

Record Detail * (This section is required.)

Permit Type Building/Residential/Misc/Solar Panel	Permit Number B21002323	Opened Date 06/23/2021
Description of Work SFD/ INSTALL 48 GROUND MOUNTED SOLAR PANELS. TOTAL SYSTEM SIZE 17,28KW 115 FT OF TRENCHING REQUIRED		

[check spelling](#)

'OK'
JTB
11/29/2021

Address * (This section is required.)

Search Reset Clear Get Parcel & Owner

Street # 2840	Street Name ROLLING FORK	Street Type WAY
Unit Type --Select--	Unit #	
	X Coordinate -77.01405	Y Coordinate 39.30427
City GLENWOOD	State MD	Zip Code 21738
		Primary Yes

Parcel * (This section is required.)

Search Reset Clear Get Address & Owner

GIS ID *	Parcel	Parcel Area	Land Value	Improved Value	Exemption Value	Plan Area
906695	123	1.23	227300	776600	549300	RURAL
Legal Description IMPSLOT 33 1.236 A[]2840 ROLLING FORK WAY[]GWYNDYL OAK ESTATES						

[check spelling](#)

Block	Lot	Census Tract	Council Dist	Inspection Dist	Supervisor Dist	Map #	DAP Zone
	33	605601	5				
Plan Area		State Tax Id 1404356306		Subdivision Name GWYNDYL OAK ESTATES			
Section		Area		Tax Map 14			
Grid 14-11		Zoning District RC-DEO		ADC Map 4812-H2			
SDP No.		Final Plan No.		WP File No.			
Record Plat No. 11552		WS Contract No.		FDP No.	Primary Yes		
Owner Occupied <input type="radio"/> Yes <input type="radio"/> No		Year Built 1996		Historic District <input type="radio"/> Yes <input checked="" type="radio"/> No			
Historic District Registry No.		Stat Area 4-06		Flood Plain <input type="radio"/> Yes <input checked="" type="radio"/> No			
Building No							

Owner * (This section is required.)

Search Reset Clear

Name *
EARL H. ARNETTE

Address Line 1
2840 ROLLING FORK WAY

Address Line 2

Address Line 3

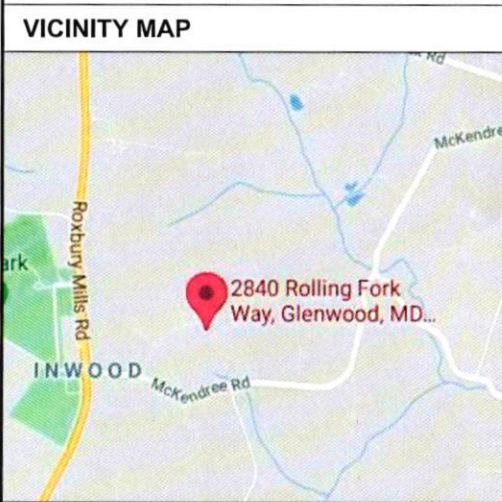
Mail City GLENWOOD	Mail State MD	Mail Zip Code 21738
Phone 443-745-1945	Primary Yes	
E-mail		
Cell Number	Fax Number	

SCOPE OF WORK

- SYSTEM SIZE: 17280W DC, 15718W AC
- MODULES: (48) LONGI GREEN ENERGY TECHNOLOGY CO LTD: LR4-60HPH-360M
- INVERTERS: (48) ENPHASE ENERGY: IQ7PLUS-72-2-US
- RACKING: ;
- TRENCHING REQUIRED: AC WIRE TO BE TRENCHED 200 FT IN DIRT MATERIAL.

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH 2018 IRC/IBC/IEBC, MUNICIPAL CODE, AND ALL MANUFACTURERS' LISTINGS AND INSTALLATION INSTRUCTIONS.
- PHOTOVOLTAIC SYSTEM WILL COMPLY WITH NEC 2020.
- ELECTRICAL SYSTEM GROUNDING WILL COMPLY WITH NEC 2020.
- PHOTOVOLTAIC SYSTEM IS UNGROUNDED. NO CONDUCTORS ARE SOLIDLY GROUNDED IN THE INVERTER. SYSTEM COMPLIES WITH 690.35.
- MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.
- INVERTER CONFORMS TO AND IS LISTED UNDER UL 1741.
- RACKING CONFORMS TO AND IS LISTED UNDER UL 2703.
- SNAPNRACK RACKING SYSTEMS, IN COMBINATION WITH TYPE I, OR TYPE II MODULES, ARE CLASS A FIRE RATED.
- RAPID SHUTDOWN REQUIREMENTS MET WHEN INVERTERS AND ALL CONDUCTORS ARE WITHIN ARRAY BOUNDARIES PER NEC 690.12(1).
- CONSTRUCTION FOREMAN TO PLACE CONDUIT RUN PER 690.31(G).
- ARRAY DC CONDUCTORS ARE SIZED FOR DERATED CURRENT.
- 11.35 AMPS MODULE SHORT CIRCUIT CURRENT.
- 17.73 AMPS DERATED SHORT CIRCUIT CURRENT [690.8 (a) & 690.8 (b)].



