

**Development Services** 

## EXPEDITED PERMIT PROCESS FOR RESIDENTIAL SMALL-SCALE PV SYSTEMS STANDARD STRING SYSTEM, MICRO-INVERTER, AC MODULE, OR SUPPLY SIDE

## Required Information for Permit:

1. Two copies of site plan showing location of major components on the property. This drawing need not be exactly to scale, but it should represent relative location of components at site. PV arrays on dwellings with a 3' perimeter space at ridge and sides may not need separate fire service review.

2. Two copies of detail, note, elevation, or a combination thereof, indicating PV panels installed will be uniformly spaced above the roof surface less than 12 inches from roof surface and the PV panels will not extend past roof peak.

3. Two copies of electrical diagram showing PV array configuration, wiring system, over-current protection, inverter, disconnects, required signs, and ac connection to building.

4. Two copies of specification sheets and installation manuals for all manufactured components including, but not limited to, PV modules, inverter(s), combiner box, disconnects, and mounting system.

5. Printed name and signature of person responsible for design on all pages. Include license number if applicable.

6. Be advised that if any of the PV wiring is installed inside the dwelling, smoke alarms will need to be updated if not to current code per Florida Building Code Residential, Section R314.3

## Step 1: Structural Review of PV Array Mounting System

Is the array to be mounted on a defined, permitted roof structure? YES NO *If No, submit a separate completed building permit application for review.* 

## **Roof Information**

1. Does the roof have a single roof covering? Yes No

2. Provide method and type of weatherproofing for roof penetrations:

## Mounting System Information:

1. Is the mounting structure an engineered product designed to mount PV modules with no more

than a 12" gap beneath the module frames? 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

c) Total Number of Attachment Pointsd) Weight per Attachment Point (b+/-c)

lbs (if greater than 45 lbs, building permit required)

lbs.

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)
- g) Distributed Weight of PV Module on Roof (b+/-f)

If distributed weight of the PV system is greater than 5 lbs/ff, building permit required.

## Step 2: Walk Through Review of PV System

## In order for a PV system to be considered for an expedited permit process, the following must apply:

- 1. PV modules, utility-interactive inverters, and combiner boxes are identified for use in PV systems.
- 2. The PV array is composed of 4 series strings or less per inverter.
- 3. The total inverter capacity has a continuous ac power output of 10,000 Watts or less.
- 4. One of the standard electrical diagrams can be used to accurately represent the PV system.

5. The PV system, when installed in a historic district, is inconspicuous from the public right-of-way and will not damage or obscure any character-defining features.

6. The PV system extends no further than 12" above mounting surface, and is uniformly spaced above a sloped roof surface.

7. The PV system does not extend past the roof peak.

## Step 3: Separate Permits Required

Per the Florida Administrative Code, Rule 61G4-15.021, "Solar contractors may install new or replace existing power and control wiring in photo-voltaic (PV) source circuits, PV output circuits, battery storage system circuits, and power conditioning unit. In an interactive system that operates parallel with a primary source of electrical energy, this work is limited to the PV supply side of the power conditioning unit. In a stand-alone, or non-grid connected system, the work above referenced shall be limited to the PV supply side of the power conditioning unit and shall not include wiring integral to the building premises. All work shall be done in accordance with the National Electric Code". Any work integral to the building premises wiring shall be done by a licensed electrical contractor. A separate electrical permit will be required for this work, and should be submitted at the same time as the permit application for the PV system.

Print Name:	Company Name (if applicable):
Signature:	License Number (if applicable):

Date:

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## Required labels per 2014 NEC



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INSULATED EGC	THWN-2 C or XHHW-2 C or RHW-2	DC GROUNDING ELECTRODE CONI	INSULATED EGC	THWN-2 C or XHHW-2 C or RHW-2	THWN-2 C or XHHW-2 C or RHW-2	BARE COPPER EQ. GRD. COND. (EC	USE-2 Or PV WIRE D	5 DESCRIPTION OR CONDUCTOR TY	CONDUIT A	1 SOLAR PV MODULE   2 PV ARRAY   3 J-BOX (IF USED)   4 COMBINER (IF USED)   5 DC/AC INVERTER   6 DC/AC INVERTER   7 GEN METER (IF USED)   4 AC DISCONNECT (IF USED)   5 DC/AC INVERTER   6 DC/AC INVERTER   7 GEN METER (IF USED)   8 SERVICE PANEL   9 SERVICE CIRCUIT   9 SERVICE SOURCE-CIRCUIT   9 SERVIES SOURCE-CIRCUIT <td< td=""></td<>
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STANDARD STRING SYSTEM ELECTRICAL DIAGRAM

