



Town of Gallatin
Attn: Jake Exline / Terry Porter
667 County Route 7
Gallatin, NY 12502

RE: SBL #195.-1-58

Dear Sir/Madam:

Enclosed please find for **Stark, 108 Decker Rd., Gallatin, NY 12567** the following:

- Check in the amount of \$200
- Application for Special Permit and Site Plan Approval
- List of all Adjoining Properties
- Short Environmental Assessment Form
- Homeowner Signed Consent Form
- Columbia County Property Description Report
- 2022 Tentative Assessment Roll pg 217
- Insurance Certificates (will be emailed over)
- Four (4) Set of plot plans stamped by PE
- Four (4) Plan Sets with Specifications
- Self-Addressed pre-paid UPS Return Envelope

Please call 845.706.8168 when Building Permit can be picked up. If there is any additional documentation needed, please do not hesitate to email: kathy@nyssf.com or call 845.706.8168.

Thank you!

Sincerely,

Kathy Dennett
NYS Solar Farm, Inc.
1938 Route 44/55
Modena, NY 12548
kathy@nyssf.com
845-706-8168 - cell
845-256-6051 - direct



TOMPKINS
Mahopac Bank

2061

NEW YORK STATE SOLAR FARM INC

ACCOUNT D
871 ROUTE 208
GARDINER, NY 12525

50-1139/219

6/8/2022

PAY TO THE
ORDER OF

Town of Gallatin

\$ **200.00

Two Hundred and 00/100*****

DOLLARS

Town of Gallatin

MEMO

Stark BP



[Handwritten Signature]
AUTHORIZED SIGNATURE

⑈002061⑈ ⑆021911398⑆ 8320026334⑈

Security Features Included. Details on back.

**APPLICATION FOR SPECIAL PERMIT
AND SITE PLAN APPROVAL
TOWN OF GALLATIN**

Application is hereby made to the Zoning Enforcement officer of the Town of Gallatin for issuance of a Special Permit pursuant to Section 6.8 and Site Plan approval pursuant to Section 6.7 of the Town of Gallatin Zoning Law. This application will be forwarded to the Town of Gallatin Planning Board in accordance with Sections 6.7 and 6.8 (A)(2) and (3) of the Zoning Law for review and approval. A meeting will be scheduled by the Planning Board to review the application with the applicant and determine its completeness and/or need for further information and materials and to conduct a Sketch Plan Conference in accordance with Section 6.7(B)(2) of the Zoning Law. The application will not be deemed complete until declared complete for review purposes by the Planning Board.

The applicant is urged to review the provisions of the Zoning Law, especially Sections 2.1, Article III, Article IV, Section 6.7, Section 6.8 and any supplementary regulations contained in Article V which may apply to your proposed use prior to making this application.

Application Requirements: In addition to the information required in this application form, the applicant must submit with this form:

1. A preliminary plan which demonstrates the overall site layout and building location, parking areas, access and egress locations, setbacks and buffer areas, lighting, landscaping, signage and the extent of existing development on adjacent properties.
2. Preliminary building plans and elevations illustrating proposed building construction and alteration.

The planning Board, after the conduct of the preliminary meeting and sketch plan conference, will advise the applicant whether a short form or long form Environmental Assessment form will be required; which of the application requirements set forth in Section 6.7 (C) must be submitted; and what additional documentation or information must be submitted before the application will be declared complete for review purposes.

Name of Applicant: Benjamin Stark

Applicant's street and mailing address: 108 Decker Rd., Gallatin, NY 12567

Applicant's telephone number: (day) 585-978-1556 (evening) 585-978-1556

Applicant's fax number: _____

Applicant's representative's name, address, telephone number and fax number _____
Anthony S. Sicari, Jr. / NYS Solar Farm, Inc.
1938 Route 44-55, Modena, NY 12548 845-706-8168 / 845-256-6051

Name and Address of property owner if different from applicant: _____
Benjamin Stark, 108 Decker Rd., Gallatin, NY 12567
(Attach signed authorization from property owner for submission of this application)

Describe interest of applicant in property (i.e. contract vendee, leasee, etc.) _____
Owner

Street address and mailing address of property: _____
108 Decker Rd., Gallatin, NY 12567

Zoning District in which property is located: 02

Property's tax grid number(s): East: 716226 / North: 1178963

Nearest intersecting street or road: Hill Top Road

(Attach copy of deed to property)

Describe current use of the property: 322 - Rural vac > 10

Describe proposed use for property and all proposed new buildings and structures: _____

We are seeking Building and Planning Board approval to install a Ground Mounted Solar PV Array on the rear yard of 108 Decker Rd., Gallatin, NY 12567

Ground Mount Solar PV Array Dimensions: Array Area = 880.56 square feet; Height = 11'2"

Ground Mounted Solar PV Array Size is 19.92 kW DC / 15.2 kW AC

(attach additional sheets if necessary)

Set forth the name(s) address(es) and tax grid numbers of all adjoining property owners as taken from the latest tax Rolls: _____

****PLEASE SEE ATTACHED****

List all existing special permits; site plan approvals; and/or variances issued for the property: _____

Adjoining Properties for: 108 Decker Rd., Gallatin, NY 12567

132 Decker Rd, Gallatin, NY 12567 Tax Map Id: 204.-1-5.110

Owner: Sara Nisbitt, 132 Decker Rd., Ancram, NY 12502

Decker, Rd, Gallatin, NY 12567 Tax Map Id: 204.-1-6

Owner: Elizabeth D. Cunningham, 45 W Sheffield Rd., Gt Barrington, MA 01230

610 Cty Rte 11, Gallatin, NY 12567 Tax Map Id: 195.-1-52

Owners: Charles W Fournier and Bonnie Litt, 54 Riverside Drive Apt. 3c, New York, NY 10024

Cty Rte 11, Gallatin, NY 12567 Tax Map Id: 195.-1-59

Owners: Charles W Fournier and Bonnie Litt, 54 Riverside Drive Apt. 3c, New York, NY 10024

1886 State Rte 82, Gallatin, NY 12567 Tax Map Id: 195.—53.100

Owner: Ralph D'Albis, 1886 State Rte. 82, Ancram, NY 12502

State Rte 82, Gallatin, NY 12567 Tax Map Id: 195.-1-53.200

Owner: Santo J. Tambone, 25 Ganung Dr., Ossining, NY 10562


617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information			
Name of Action or Project: Solar PV Ground - Mounted Installation 19.92 kW DC			
Project Location (describe, and attach a location map): 108 Decker Rd., Gallatin, NY 12567 - SBL 195.-1-58 - Grid East: 716226 / Grid North: 1178963			
Brief Description of Proposed Action: We are seeking Building and Planning Board approval to install a Ground Mounted Solar PV Array on the rear yard of 108 Decker Rd., Gallatin, NY 12567 Ground Mount Solar PV Array Dimensions: Array Area = 880.56 square feet; Height = 11'2" Ground Mounted Solar PV Array Size is 19.92 kW DC / 15.2 kW AC			
Name of Applicant or Sponsor: New York State Solar Farm, Inc.		Telephone: 845-706-8168 / 845-256-6051 E-Mail: Kathy@nyssf.com / Rose@nyssf.com	
Address: 1938 Route 44/55			
City/PO: Modena		State: NY	Zip Code: 12548
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Town of Gallatin Building Dept., Town of Gallatin Planning Board, Incentive - NYSERDA Grant		NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action? _____ acres			
b. Total acreage to be physically disturbed? _____ acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres			
4. Check all land uses that occur on, adjoining and near the proposed action. <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland			


18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: Anthony S. Sicari, Jr. / NYS Solar Farm, Inc.		Date: 06/24/2022
Signature: 		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing: a. public / private water supplies? b. public / private wastewater treatment utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input checked="" type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
NYS Solar Farm, Inc.	
_____	_____
Name of Lead Agency	Date
Anthony S. Sicari, Jr.	Owner
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
	_____
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT



**SOLAR
GROUND
MOUNT**

Decker Rd

Decker Rd



SUNPOWER®

by New York State Solar Farm

NEW YORK STATE SOLAR FARM 1938 STATE ROUTE 44/55, MODENA, NY 12548

UNIVERSAL NEW YORK PROPERTY OWNER'S ENDORSEMENT
(Person applying for building permit is not the property owner)

State of New York, county of Columbia --I hereby certify that

I, Benjamin Stark am the owner in fee of

108 Decker Rd. (address) in the Town of

Gallatin. I also hereby authorize Anthony S. Sicari, Jr. of SunPower by

New York State Solar Farm, Inc. to apply for, file, and receive permit(s) to perform the installation of a photovoltaic system on my residence.