LEGEND AND ABBREVIATIONS

SERVICE ENTRANCE	
MAIN PANEL	
SUB-PANEL	
PV LOAD CENTER	CHIMNEY
SUNRUN METER	ATTIC VENT
DEDICATED PV METER	FLUSH ATTIC VENT
INVERTER(S)	PVC PIPE VENT
AC DISCONNECT(S)	METAL PIPE VENT
DC DISCONNECT(S)	T-VENT
IQ COMBINER BOX	SATELLITE DISH
INTERIOR EQUIPMENT SHOWN AS DASHED	FIRE SETBACKS
	HARDSCAPE
	- PL - PROPERTY LINE

SCALE: NTS

A	AMPERE
AC	ALTERNATING CURRENT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AZIM	AZIMUTH
COMP	COMPOSITION
DC	DIRECT CURRENT
(E)	EXISTING
ESS	ENERGY STORAGE SYSTEM
EXT	EXTERIOR
INT	INTERIOR
MAG	MAGNETIC
MSP	MAIN SERVICE PANEL
(N)	NEW
NTS	NOT TO SCALE
OC	ON CENTER
PRE-FAB	PRE-FABRICATED
PSF	POUNDS PER SQUARE FOOT
PV	PHOTOVOLTAIC
RSD	RAPID SHUTDOWN DEVICE
TL	TRANSFORMERLESS
TYP	TYPICAL
V	VOLTS
W	WATTS

REV	NAME	DATE	COMMENTS
D	K. NOWAK	11/18/21	UPDATED PV 2.0

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PAGE #	DESCRIPTION
PV-1.0	COVER SHEET
PV-2.0	SITE PLAN
PV-3.0	ELECTRICAL
PV-4.0	SIGNAGE

SUNRUN

MHIC #115875

812 OREGON AVE. STE J LINTHOUR HEIGHTS, MD 21090
PHONE 443-457-5012
FAX 0

CUSTOMER RESIDENCE:
EARL ARNETTE
2840 ROLLING FORK WAY,
GLENWOOD, MD, 21738

TEL. (443) 745-1945
APN #: APN: 04-356306

PROJECT NUMBER:
251R-840ARNE

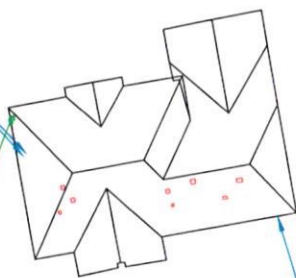
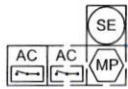
DESIGNER: (415) 580-6920 ex3
KEVIN NOWAK

SHEET
COVER SHEET

REV: D 11/18/2021

PAGE PV-1.0

SITE PLAN DETAIL- SCALE = 1" = 30'



(E) RESIDENCE



(E) DETACHED STRUCTURE

(N) CONDUIT RUN
(ENTRENCHED - 200 FT)

