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Showing 1 of 1

<input type="checkbox"/> Permit #	Status	Record Type Alias	Street #	Street Name	Type	Unit Type	Unit #	City
<input type="checkbox"/> B22001617	Review In Process	Residential Solar Panels	3665	JENNINGS CHAPEL	RD			WOODB

Page 1 of 1 < >

Approved Septic System Plan
 Howard County Health Department
Tommy Rowland 5-13-22
 Signature
 Date
 B 22001617



Scott E. Wyssling, PE
Jon P. Ward, SE, PE
Gregory T. Elvestad, PE

76 North Meadowbrook Drive
Alpine, UT 84004
office (201) 874-3483
swyssling@wysslingconsulting.com

April 20, 2022

SunnyMac Solar
413 8th Ave
Wilmington, DE 19805

Re: Engineering Services
McDonald Residence
3665 Jennings Chapel Road, Woodbine MD
28.080 kW System

To Whom It May Concern:

Pursuant to your request, we have reviewed the following information regarding ground mount solar panel installation at the above referenced location:

1. Structural drawings prepared by Solar Foundations, USA identifying specific racking layout and components for the proposed ground mount system.
2. Design drawings of the proposed system including a site plan, and details for the solar panels. This information was prepared by SunnyMac and will be utilized for approval and construction of the proposed system.

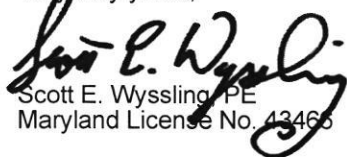
Based on our review of the Photovoltaic Array installed at 6 modules high and 18 modules wide. The PV array shall have a pier spacing of 13'-0" feet max East/West and 11'-10" North/South max spacing. Based on a wind speed of 102 mph, Exposure B, and a snow load of 25 PSF, it was determined that the minimum required depth of the auger/screw shall be minimum 48" inches below grade. The auger/screw shall be tested in the field after installation to provide minimum 2,000 lbs pull out and this information shall be provided to this office.

Based on the above evaluation, it is the opinion of this office that with appropriate construction the auger/screw and post assembly will adequately support the proposed solar array. This evaluation is in conformance with the *Maryland Residential Code (2018 IBC)*, current industry standards, and is based on information supplied to us at the time of this report.

This certification is specific to the footing design for the solar system and does not include the racking system. Racking system and components designed and specified by the manufacturer (Solar Foundations, USA).

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,


Scott E. Wyssling, PE
Maryland License No. 43465



Signed April 20, 2022

GENERAL NOTES:

- N1. DRAWINGS ARE DIAGRAMMATIC ONLY. THE LOCATION AND ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR UNLESS OTHERWISE NOTED OR STANDARDIZED.
- N2. IF A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT DEVICES, OVERCURRENT PROTECTION, GROUNDING SYSTEMS, ETC. (ALL EQUIPMENT AND MATERIALS) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIALS AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS IN THE SPECIFICATIONS OR NOTED ON THE PLANS TO ENSURE COMPLETE COMPLIANCE WITH ALL CODES AND TO ENSURE THE LONGEVITY AND SAFETY OF THE OPERABLE SYSTEM.
- N3. ALL OUTDOOR EQUIPMENT SHALL BE MIN. NEMA 3R RATED.
- N4. METAL CONDUIT AND ENCLOSURES SHALL BE USED WHERE PV SOURCE OR OUTPUT CIRCUITS ARE RUN INSIDE A BUILDING.
- N5. MODULES SHALL NOT BE PLACED OVER ANY PLUMBING VENTS AND AT LEAST 6" ABOVE FLUSH VENTS.
- N6. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH ANY AND ALL REQUIREMENTS GIVEN BY UTILITY COMPANIES.
- N7. FOR ADDITIONAL EQUIPMENT SPECIFICATIONS, SEE PROVIDED CUT SHEETS.
- N8. ALL NEC REFERENCES SHALL BE DIRECTLY INTERCHANGEABLE WITH NEC REFERENCES.
- N9. IT IS ILLEGAL FOR ANYONE UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT TO ALTER ANY ITEMS ON THIS PLAN.
- N10. THE ENGINEER HAS NOT BEEN RETAINED FOR JOB SUPERVISION.
- N11. ALL OSHA REGULATIONS AND STANDARDS FOR SAFE AND HEALTHFUL WORKING CONDITIONS TO BE FOLLOWED.
- N12. ALL CONTRACTORS WORKING ON GROUNDS TO BE INSURED AS SUCH.

STRUCTURAL NOTES:

- S1. MOUNTS ARE DIAGRAMMATIC AND EXACT LOCATION MAY CHANGE, BUT SHALL BE ACCURATELY SPACED.
- S2. MOUNTS SHALL BE STAGGERED WHEN NECESSARY TO EVENLY DISTRIBUTE LOAD AMONGST RAFTERS.
- S3. DO NOT SPLICE RAILS IN MIDDLE 50% OF SPAN BETWEEN TWO MOUNTS.

