

TOWN OF DEWEY-HUMBOLDT

"Arizona's Country Town"

SOLAR PERMIT Application

Community Development
PO Box 69 - Humboldt, AZ 86329

www.dhaz.gov

Phone: 928-632-7362, Fax: 928-632-7365

DATE Submitted: _____ PERMIT # (office): _____ PARCEL # _____

Permit Type: Residential Other LABOR ONLY Valuation \$ _____

Site Address: _____

Property Owner: _____ Applicant: _____

Owner Mailing Address: _____ City/State/Zip: _____

Applicant Email: _____ Applicant Phone: (_____) _____

Project Description: _____ Sq. Footage: _____

Is Project being done as Owner Builder? Yes No

I am the Owner/Builder of the property. I will follow in strict compliance with ARS 32-1121A.5. The property is intended for sole occupancy by the owner, not intended for occupancy by members of the public, owner's employees or business visitors. The structure(s) are NOT INTENDED FOR SALE OR RENT WITHIN 1 YEAR AFTER COMPLETION.

I am the Owner/Developer of the property. I will follow in strict compliance with 32-1121A.6. I will contract with a licensed General Contractor pursuant to this chapter.

*****NOTE: ATTACH A COPY OF THE COUNTY SEPTIC APPROVAL*****

CONTRACTOR INFORMATION:

For projects not exempt under ARS 32-1121, the contractor must possess a current and valid Arizona license. The following Contractor information MUST be completed prior to issuance of permit. Is Contractor currently licensed under provisions of ARS 32-1169? Yes No Visit roc.az.gov/licensing for contractor license information.

Architect/Engineer: _____ Phone: (_____) _____

Contractor: _____ Phone: (_____) _____

Business Address: _____

City: _____ State: _____ Zip: _____

ROC #:	Expires: (MO/DA/YR)	Class:	Type:

The Town of Dewey-Humboldt does NOT regulate deed restrictions. It is recommended that all applicants check to verify that CC & R's will not be violated by the applicant if this permit is issued. Every permit issued shall become invalid two (2) years from the issue date. The building official is authorized to grant a one (1) time extension of time for a period of up to 180 days. This permit becomes null and void if work or construction authorized is not commenced within 180 days or if construction or work is suspended or abandoned for a period of 180 days at any time after work is commenced. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or performance of construction. I acknowledge that I make this statement under penalty of perjury.

I am: Owner: Contractor
Agent: Other: _____

Signature of Applicant

Date

	Initials:	Date:
Zoning Approval:		
PW Approval:		
Flood Control		
GDP#:		
Plan Check Approval:		

Payment Date:		Initials:	
Payment Amount:			
Description:	Deposit <input type="checkbox"/>	Paid in Full <input type="checkbox"/>	
	Check <input type="checkbox"/>	Cash <input type="checkbox"/>	CC <input type="checkbox"/>
Receipt #:		Date permit final:	

Checklist for Permit Submission

Please have all checked components with you when you drop off permit so it can be submitted for review

	Residential Building Permit	Manuf. Home Permit	Solar Permit	Grading Permit	Over the Counter Permit (Elec, Plumb, Mech)	Zoning Clearance Permit (Fences, out buildings)
Signed Permit Application	X	X	X	X	X	X
*Issued Septic Permit (From Yavapai County)	X	X				
Types of Plans:						
• 2 Sets of Full Construction Plans	X		X	X		
• 2 AZ Stamped Truss Calculations	X					
• 2 sets of plans and footings approved by State of AZ Manufactured Housing		X				
• 1 Plot Plan 8 ½" x 11"	X	X	X	X	X	X
• 2 Site Plan 18" x 24" (Min size)	X	X	X			
Affidavit of Site Soil	X	X		X		
Soils Report	X (possibly)	X (possibly)		X (possibly)		
Directions to Site	X	X	X	X	X	X
Residential Outdoor Lighting	X	X				
Deposit or One time fee	X	X	X	X	X	X

If you are uncertain what is needed, please call us, we would be happy to help.

*Yavapai County handles all Septic Permits. We are unable to start the approval process of any residential plans until we know where the approved septic system will be located and its size.