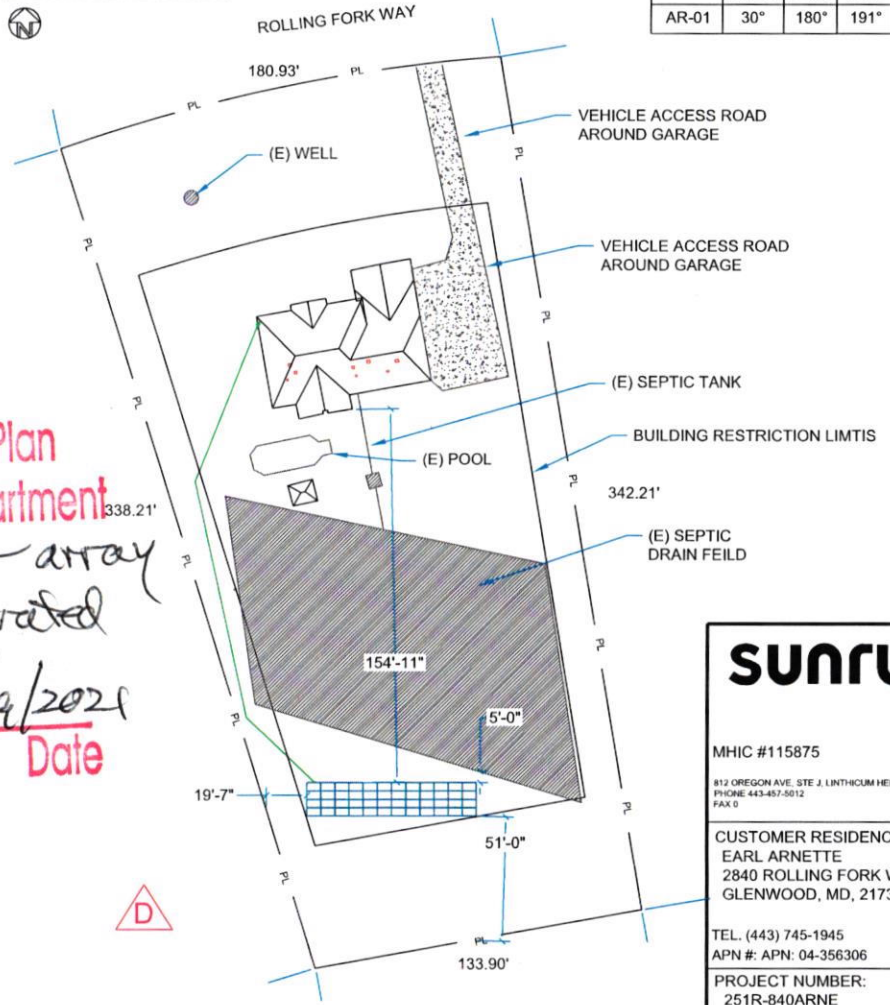


(N) ARRAY AR-01



NOTE: MICRO-INVERTERS INSTALLED UNDER EACH MODULE

SITE PLAN - SCALE = 1" = 50'



ROLLING FORK WAY

180.93'

(E) WELL

VEHICLE ACCESS ROAD
AROUND GARAGE

VEHICLE ACCESS ROAD
AROUND GARAGE

(E) SEPTIC TANK

BUILDING RESTRICTION LIMITS

(E) POOL

342.21'

(E) SEPTIC
DRAIN FEILD

154'-11"

5'-0"

19'-7"

51'-0"

133.90'



	ARRAY PITCH	TRUE AZIM	MAG AZIM	PV AREA (SQFT)
AR-01	30°	180°	191°	941.2

Approved Septic System Plan
Howard County Health Department
48-panel solar array
in location illustrated
Kevin Nowak
Signature 11/29/2021
Date

SUNRUN

MHIC #115875
812 OREGON AVE, STE J, LINTHOLM HEIGHTS, MD 21090
PHONE: 443-457-5012
FAX 0

CUSTOMER RESIDENCE:
EARL ARNETTE
2840 ROLLING FORK WAY,
GLENWOOD, MD, 21738

TEL. (443) 745-1945
APN #: APN: 04-356306

PROJECT NUMBER:
251R-840ARNE

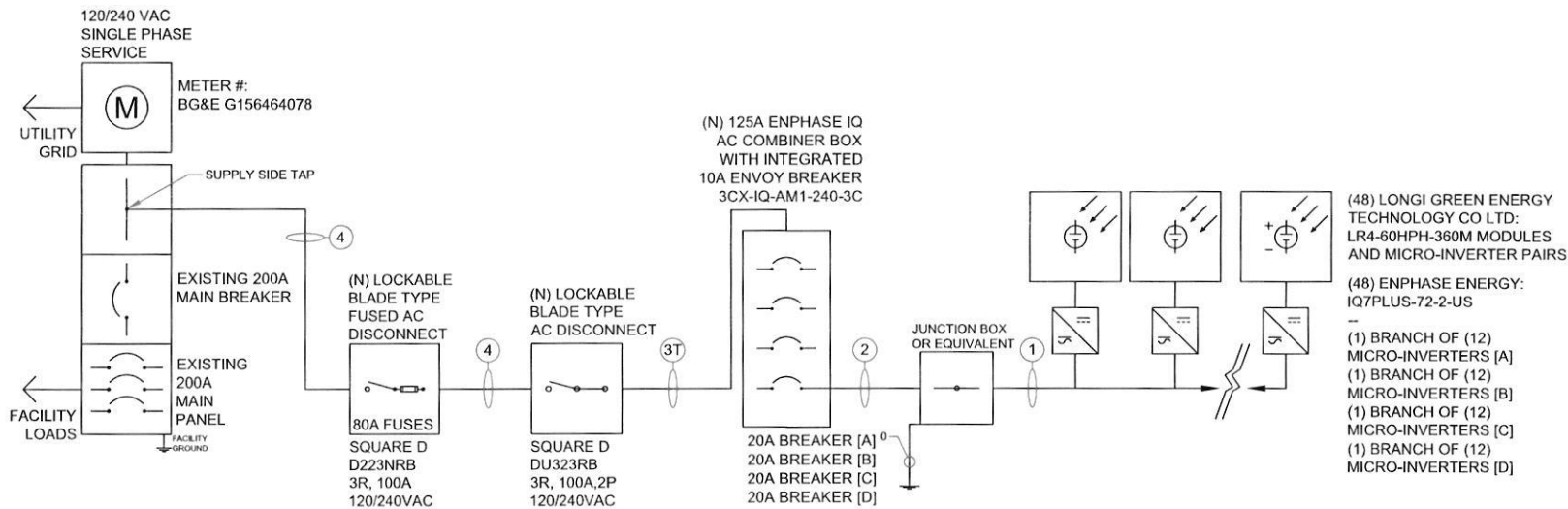
DESIGNER: (415) 580-6920 ex3
KEVIN NOWAK