# Notes for Standard String System Electrical Diagram

	VOC TEMP COEFF (mV/°C or %/°C )
<	MAX VOLTAGE (TYP 600Vpc)
W	MAXIMUM POWER (PMAX)
A	MAX SERIES FUSE (OCPD)
A	SHORT-CIRCUIT CURRENT (Isc)
<	OPEN-CIRCUIT VOLTAGE (Voc)
<	MAX POWER-POINT VOLTAGE (VMP)
Þ	MAX POWER-POINT CURRENT (IMP)
	MODULE MODEL
	MODULE MAKE

## NOTES FOR ALL DRAWINGS NATIONAL ELECTRICAL CODE® REFERENCES SHOWN AS (NEC XXX,XX) **OCPD = OVERCURRENT PROTECTION DEVICE**

## INVERTER RATINGS (Guide Section 4)

INVERTER MAKE	
INVERTER MODEL	
MAX DC VOLT RATING	
MAX POWER @ 40°C	
NOMINAL AC VOLTAGE	
MAX AC CURRENT	
MAX OCPD RATING	

## SIGNS-SEE GUIDE SECTION 7 SIGN FOR DC DISCONNECT PHOTOVOLTAIC POWER SOURCE

WARNING: ELECTE HAZARD-LINE AND ENERGIZED IN OPP	MAX CIRCUIT CURREN	MAX SYSTEM VOLTAG	RATED MPP VOLTAGE	RATED MPP CURRENT	
EN POSITION	A	m <	<	>	

	AC POINT OF CONNECTION	SOLAR PV SYSTEM	AC DISCONNECT (IF USED)	SIGN FOR INVERTER OCPD AND
1				

SOLAR)	SOURCES (UTILITY AND
<	VOMINAL AC VOLTAGE
A	AC OUTPUT CURRENT

## NOTES FOR ARRAY CIRCUIT WIRING (Guide Section 6 and 8 and Appendix D):

2.) 2005 ASHRAE FUNDEMENTALS 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).

b) 10 AWG, 50°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH ISC OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE. 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.

4) SIZE INVERTER OUTPUT CIRCUIT (AC) CONDUCTORS ACCORDING TO INVERTER OCPD AMPERE RATING. (See Guide Section 9)

3) SIZE PHOTOVOLTAIC POWER SOURCE (DC) CONDUCTORS BASED ON MAX CURRENT ON NEC 690.53 SIGN OR OCPD RATING AT DISCONNECT 2) IF GENERATION METER REQUIRED, DOES THIS METER SOCKET MEET THE REQUIREMENT? YES D NO NIA D

Contractor Name, Address and Phone Diagram for Single-Phase PV Systems Notes for One-Line Standard Electrical Site Name:

SIZE System AC Size: FSCM NO Site Address: DWG NO REV

Checked By Drawn By:

SCALE

NTS

Date

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EXPEDITED PERMIT PROCESS FOR PV SYSTEMS

NOTES FOR INVERTER CIRCUITS (Guide Section 8 and 9):