FOR SOLAR INSTALLER USE SUBMITTAL & REVIEW CRITERIA

All Project Applications must contain the following:

Submittal Requirements:

1. Permit information sheet
2. 8 ½" X 11" Plot Plan drawn to scale
3. Directions to Site Map
4. Plans as defined below

All submittals shall be site specific and designed to the provisions of the 2017 National Electrical Code (Electrical design), the 2018 International Residential Code and 2018 International Building Code (Structural design), and the 2018 International Fuel Gas Code (Gas piping) as adopted by the Town of Dewey-Humboldt.

MINIMUM CONTENT REQUIREMENTS FOR PLAN SUBMITTAL:

General:

- Any system over 10Kw requires approval from APS prior to issuance/final
- Two (2) sets of plans, minimum sheet size 11" x 17" (suggest preferred size 18" x 24") that are site specific for the project**. Five (5) sets of plans required for a commercial solar project.
- Plans shall be legible and clearly indicate the entire scope of proposed work**
- Provide an itemized list of components with cost break down including a separate line item for total labor/installation cost**
- In certain situations, additional information, and/or engineering may be required**

Site Plan: (SEE SAMPLE SITE PLAN)

- Single sheet site plan, minimum sheet size 11" x 17" (suggest preferred size 18" x 24") clearly indicating the location(s) of all equipment**
- The type/use of each structure on which the system is to be mounted or contained within: dwelling, garage, storage building, manufactured home, etc.**
- Indicate the distance between structures and to solar system(Voltage drop)

System Components: **

- Provide manufacturer's specifications for ALL system components: solar panels, inverters, controllers, disconnects, junction boxes, panel boards, etc. (Manufacturers Installation instructions shall be on site at time of inspection)
- The manufacturer's specifications shall clearly indicate the specific model to be used
- The manufacturer's specifications shall include the approved testing laboratory listing: Underwriters Laboratories (UL), ELT Testing Laboratories, Inc. (ETL), or Canadian Standards Association (CSA) and listing number for each component. NOTE: ONLY listed/labeled components will be permitted

Array Drawing: (SEE SAMPLE ARRAY DRAWING)

- Drawing shall specify the number of modules in series or in parallel for each array and total number of arrays
- Include the operating voltage, operating current, maximum system voltage, and short-circuit current
- Indicate the specific make and model of modules(s). These shall correspond with the provided manufacturer's specifications
- Indicate wire size (AWG), type, insulation type, number of wires, conduit size & type and burial depth

One (1) – Line Electrical Diagram: (SEE SAMPLE ONE (1) – LINE DIAGRAM)

- One (1) Line Electrical Diagram must be prepared by a Licensed Electrical Contractor or Engineer
- The wiring line diagram shall include all wire sizes (AWG), type, insulation type, number of wires and conduit size & type
- All equipment/components shown identifying specific make and model shall correspond with the provided manufacturer's specifications

- All required notes regarding Labeling and Warning Signage shall be in accordance with NEC, all applicable requirements of the utility company (APS), and the local authority having jurisdiction (See sample one (1) – and three (3) – line diagrams)
- Include the KW output, all disconnects, operating voltage, operating current, maximum system voltage, and short-circuit current
- Indicate size of main electrical panel and specify any panel replacements or upgrades, (i.e., 200 Amp to 400 Amp)

Three (3) – Line Electrical Diagram: (SEE SAMPLE THREE (3) – LINE DIAGRAM)

- Three (3) Line Electrical Diagram must be prepared by a Licensed Electrical Contractor or Engineer
- The three (3) – line electrical diagram shall include all the same information required on the above one (1) – line diagram

Systems with Batteries and/or Generator Power Backup:

- Provide the manufacturer's specifications for the specific type, brand and model of batteries
- The plans shall include the number of batteries to be used and a floor plan of the battery storage location. Include the type of storage racks and show the working space access to the batteries and ventilation (amount and how being vented)
- The electrical wiring, disconnect types and related wiring connections to the system shall be included on the one (1) – and three (3) – line diagrams (See sample one (1) – and three (3) – line diagrams with a battery system)
- Provide the manufacturer's specifications for the generator. The site plan shall indicate where the generator will be located, the type of fuel storage, and location of fuel storage. Pipe size for LPG or natural gas lines and LPG storage tank size (water gallon capacity) shall also be included on the site plan.
- Include electrical wiring, disconnect types and related wiring connections to the systems, and the transfer switch on the one (1) – and three (3) – line diagrams