SHEET
SITE PLAN

REV: D 11/18/2021

PAGE PV-2.0

f. SURFACE



CONDUIT SCHEDULE

#	CONDUIT	CONDUCTOR	NEUTRAL	GROUND
0	NONE	NONE	NONE	(1) 6 AWG BARE COPPER
1	NONE	(2) 12 AWG PER ENPHASE Q CABLE BRANCH	NONE	(1) 10 AWG BARE COPPER
2	3/4" EMT OR EQUIV.	(8) 10 AWG THHN/THWN-2	NONE	(1) 8 AWG THHN/THWN-2
3T	1" SCH 40 PVC (BELOW GROUND) 1" SCH 80 PVC (ABOVE GROUND)	(2) 4 AWG THHN/THWN-2	NONE	(1) 8 AWG THHN/THWN-2
4	1" EMT OR EQUIV.	(2) 4 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2

MODULE CHARACTERISTICS

LONGI GREEN ENERGY
TECHNOLOGY CO LTD:
LR4-60HPH-360M: 360 W
OPEN CIRCUIT VOLTAGE: 40.5 V
MAX POWER VOLTAGE: 34 V
SHORT CIRCUIT CURRENT: 11.35 A

SUNRUN

MHIC #115875

812 OREGON AVE, STE J, LINTHICUM HEIGHTS, MD 21090
PHONE: 443-491-5912
FAX: 0

CUSTOMER RESIDENCE:
EARL ARNETTE
2840 ROLLING FORK WAY,
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TEL: (443) 745-1945
APN #: APN: 04-356306

PROJECT NUMBER:
251R-840ARNE

DESIGNER: (415) 580-6920 ex3
KEVIN NOWAK

SHEET
ELECTRICAL

REV: D 11/18/2021

PAGE PV-3.0

WARNING
ELECTRICAL SHOCK HAZARD

TERMINALS ON LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION:
INVERTER(S), AC DISCONNECT(S), AC COMBINER PANEL (IF APPLICABLE).
PER CODE(S): NEC 2020: 690.13(B), NEC 2017: 690.13(B), NEC 2014: 690.17(E), NEC 2011: 690.17(4)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL LOCATION:
UTILITY SERVICE ENTRANCE/METER, INVERTER/DC DISCONNECT IF REQUIRED BY LOCAL AHJ, OR OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ.
PER CODE(S): NEC 2020: 690.56(c)(2), NEC 2017: 690.56(C)(3), NEC 2014: 690.12, NEC 690.56, IFC 2012: 605.11.1, IFC 2018: 1204.5.3

WARNING
POWER SOURCE OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
ADJACENT TO PV BREAKER AND ESS OCPD (IF APPLICABLE).
PER CODE(S): NEC 2020: 705.12(B)(3)(2), NEC 2017: 705.12(B)(2)(3)(b), NEC 2017: 705.12(B)(3), NEC 2014: 705.12(B)(3), NEC 2011: 705.12(D)(7)

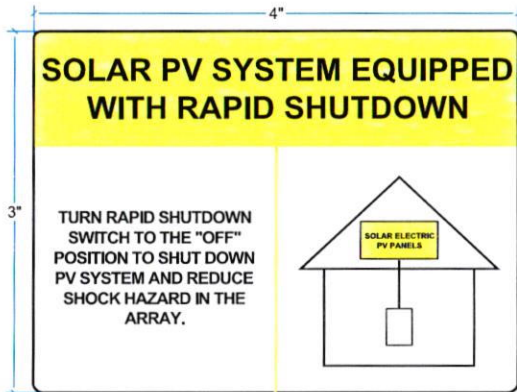
PV SYSTEM DISCONNECT

MAXIMUM AC OPERATING CURRENT: 58.00 AMPS
NOMINAL OPERATING AC VOLTAGE: 240 VAC

LABEL LOCATION:
AC DISCONNECT(S), PHOTOVOLTAIC SYSTEM POINT OF INTERCONNECTION.
PER CODE(S): NEC 2020: 690.54, NEC 2017: 690.54, NEC 2014: 690.54, NEC 2011: 690.54