1) IF UTILITY REQUIRES A VISIBLE-BREAK SWITCH, DOES THIS SWITCH MEET THE REQUIREMENT? YES NO NO NA NA

ωN 4 TAG 0 00 4 70 70 10 ω N TAG FOR UNUSED SOURCE CIRCUITS PUT "N/A" in BLANK ABOVE \_ MODULES OR DC-TO-DC CONVERTERS IN SERIES SOURCE-CIRCUIT DC-TO-DC CONVERTERS IN MODULES OR DC-TO-DC CONVERTERS IN SERIES SOURCE-CIRCUIT DC-TO-DC CONVERTERS IN DESCRIPTION OR CONDUCTOR TYPE 
 THWN-2
 or
 XHHW-2
 or
 RHW-2
 THWN-2
 THWN-2
 Or
 RHW-2
 Or
 INSULATED EGC THWN-2 C or XHHW-2 C INSULATED EGC BARE COPPER EQ. GRD. COND. (EGC) USE-2 Or PV WIRE SERIES SOURCE-CIRCUIT SERIES SOURCE-CIRCUIT DESCRIPTION SERVICE PANEL **PV ARRAY OUTPUT 3** DC-DC CONVERTER AC DISCONNECT RAPID SHUTDOWN EQUIP **PV ARRAY OUTPUT 1** GEN METER DC/AC INVERTER DC DISCONNECT J-BOX **PV ARRAY OUTPUT 4 PV ARRAY OUTPUT 2** SOLAR PV MODULE N MODULES OR CONDUIT AND CONDUCTOR SCHEDULE ω or RHW-2 -PART NUMBER 1 COND. NUMBER OF GAUGE CONDUCTORS J-BOX 10 10 10 თ 10 4 NOTES (N/A IF NOT USED) 0000 VAC, EQUIPMENT SCHEDULE 000 RS EQUIP. A MAIN, TYPE NIA NIA CONDUIT CONDUIT τ S A BUS, N/A SIZE N/A i 8 DC DISCO A INVERTER OCPD Checked By Drawn By: ത Address and Phone Contractor Name 00000 Solar Portion أففق INVERTER 000 DC AC w 1 INCLUDED WITH DISCONNECT N/A IF INVERTER SCALE SIZE One-Line Standard Electrical Diagram for Small-Scale, Single-Phase PV Systems 0 Electrical Portion System AC Size Site Address: Site Name: NTS  $\leq$ 00 0 Date AC DISCO 4 ဖ 00000000 BUILDING ELECTRODE E1.1a DWG NC SHEET 10 MAIN MAIN SERVICE PANEL UTILITY  $\leq$ REV

Standard String With Converter

							4) TOTAL OF INVERTER OCPD(s), ONE FO	OUT D AMIFERE RATING. (See Table 703.12)	3) SIZE INVERTER OUTPUT CIRCUIT (AC) CONDU	2) IF GENERATION METER REQUIRED, DOES TH	1) IF UTILITY REQUIRES A VISIBLE-BREAK SWITO REQUIREMENT? YES NO NO N/A	NOTES FOR INVERTER CIRCUITS			LOWEST EXPECTED AMBIENT TEMP°C	BASED ON ASHRAE MINIMUM MEAN EXTREME DE BULB TEMPERATURE FOR ASHRAE LOCATION	LOWEST EXPECTED AMBIENT TEMPERATURE		NOTE FOR ARRAY CIRCUIT WIRING		VOC TEMP COEFF (mV/°C□ or %/°C□)	MAX VOLTAGE (TYP 600VDC)	MAXIMUM POWER (PMAX)	MAX SERIES FUSE (OCPD)	SHORT-CIRCUIT CURRENT (Isc)	OPEN-CIRCUIT VOLTAGE (Voc)	MAX POWER-POINT VOLTAGE (VMP)	MAX POWER-POINT CURRENT (IMP)	MODULE MODEL	MODULE MAKE	PV MODULE RATINGS @ STC
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							HINVERTER. DOES TOTAL		ACCORDING TO INVERTER	ER SOCKET MEET THE	ES THIS SWITCH MEET THE		MAX OCPD RATING	MAX AC CURRENT	NOMINAL AC VOLTAGE	MAX POWER @ 40°C	MAX DC VOLT RATING	INVERTER MODEL	INVERTER MAKE	INVERTER RATINGS	MAX OUTPUT CIRCUIT V (T	MAXIMUM POWER	MAX VOLTAGE	MAX CURRENT	CONVERTER MODE	CONVERTER MAKE	DC-TO-DC CONVERTER		SHOWN AS (NEC XXX.XX		NOTES FOR ALL DRAWING
Checked By:	Drawn By:						Address and Phone:	Contractor Name.	*NOTE: MICROINVI SIGN SINCE 690.51							-					TYP 600V <sub>DC</sub> )						RATINGS (if used)				3S.
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## MICRO-INVERTER ELECTRICAL DIAGRAM