Owner Signature  Date Jan 11, 2022

SunPower® by New York State Solar Farm

SunPower® Master Dealer

Solar System Design and Installation

1938 Rt. 44/55, Modena, NY 12548 Tel: 845-255-0610 Email: info@nyssf.com



Property Description Report For: 108 Decker Rd, Municipality of Gallatin

No Photo Available

Total Acreage/Size:	85.41	Status:	Active
Land Assessment:	2022 - Tentative \$942,100 2021 - \$942,100	Roll Section:	Taxable
Full Market Value:	2022 - Tentative \$1,207,821 2021 - \$1,018,486	Swis:	103400
Equalization Rate:	2022 - Tentative 78.00% 2021 - 92.50%	Tax Map ID #:	195.-1-58
Deed Book:	917	Property Class:	322 - Rural vac>10
Grid East:	716226	Site:	RES 1
		In Ag. District:	No
		Site Property Class:	322 - Rural vac>10
		Zoning Code:	02
		Neighborhood Code:	03401
		School District:	Germantown
		Total Assessment:	2022 - Tentative \$942,100 2021 - \$942,100
		Property Desc:	
		Deed Page:	2455
		Grid North:	1178963

Area

Living Area:	0 sq. ft.	First Story Area:	0 sq. ft.
Second Story Area:	0 sq. ft.	Half Story Area:	0 sq. ft.
Additional Story Area:	0 sq. ft.	3/4 Story Area:	0 sq. ft.
Finished Basement:	0 sq. ft.	Number of Stories:	0
Finished Rec Room:	0 sq. ft.	Finished Area Over Garage:	0 sq. ft.

Structure

Building Style:	0	Bathrooms (Full - Half):	0 - 0
Bedrooms:	0	Kitchens:	0
Fireplaces:	0	Basement Type:	0
Porch Type:	0	Porch Area:	0.00
Basement Garage Cap:	0	Attached Garage Cap:	0.00 sq. ft.
Overall Condition:	0	Overall Grade:	
Year Built:			

Owners

Benjamin Stark
242 Gates Ave
Brooklyn NY 11238

Sales

Sale Date	Price	Property Class	Sale Type	Prior Owner	Value Usable	Arms Length	Add. Parcels	Deed Book and Page
11/2/2020	\$1,150,000	322 - Rural vac>10	Land Only	Stark, Benjamin	No	Yes	No	917/2455
12/11/2015	\$325,000	240 - Rural res	Land & Building	Aleksandravicius, Anthony	Yes	Yes	No	817/1628

Utilities

Sewer Type:	Private	Water Supply:	Private
Utilities:	Electric	Heat Type:	0
Fuel Type:	0	Central Air:	No

Improvements

Structure	Size	Grade	Condition	Year
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Special Districts for 2022 (Tentative)

Description	Units	Percent	Type	Value
FD341-GAL FIRE DISTRICT	0	0%		0

Special Districts for 2021

Description	Units	Percent	Type	Value
FD341-GAL FIRE DISTRICT	0	0%		0

Exemptions

Year	Description	Amount	Exempt %	Start Yr	End Yr	V Flag	H Code	Own %
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Taxes

Year	Description	Amount
2009	County	\$2,439.27

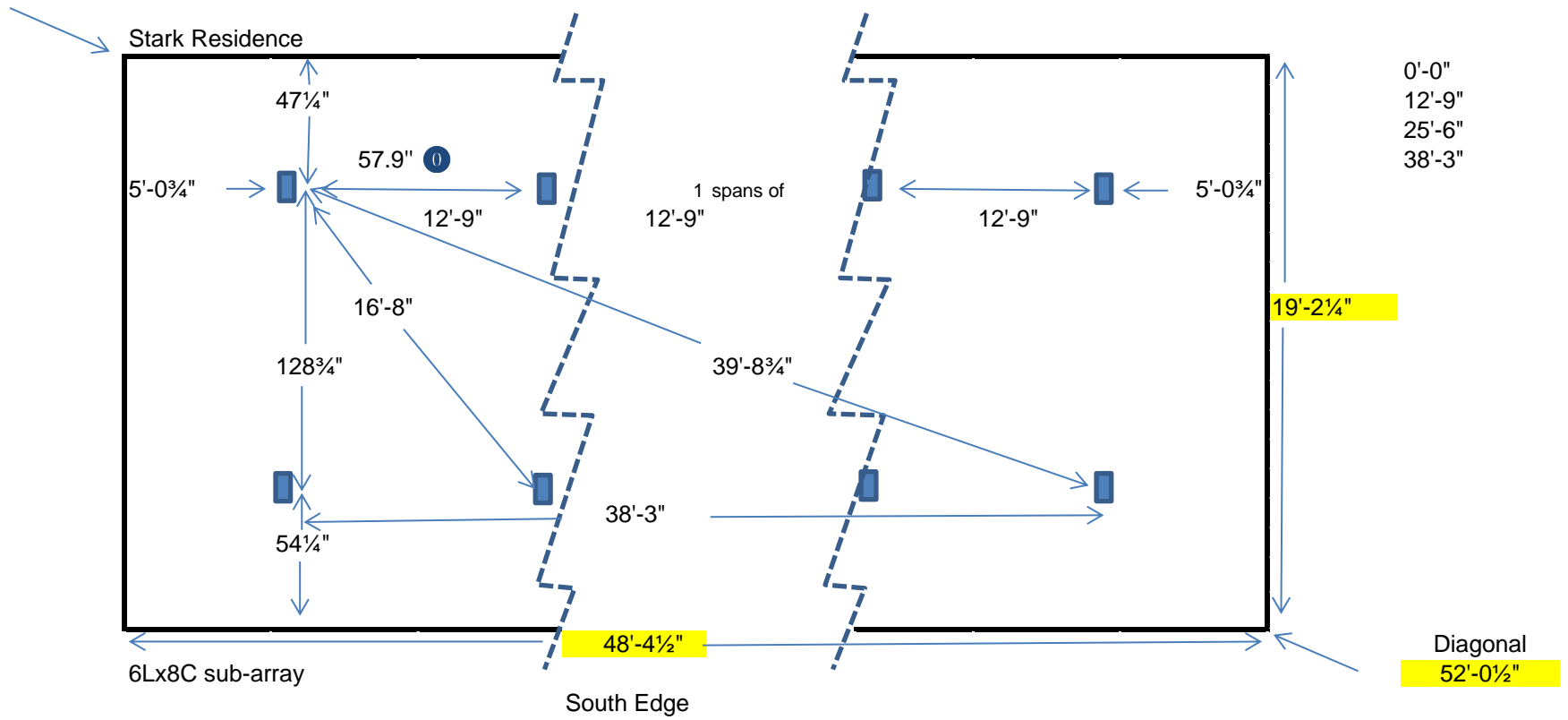
*** Taxes reflect exemptions, but may not include recent changes in assessment.**

STATE OF NEW YORK
 COUNTY - Columbia
 TOWN - GALLATIN
 SWIS - 103400

2 0 2 2 T E N T A T I V E A S S E S S M E N T R O L L
 T A X A B L E SECTION OF THE ROLL - 1
 OWNERS NAME SEQUENCE
 UNIFORM PERCENT OF VALUE IS 078.00

