

**Town of Northumberland
Area Variance Application
Zoning Board of Appeals**

OFFICE USE ONLY	
SBL#:	<u>118-1-1.14</u>
Application #:	<u>0003-24</u>
Date of Appeal:	<u>5/1/2024</u>
Date of Receipt by Board:	<u>4/24/2024</u>
Date of Public Hearing:	_____
Date of Final Action:	_____
Date of Filing a Decision with the Town Clerk's Office:	_____

Part 1: To Be Completed by the Applicant

Applicant: Alex Martin // Kasselmann Solar, LLC.
 Owner (if not applicant): Ben Nelson
 Mailing Address: 279 Broadway Bldg 2
 Menands, NY 12204 amartin@kasselmansolar.com lgardner@kasselmansolar.com
 Day Phone: (518) 918-4800 Evening Phone: _____

Property Information

Appeal Concerns Property at the Following Address: 262 Austin Road, Northumberland, NY 12831

Date Applicant Acquired Property: Please see attached
 (If property is not owned by the applicant, the applicant must submit a statement by the
 property owner authorizing the applicant to appeal on his/her behalf.)

**Note: the ZBA is without authority to grant an Area Variance unless the applicant can demonstrate that the
 dimensional requirements of the zoning regulations have created a practical difficulty. Accordingly, the
 applicant for an Area Variance must complete the following information.**

Project Description (Briefly describe your proposal and attach a surveyed plot plan): Installation of ground-mounted
 PV arrays totaling 36.90 kW (14.76kW and 22.14kW respectively)

State what type and size of an area variance you are requesting (ex. 3 foot side yard variance): _____
65' front yard variance and 5 acre lot variance

State the reason you are applying for the area variance: Lot size variance as 10 acre lot is required, project parcel is 5 acres.
 Due to the shape, size, and solar access of the parcel placement behind the residence is not feasible. the parcel is not deep enough in most areas to abide by the 100' set back.

Describe the character of the neighborhood and how this project will not be a substantial detriment to the
 neighborhood: Rural residential neighborhood with abundant natural screening that should allow for minimal if any visual disruption. Otherwise installation
 will have no environmental or other impact on surrounding community. Neighboring parcel across street is farmland.

Signature of Property Owner: See attached Signature of Applicant: Alex Martin
 Date: _____ Date: 4/22/24

Disclaimer: We hereby dispose and say that all the above statements and
 statement content in the application submitted are true.

Sworn before me, Krista Galliher, on this date 22nd, month, April, and year 2024
Alex Martin Krista Galliher
 Applicant Notary

Property Owner

--- OVER ---

KRISTA GALLIHER
 NOTARY PUBLIC-STATE OF NEW YORK
 No. 01GA6345213
 Qualified In Albany County
 My Commission Expires 07-18-2024

262 Austin Rd
App # 0003-24
Ben Nelson

Part 2: To Be Completed by Zoning Administrator

SBL# 118-1-114 Current Zoning: AG

Is Property in Hamlet Area? ___ Yes No Is SEQRA Review required? ___ Yes ___ No

The applicant's appeal from a decision of the Zoning Enforcement Officer, or on direct appeal from the planning board as permitted by Town Law, concerns the following:

- Denial of an Application for a Building Permit concerns the following: Not enough acreage + does not meet setback requirements
- ___ Denial of an Application for a Certificate of Occupancy (Attach to Application)

For the Proposed Activity: _____
Denial was made because of a violation of the Town Zoning Code (s): _____

Michael Long
Signature of Zoning Administrator

4/24/24
Date of Zoning Administrator's Decision

Part 3: To Be Completed by the Zoning Board of Appeals

Following a public hearing and reviewing the above materials from the applicant and the criteria provided from the Zoning Administrator the ZBA finds:

___ The Applicant has failed to meet the above criteria and the application is **denied** on the basis of: _____

___ The Applicant has shown adequate and substantial merit to the application project and is hereby **approved** by the ZBA which grants the applicant the requested Area Variance in the manner detailed below:

Signature of ZBA Chairperson

Date

Applicant: Unless otherwise specified by the Zoning Board of Appeals, a decision on any appeal shall expire if you fail to obtain any necessary building permits or comply with the conditions of said authorized permit within six (6) months from the date of authorization thereof. The Zoning Board of Appeals may increase this period from six (6) months to one (1) year at its discretion.