Roof Framing Details: (Required for ANY/ALL roof mounted equipment) **

- Provide details indicating the type of roof structure system: manufactured trusses, conventional framed system, manufactured roof joist system, metal frame system, etc. Include the sheathing size/type, roof slopes, and type of roof covering materials (shingles/tile, etc.) Low slope roof trusses shall be engineered
- Indicate the size of support members, spacing of members, age of structure (or year built), and span between walls/beams supporting the roof
- Location of all roof vent systems, plumbing or mechanical, in the array area. Vents shall not be covered by arrays
- Indicate the weight of array and all other components (pounds per square foot, load to roof supports). Include all module/array support or tilt systems
- Provide manufacturer's specifications and installation instructions for mounting systems and attachment hardware for the system to be used. NOTE: Engineering may be required to verify resistance of wind uplift on low slope roof with tilt systems and of systems designed to be attached to the roof covering only and not direct to the roof frame members
- Roof mounted systems on Manufactured Mobile Homes, Park Model Units and Factory Built Buildings will require an engineered design and/or specific approval from the manufacturer. Engineering shall include additional loading of inverters if attached to units
- If not using a pre-engineered mounting/rack system, provide an engineered design for the system

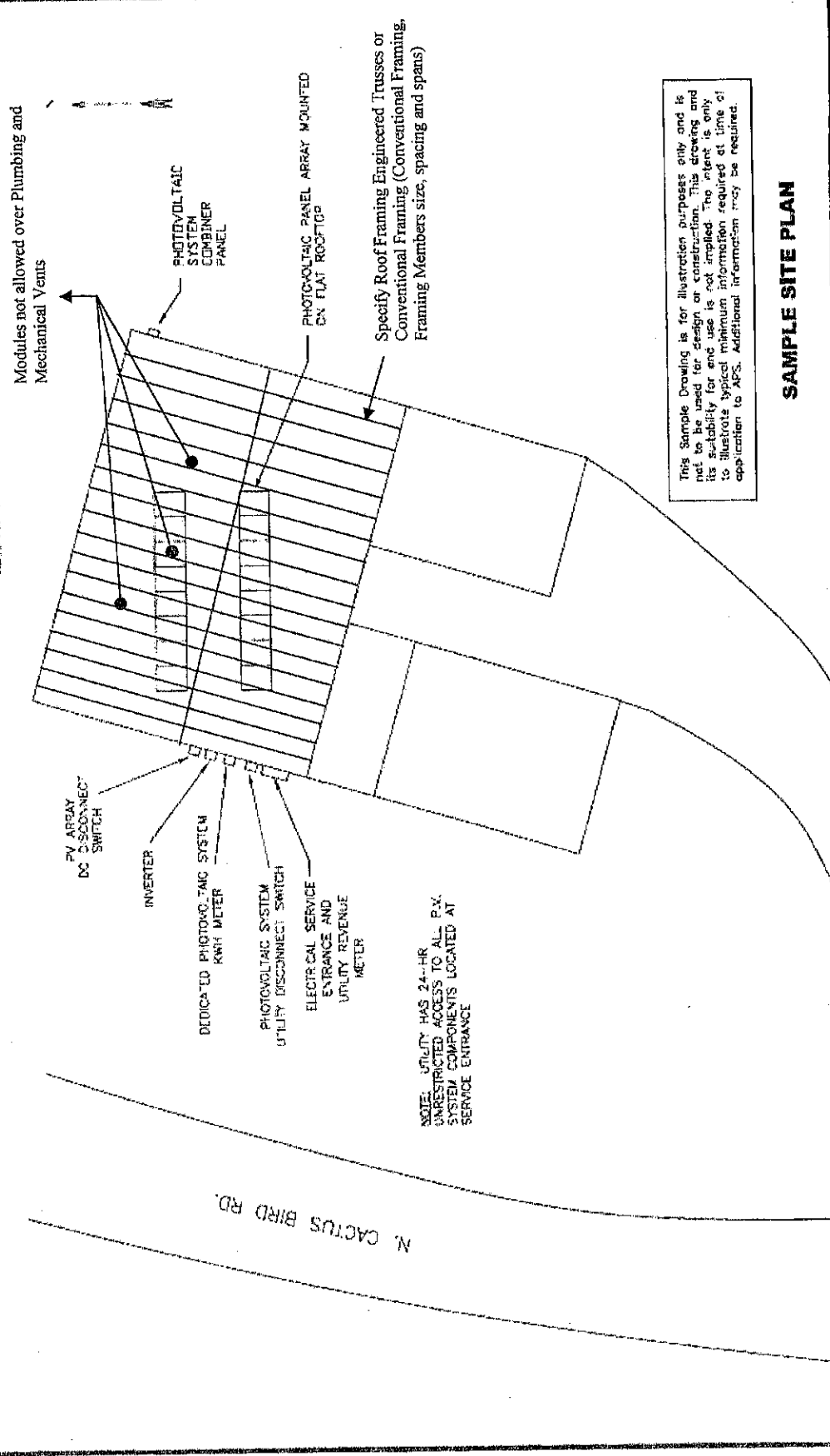
Ground Set Systems: **

- Indicate the weight of array and all other components. Include all support members and equipment being supported by the foundation/footing
- Provide manufacturer's specifications of attachment hardware for mounting of system to the support members
- If not using a pre-engineered mounting/rack system, provide an engineered design for the foundation/footing system. The design shall include attachment to foundation (anchor bolts, size [diameter]), and number of bolts, embedment depth, size and amount of reinforcement steel, depth and size of foundation/footing

This list is not all inclusive. Additional information and engineering as determined by the Building Official during plan review may be required.

** Applicable to Solar Water Systems.

REV. C	INITIAL RELEASE NOT FOR CONSTRUCTION	DESCRIPTION	DATE
			01-29-07



This Sample Drawing is for illustration purposes only and is not to be used for design or construction. This drawing and its suitability for and use is not implied. The client is only to illustrate typical minimum information required at time of application to APS. Additional information may be required.

SAMPLE SITE PLAN

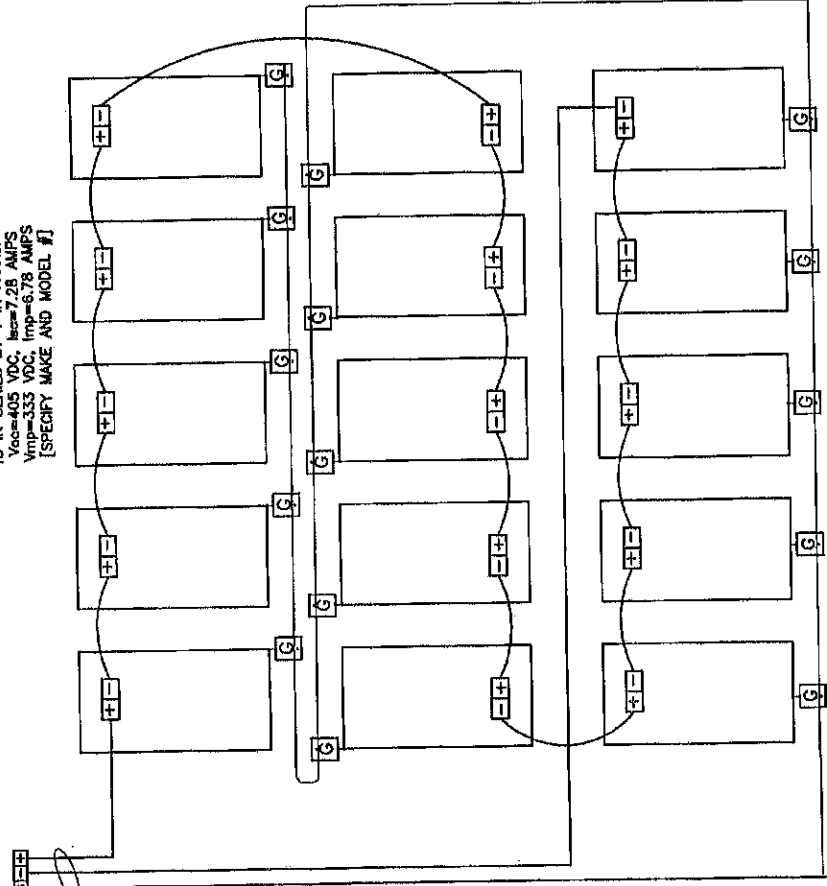
1224 South Mohr Street Any City, Arizona 85123 Tel: 503-555-5555		SITE PLAN	
APPROVALS		ABC SOLAR COMPANY, INC.	
DRAWN	ABC	DATE	01-20-04
CHECKED			
ENGINEER			
M.G.R.			
REV. C		REV. CODE	01-29-07
ABC PROJECT #111-9699		PROJECT NO.	0000-0004
DO NOT SCALE DRAWINGS	SCALE	REV. C	SHEET 1 OF 1