CAUTION: MULTIPLE POWER SOURCES

PER CODE(S): NEC 2020 690.56(B), NEC 2020 705.10



LABEL LOCATION:
ON OR NO MORE THAT 1 M (3 FT) FROM THE SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED.
PER CODE(S): NEC 2020: 690.56(C), NEC 2017: 690.56(C)(1)(a)

NOTES AND SPECIFICATIONS:

- SIGNS AND LABELS SHALL MEET THE REQUIREMENTS OF THE NEC 2020 ARTICLE 110.21(B), UNLESS SPECIFIC INSTRUCTIONS ARE REQUIRED BY SECTION 690, OR IF REQUESTED BY THE LOCAL AHJ.
- SIGNS AND LABELS SHALL ADEQUATELY WARN OF HAZARDS USING EFFECTIVE WORDS, COLORS AND SYMBOLS.
- LABELS SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING METHOD AND SHALL NOT BE HAND WRITTEN.
- LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
- SIGNS AND LABELS SHALL COMPLY WITH ANSI Z535.4-2011, PRODUCT SAFETY SIGNS AND LABELS, UNLESS OTHERWISE SPECIFIED.
- DO NOT COVER EXISTING MANUFACTURER LABELS.

SUNRUN

MHIC #115875

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GLENWOOD, MD, 21738

TEL. (443) 745-1945
APN #: APN: 04-356306

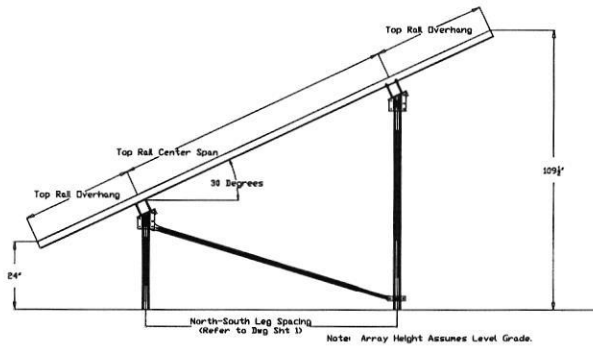
PROJECT NUMBER:
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DESIGNER: (415) 580-6920 ex3
KEVIN NOWAK

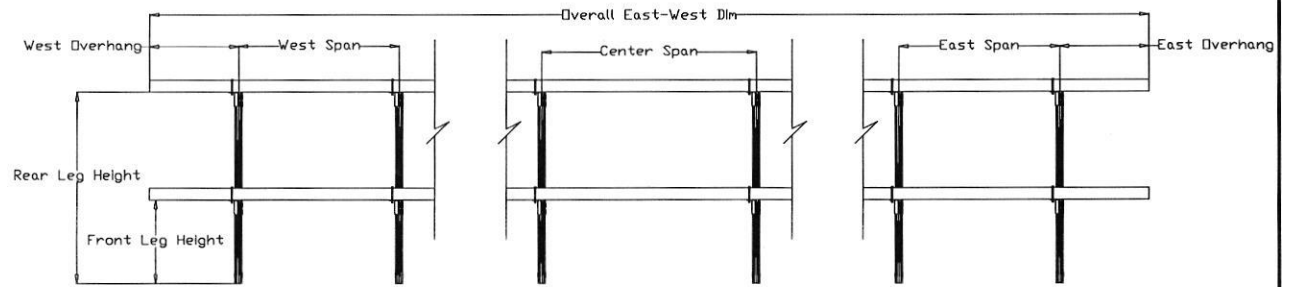
SHEET **SIGNAGE**

REV: D 11/18/2021

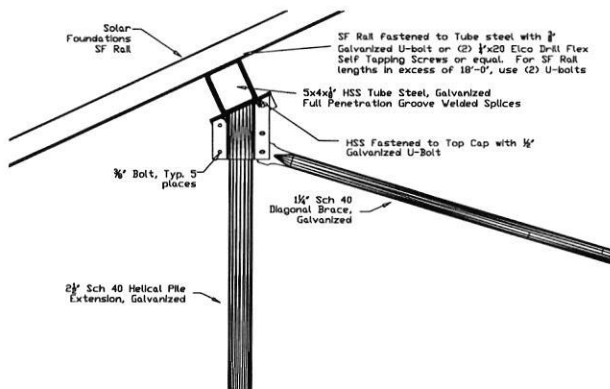
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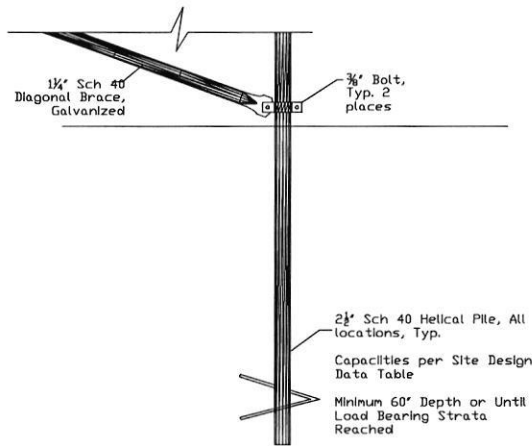
SIDE ELEVATION DETAIL NOT TO SCALE