ELECTRICAL NOTES:

- E1. MAXIMUM POWER PER STRING DOES NOT EXCEED 6000W.
- E2. ANY EQUIPMENT OR ELECTRICAL MATERIALS USED FOR THIS INSTALLATION SHALL BE NEW AND LISTED BY A RECOGNIZED ELECTRICAL TESTING LABORATORY.
- E3. AN INVERTER IN AN INTERACTIVE SOLAR PV SYSTEM SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THAT SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED.
- E4. ALL PV ARRAYS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION BY INVERTER(S), AND ARC FAULT PROTECTION IS INVERTER-INTEGRATED.
- E5. ANY AC COMPONENT SHALL MEET OR EXCEED THE AVAILABLE FAULT CURRENT CALCULATED AT THAT COMPONENT.
- E6. ALL MODULES AND ANY RELATED GROUND MOUNTED METALLIC EQUIPMENT SHALL BE PROPERLY BONDED AND GROUNDED.
- E7. ALL WIRE, VOLTAGES, AMPERAGES AND EQUIPMENT IS SIZED ACCORDING TO TEMPERATURE DERATING AND LOCATION.
- E8. ONLY COPPER (CU) CONDUCTORS SHALL BE USED FOR NEW WIRING. CONDUCTORS SHALL BE STRANDED OR SOLID WITH PROPERLY RATED CONNECTORS.
- E9. ALL MODULES AND RACKING SHALL BE GROUNDED VIA UL-2703-LISTED RACKING SYSTEM'S INTEGRATED GROUNDING (PLEASE SEE DATA SHEET) OR WITH TIN PLATED DIRECT BURIAL RATED LAY IN LUGS USING STAINLESS STEEL HARDWARE, STAR WASHERS, AND THREAD FORMING BOLTS.

PROJECT DESCRIPTION:

(78x360) REC REC 360 TWINPEAK 4 BLACK SERIES MODULES
GROUND MOUNTED SOLAR PHOTOVOLTAIC MODULES
SYSTEM SIZE: 28.080KW DC / 22.8 MW AC

EQUIPMENT SUMMARY
78 REC REC 360 TWINPEAK 4 BLACK SERIES MODULES
02 SOLAREEDGE SE 11400H-US
78 SOLAREEDGE POWER OPTIMIZER P401

SHEET INDEX

PV-0	COVER SHEET
PV-1	SITE PLAN
PV-2	ROOF PLAN & MODULES
PV-3	STRING LAYOUT
PV-3.1	ATTACHMENT DETAIL
PV-4	ELECTRICAL LINE DIAGRAM & WIRING CALCULATIONS
PV-5	PLACARDS
PV-6	OPTIMIZER CHART
PV-7+	EQUIPMENT SPECIFICATION

GOVERNING CODES

2017 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL FIRE CODE

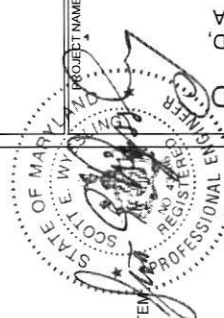
SCOPE OF WORK
INSTALLATION OF A SAFE AND
CODE-COMPLIANT GRID-TIED SOLAR PV SYSTEM
ON AN EXISTING RESIDENTIAL GROUND TOP.



SUNNYMAC SOLAR LLC
P.O. BOX 30770
WILMINGTON, DE 19805
LIC# 13VH0576110
ELEC LIC# 34EB0147700
DEBBIE@SUNNYMACSOLAR.COM
(844) 786-6962 EXT. 11 OR 21

DESCRIPTION	DATE	REV
BLE PERGONDEK	4/19/22	

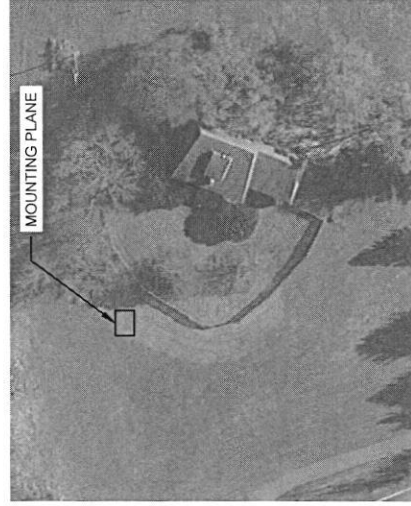
Signature with Seal



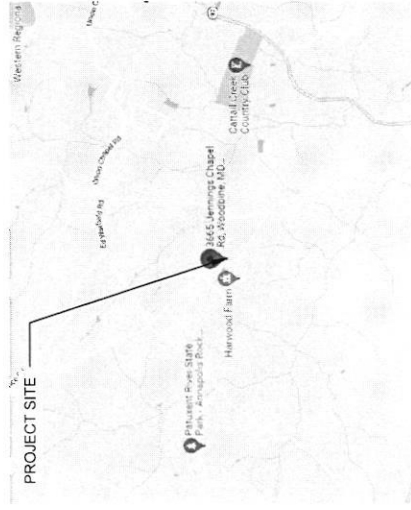
PROJECT NAME

DENIS MCDONALD
3665 JENNINGS CHAPEL RD,
WOODBINE, MD 21797, USA

Signed April 20, 2022



1 HOUSE PHOTO
PV-0 SCALE: NTS



2 VICINITY MAP
PV-0 SCALE: NTS

COVER SHEET

SHEET SIZE
ANSI/B
11" X 17"
SHEET NUMBER
PV-0

SUNNYMAC
 P.O. BOX 30770
 WILMINGTON, DE 19805
 LIC# 13VH0576110
 ELEC LIC#34EB0147700
 DEBBIE@SUNNYMACSOLAR.COM
 (844) 786-6962 EXT. 11 OR 21