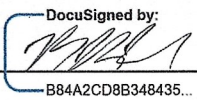
Revised and Approved Form: _____
By: ZBA and Town Board



279 Broadway
Building #2
Menands, NY 12204
(518)-478-8365
(518)-953-1095 Fax

I Ben and Lauren Nelson (Customer) hereby authorize Kasselmann Solar LLC, to act as customer, agent & contractor, to represent at board meetings and to submit/received all necessary permit and board applications, and supporting documents to the Town Building Department on my behalf.

Customer Name (Print) Ben and Lauren Nelson

Customer Signature 

Customer Address 262 Austin Rd, Gansevoort NY 12831

Municipality that issues your Building Permit Gansevoort

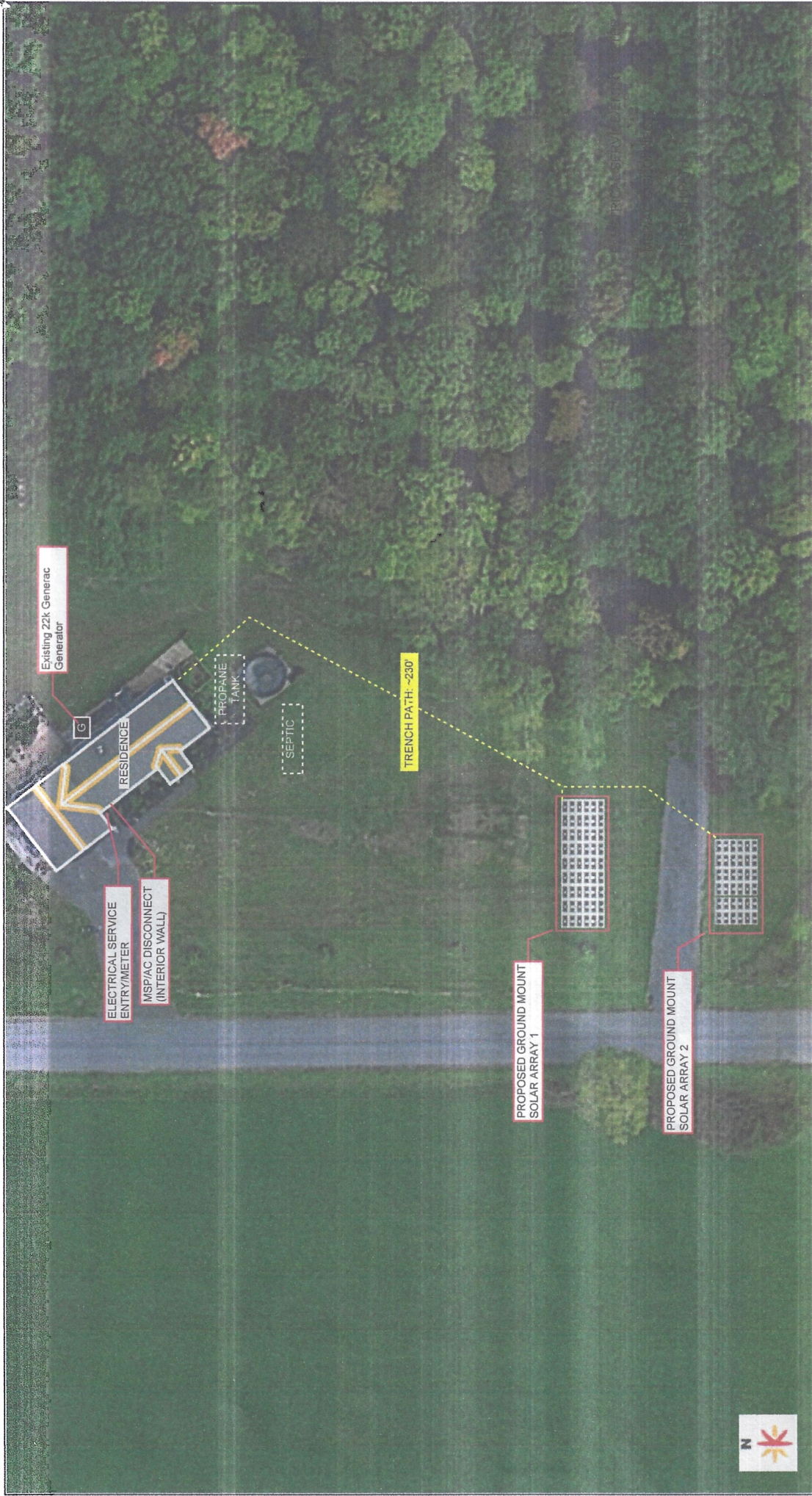
Kasselmann Solar Employee Signature 



Ben Nelson

262 Austin Rd
Gansevoort, NY 12831

March 29th, 2024

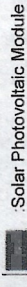


Project and Installation Details

System Size DC (kW): 36.80
90 REC REC410AA Pure
90 SolarEdge Technologies Inc. P505
1 SolarEdge Technologies Inc. SE10000H-US (PRISM) USSNBBL14
1 SolarEdge Technologies Inc. SE10000H-US
1 SolarEdge Technologies Inc. SE5000H-US
Racking: Solar Foundations, USA Ground Screws
Trenching: 230'
Interior wire run: 45'

Ground Mount Solar Facility Description

GM Solar Array 1	GM Solar Array 2
Tilt: 27-Degrees	Tilt: 27-Degrees