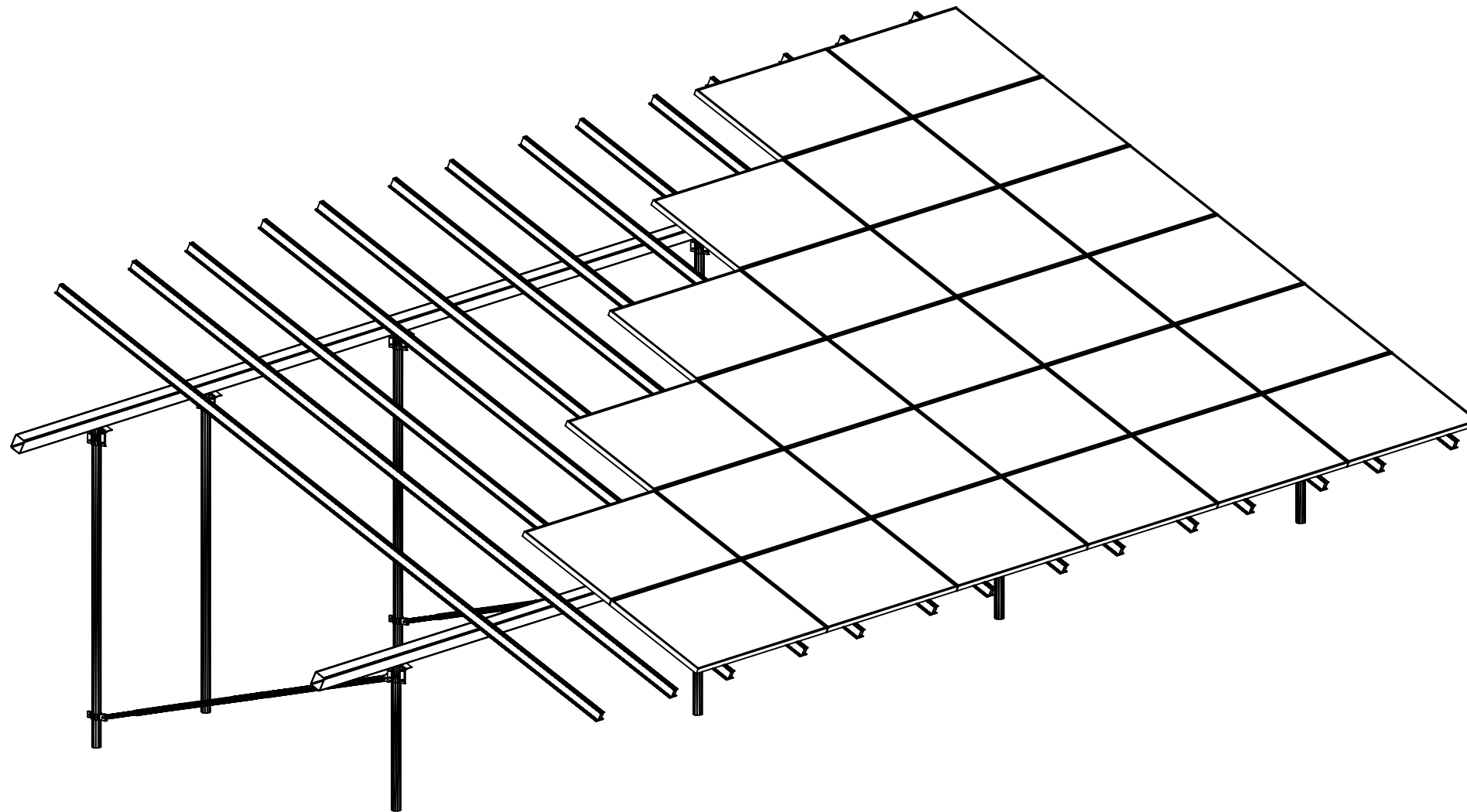
PAGE 217
 VALUATION DATE-JUL 01, 2021
 TAXABLE STATUS DATE-MAR 01, 2022

TAX MAP PARCEL NUMBER	PROPERTY LOCATION & CLASS	ASSESSMENT	EXEMPTION CODE	COUNTY TAXABLE VALUE	TOWN TAXABLE VALUE	SCHOOL TAXABLE VALUE	ACCOUNT NO.
204.-1-8.100	5 Decker Rd 210 1 Family Res			204.-1-8.100			
	Germantown 103602	65,600	COUNTY TAXABLE VALUE	345,000			
	ACRES 5.27	345,000	TOWN TAXABLE VALUE	345,000			
	EAST-0718998 NRTH-1177999		SCHOOL TAXABLE VALUE	345,000			
	DEED BOOK 906 PG-1311		FD341 GAL FIRE DISTRICT	345,000 TO			
	FULL MARKET VALUE	442,308					
99 Beaver Rd	210 1 Family Res			202.-2-33			
202.-2-33	Pine Plains 134201	43,000	BAS STAR 41854	0	0	32,160	
St. Pierre Danielle	ACRES 1.50 BANKC030981	212,000	COUNTY TAXABLE VALUE	212,000			
99 Beaver Rd	EAST-0689396 NRTH-1169341		TOWN TAXABLE VALUE	212,000			
Red Hook, NY 12571	DEED BOOK C0460 PG-F1356		SCHOOL TAXABLE VALUE	179,840			
	FULL MARKET VALUE	271,795	FD341 GAL FIRE DISTRICT	212,000 TO			
149 Cty Rte 7	210 1 Family Res			217.-1-17			
217.-1-17	Pine Plains 134201	59,200	BAS STAR 41854	0	0	32,160	
Stapf John J	ACRES 4.20 BANK0030385	189,000	COUNTY TAXABLE VALUE	189,000			
Stapf Jane M	EAST-0706944 NRTH-1159986		TOWN TAXABLE VALUE	189,000			
149 Co Rte 7	DEED BOOK C0280 PG-F0480		SCHOOL TAXABLE VALUE	156,840			
Pine Plains, NY 12567	FULL MARKET VALUE	242,308	FD341 GAL FIRE DISTRICT	189,000 TO			
195.-1-58	108 Decker Rd			195.-1-58			
Stark Benjamin	322 Rural vac>10	942,100	COUNTY TAXABLE VALUE	942,100			
242 Gates Ave	Germantown 103602	942,100	TOWN TAXABLE VALUE	942,100			
Brooklyn, NY 11238	ACRES 85.41	942,100	SCHOOL TAXABLE VALUE	942,100			
	EAST-0716226 NRTH-1178963		FD341 GAL FIRE DISTRICT	942,100 TO			
	DEED BOOK 917 PG-2455						
	FULL MARKET VALUE	1207,821					
MAY BE SUBJECT TO PAYMENT							
UNDER AGDIST LAW TIL 2025							
202.-1-36.110	Cty Rte 2			202.-1-36.110			
Stark Colin	314 Rural vac<10	62,000	COUNTY TAXABLE VALUE	62,000			
30 Maple Ln	Pine Plains 134201	62,000	TOWN TAXABLE VALUE	62,000			
Red Hook, NY 12571	Micro 6705	62,000	SCHOOL TAXABLE VALUE	62,000			
	ACRES 7.20		FD341 GAL FIRE DISTRICT	62,000 TO			
	EAST-0686560 NRTH-1172546						
	DEED BOOK 895 PG-1891						
	FULL MARKET VALUE	79,487					



PLAN VIEW

N. T. S.



Site Design Conditions

Basic Wind Speed: (Risk Category II)	115 MPH	Max. Leg Axial Bearing:	4,270 lbs.
Basic Wind Speed: (Risk Category I)	105 MPH	Max. Leg Uplift:	1,730 lbs.
Exposure Category:	B	Max. Lateral Resistance:	1,405 lbs.
Ground Snow Load:	40 PSF	Top Rail Max. Loading:	101.4 plf
Flat Roof Snow Load: (if applicable)	N/A	Helical Pile Depth:	60" Min
Site Contour:	<5 Degree Slope	Lateral Resistance Plate Size:	Not Req'd

All design work has been performed in accordance with the 2020 Building Code of New York State effective May 12, 2020, including but not limited to, the 2018 International Building Code with state directed modifications.

Net design pressures were calculated in accordance with ASCE 7-16 section 27.3.2, "Open Buildings with Monoslope, Pitched, or Troughed Roofs". All load cases were evaluated in determining the limiting design conditions. The data table above provides the results for the limiting load case. Maximum leg reaction forces represent the highest load condition seen by any leg in the structure. All legs in the structure are designed to meet the maximum load conditions.

6Lx8C Sub-Array Design Conditions

Front Leg Height:	41"	Array Tilt Angle:	25 Degrees
Rear Leg Height:	101"	Overall Array East-West Dim:	48'-5"
North-South Leg Spacing:	128 ³ / ₄ "	Number of Modules/Sub-Array:	48
West Span Leg Spacing:	12'-9"	Number of Sub-Arrays:	1
East Span Leg Spacing:	12'-9"	Module Columns/Sub-Array:	8
Quantity Center Spans:	1	Number of Module Rows:	6
Center Span Leg Spacing:	12'-9"	Module Orientation:	Landscape
East & West Overhang:	4'-3"	Module Column Spacing:	3 ³ / ₈ "
Overall Beam Length:	46'-9"	Module Row Spacing:	1 ¹ / ₄ "
Front Edge Ground Clearance:	28"	Module Model:	SPR-A410-BLK
Horizontal Rail Material:	5"x4"x ¹ / ₈ " HSS	Module Size:	40.00" x 72.24"
Top Rail Material:	SF Rails	Individual Module Rating:	410 watt
Qty Rails per Panel:	2	Sub Array Power Rating:	19.68 kw
Top Rail Length:	254"	Total Power Rating:	19.68 kw
Top Rail Center Span:	142"		
Top Rail Overhangs:	56"		

1 Additional North Column is to be installed per field direction. The Column is to support equipment mounting needs. It is not required for North beam support.