DESCRIPTION	DATE	REV
BLE PERSONDEK	4/19/22	

Signature with Seal

PROJECT NAME
 DENIS MCDONALD
 3665 JENNINGS CHAPEL RD,
 WOODBINE, MD 21797, USA

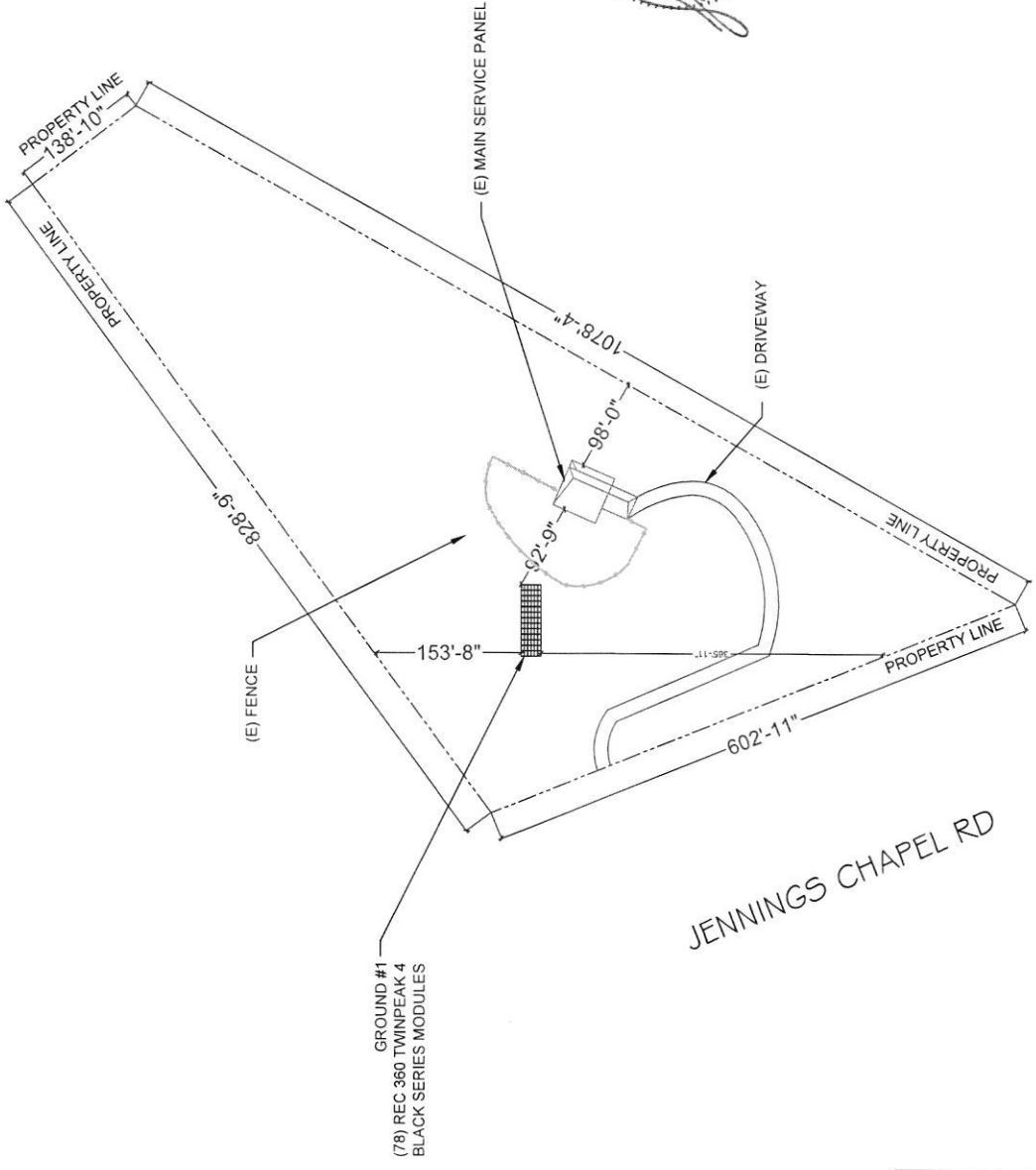
SITE PLAN

SHEET SIZE
 ANSI B
 11" X 17"