NOTE: UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL P.V. SYSTEM COMPONENTS LOCATED AT SERVICE ENTRANCE

REV.	DESCRIPTION	DATE
C	UPDATE ARRAY WIRING TO 2258	01-29-07

TYPICAL FOR BOTH PV ARRAYS #1 AND #2
SEE DWG #0000-0002

2258 WATT PHOTOVOLTAIC ARRAY
[TYPICAL OF 2]
15 PANELS [SPECIFY WATTAGE]
15 IN SERIES BY 1 IN PARALLEL
Voc=405 VDC, Isc=7.25 AMPS
Vmp=333 VDC, Imp=6.78 AMPS
[SPECIFY MAKE AND MODEL #]



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SAMPLE ARRAY DRAWING

1234 South Main Street Any City, Arizona Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
APPROVALS	DATE	4516 WATT PHOTOVOLTAIC ARRAY	
DRAWN ABC	01-30-04	WIRING DIAGRAM	
CHECKED			
ENGINEER			
M.G.R.	11-10-2008	SIZE	CODE
REV. C		A	0000-0003
DO NOT SCALE DRAWINGS		SCALE	REV. C
		NA	SHEET 1 OF 1

NOTES: [TYPICAL]

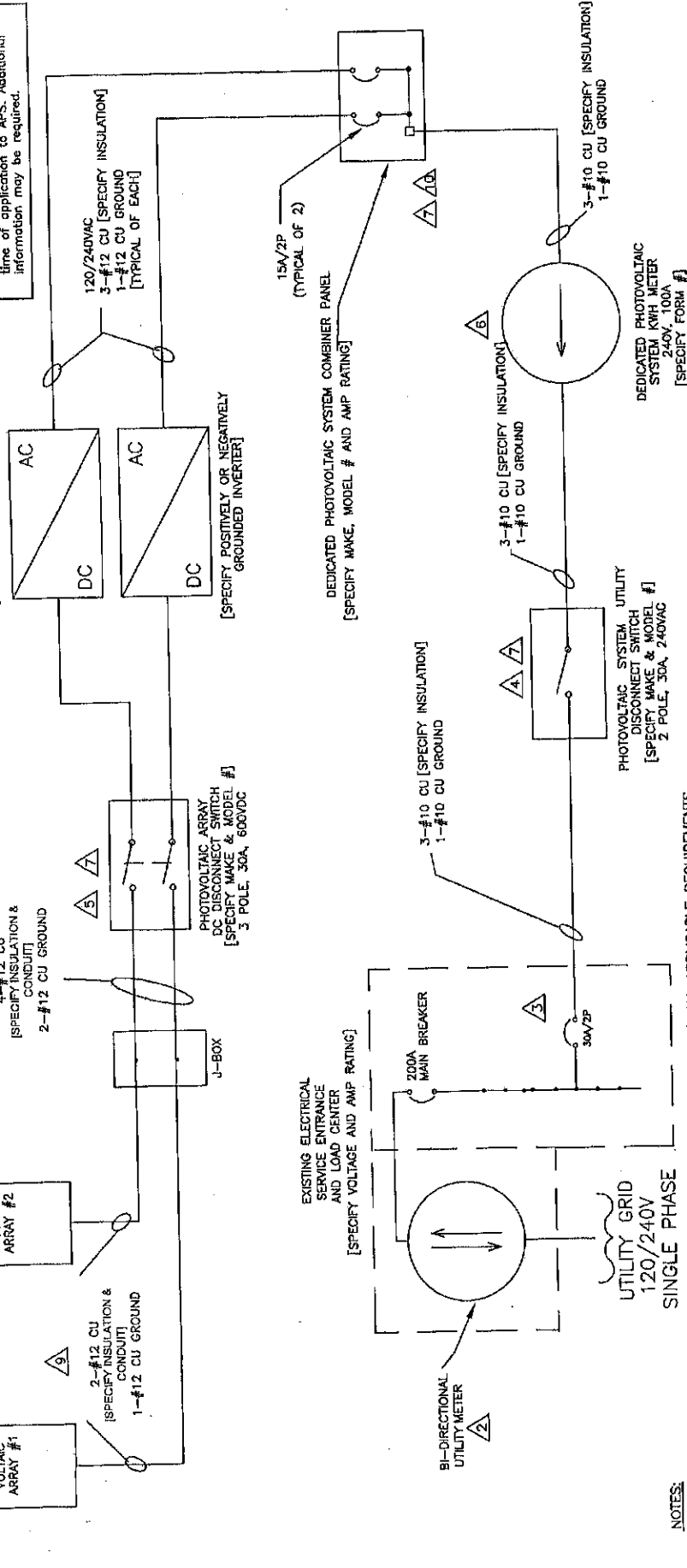
- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- GROUND WIRE MUST BE CONTINUOUS AND INSTALLED TO ALLOW FOR PANEL REMOVAL WITHOUT DISRUPTING CONTINUITY. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC 690-4 (C).
- FOLLOW MANUFACTURERS SUGGESTED INSTALLATION PRACTICES AND WIRING SPECIFICATIONS.
- WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS.

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2400 WATT INTERACTIVE INVERTER (TYPICAL OF 2)
100 TO 500 VDC TO 120/240 VAC 1Ø
[SPECIFY MAKE & MODEL #]