Sheet 1 of 3

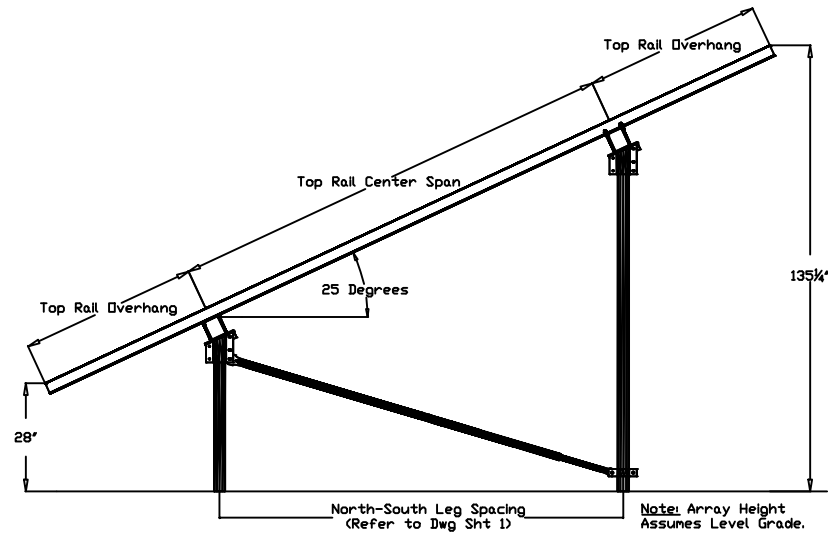
New York State Solar Farm

Date	Revision	Drawn By:	Review By:
06/13/2022	Original	SH	JD

Project:
Stark Residence
 108 Decker Rd
 Ancram, NY 12502

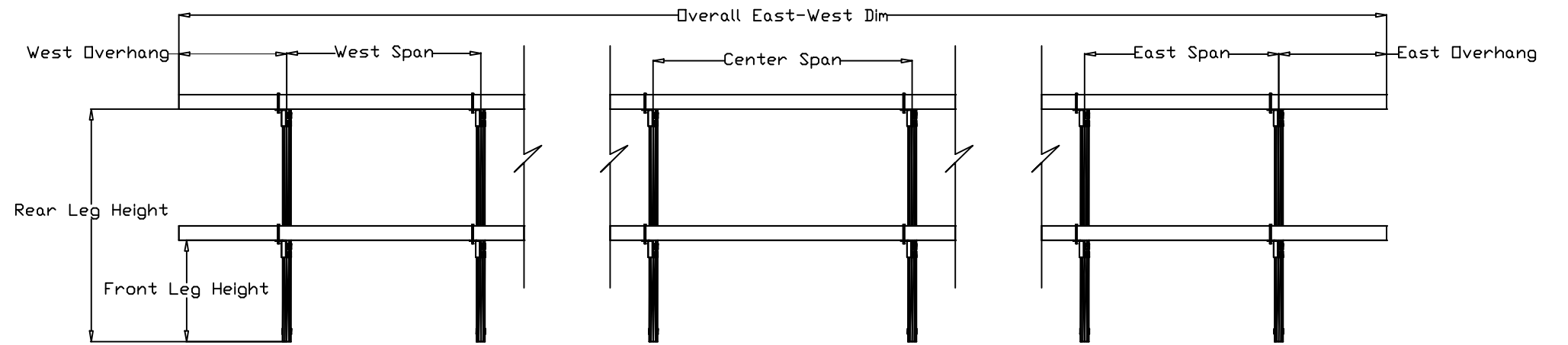
Solar Foundations USA

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



SIDE ELEVATION DETAIL

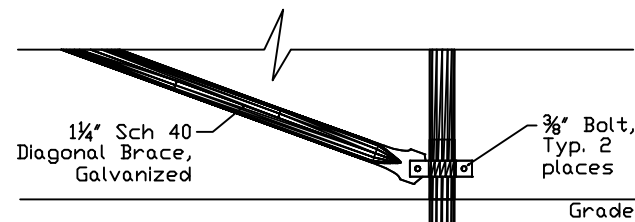
N.T.S



Refer to Dwg Sheet 1 for East-West Pile Spans and Front and Rear Leg Heights.

POST SPACING ELEVATION DETAIL

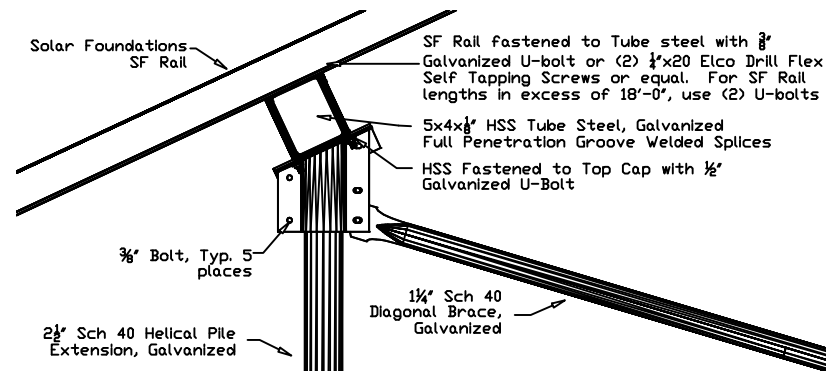
N.T.S



2 1/2" Sch 40 Helical Pile, All locations, Typ.
Capacities per Site Design Data Table
Minimum 60" Depth or Until Load Bearing Strata Reached

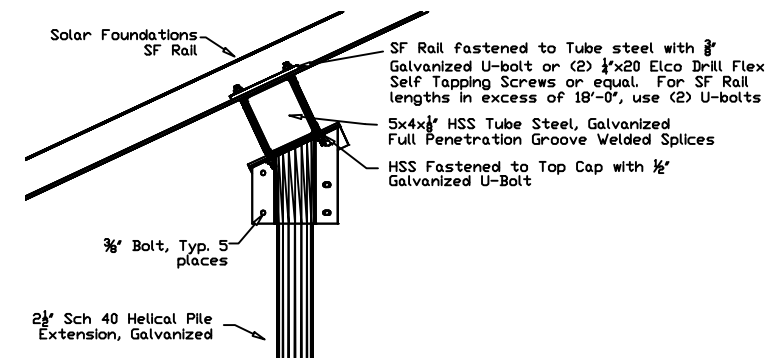
HELICAL PILE DETAIL

N.T.S



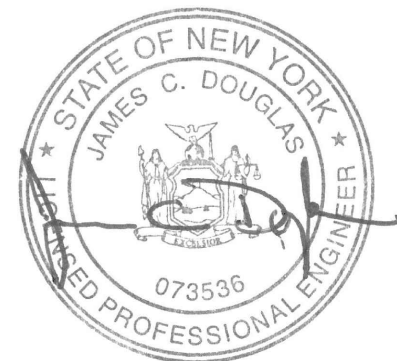
LOWER CAP DETAIL

N.T.S



UPPER CAP DETAIL

N.T.S



Sheet 2 of 3

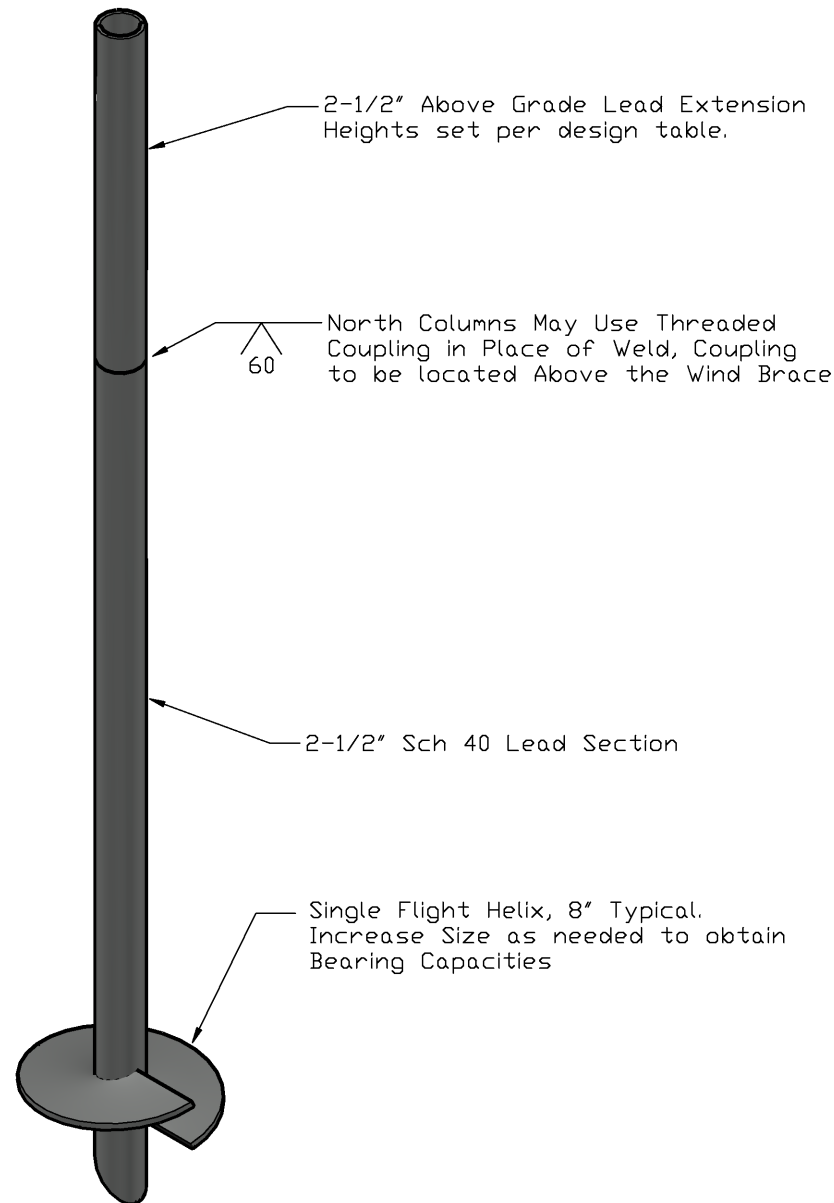
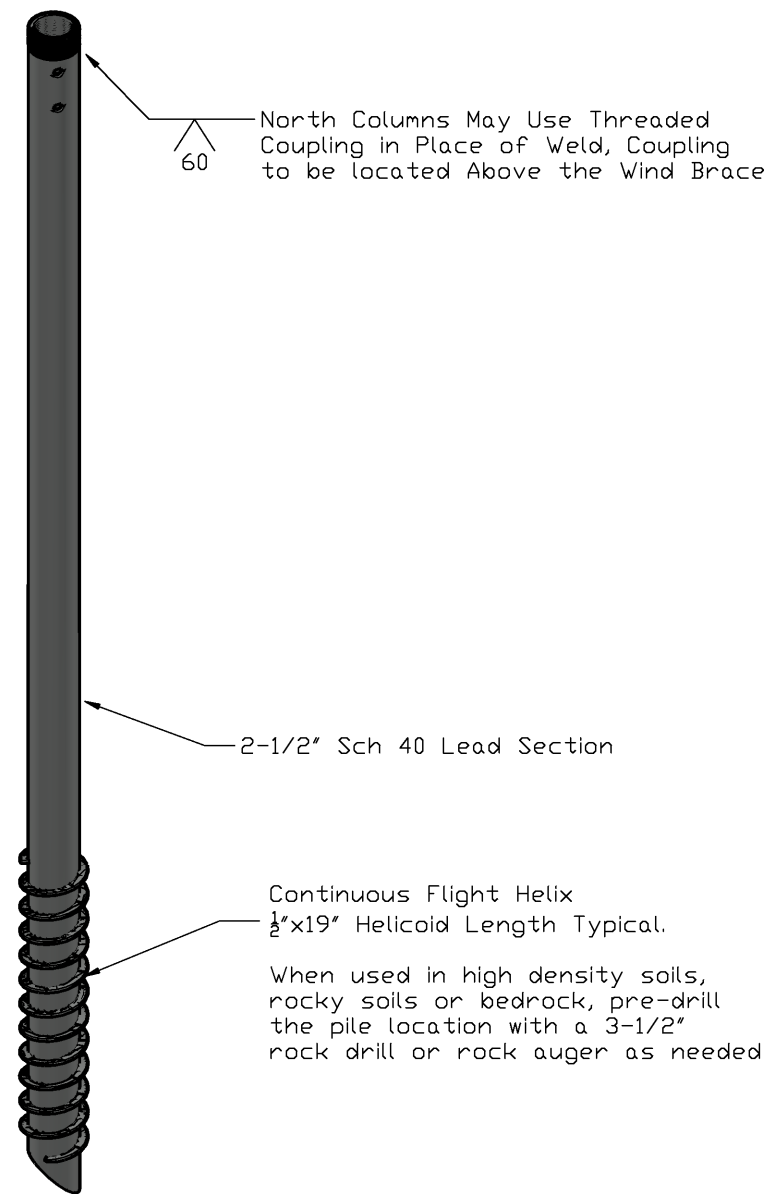
New York State Solar Farm