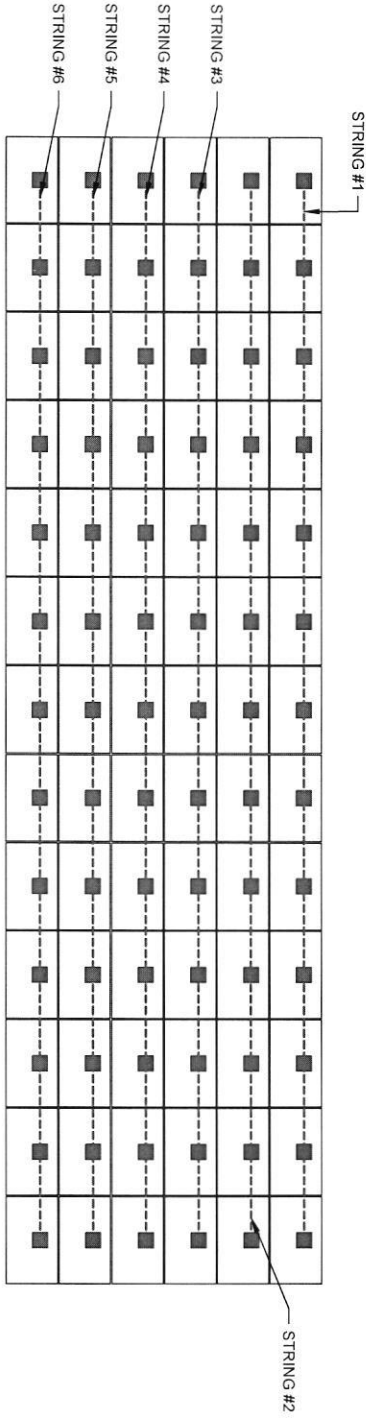
SHEET NUMBER
 PV-1



Signed April 20, 2022




1 | SITE PLAN
 PV-1 | SCALE: 1/128" = 1'-0"



1
STRING LAYOUT
SCALE: 1/8" = 1'-0"
PV-2.1



STRING LAYOUT ANSI B 11" X 17" SHEET NUMBER PV-2.1	DENIS MCDONALD 3665 JENNINGS CHAPEL RD, WOODBINE, MD 21797, USA	PROJECT NAME DRAWN BY DESCRIPTION DATE REV BLEP/SCORER 4/19/22	 SUNNYMAC SOLAR LLC P.O BOX 30770 WILMINGTON, DE 19805 LIC# 13VH0576110 ELEC LIC#34EB0147200 DEBBIEF@SUNNYMACSOLAR.COM (844) 786-6962 EXT. 11 OR 21	Signature with Seal
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SUNNYMAC
 SUNNYMAC SOLAR LLC
 P.O. BOX 30770
 WILMINGTON, DE 19805
 LIC# 13VH0576110
 ELEC LIC# 34EB0147700
 DEBBIE@SUNNYMACSOLAR.COM
 (844) 786-6962 EXT. 11 OR 21

