL SUPPLY BREAKERS COMPLY WITH 120% BUSBAR EXCEPTION IN 690.64(B)(2)(a)? YES/NO (CIRCLE ONE)

Contractor Name and Address:		Standard Electrical Diagram for	
		Small-Scale, Single-Phase PV Systems	
Site Name: _____		Site Address: _____	
System AC Size: _____		System AC Size: _____	
SIZE	FSCM NO	DWG NO	REV
		E1.1	0
SCALE	NTS	Date:	SHEET