Date	Revision	Drawn By:	Review By:
06/13/2022	Original	SH	JD

Project:
Stark Residence
108 Decker Rd
Ancram, NY 12502

Solar Foundations USA

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



HELICAL PILE DETAIL
N. T. S.

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.
 - 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

New York State Solar Farm

Date	Revision	Drawn By:	Review By:
06/13/2022	Original	SH	JD

Project:
Stark Residence
108 Decker Rd
Ancram, NY 12502

Solar Foundations USA

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

CONFORMING TO 2020 RESIDENTIAL CODE OF NEW YORK STATE & 2017 NEC

LEGEND:

- SOLAR MODULE
- M MAIN MAIN SERVICE
- INV INV MICRO INVERTER
- PP PP PV DEDICATED PANEL
- JB JB JUNCTION BOX

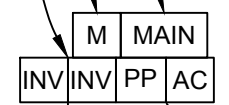
- CONDUIT RUN
- STRUCTURES
- DRIVEWAY
- - - PROPERTY LINE
- FIRE ACCESS



LOCATION OF MAIN SERVICE PANEL ON EXTERIOR POST MOUNTED BACKBOARD

LOCATION OF UTILITY METER ON EXTERIOR POST MOUNTED BACKBOARD

LOCATION OF INVERTER(S) ON EXTERIOR POST MOUNTED BACKBOARD



SITE PLAN DETAIL AT POINT OF CONNECTION: SCALE: 3/32" = 1'-0"

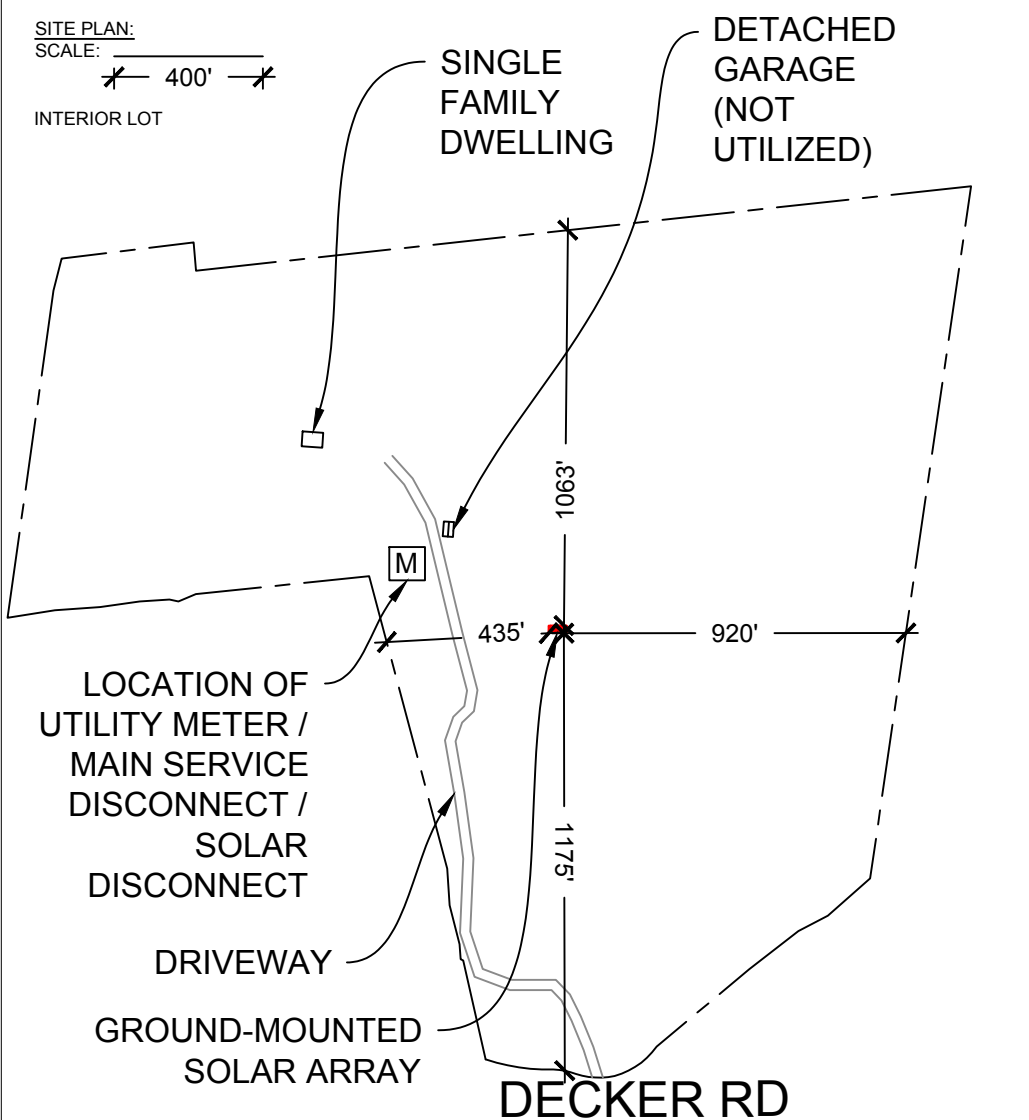
PV DEDICATED PANEL AND PV AC DISCONNECT ON EXTERIOR POST MOUNTED BACKBOARD NEXT TO UTILITY METER AND WITHIN 10' ELECTRICALLY OF MAIN SERVICE PANEL

DETACHED GARAGE (NOT UTILIZED)

DRIVEWAY

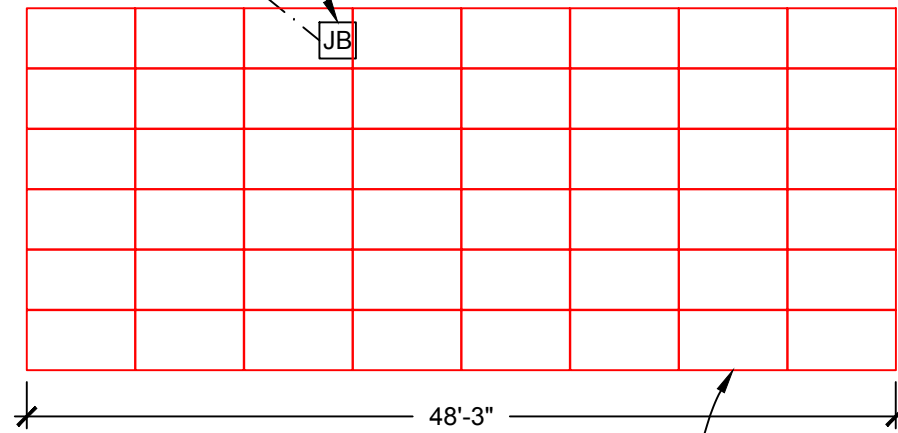
~515' TRENCHED PVC SCH 80

~515' TRENCHED PVC SCH 80



RACKING-MOUNTED JUNCTION BOX

GROUND MOUNT DIMENSIONS:
 48'3" LENGTH
 18'3" WIDTH GROUND AREA
 20'2" WIDTH ALIGNED W/ 25 TILT
 11'2" HEIGHT
 880.56 SQ FT GROUND AREA



(48) GROUND-MOUNTED PV MODULES EACH WITH SOLAR EDGE OPTIMIZERS

SITE PLAN DETAIL AT SOLAR ARRAY: SCALE: 3/32" = 1'-0"

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SUNPOWER®

by New York State Solar Farm

CUSTOMER:
 BENJAMIN STARK
 RESIDENCE
 108 DECKER RD
 GALLATIN, NY 12567

CUSTOMER ID#: 24240

PV SYSTEM CONFIGURATION:
 SYSTEM SIZE: 19.92 kW DC
 SYSTEM SIZE: 15.2 kW AC
 PV MODULES: (48) SUNPOWER A415-DC
 INVERTER: SOLAREEDGE (2)SE7600H-US (2x12)(2X12)
 OPTIMIZER: (48) S440