AZIMUTH: 180 - DEGREES (S)	AZIMUTH: 180 - DEGREES (S)
Configuration (N/S x E/W): 6L x 9C	Configuration (N/S x E/W): 6L x 6C
Max Height: 11.93'	Max Height: 11.93'
Square Footage: 1,017.9 sq. ft.	Square Footage: 678.6 sq. ft.



Solar Photovoltaic Module

Electrical labels to be placed on PV equipment per NEC 690.56. * Labels are site specific - please see attached labeling guide.



kasselmannSOLAR



262 Austin Rd
Gansevoort, NY 12831

2025-01-14
Aerial view of property showing solar array layout
© 2025 Kasselmann Solar LLC

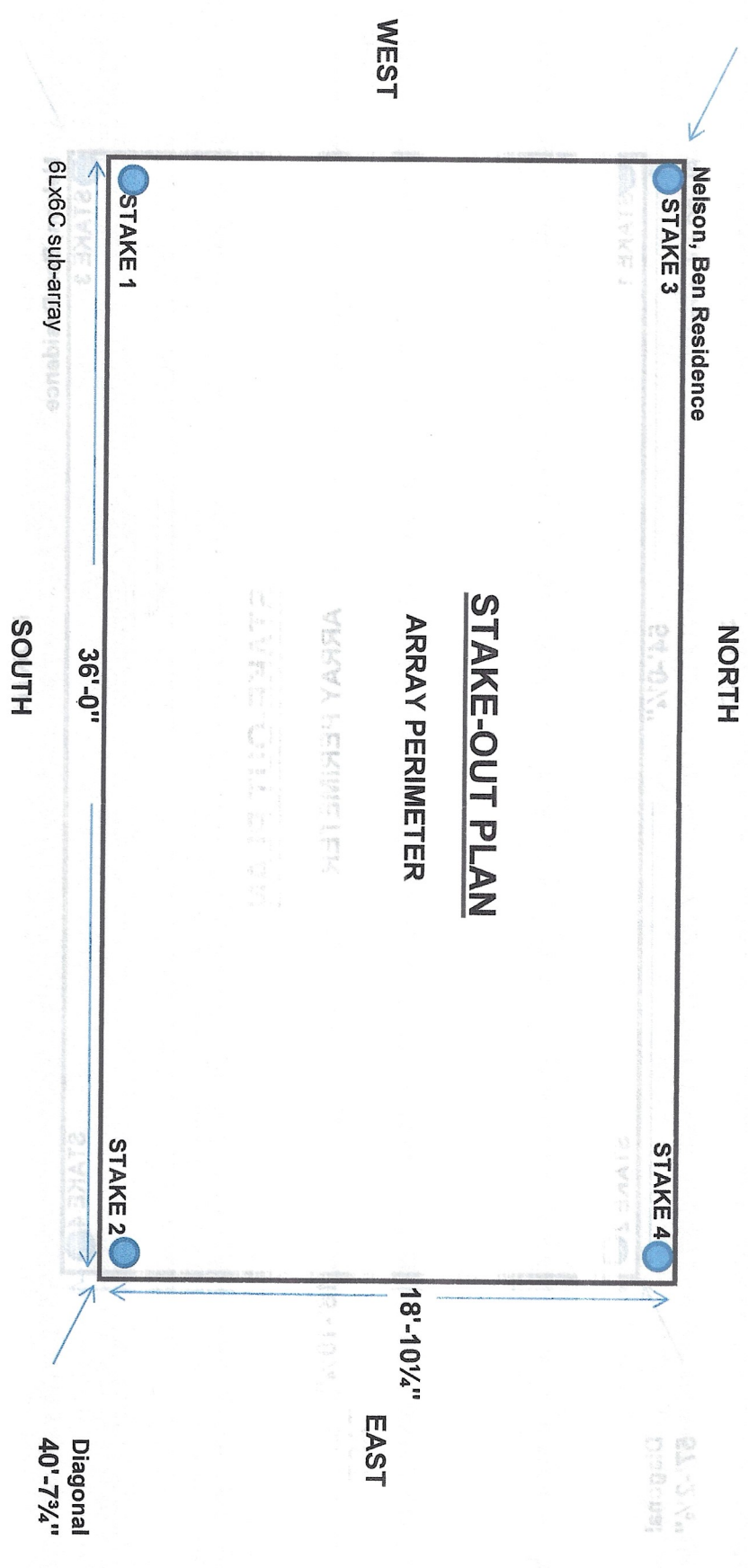
2025-01-14
Aerial view of property showing solar array layout
© 2025 Kasselmann Solar LLC