## EXPEDITED PERMIT PROCESS FOR PV SYSTEMS

## NOTES FOR MICRO-INVERTER ELECTRICAL DIAGRAM

MODULE MAKE	
MODULE MODEL	
MAX POWER-POIL	IT CURRENT (IMP)
MAX POWER-POIL	T VOLTAGE (VMP)
OPEN-CIRCUIT VO	LTAGE (Voc)
SHORT-CIRCUIT O	URRENT (Isc)
MAX SERIES FUSE	(OCPD)
MAXIMUM POWER	(Pmax)
MAX VOLTAGE (T)	P 600Vpc)
VOC TEMP COEFF	(mV/°C□ or ‰/°C□)
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NATIONAL ELECTRICAL CODE<sup>®</sup> REFERENCES SHOWN AS (NEC XXX XX)

## INVERTER RATINGS IGuide 0 4

MAX OCPD RATING	MAX AC CURRENT	NOMINAL AC VOLTAGE	MAX POWER @ 40°C	MAX DC VOLT RATING	INVERTER MODEL	INVERTER MAKE	manufactor in the manufactor
							1

THIS PANEL FED BY MUL SOURCES (UTILITY AND S	NOMINAL AC VOLTAGE	AC OUTPUT CURRENT	SOLAR PV SYSTEM	SIGN FOR INVERTER OCPD AND A	No sign necessary since 6 marking on PV module co needed information	SIGN FOR DC DISCONNECT	SIGNS-SEE GUIDE SECTION 7
TIPLE OLAR)			ION	ĥ	90.51 Vers		

								b) 10 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES	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	LEAST 0.2" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES).	2.) 2009 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	2) mores I continuous Ambient temperature based on Ashrae Highest MONTH 2% DRY BULB TEMPERATURE OR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMPERATUREC	EXTREME DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION LOWEST EXPECTED AMBIENT TEMP°C	NOTES FOR ARRAY CIRCUIT WIRING (Guide Section 6 and 8 and Appendix E):	
Checked by:		Drawn By:					Contractor Name, Address and Phone:		5) TOTAL OF INVER INVERTER CIRCUIT. DOES EXCEPTION IN 690.64(B)(2	4) SIZE INVERTER OUTPU OCPD AMPERE RATING. ((	3) SIZE PHOTOVOLTAIC P CURRENT ON NEC 690 53	2) IF GENERATION METER REQUIREMENT? YES	1) IF UTILITY REQUIRES A REQUIREMENT? YES	NOTES FOR INVERTER CIR	
SCALE	L	SIZE					7		TOTAL	T CIRC	SIGN C	NOC	NOL	CUITS	
NTS		FSCM NO	System AC :	Site Address	Site Name:	liagram for	lotes for O		SUPPLY BRE	UIT (AC) CONE de Section 9)	SOURCE (DC) )R OCPD RATH	IRED, DOES TI	E-BREAK SWI	(Guide Section	
Date:			Size:	73		Sing	ne-Lii		T OCPE	UCTOR	IG AT D	HS MET	CH, DC	1 and 9)	
SHEET		0WG NO				Ie-Phase PV Systems	ne Standard Electrical		D(s), ONE FOR EACH MICRO- COMPLY WITH 120% BUSBAR	RS ACCORDING TO INVERTER	JCTORS BASED ON MAX DISCONNECT	TER SOCKET MEET THE	DES THIS SWITCH MEET THE		