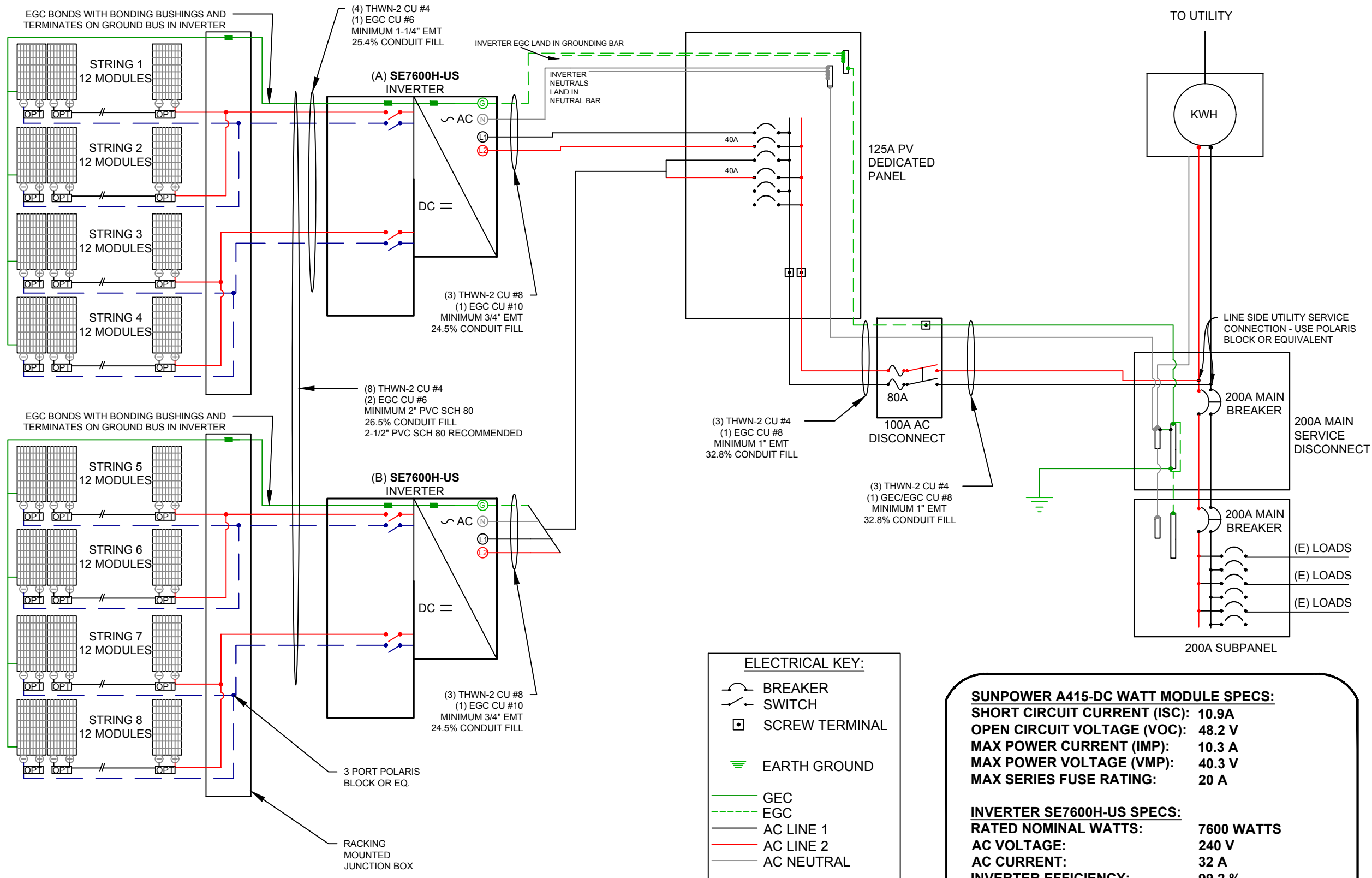
DRAWN BY: NYSOLAR-AS
 DATE: 4-26-2022
 REV: 0
 INSTALLER CODE: 0

SHEET #: PV1
 SHEET TITLE: SITE PLAN
 1 OF 10 SHEETS

SCALE: LISTED

SOLAR ARRAYS AND THEIR SYSTEM COMPONENTS SHALL BE INSTALLED IN CONJUNCTION WITH LOCAL CODES, 2020 RESIDENTIAL CODE OF NEW YORK STATE & 2017 NEC

CONFORMING TO 2020 RESIDENTIAL CODE OF NEW YORK STATE & 2017 NEC



INSTALLER NOTE: LOCK UP THE SYSTEM BEFORE YOU LEAVE

JOB IS A CASH PURCHASE

SUNPOWER A415-DC WATT MODULE SPECS:

SHORT CIRCUIT CURRENT (ISC): 10.9A
 OPEN CIRCUIT VOLTAGE (VOC): 48.2 V
 MAX POWER CURRENT (IMP): 10.3 A
 MAX POWER VOLTAGE (VMP): 40.3 V
 MAX SERIES FUSE RATING: 20 A

INVERTER SE7600H-US SPECS:

RATED NOMINAL WATTS: 7600 WATTS
 AC VOLTAGE: 240 V
 AC CURRENT: 32 A
 INVERTER EFFICIENCY: 99.2 %

SE7600H-US INVERTER WITH S440 OPTIMIZERS:

MAX POWER POINT CURRENT (IMP): 20 A@25°C
 MAX POWER POINT VOLTAGE (VMP): 400 V@25°C
 MAX CIRCUIT CURRENT: 20 A@25°C
 MAX SYSTEM VOLTAGE: 480 V@25°C

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 GALLATIN, NY 12567

CUSTOMER ID#:
 24240

PV SYSTEM CONFIGURATION:

SYSTEM SIZE: 19.92 kW DC
 SYSTEM SIZE: 15.2 kW AC
 PV MODULES: (48) SUNPOWER
 A415-DC
 INVERTER: SOLAREEDGE
 (2)SE7600H-US (2x12)(2X12)
 OPTIMIZER: (48) S440

DRAWN BY: NYSOLAR-AS
 DATE: 4-26-2022
 REV: 0
 INSTALLER CODE: 0

SHEET #: PV3

SHEET TITLE: ELECTRICAL
 3 OF 10 SHEETS
 SCALE: N/A

SOLAR ARRAYS AND THEIR SYSTEM COMPONENTS SHALL BE INSTALLED IN CONJUNCTION WITH LOCAL CODES, 2020 RESIDENTIAL CODE OF NEW YORK STATE & 2017 NEC

NEC 690.5(c)
PLACE THIS LABEL ON INVERTER(S) OR NEAR
GROUND-FAULT INDICATOR (ON INVERTER(S) U.O.N.)

WARNING
ELECTRIC SHOCK HAZARD
IF A GROUND FAULT IS INDICATED,
NORMALLY GROUNDED CONDUCTORS
MAY BE UNGROUNDED AND
ENERGIZED

NEC 690.17
PLACE THIS LABEL ON ALL DISCONNECTING
MEANS WHERE ENERGIZED IN AN OPEN POSITION

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE
LINE AND LOAD SIDE MAY
BE ENERGIZED IN THE
OPEN POSITION

NEC 705.12(D)(7)
PLACE THIS LABEL AT P.O.C. TO SERVICE
DISTRIBUTION EQUIPMENT (I.E. MAIN PANEL (AND
SUBPANEL IF APPLICABLE))

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

NEC 690.31 (E) 3 & 4
PLACE ON ALL JUNCTION BOXES EXPOSED
RACEWAYS EVERY 10'

**PHOTOVOLTAIC
POWER SOURCE**

NEC 690.54
PLACE THIS LABEL AT "INTERACTIVE POINT OF
INTERCONNECTION" (AT MAIN SERVICE PANEL AND
SUBPANEL IF APPLICABLE)

INTERACTIVE PHOTOVOLTAIC POWER SOURCE
RATED AC OUTPUT CURRENT (A): 64 A
NOMINAL OPERATING AC VOLTAGE (V): 240 V

SUNPOWER A415-DC WATT MODULE SPECS:
SHORT CIRCUIT CURRENT (ISC): 10.9A
OPEN CIRCUIT VOLTAGE (VOC): 48.2 V
MAX POWER CURRENT (IMP): 10.3 A
MAX POWER VOLTAGE (VMP): 40.3 V
MAX SERIES FUSE RATING: 20 A

INVERTER SE7600H-US SPECS:
RATED NOMINAL WATTS: 7600 WATTS
AC VOLTAGE: 240 V
AC CURRENT: 32 A
INVERTER EFFICIENCY: 99.2 %

SE7600H-US INVERTER WITH S440 OPTIMIZERS:
MAX POWER POINT CURRENT (IMP): 20 A@25°C
MAX POWER POINT VOLTAGE (VMP): 400 V@25°C
MAX CIRCUIT CURRENT: 20 A@25°C
MAX SYSTEM VOLTAGE: 480 V@25°C

NEC 705.12(D)(4)
PLACE THIS LABEL ON ALL EQUIPMENT CONTAINING
OVERCURRENT DEVICES IN CIRCUITS SUPPLYING
POWER TO A BUSBAR OR CONDUCTORS SUPPLIED
FROM MULTIPLE SOURCES.

CAUTION
CONTAINS MULTIPLE POWER
SOURCES

NEC 690.35(F)
PLACE THIS LABEL AT EACH JUNCTION BOX, COMBINER
BOX, INVERTER AND DEVICE WHERE ENERGIZED,
UNGROUNDING CIRCUITS MAY BE EXPOSED DURING
SERVICE.