DESCRIPTION	DATE	REV
B.E. PERSONICK	4/19/22	

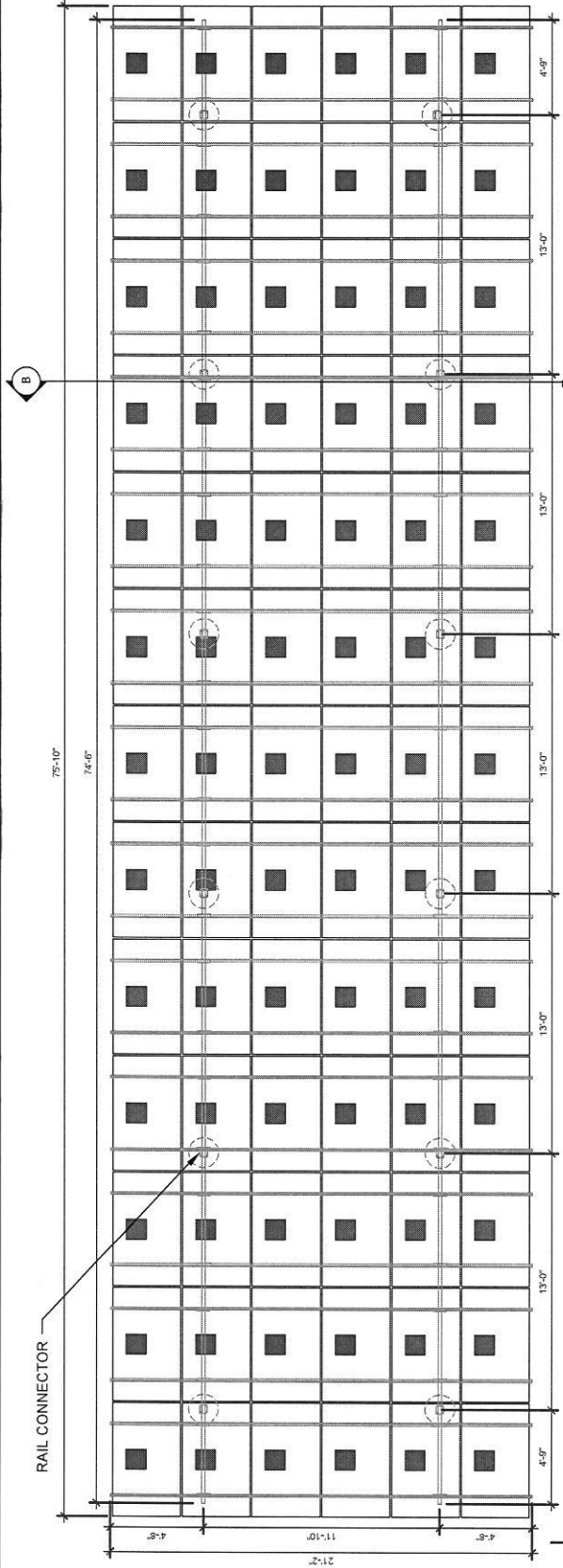
Signature with Seal

PROJECT NAME
 DENIS MCDONALD
 3665 JENNINGS CHAPEL RD,
 WOODBINE, MD 21797, USA

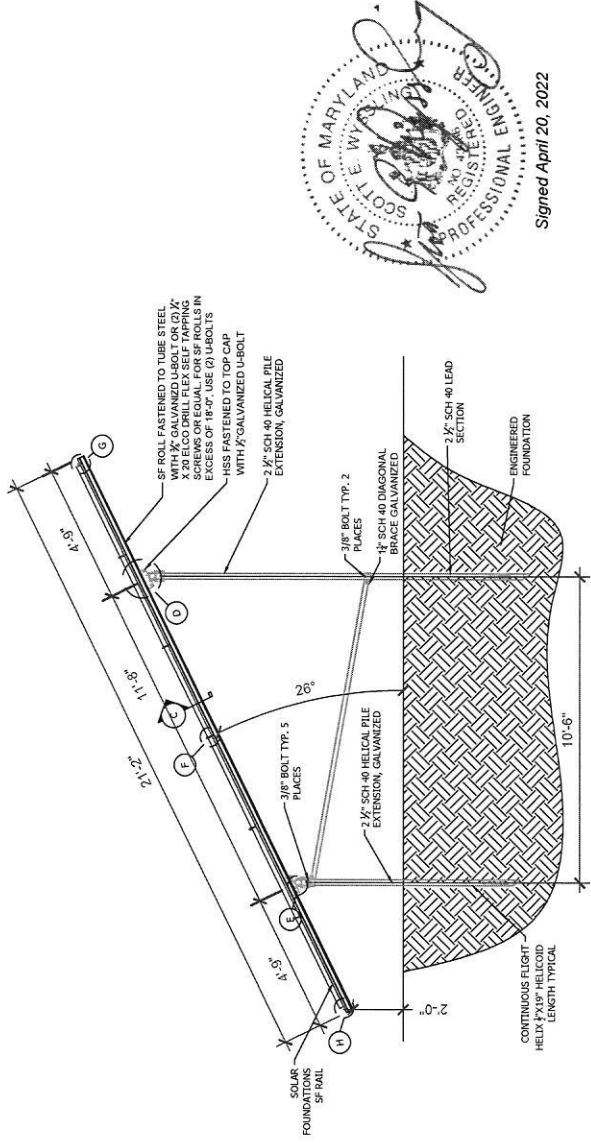
ATTACHMENT
 DETAIL

SHEET SIZE
 ANSIB
 11" X 17"

SHEET NUMBER
 PV-3



1 GROUND MOUNT LAYOUT
 PV-3 NOT TO SCALE



2 TILT UP DETAIL
 PV-3 NOT TO SCALE



Signed April 20, 2022

⚠ WARNING
ELECTRICAL SHOCK HAZARD

DO NOT TOUCH TERMINALS. 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): CEC 2019: 690.17(B).

⚠ WARNING
ELECTRICAL SHOCK HAZARD

IF GROUND FAULT IS INDICATED ALL NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED

LABEL LOCATION:
INVERTER(S), ENPHASE ENVOY ENCLOSURE (IF APPLICABLE).
PER CODE(S): CEC 2019: 690.15.

⚠ WARNING
ELECTRICAL SHOCK HAZARD

THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

LABEL LOCATION:
INVERTER(S), DC DISCONNECTS.
PER CODE(S): CEC 2019: 690.35(F).

⚠ WARNING
DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL LOCATION:
UTILITY SERVICE METER AND MAIN SERVICE PANEL.
PER CODE(S): NEC 2014: 705.12(D)(3),
NEC 2011: 705.12(D)(4)

⚠ WARNING
INVERTER OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
ADJACENT TO PV BREAKER (IF APPLICABLE).
PER CODE(S): CEC 2019: 705.12(B).

⚠ WARNING
PHOTOVOLTAIC SYSTEM COMBINER PANEL

DO NOT ADD LOADS

LABEL LOCATION:
PHOTOVOLTAIC AC COMBINER (IF APPLICABLE).
PER CODE(S): CEC 2019:
705.12(D)(2)(3)(c).

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION:
INTERIOR AND EXTERIOR DC CONDUIT EVERY 10 FT. AT EACH TURN, ABOVE AND BELOW PENETRATIONS, ON EVERY JB/PULL BOX CONTAINING DC CIRCUITS.
PER CODE(S): CEC 2019: 690.13.

PHOTOVOLTAIC SYSTEM AC DISCONNECT
RATED AC OPERATING CURRENT 95 AMPS
AC NOMINAL OPERATING VOLTAGE 240 VOLTS

LABEL LOCATION:
AC DISCONNECT, POINT OF INTERCONNECTION
(PER CODE: CEC690.54)

INVERTER 1&2

PHOTOVOLTAIC DC DISCONNECT	
RATED MAXIMUM POWER-POINT CURRENT:	11.7 ADC
RATED MAXIMUM POWER-POINT VOLTAGE:	400 VDC
MAXIMUM SYSTEM VOLTAGE:	480 VDC
MAXIMUM SHORT CIRCUIT CURRENT:	15 ADC

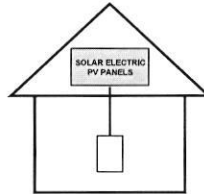
LABEL LOCATION:
INVERTER(S), DC DISCONNECT(S).
PER CODE(S): CEC 2019: 690.53.

NOTES AND SPECIFICATIONS:

- SIGNS AND LABELS SHALL MEET THE REQUIREMENTS OF THE CEC 2019 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.

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY.