2025-01-14
Aerial view of property showing solar array layout
© 2025 Kasselmann Solar LLC



K92261W9U20170





NORTH

Nelson, Ben Residence

STAKE 3

24'-0"

STAKE 4

STAKE-OUT PLAN

ARRAY PERIMETER

WEST

18'-10 1/4"

EAST

STAKE 1

36'-0"

Diagonal
40'-7 3/4"

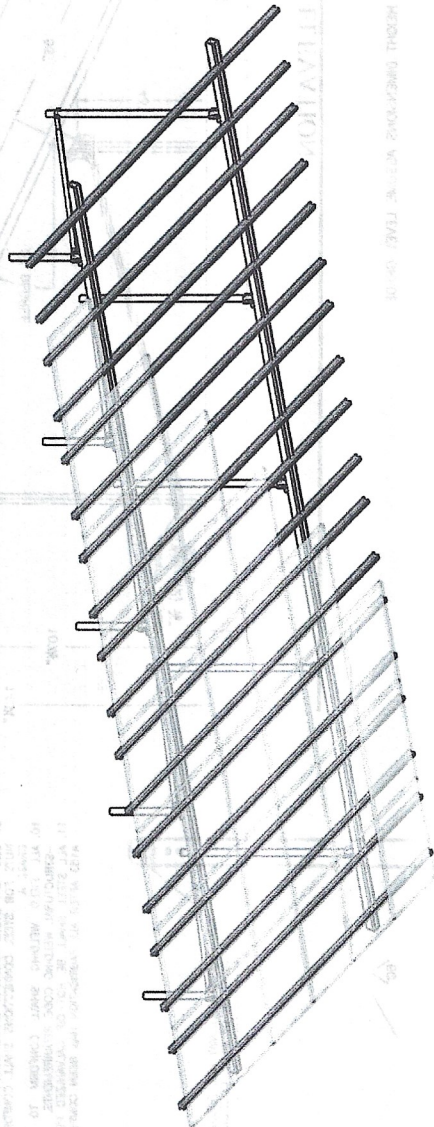
SOUTH

6Lx6C sub-array sequence

STAKE 2

STAKE 1

PANEL LAYOUT (6Lx9C AND 6Lx6C)
N.T.S



ISOMETRIC VIEW
N.T.S

6Lx9C SUB-ARRAY DESIGN DATA

QTY OF MODULES/SUB-ARRAY:	54
QTY OF SUB-ARRAYS:	1
PANEL COLUMNS/SUB-ARRAY:	9
QTY OF PANEL ROWS:	6
PANEL ORIENTATION:	LANDSCAPE
PANEL COLUMN SPACING:	3/4"
PANEL ROW SPACING:	1/2"
PANEL MODEL:	REC410A PURE BLACK
PANEL SIZE:	40" x 71.69"
PANEL POWER RATING:	410 WATTS
SUB ARRAY POWER RATING:	2214 kW
TOTAL POWER RATING:	2214 kW
QTY RAIL PER PANEL:	2

6Lx6C SUB-ARRAY DESIGN DATA

QTY OF MODULES/SUB-ARRAY:	36
QTY OF SUB-ARRAYS:	1
PANEL COLUMNS/SUB-ARRAY:	6
QTY OF PANEL ROWS:	6
PANEL ORIENTATION:	LANDSCAPE
PANEL COLUMN SPACING:	3/4"
PANEL ROW SPACING:	1/2"
PANEL MODEL:	REC410A PURE BLACK
PANEL SIZE:	40" x 71.69"
PANEL POWER RATING:	410 WATTS
SUB ARRAY POWER RATING:	1476 kW
TOTAL POWER RATING:	1476 kW
QTY RAIL PER PANEL:	2

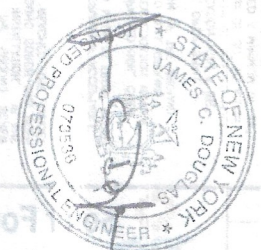
SITE DESIGN CONDITIONS

BASIC WIND SPEED:	109 MPH	MAXIMUM PILE AXIAL BEARING:	5,505 LBS
(RISK CATEGORY II)		MAXIMUM PILE UPLIFT:	2,640 LBS
(RISK CATEGORY I)	101 MPH	MAXIMUM LATERAL RESISTANCE:	2,230 LBS
EXPOSURE CATEGORY:	C	TOP RAIL MAXIMUM LOADING:	126.4 PLF
GROUND SNOW LOAD:	50 PSF	GROUND SCREW DEPTH:	80" MIN
FLAT ROOF SNOW LOAD:	N/A		
SITE CONTOUR:	<3 DEG SLOPE		

ALL DESIGN WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE 2020 BUILDING CODE, WITH THE EXCEPTION OF 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 PILE REACTION FORCES REPRESENT THE HIGHEST LOAD CONDITION APPLIED TO ANY PILE. ALL PILES IN THE STRUCTURE ARE DESIGNED TO MEET THE MAXIMUM LOAD CONDITIONS.