WARNING
ELECTRIC SHOCK HAZARD
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE UNGROUNDED
AND MAY BE ENERGIZED

**RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM**

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

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

RAPID SHUTDOWN:

**PHOTOVOLTAIC SYSTEM
EQUIPPED WITH
RAPID SHUTDOWN**

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MODENA, NY 12548 USA
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by
New York State Solar Farm

CUSTOMER:
BENJAMIN STARK
RESIDENCE
108 DECKER RD
GALLATIN, NY 12567

CUSTOMER ID#:
24240

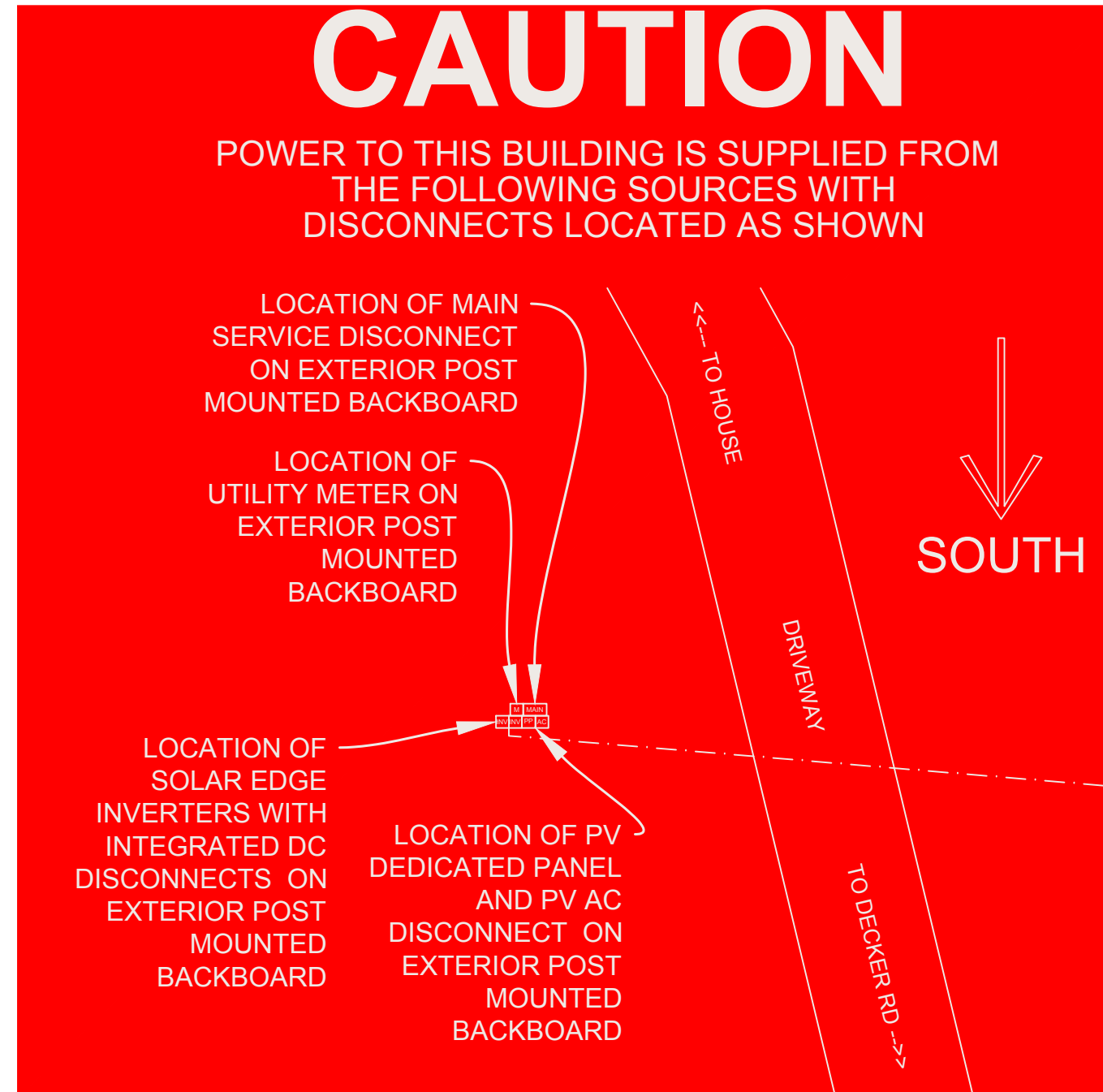
PV SYSTEM CONFIGURATION:
SYSTEM SIZE: 19.92 kW DC
SYSTEM SIZE: 15.2 kW AC
PV MODULES:(48) SUNPOWER
A415-DC
INVERTER: SOLAREEDGE
(2)SE7600H-US (2x12)(2X12)
OPTIMIZER: (48) S440

DRAWN BY: NYSOLAR-AS
DATE: 4-26-2022
REV: 0
INSTALLER CODE: 0

SHEET #: PV4
SHEET TITLE: LABELS
4 OF 10 SHEETS
SCALE: N/A

SOLAR ARRAYS AND THEIR SYSTEM
COMPONENTS SHALL BE INSTALLED
IN CONJUNCTION WITH LOCAL
CODES, 2020 RESIDENTIAL CODE OF
NEW YORK STATE & 2017 NEC

NEC 690.14(D)(4) LINKS TO 705.10 DIRECTORY
A permanent plaque or directory denoting all electric power sources on or in the premises must be installed at each service equipment location and all interconnected electric power production sources.



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CUSTOMER ID#:
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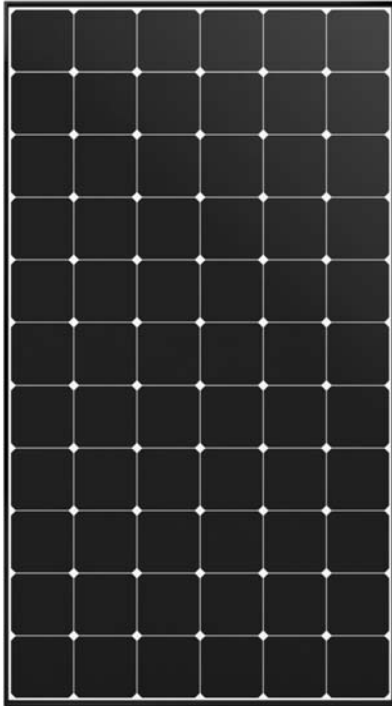
PV SYSTEM CONFIGURATION:
SYSTEM SIZE: 19.92 kW DC
SYSTEM SIZE: 15.2 kW AC
PV MODULES:(48) SUNPOWER
A415-DC
INVERTER: SOLAREEDGE
(2)SE7600H-US (2x12)(2X12)
OPTIMIZER: (48) S440

DRAWN BY: NYSOLAR-AS
DATE: 4-26-2022
REV: 0
INSTALLER CODE: 0

SHEET #: PV5

SHEET TITLE: LABELS
5 OF 10 SHEETS
SCALE: N/A

SOLAR ARRAYS AND THEIR SYSTEM COMPONENTS SHALL BE INSTALLED IN CONJUNCTION WITH LOCAL CODES, 2020 RESIDENTIAL CODE OF NEW YORK STATE & 2017 NEC



390–420 W Residential A-Series Panels

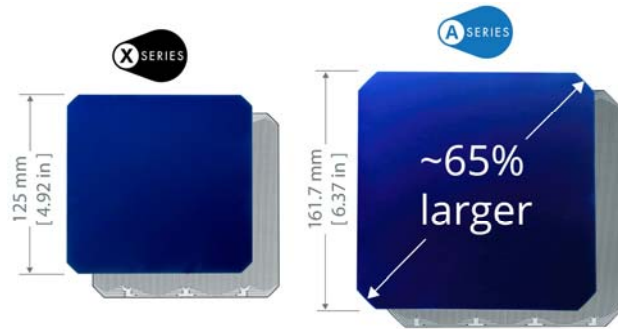
SunPower® Maxeon® Technology

SunPower® Maxeon® cell-based panels maximize energy production and savings by combining industry-leading power, efficiency, and durability with the most comprehensive power, product, and service warranty in the industry.^{1,2}



Highest Power Density Available

SunPower's new Maxeon Gen 5 cell is 65% larger than prior generations, delivering the most powerful cell and highest efficiency panel in residential solar.² The result is more power per square meter than any commercially available solar.¹



SunPower Maxeon Solar Cell Technology



Fundamentally Different. And Better.

- Cell efficiencies of over 25%
- Delivers leading reliability³
- Patented solid metal foundation prevents breakage and corrosion

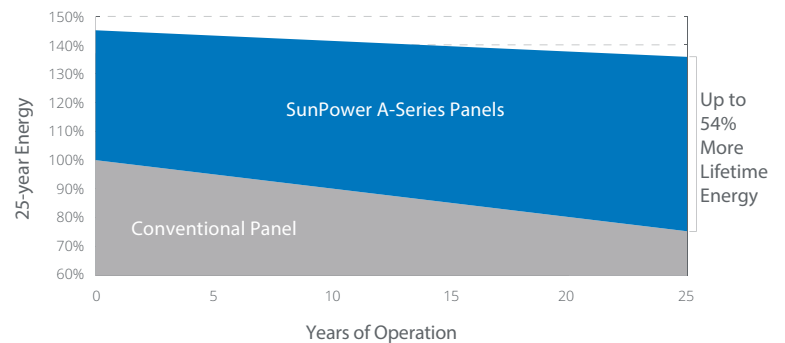
As sustainable as the energy it produces.