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

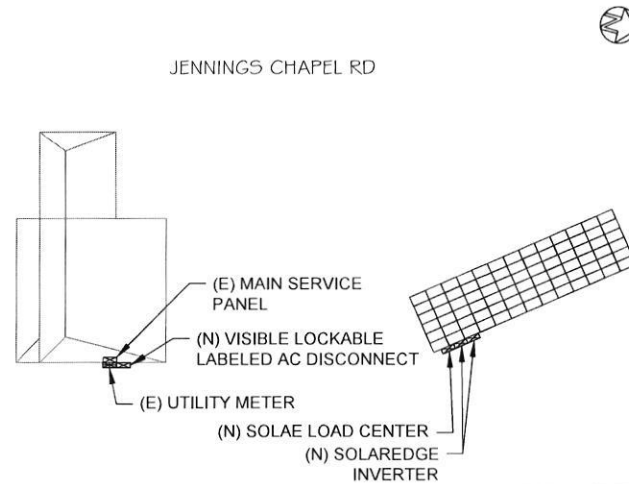
PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

LABEL LOCATION:
WEATHER RESISTANT MATERIAL, DURABLE PLAQUE, UL969 AS STANDARD TO WEATHER RATING (UL LISTING OF MARKINGS NOT REQUIRED), MIN 1/2" LETTER HEIGHT ARIAL OR SIMILAR FONT NON-BOLD, PLACED WITHIN THE MAIN SERVICE DISCONNECT, PLACED ON THE OUTSIDE OF THE COVER WHEN DISCONNECT IS OPERABLE WITH SERVICE PANEL CLOSED. (PER CODE: CEC690.12, 690.56(C))

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

- AT: MAIN SERVICE PANEL, UTILITY METER
 SOLAREEDGE INVERTER
 AC DISCONNECT



SUNNYMAC
SUNNYMAC SOLAR LLC
P.O. BOX 30770
WILMINGTON, DE 19805
LIC# 15VH0576110
ELEC LIC# 4EB01477200
DEBBIE@SUNNYMACSOLAR.COM
(844) 786-6962 EXT. 11 OR 21

DRAWN BY:

DESCRIPTION	DATE	REV
B.E. PERSONDEK	4/19/22	

Signature with Seal

PROJECT NAME

DENIS MCDONALD
3665 JENNINGS CHAPEL RD,
WOODBINE, MD 21797, USA

PLACARDS

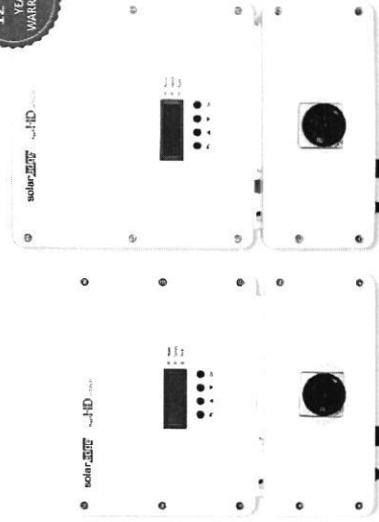
SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-5

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US



Optimized installation with HD-Wave technology

- ! Specifically designed to work with power optimizers
- ! Record breaking efficiency
- ! Fixed voltage inverter for longer strings
- ! Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- ! UL1741 SA certified, for CPUC Rule 21 grid compliance
- ! Extremely small
- ! Built in module-level monitoring
- ! Outdoor and indoor installation
- ! Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

solaredge.com



INVERTERS

/ Single Phase Inverter

with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /

SE7600H-US / SE10000H-US / SE11400H-US

OUTPUT	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
Rated AC Power Output	3000	3800 @ 240V 3800 @ 240V 3800 @ 208V	5000	6000 @ 240V 6000 @ 240V 6000 @ 208V	7600	10000	11400
Maximum AC Power Output	3000	3800 @ 240V 3800 @ 240V 3800 @ 208V	5000	6000 @ 240V 6000 @ 240V 6000 @ 208V	7600	10000	11400
AC Output Voltage Min. Norm. Mode	240	240	240	240	240	240	240
AC Output Voltage Max. Norm. Mode	240	240	240	240	240	240	240
AC Frequency (Nominal)	60	60	60	60	60	60	60
Maximum Continuous Output Current @ 240V	12.5	16	21	25	32	42	47.5
Maximum Continuous Output Current @ 208V	-	16	-	24	-	-	48.5
CEP Threshold	-	-	-	-	-	-	-
Grid Monitoring, Grid-Tie Protection, Anti-Islanding Protection, Communication Protocols	Yes						

INPUT

Maximum DC Power @ 240V	4850	5900	7750	9300	13000	17500	19150
Maximum DC Power @ 208V	5900	7750	9300	13000	17500	19150	15400
Transformerless, Ungrounded	Yes						
Maximum Input Voltage	480						
Nominal DC Input Voltage	380						
Maximum Input Current @ 480V	8.5	10.5	11.5	16.5	20	27	30.5
Maximum Input Current @ 208V	-	8	-	13.5	-	-	27
Max. Input Short Circuit Current	45						
Reverse Polarity Protection	Yes						
Ground-Fault Isolation Protection	600Vdc Series MPPT						
Maximum Inverter Efficiency	99	99	99	99.2	99.2	99.2	99.2
CLC Weighted Efficiency	4.2-5						

ADDITIONAL FEATURES

Surge and Communication Interference	IP66, Ethernet / Wi-Fi (optional), Cellular (optional)						
Revenue Grade Data, ANSI C12.20	Optional						
Rapid Shutdown - NEC 2014 and 2017 (UL1741)	Automatic Rapid Shutdown upon AC Grid Disconnect						