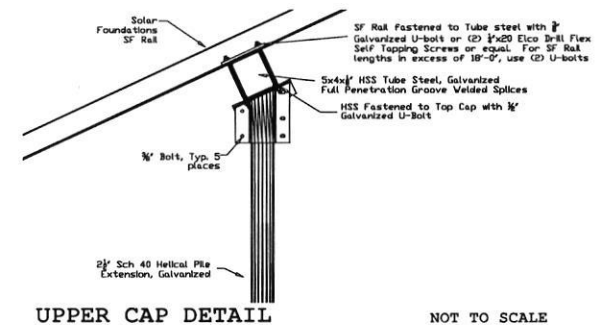
Refer to Dwg Sheet 1 for East-West Pile Spans and Front and Rear Leg Heights.
POST SPACING ELEVATION DETAIL NOT TO SCALE



LOWER CAP DETAIL NOT TO SCALE



HELICAL PILE DETAIL NOT TO SCALE



UPPER CAP DETAIL NOT TO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40027, Expiration Date: 3/15/23.



Sheet 2 of 3

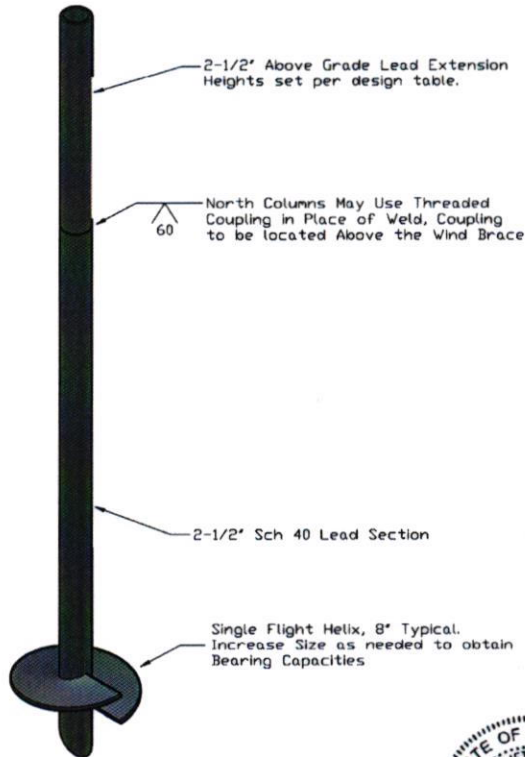
Date	Revision	Drawn By:	Review By:
06/23/2021	Original	MM	JD

Sunrun

Project:
Arnette Residence (251R-840ARNE)
 2840 Rolling Fork Way
 Glenwood, MD 21738

Solar Foundations USA

1142 River Road, New Castle, DE 19720 Ph: (855) 738-7200 Fax: (866) 644-5665



Helical Pile Detail

NOT TO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40027, Expiration Date: 3/15/23.



Specification Requirements:

The following material specification requirements pertain to the fabrication of the Solar Foundations USA ground mount solar support structure as indicated on these drawings.

1. Solar Foundation aluminum rails shall conform to ASTM B221.
2. Structural steel tubing shall be ASTM A500 High Yield (60 ksi).
3. Steel pipe for piles shall conform to ASTM A500 Grade C.
4. Steel pile extensions shall be ASTM A53 Grade B.
5. Steel pipe for diagonal bracing shall be ASTM A53 Grade A.
6. Fabricated steel plate for column cap assemblies, bracing clamps, etc. shall be ASTM A36 or A1011.
7. Steel bolts for cap fasteners shall conform to SAE J429 Grade 5. All other bolts shall conform to SAE J429 Grade 5 or better.
8. Steel U-bolts shall conform to ASTM 1018.
9. USS flat steel washers shall conform to ASTM F844 and nuts for steel connections shall conform to ASTM A563 Grade A.
10. All field welding shall conform to AWS D1.1/D1.1M -Structural Welding Code requirements.
11. All steel shall be hot-dip galvanized per ASTM A123 or A153 after all fabrication has been completed.