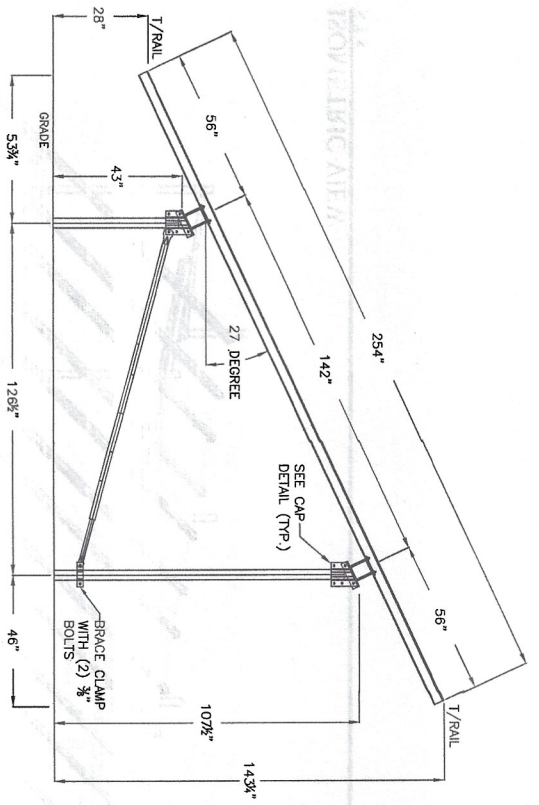
SPECIAL REVISION: REFINEMENT

DATE	REVISION	DESIGNED BY	CHECKED BY
04/04/2024	ORIGINAL	JB	JD



KASSELMAN SOLAR LLC
-PROJECT-
NELSON, BEN RESIDENCE
262 AUSTIN RD
GANSEVOORT, NY 12831

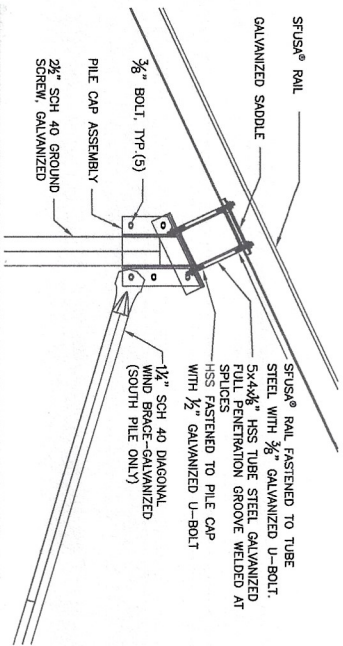
Solar Foundations® USA
1142 River Road, New Castle, DE 19720
Ph: (855) 738-7200 Fax: (866) 644-5665



EAST ELEVATION

NTS

NOTE:
1. ARRAY HEIGHT DIMENSIONS ASSUME LEVEL GRADE



CAP DETAIL

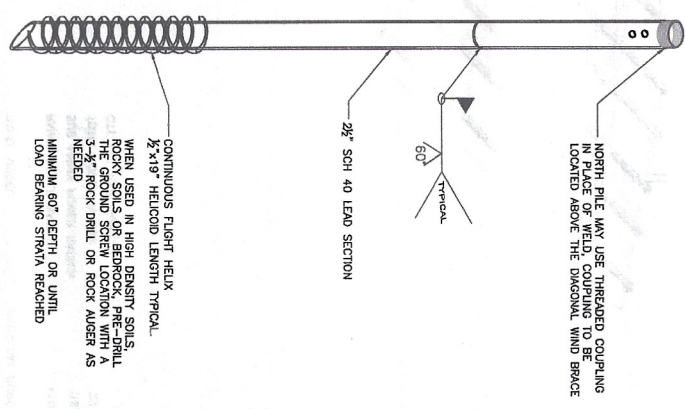
NTS

SPECIFICATION REQUIREMENT NOTES:

1. THE FOLLOWING MATERIAL SPECIFICATION REQUIREMENTS PERTAIN TO THE FABRICATION OF THE SOLAR FOUNDATIONS USED: GROUND MOUNT SOLAR SUPPORT STRUCTURE AS INDICATED ON THESE DRAWINGS.
2. SPUSA® ALUMINUM RAILS SHALL CONFORM TO ASTM B221.
3. STRUCTURAL STEEL TUBING SHALL BE ASTM A500 HIGH YIELD (60 KSI).
4. STEEL PIPE FOR PILES SHALL CONFORM TO ASTM A500 GRADE B.
5. STEEL PIPE EXTENSIONS SHALL BE ASTM A53 GRADE B.
6. STEEL PIPE FOR DIAGONAL BRACING SHALL BE ASTM A53 GRADE A.
7. STEEL PIPE SHALL CONFORM TO AISC 360 OR A101.
8. STEEL U-BOLTS SHALL CONFORM TO ASTM 1018.
9. STEEL U-BOLTS SHALL CONFORM TO ASTM 1018.
10. ALL FIELD WELDING SHALL CONFORM TO AWS D1.1/D1.1M - STRUCTURAL WELDING CODE REQUIREMENTS PER ASTM A123 OR A133 AFTER ALL FABRICATION HAS BEEN COMPLETED.