2258 WATT PHOTO-VOLTAIC ARRAY #2
Voc=405VDC, Isc=7.28AMP
Vmp=333VDC, Imp=6.78AMPS

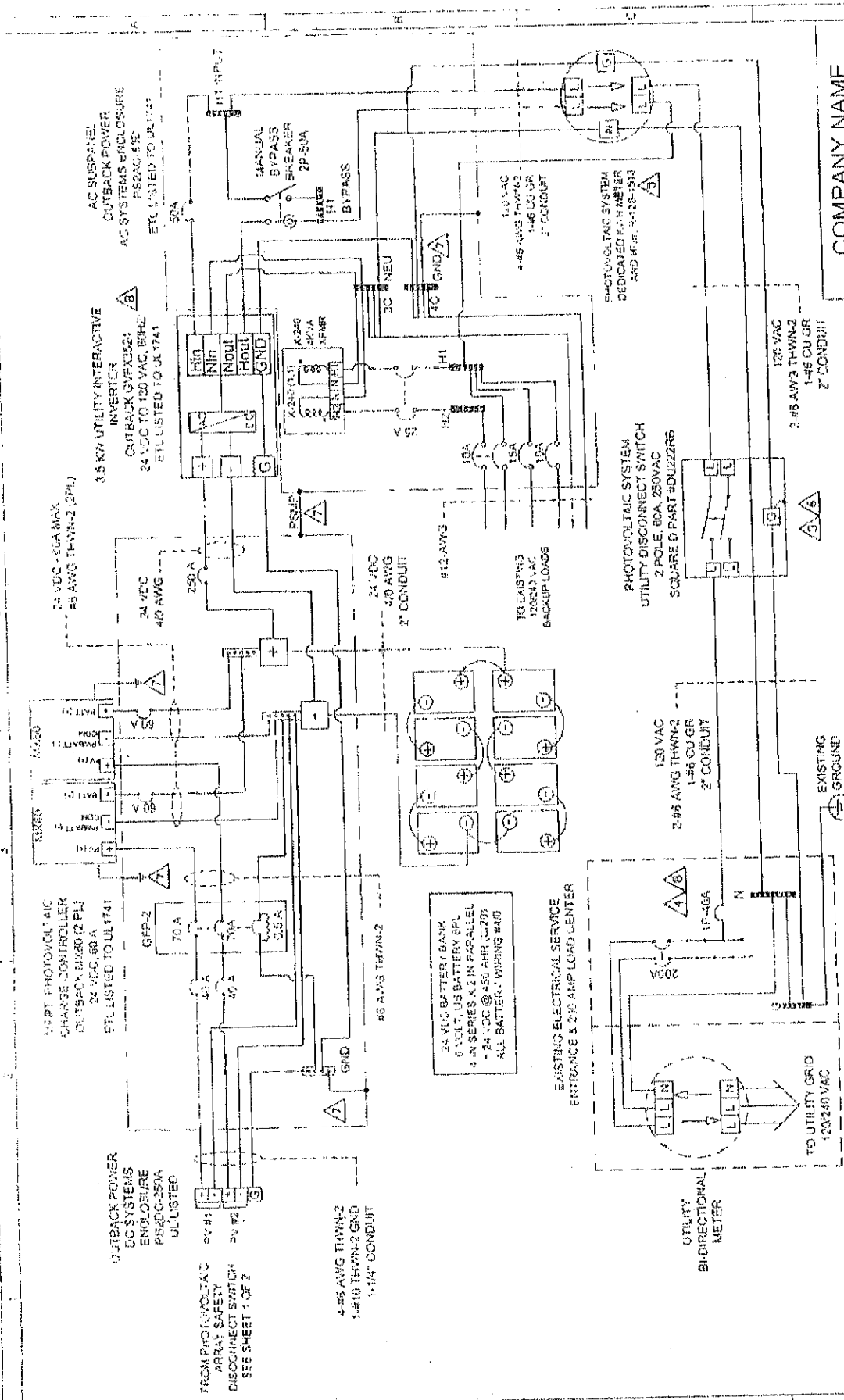
2258 WATT PHOTO-VOLTAIC ARRAY #1
Voc=405VDC, Isc=7.28AMP
Vmp=333VDC, Imp=6.78AMPS



- NOTES:**
- 1. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - 2. BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED).
 - 3. LABEL "PHOTOVOLTAIC ELECTRIC POWER SOURCE" PER NEC 705.10, AND "BREAKERS ARE BACKED" PER NEC 690.64(b)(5). LABEL WITH THE MAXIMUM AC OUTPUT OPERATING CURRENT AND THE OPERATING VOLTAGE PER NEC 690.54.
 - 4. LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH". SWITCH COVER TO BE LOCKED AT ALL TIMES. SWITCH TO BE VISIBLE BLADE AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.22.
 - 5. LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(d).
 - 6. LABEL "PHOTOVOLTAIC POWER SYSTEM DEDICATED KWH METER".
 - 7. PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION".
 - 8. LISTING AGENCY NAMES AND NUMBERS TO BE INDICATED ON POWER INVERTER AND SOLAR MODULES PER NEC 110.3(b).
 - 9. METALIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31 (E).
 - 10. LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "LOADS NOT TO BE ADDED TO THIS PANEL".