STANDARD COMPLIANCE

Safety	UL1741, UL1741 SA, UL 9898, CSA C22.2, Canadian A-CI according to ILL M-07						
Grid Connection Standards	IEEE 1547, Rule 21, Rule 14.1, I.B.						
Dimensions	FCC Part 15 Class B						

INSTALLATION SPECIFICATIONS

AC Output Current Size / AWG Range	1" Maximum / 14-1 AWG						
DC Input Current Size / AWG Range	1" Maximum / 1-5 Straps / 14-6 AWG						
AC Input Range	2" x 1/4" x 1/4" / 2" x 1/4" x 1/4"						
Dimensions	27" W / 14" H x 6.5" D / 27" x 14" x 6.5"						
Weight with Safety Switch	27" W	21" W / 14" H	27" W / 14" H	27" W / 14" H	27" W / 14" H	27" W / 14" H	27" W / 14" H
RoHS	Yes						
Cooling	Natural Convection						
Operating Temperature Range	32°F to 140°F / 0°C to 60°C (optional)						
Protection Rating	NEMA 4X (Inverter with Safety Switch)						

* For other required ratings please contact Solar Edge support.
 * A "typical" value is shown for reference only. The actual value will vary based on the specific application.
 * For more information, please visit our website at <http://www.solaredge.com> or contact your local distributor.
 * All dimensions are in inches unless otherwise specified.
 * All weights are in pounds unless otherwise specified.
 * All values are approximate and subject to change without notice.

SUNNYMAC
P.O. BOX 30770
WILMINGTON, DE 19805
LIC# 13VH0576110
ELEC LIC# 4E4B0147700
DEBBE@SUNNYMACSOLAR.COM
(844) 786-6962 EXT. 11 OR 21

DESCRIPTION	DATE	REV
BLE PERFORMER	4/19/22	

Signature with Seal

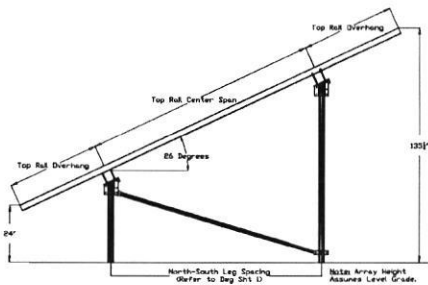
PROJECT NAME
DENIS MCDONALD
3665 JENNINGS CHAPEL RD,
WOODBINE, MD 21797, USA

EQUIPMENT SPECIFICATION

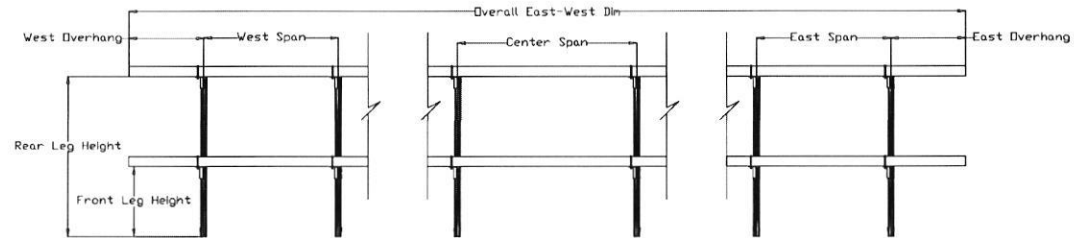
SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-8

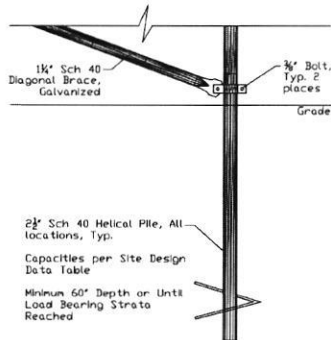
RoHS



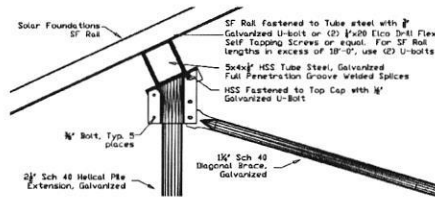
SIDE ELEVATION DETAIL
N.T.S



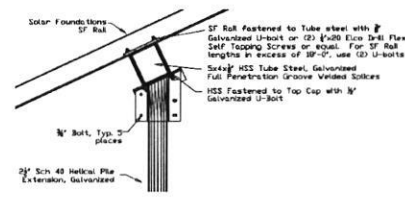
POST SPACING ELEVATION DETAIL
N.T.S



HELICAL PILE DETAIL
N.T.S



LOWER CAP DETAIL
N.T.S



UPPER CAP DETAIL
N.T.S

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.