- Achieved the #1 ranking on the Silicon Valley Toxics Coalition's Solar Scorecard for 3 years running
- SunPower modules can contribute to your business's LEED certification⁴



Maximum Lifetime Energy and Savings

Designed to deliver up to 54% more energy from the same space over the first 25 years in real-world conditions like partial shade and high temperatures.¹



Best Reliability, Best Warranty

SunPower technology is proven to last and we stand behind our panels with the industry's most comprehensive 25-year Combined Power, Product and Service Warranty.

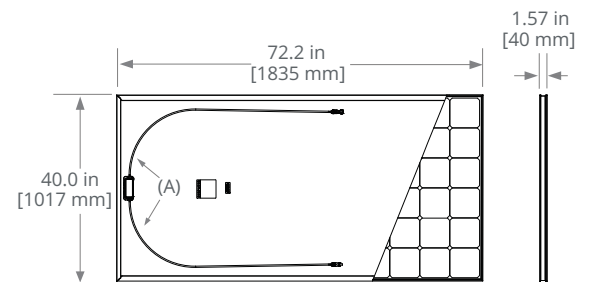


390–420 W Residential A-Series Panels

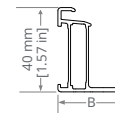
Electrical Data					
	SPR-A420	SPR-A415	SPR-A410	SPR-A400	SPR-A390
Nominal Power (P _{nom}) ⁵	420 W	415 W	410 W	400 W	390 W
Power Tolerance	+5/0%	+5/0%	+5/0%	+5/0%	+5/0%
Panel Efficiency	22.5%	22.2%	22.0%	21.4%	20.9%
Rated Voltage (V _{mpp})	40.5 V	40.3 V	40.0 V	39.5 V	39.0 V
Rated Current (I _{mp})	10.4 A	10.3 A	10.2 A	10.1 A	9.99 A
Open-Circuit Voltage (V _{oc})	48.2 V	48.2 V	48.2 V	48.1 V	48.0 V
Short-Circuit Current (I _{sc})	10.9 A	10.9 A	10.9 A	10.9 A	10.8 A
Max. System Voltage	1000 V UL				
Maximum Series Fuse	20 A				
Power Temp Coef.	-0.29% / °C				
Voltage Temp Coef.	-136 mV / °C				
Current Temp Coef.	4.1 mA / °C				

Operating Condition And Mechanical Data	
Temperature	-40° F to +185° F (-40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class A+
Solar Cells	66 Monocrystalline Maxison Gen 5
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-68, TE (PV4S)
Weight	44 lbs (20 kg)
Max. Test Load ⁶	Wind: 125 psf, 6000 Pa, 611 kg/m ² back Snow: 187 psf, 9000 Pa, 917 kg/m ² front
Design Load	Wind: 75 psf, 3600 Pa, 367 kg/m ² back Snow: 125 psf, 6000 Pa, 611 kg/m ² front
Frame	Class 1 black anodized (highest AAMA rating)

Tests And Certifications	
Standard Tests	UL1703
Quality Management Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, Recycle Scheme, REACH SVHC-163
Available Listings	UL



FRAME PROFILE



- (A) Cable Length: 52 in +/-0.4 in [1320 mm +/-10 mm]
 (B) Long Side: 1.3 in [32 mm]
 Short Side: 0.9 in [24 mm]

1 SunPower 420 W, 22.5% efficient, compared to a Conventional Panel on same-sized arrays (280 W p-multi, 17% efficient, approx. 1.64 m²), 8% more energy per watt (based on PVSyst pan files for avg US climate), 0.5%/yr slower degradation rate (Jordan, et. al. "Robust PV Degradation Methodology and Application." PVSC 2018).

2 Based on search of datasheet values from websites of top 20 manufacturers per IHS, as of December 2019.

3 Jordan, et. al. Robust PV Degradation Methodology and Application. PVSC 2018.

4 Maxison panels can contribute to LEED Materials and Resources credit categories.

5 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.

6 Please read the safety and installation guide for more information regarding load ratings and mounting configurations.

See www.sunpower.com/company for more reference information.

For more details, see extended datasheet: www.sunpower.com/solar-resources. Specifications included in this datasheet are subject to change without notice.

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sunpower.com

SUNPOWER®



533065 Rev C / LTR_US

Publication Date: May 2020

solar**edge**

Single Phase Inverter with HD-Wave Technology for North America

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

INVERTERS



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
- High reliability without any electrolytic capacitors
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)





Single Phase Inverter

with HD-Wave Technology for North America

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

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400	VA
Max. AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400	VA
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	-	Vac
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Frequency (Nominal)					59.3 - 60 - 60.5 ⁽¹⁾			Hz
Maximum Continuous Output Current 208V	-	16	-	24	-	-	-	A
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
GFDI Threshold					1			A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds					Yes			
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V Transformer-less, Ungrounded	-	5100	-	7750 Yes	-	-	-	
Maximum Input Voltage					480			Vdc
Nominal DC Input Voltage					380		400	Vdc
Maximum Input Current 208V	-	9	-	13.5	-	-	-	
Maximum Input Current @240V	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Max. Input Short Circuit Current					45			Adc
Reverse-Polarity Protection					Yes			
Ground-Fault Isolation Detection					600µs Sensitivity			
Maximum Inverter Efficiency	99					99.2		%
CEC Weighted Efficiency					99			%
Nighttime Power Consumption					< 2.5			W
ADDITIONAL FEATURES								
Supported Communication Interfaces					RS485, Ethernet, ZigBee (optional), Cellular (optional)			
Revenue Grade Data, ANSI C12.20					Optional ⁽²⁾			
Rapid Shutdown - NEC 2014 and 2017 690.12					Automatic Rapid Shutdown upon AC Grid Disconnect			
STANDARD COMPLIANCE								
Safety					UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCL according to T.I.L. M-07			
Grid Connection Standards					IEEE1547, Rule 21, Rule 14 (HI)			
Emissions					FCC Part 15 Class B			
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range					3/4" minimum / 14-6 AWG		3/4" minimum / 14-4 AWG	
DC Input Conduit Size / # of Strings / AWG Range					3/4" minimum / 1-2 strings / 14-6 AWG		3/4" minimum / 1-3 strings / 14-6 AWG	
Dimensions with Safety Switch (HxWxD)					17.7 x 14.6 x 6.8 / 450 x 370 x 174		21.3 x 14.6 x 7.3 / 540 x 370 x 185	in / mm
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9			38.8 / 17.6		lb / kg
Noise					< 25		< 50	dBA
Cooling					Natural Convection		Natural convection	
Operating Temperature Range					-13 to +140 / -25 to +60 ⁽³⁾ (-40° F / -40° C option) ⁽⁴⁾			°F / °C
Protection Rating					NEMA 3R (Inverter with Safety Switch)			

⁽¹⁾ For other regional settings please contact SolarEdge support

⁽²⁾ Revenue grade inverter P/N: SExxxH-US000NNC2

⁽³⁾ For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>

⁽⁴⁾ -40 version P/N: SExxxH-US000NNU4



Power Optimizer For Residential Installations

S440, S500



POWER OPTIMIZER

Enabling PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Detects abnormal PV connector behavior, preventing potential safety issues*
- Faster installations with simplified cable management and easy assembly using a single bolt
- Module-level voltage shutdown for installer and firefighter safety
- Flexible system design for maximum space utilization
- Superior efficiency (99.5%)
- Compatible with bifacial PV modules

* Functionality subject to inverter model and firmware version

/ Power Optimizer

For Residential Installations

S440, S500

	S440	S500	UNIT
Rated Input DC Power ⁽¹⁾	440	500	W
Absolute Maximum Input Voltage (Voc)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15	Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		%
Overvoltage Category	II		
OUTPUT DURING OPERATION			
Maximum Output Current	15		Adc
Maximum Output Voltage	60		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer	1		Vdc
STANDARD COMPLIANCE			
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3, CISPR11, EN-55011		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL94 V-0, UV Resistant		
RoHS	Yes		
Fire Safety	VDE-AR-E 2100-712:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 155 x 30		mm
Weight (including cables)	655 / 1.5		gr / lb
Input Connector	MC4 ⁽²⁾		
Input Wire Length	0.1		m
Output Connector	MC4		
Output Wire Length	(+) 2.3, (-) 0.10		m
Operating Temperature Range ⁽³⁾	-40 to +85		°C
Protection Rating	IP68 / NEMA6P		
Relative Humidity	0 - 100		%

(1) Rated power of the module at STC will not exceed the Power Optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed

(2) For other connector types please contact SolarEdge

(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details

PV System Design Using a SolarEdge Inverter		Single Phase HD-Wave	Three Phase	Three Phase for 277/480V Grid	
Minimum String Length (Power Optimizers)	S440, S500	8	16	18	
Maximum String Length (Power Optimizers)		25	50		
Maximum Nominal Power per String ⁽⁴⁾		5700	11250 ⁽⁵⁾	12750 ⁽⁶⁾	W
Parallel Strings of Different Lengths or Orientations		Yes			

(4) If the inverters rated AC power \leq maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power Refer to: <https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf>

(5) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W

(6) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W

(7) It is not allowed to mix S-series and P-series Power Optimizers in new installations