INSTALLATION REQUIREMENT NOTES:

1. THE MINIMUM AVERAGE INSTALLATION TORQUE REQUIRED TO OBTAIN THE TARGET DEPTH OF THE GROUND SCREW SHALL BE DETERMINED PRIOR TO THE INSTALLATION OF THE GROUND SCREW. THE INSTALLATION TORQUE SHALL BE AN AVERAGE OF THE INSTALLATION TORQUES INDICATED DURING THE LAST ONE FOOT OF INSTALLATION.
2. THE TORSIONAL STRENGTH RATING OF THE GROUND SCREW SHALL NOT BE EXCEEDED DURING THE INSTALLATION. IF THE TORSIONAL STRENGTH LIMIT OF THE GROUND SCREW HAS BEEN EXCEEDED, THE GROUND SCREW SHALL NOT BE USED FOR THE TARGET DEPTH. PERFORM THE FOLLOWING:
 - a. REVIEW DEVELOPED TORQUE AND GROUND SCREW DEPTH WITH ENGINEER OF RECORD TO DETERMINE IF ACCEPTABLE REQUIREMENT.
 - b. FOR INSTALLATION INTO HIGHLY COMPACTED SOIL, CREW SHALL PRE-DRILL THE GROUND SCREW LOCATION WITH A 3/8" CARBIDE TIPPED ROCK AUGER TO FULL GROUND SCREW DEPTH PRIOR TO INSTALLATION OF THE GROUND SCREW.
 - c. FOR INSTALLATION INTO SOLID ROCK, CREW SHALL PRE-DRILL THE GROUND SCREW LOCATION WITH A 3/8" PNEUMATIC DRIVEN ROCK DRILL. DEPTH OF DRILLED HOLE INTO THE ROCK SHALL BE A MINIMUM OF 30" TO ALLOW THE GROUND SCREW TO BE INSTALLED A MINIMUM OF 24" INTO THE ROCK FOR FULL FLIGHT ENGAGEMENT.
3. IF THE TARGET DEPTH IS ACHIEVED, BUT THE TORSIONAL REQUIREMENT HAS NOT BEEN MET THE INSTALLER PERFORM ONE OF THE FOLLOWING:
 - a. INSTALL THE GROUND SCREW DEEPER TO OBTAIN THE REQUIRED CAPACITY.
 - b. REMOVE THE GROUND SCREW AND INSTALL AN APPROVED SINGLE FLIGHT PILE WITH A LARGER DIAMETER HELIX.
 - c. REDUCE THE LOAD ON THE INDIVIDUAL GROUND SCREWS BY PROVIDING ADDITIONAL GROUND SCREWS AT A REDUCED SPACING. CONTACT ENGINEER OF RECORD FOR DETERMINATION OF MAXIMUM PILE SPACING BASED UPON DEVELOPED TORQUE.

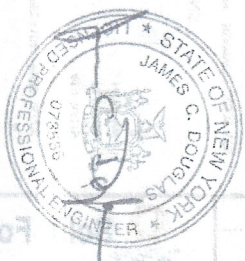


GROUND SCREW DETAIL

NTS

CONTINUOUS FLIGHT HELIX
2 1/2"x1 1/2" HELICOID LENGTH TYPICAL
WHEN USED IN HIGH DENSITY SOILS, ROCKY SOILS OR BEDROCK, PRE-DRILL THE GROUND SCREW LOCATION WITH A 3-3/8" ROCK DRILL OR ROCK AUGER AS NEEDED
MINIMUM 60" DEPTH OR UNTIL LOAD BEARING STRAIN REACHED

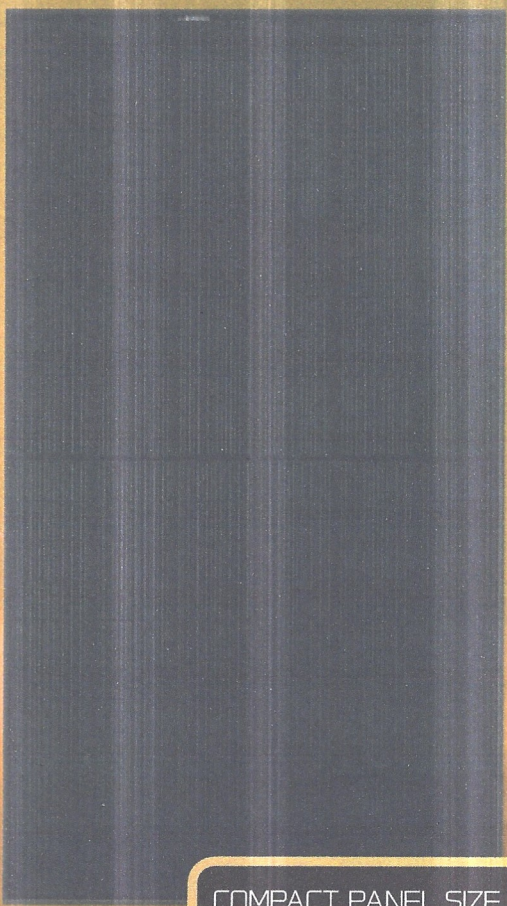
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1142 River Road, New Castle, DE 19720
Ph: (855) 738-7200 Fax: (866) 644-5665