SUNNYMAC SOLAR LLC
P.O. BOX 30770
WILMINGTON, DE 19805
LIC# 13VHD05761.D
ELC LIC#34EB0147200
DEBBIE@SUNNYMACSOLAR.COM
(844) 786-6962 EXT. 11 OR 21

DRAWN BY:		
DESCRIPTION	DATE	REV
B.E.PERSONDEK	4/19/22	

Signature with Seal

PROJECT NAME

DENIS MCDONALD
3665 JENNINGS CHAPEL RD,
WOODBINE, MD 21797, USA

EQUIPMENT
SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-11

Sheet 2 of 3

SunnyMac, LLC

Solar Foundations USA

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

Date	Revision	Drawn By:	Review By:
04/07/2022	Original	JB	JD

Project:
McDonald Residence
3665 Jennings Chapel Road
Woodbine, MD 21797



SUNNYMAC SOLAR LLC
 P.O. BOX 30770
 WASHINGTON, DE 19808
 LIC# 13VH0576110
 ELEC LIC# 4E4B0147700
 DEBBRHEF@SUNNYMACSOLAR.COM
 (844) 786-6962 EXT. 11 OR 21

DESCRIPTION	DATE	REV
BLEPERSOBOOK	4/19/22	

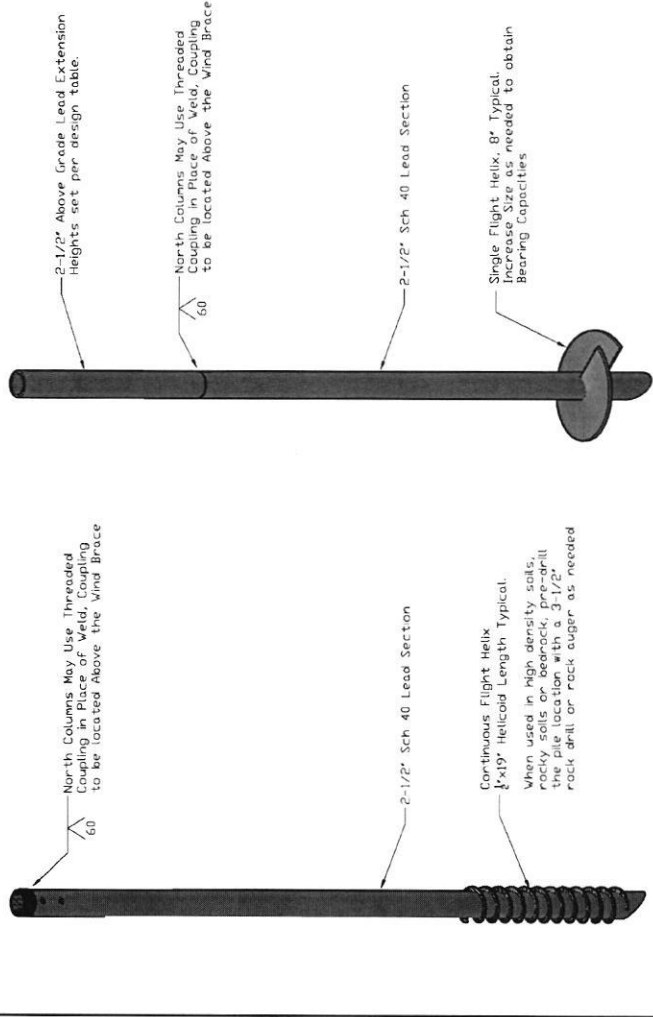
DRAWN BY:
 Signature with Seal

PROJECT NAME
DENIS MCDONALD
 3665 JENNINGS CHAPEL RD,
 WOODBINE, MD 21797, USA

EQUIPMENT
 SPECIFICATION
 SHEET SIZE
ANSI B
11" X 17"
 SHEET NUMBER
PV-12

- 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.
- Solar Foundation aluminum rails shall conform to ASTM B221. Anodizing shall conform to MIL-STD-883C Class B.
 - Steel pipe for pile shall conform to ASTM A500 Grade B.
 - Steel pipe for diagonal bracing shall be ASTM A53 Grade B.
 - Steel pipe for diagonal bracing shall be ASTM A53 Grade A.
 - Fabricated steel plate for column cap assemblies, bracing clamps, etc. shall be ASTM A36 or A1011 conform to SAE J429 Grade 5. All other bolts shall conform to SAE J429 Grade 5 or better.
 - USS U-bolts shall conform to ASTM 1018.
 - USS flat steel washers shall conform to ASTM F844 and nuts for steel connections shall conform to ASTM F617 Grade A.
 - All field welds shall conform to AWS D11.1M Structural Welding Code requirements.
 - All steel shall be hot-dip galvanized per ASTM A123 or A153 after all fabrication has been completed.

- Installation Requirements:**
- The minimum average installation torque required to obtain the required 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 installation torques indicated during the last 1 foot of installation.
 - The torsional strength rating of the torque anchor shall not be exceeded during the rotation. If the torsional strength limit of the torque anchor has been reached, but the anchor has not reached the target depth, perform the following:
 - 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.
 - The installer may remove the torque anchor and install a new one with smaller diameter helical plate.
 - If using a continuous flight pile, pre-drill the pile location with a 3-1/2" rock auger or 3-3/8" rock drill as needed.
 - If the target depth is achieved, but the torsional requirement has not been met the installer may do one of the following:
 - Install the torque anchor deeper to obtain the required capacity.
 - Remove the torque anchor and install a new one with a larger diameter helical plate or one with multiple helical plates. The load capacity on the individual torque anchor may be increased by providing additional torque anchors at a reduced spacing.



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. 40087, Expiration Date 3/15/23.

SunnyMac, LLC
 Project:
McDonald Residence
 3665 Jennings Chapel Road
 Woodbine, MD 21797

Sheet 3 of 3

Date	Revision	Drawn By:	Review By:
04/07/2022	Original	JB	JD

Solar Foundations USA

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