## EXPEDITED PERMIT PROCESS FOR PV SYSTEMS

			AMP OR SMALLER OCPD.	a) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR AC MODULES INVERTER OUTPUT CIRCUITS WITH 12 AMPS OR LESS WHEN PROTECTED BY A 15- AMP OR SMALLER OCPD. b) 10 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR AC MODULES	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).	2) 2009 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED	2) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SMILAR TO INSTALLATION LOCATION HIGHEST CONTINUING TEMPERATURE SAME AND A SHRAE TO	1.) LOWEST EXPECT AMBIENT TEMPERATURE BASED ON ASHRAE MINIMUM MEAN EXTREME DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALL ATION TO TOTATION	MAXIMUM OCPD RATING	MAXIMUM AC CURRENT	MAXIMUM AC POWER	NOMINAL OPERATING AC F	NOMINAL OPERATING AC VI	AC MODULE MODEL	AC MODULE MAKE	AC MODULE RATINGS (Gu	OCPD = OVERCURREN NATIONAL ELECTRICAL SHOWN AS (NEC XXX X	NOTES FOR ALL DRAWN		INUTES FOR AC MODU
Checked By:	Drawn By:		Contractor Name, Address and Phone	MODULE CIRCUIT. DOES EXCEPTION IN 690 64(8)(	4) SIZE INVERTER OUTPL OCPD AMPERE RATING.	3) SIZE PHOTOVOLTAIC F	2) IF GENERATION METER REQUIREMENT? YES	1) IF UTILITY REQUIRES /				REQUENCY	OLTAGE			ide Appendix C)	T PROTECTION DEVICE CODE® REFERENCES	IGS		le Electrical I
SCALE	Sã			TOTAL 2)(a)? YI	JT CIRC (See Gu	BOWER	R REOL	A VISIBL	_											DIAC
NTS	FSCM NO	Site Address System AC	Votes for C	SUPPLY BREA	UIT (AC) CONE ide Section 9)	SOURCE (DC) DR OCPD RATI	J NIA [] JIRED, DOES TI J NIA []	E-BREAK SWIT		SOURC	THIS P	NOMINAL AC	ACOUTPUT	200	DISCONNE		Ę	SIGN FOF	SIGNS	RAM
Date:		s: Size:	ne-Line Sta Single-Pha	KERS COMPLY	JUCTORS ACCC	CONDUCTORS	HIS METER SOC	TCH. DOES THIS		ES (UTILITY A	ANEL FED BY	VOITAGE	CIRRENT	OLAR PV SYS	CT (IF USED)		'A since no dc l	R DC DISCONNEC	-SEE GUIDE SECT	
SHEET	DWG NO		andard Electrical ase PV Systems	IE FOR EACH AC WITH 120% BUSBAR	ORDING TO INVERTER	BASED ON MAX	OKET MEET THE	S SWITCH MEET THE		ND SOLAR)	MULTIPLE		NECTION	STEM	AND AC		wiring	H	FION 7	



# NOTES FOR SUPPLY-SIDE CONNECTION ELECTRICAL DIAGRAM

IODULE MAKE A   IODULE MODEL A   IAX POWER-POINT CURRENT (I <sub>MP</sub> ) A   AX POWER-POINT VOLTAGE (V <sub>MP</sub> ) V   PEN-CIRCUIT VOLTAGE (V <sub>MP</sub> ) V   PEN-CIRCUIT CURRENT (I <sub>SC</sub> ) V   AX SERIES FUSE (OCPD) A   AX SERIES FUSE (OCPD) A   AX VOLTAGE (TYP 600V <sub>DC</sub> ) V   VOLTAGE (TYP 600V <sub>DC</sub> ) V		
IODULE MAKE IODULE MODEL   IAX POWER-POINT CURRENT (IMP) A   AX POWER-POINT VOLTAGE (VMP) V   AX POWER-POINT VOLTAGE (VMP) V   PEN-CIRCUIT VOLTAGE (VMP) V   HORT-CIRCUIT CURRENT (ISC) V   AX SERIES FUSE (OCPD) A   AX NOULTAGE (TYP 600Vpc) V		
IODULE MAKE IODULE MODEL   IODULE MODEL IODULE MODEL   IAX POWER-POINT CURRENT (I <sub>MP</sub> ) A   AX POWER-POINT VOLTAGE (V <sub>MP</sub> ) V   PEN-CIRCUIT VOLTAGE (V <sub>MP</sub> ) V   PEN-CIRCUIT CURRENT (I <sub>SC</sub> ) V   AX SERIES FUSE (OCPD) A   AX SERIES FUSE (P <sub>MAX</sub> ) W	۷	MAX VOLTAGE (TYP 600Vpc)
IODULE MAKE IODULE MODEL   IAX POWER-POINT CURRENT (I <sub>MP</sub> ) A   AX POWER-POINT VOLTAGE (V <sub>MP</sub> ) V   PEN-CIRCUIT VOLTAGE (V <sub>oc</sub> ) V   HORT-CIRCUIT CURRENT (I <sub>SC</sub> ) A   AX SERIES FUSE (OCPD) A	W	MAXIMUM POWER (PMAX)
IODULE MAKE IODULE MODEL   IODULE MODEL IODULE MODEL   IAX POWER-POINT CURRENT (Imp) A   IAX POWER-POINT VOLTAGE (Vmp) V   PEN-CIRCUIT VOLTAGE (Vmp) V   HORT-CIRCUIT CURRENT (Imp) A	A	MAX SERIES FUSE (OCPD)
IODULE MAKE	A	SHORT-CIRCUIT CURRENT (Isc)
IODULE MAKE IODULE MODEL IAX POWER-POINT CURRENT (I <sub>MP</sub> ) AX POWER-POINT VOLTAGE (V <sub>MP</sub> ) V	<	OPEN-CIRCUIT VOLTAGE (Voc)
IODULE MAKE	<	MAX POWER-POINT VOLTAGE (V MP)
ODULE MODEL	Þ	MAX POWER-POINT CURRENT (IMP)
IODULE MAKE		MODULE MODEL
		MODULE MAKE