Installation Requirements:

1. The minimum average installation torque required to obtain the required indicated capacities and the minimum installation depth shown on the plans shall be satisfied prior to termination of the installation. The installation torque shall be an average of the installation torques indicated during the last 1 foot of installation.
2. The torsional strength rating of the torque anchor shall not be exceeded during the installation. If the torsional strength limit of the anchor has been reached, but the anchor has not reached the target depth, perform the following:
 - 2.1. If the torsional strength limit is achieved prior to reaching the target depth, the installation may be acceptable if reviewed and approved by the engineer and/or owner.
 - 2.2. The installer may remove the torque anchor and install a new one with smaller diameter helical plate.
 - 2.3. If using a continuous flight pile, pre-drill the pile location with a 3-1/2" rock auger or 3-5/8" rock drill as needed.
3. If the target depth is achieved, but the torsional requirement has not been met the installer may do one of the following:
 - 3.1. Install the torque anchor deeper to obtain the required capacity
 - 3.2. Remove the torque anchor and install a new one with a larger diameter helical plate or one with multiple helical plates.
 - 3.3. Reduce the load capacity on the individual torque anchor by providing additional torque anchors at a reduced spacing.

Sheet 3 of 3

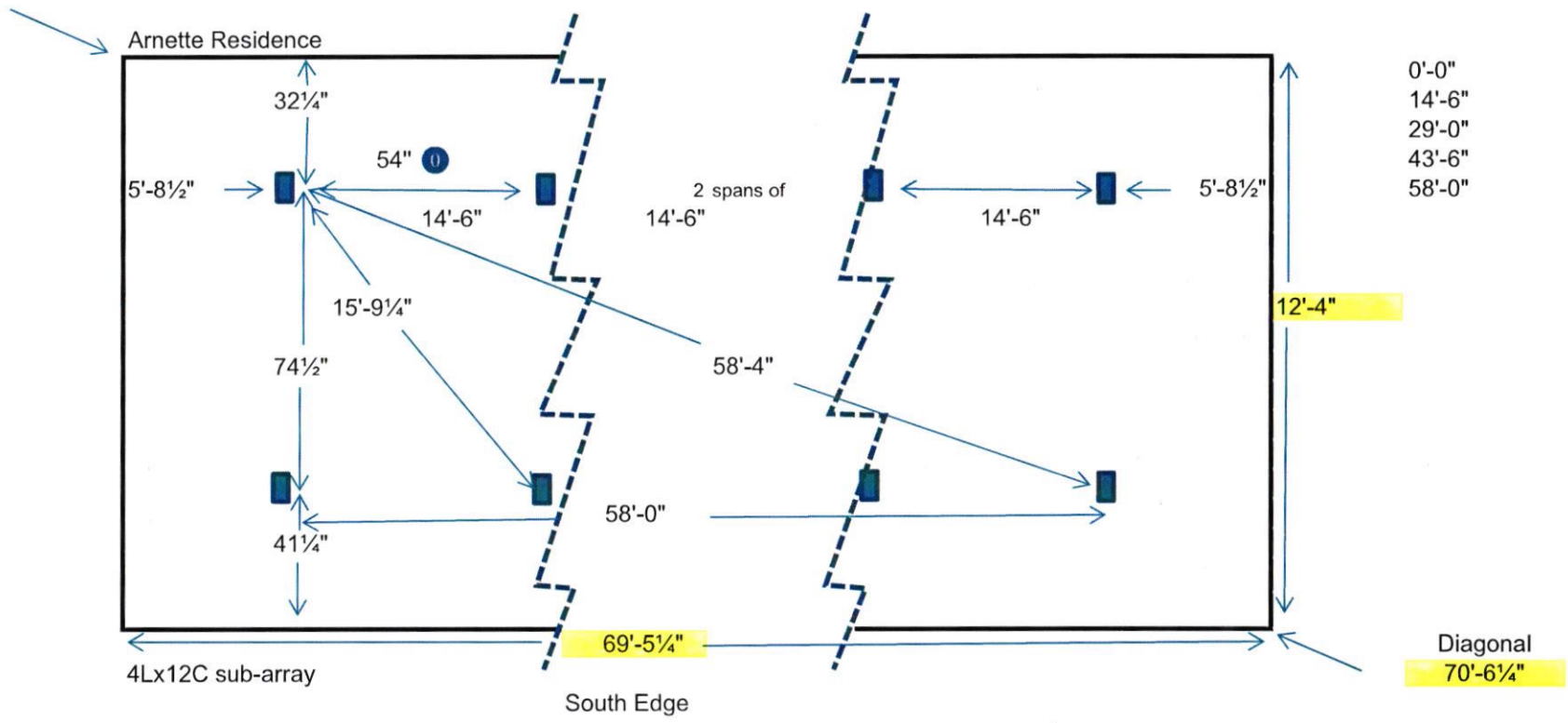
Date	Revision	Drawn By:	Review By:
06/23/2021	Original	MM	JD