SAMPLE ELECTRICAL ONE - LINE DIAGRAM

1234, South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
APPROVALS	DATE	ONE - LINE ELECTRICAL DIAGRAM	
DRAWN	ABC 06-28-05	4.8 KW PHOTOVOLTAIC SYSTEM	
CHECKED		999 N. CACTUS BIRD RD.	
ENGINEER		ANY CITY, AZ 85123	
M.G.R.		SIZE	CODE INTENT NO. DRAWING NO.
REV. E	11-10-2008	A	0000-0001
ABC PROJECT #1111-9999		SCALE	REV. E
DO NOT SCALE DRAWINGS		NA	SHEET 1 OF 1



COMPANY NAME

3-LINE ELECTRICAL DIAGRAM
 3.5 KW PHOTOVOLTAIC SYSTEM
 999 N. CACTUS BIRD RD.
 ANY CITY, AZ 85123

DATE	APPROVALS
8/12/04	
8/25/04	
09/22/04	
09/22/04	
11/17/04	

**RESIDENTIAL PV
 SAMPLE ONLY**

NOTES:
 ARE REFERENCED FROM SHEET 3
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NOTES:

- <1> ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
- <2> BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY.
- <3> LABEL BREAKER "PV ELECTRIC POWER SOURCE" PER NEC 705.10 AND "BREAKERS ARE BACKFED" PER NEC 690.64(B)(5). LABEL WITH THE MAX AC OUTPUT OPERATING CURRENT AND THE OPERATING VOLTAGE PER NEC 690.54.
- <4> LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH". SWITCH COVER TO BE LOCKED AT ALL TIMES. SWITCH TO BE VISIBLE BLADE AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.22.
- <5> LABEL PER NEC 690.14(C)(2), "PHOTOVOLTAIC SYSTEM DC DISCONNECT SWITCH". LABEL PER NEC 690.53, WITH OPERATING VOLTAGE, OPERATING CURRENT, MAX SYSTEM VOLTAGE, AND SHORT CIRCUIT. SWITCH TO BE LOCKED PER NEC 690.7(D).
- <6> LABEL "PHOTOVOLTAIC POWER SYSTEM DEDICATED KWH METER".
- <7> PROVIDE WARNING SIGN PER NEC 690.17 READING, "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION".
- <8> LISTING AGENCY NAMES AND NUMBERS TO BE INDICATED ON POWER INVERTER AND SOLAR MODULES PER NEC 110.3(B).
- <9> METALLIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31(E).
- <10> LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "LOADS NOT TO BE ADDED TO THIS PANEL".
- <11> GEC TO BE INSTALLED AS REQUIRED BY MANUFACTURER INSTRUCTIONS AND NEC 690.47.

RESIDENTIAL PV
SAMPLE ONLY

ABBREVIATIONS

PV = PHOTOVOLTAIC
GEC = GROUNDING ELECTRODE CONDUCTOR

.....
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.....

COMPANY NAME

NOTES

3.5 PHOTOVOLTAIC SYSTEM
999 N. CACTUS BIRD RD.
ANY CITY, AZ 85123

COMPANY
ADDRESS
Phone #

Drawn:

Checked:

Scale
NONE

Drawing No.
0000-0000

Sheet
3 of 4

Rev
A

Date
12-11-2008



TOWN OF DEWEY-HUMBOLDT Plot Plan Sketch and Affidavit

I certify that I am authorized by the property owner to make this application, that all information provided for this application is correct and that this plot plan, as part of the permit, indicates all structures (including fences, walls, and pads), correct property and building dimensions; setback distances; legal access and easements; road cuts; walls and/or any water course (including washes, drainage ditches etc.) on or within 50'; 100' and 200' respectively of the property. We agree to conform to all applicable laws of this jurisdiction.

Signature

Date

Orientation of Plot Plan

Dimension & Lettering ↕				
Dimension & Lettering ↔				

Document #

Sec

Twn

Rng

A P N

Zoning: _____

Stories: _____

Height: _____

Slope: _____ %

FY: _____

RY: _____

EY: _____

IY: _____

LC: _____

Lot Area _____

Lot % _____

Density Used: _____

Scale: _____

North Arrow

MUST BE DRAWN TO SCALE PER CHECKLIST. An additional 8 ½" x 11" sheet may be used to provide an area map for a parcel which exceeds 2 acres or dimensions of 300 feet.

Town of Dewey-Humboldt

Directions to Site

- An actual detailed line map is needed, not written instructions.
- Use starting point of Highway 69 (a North to South Rd)
- Make sure **street names** and north arrows **ARE readable**.
- If the map is not adequate it could cause a delay in issuing your permit.

Parcel ID _____ Address _____