## NOTES FOR ALL DRAWINGS OCPD = OVERCURRENT PROTECTION DEVICE

SHOWN AS (NEC XXX.XX) NATIONAL ELECTRICAL CODE® REFERENCES

and a hint in the second secon	
INVERTER MAKE	
INVERTER MODEL	
MAX DC VOLT RATING	<
MAX POWER @ 40°C	٤
NOMINAL AC VOLTAGE	<
MAX AC CURRENT	A
MAX OCPD RATING	>

## HAZARD-LINE AND LOAD MAY BE MAX SYSTEM VOLTAGE RATED MPP VOLTAGE RATED MPP CURRENT SIGNS-SEE GUIDE SECTION 7 MAX CIRCUIT CURRENT WARNING: ELECTRICAL SHOCK SIGN FOR DC DISCONNECT PHOTOVOLTAIC POWER SOURCE Þ < <

SIGN FOR INVERTER OCPD AND SOLAR PV SYSTEM

A AC OUTPUT CURRENT NOMINAL AC VOLTAGE THIS PANEL FED BY I SOURCES (UTILITY AN			
AC OUTPUT CURRENT NOMINAL AC VOLTAGE THIS PANEL FED BY I SOURCES (UTILITY AN			∢
	THIS PANEL FED BY N SOURCES (UTILITY AN	NOMINAL AC VOLTAGE	AC OUTPUT CURRENT

## NOTES FOR ARRAY CIRCUIT WIRING (Guide Section 6 and 8 and Appendix D);

2.) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMPERATURE \_\_\_\_\_°C 

2) 2005 ASHRAE FUNDEMENTALS 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),

FUSE 3) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES

b) 10 AWG, SO°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH ISC OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE

4) SIZE INVERTER OUTPUT CIRCUIT (AC) CONDUCTORS ACCORDING TO INVERTER OCPD AMPERE RATING. (See Guide Section 9)

5) 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 IN NO IN

3) SIZE PHOTOVOLTAIC POWER SOURCE (DC) CONDUCTORS BASED ON MAX CURRENT ON NEC 690.53 SIGN OR OCPD RATING AT DISCONNECT 2) IF GENERATION METER REQUIRED, DOES THIS METER SOCKET MEET THE REQUIREMENT? YES IN NO IN NA IN 1) IF UTILITY REQUIRES A VISIBLE-BREAK SWITCH, DOES THIS SWITCH MEET THE REQUIREMENT? YES NO NO N/A

Contractor Name. Address and Phone Diagram for Single-Phase PV Systems Notes for One-Line Standard Electrical Site Address: System AC Size Site Name:

Checked By: Drawn By

SCALE

NTS

Date

SHEE

SIZE

DWG NO

REV

EXPEDITED PERMIT PROCESS FOR PV SYSTEMS

**ENERGIZED IN OPEN POSITION** 

Þ AC DISCONNECT (IF USED)