Sunrun

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 Arnette Residence (251R-840ARNE)
 2840 Rolling Fork Way
 Glenwood, MD 21738

Solar Foundations USA

1142 River Road, New Castle, DE 19720 Ph: (855) 738-7200 Fax: (866) 644-5665



SITE INSPECTION SHEET

OWNER: Earl & Sandra Arnette PHONE #: _____

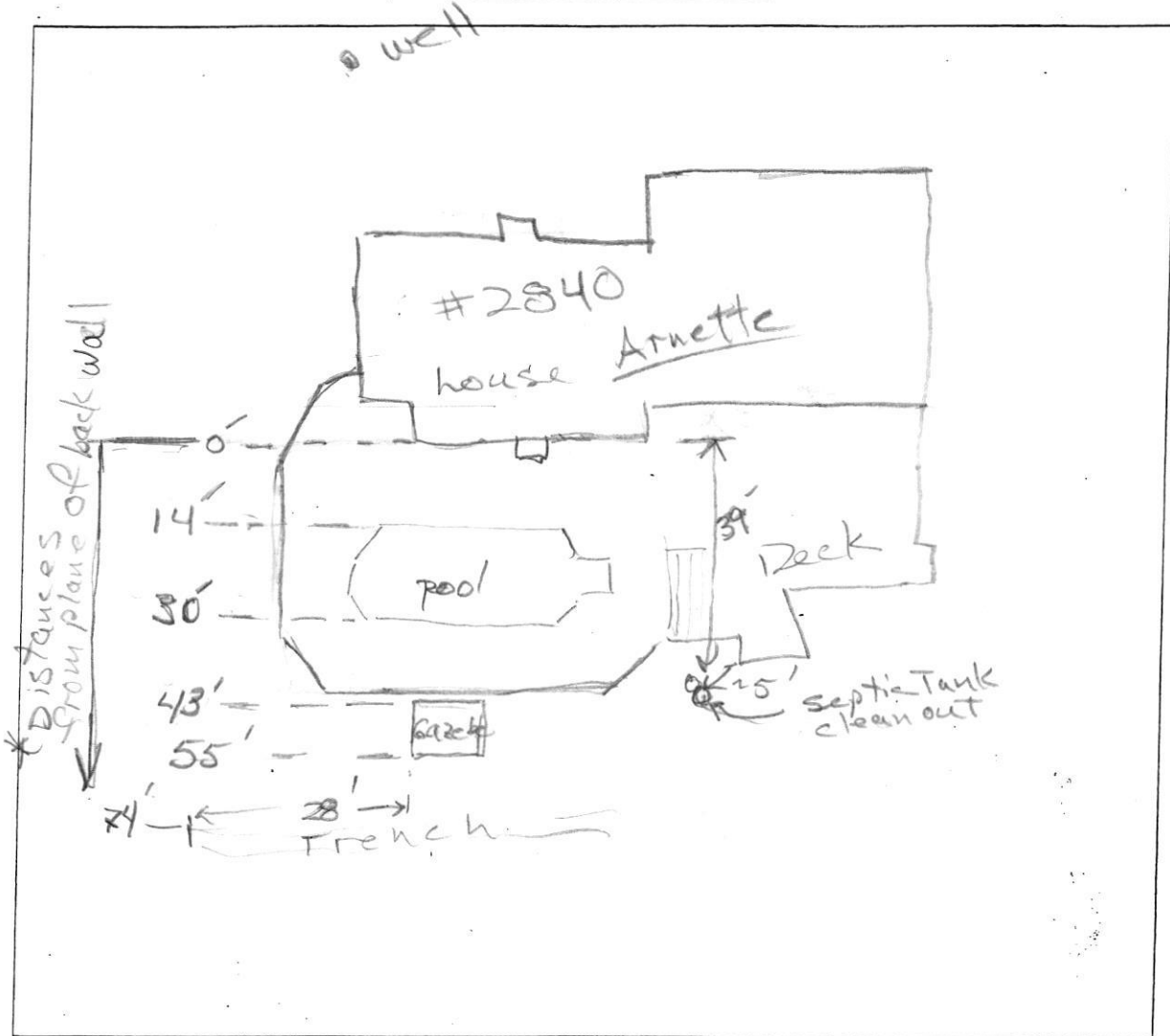
ADDRESS: 2840 Rolling Fork Way CONTRACTOR: Sunrun

WELL TAG #: HO-84-0759

SUBDIVISION: Mckendree St LOT: 33 COUNTY #: _____

PROPOSAL: Install ground-mounted solar panel array

LOCATION DIAGRAM



COMMENTS: _____

DATE: R. P. Tucker 11/17/21 INSPECTOR: _____