SOLAR'S MOST TRUSTED



REC ALPHA[®] PURE SERIES PRODUCT SPECIFICATIONS

COMPACT PANEL SIZE

410 WP
222 $\frac{W}{M^2}$



ELIGIBLE



LEAD-FREE
ROHS COMPLIANT

EXPERIENCE



PERFORMANCE

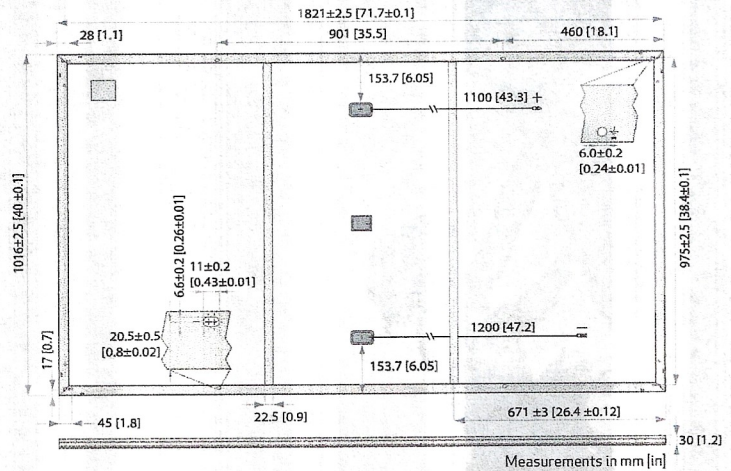
REC ALPHA PURE SERIES

PRODUCT SPECIFICATIONS



GENERAL DATA

Cell type:	132 half-cut REC heterojunction cells with lead-free, gapless technology, 6 strings of 22 cells in series
Glass:	3.2 mm solar glass with anti-reflective surface treatment in accordance with EN12150
Backsheet:	Highly resistant polymer (black)
Frame:	Anodized aluminum (black)
Junction box:	3-part, 3 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm ²) in accordance with IEC 62852, IP68 only when connected
Cable:	4 mm ² solar cable, 1.1 m + 1.2 m in accordance with EN 50618
Dimensions:	1821 x 1016 x 30 mm (1.85 m ²)
Weight:	20.5 kg
Origin:	Made in Singapore



ELECTRICAL DATA

Product Code*: RECxxxAA Pure

	385	390	395	400	405	410
Power Output - P _{MAX} (Wp)	385	390	395	400	405	410
Watt Class Sorting - (W)	0/+5	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage - V _{MPP} (V)	41.2	41.5	41.8	42.1	42.4	42.7
Nominal Power Current - I _{MPP} (A)	9.35	9.40	9.45	9.51	9.56	9.61
Open Circuit Voltage - V _{OC} (V)	48.5	48.6	48.7	48.8	48.9	49.0
Short Circuit Current - I _{SC} (A)	10.18	10.22	10.25	10.28	10.30	10.35
Power Density (W/m ²)	208	211	214	216	219	222
Panel Efficiency (%)	20.8	21.1	21.4	21.6	21.9	22.2

	293	297	301	305	309	312
Power Output - P _{MAX} (Wp)	293	297	301	305	309	312
Nominal Power Voltage - V _{MPP} (V)	38.8	39.1	39.4	39.7	40.0	40.2
Nominal Power Current - I _{MPP} (A)	7.55	7.59	7.63	7.68	7.72	7.76
Open Circuit Voltage - V _{OC} (V)	45.7	45.8	45.9	46.0	46.1	46.2
Short Circuit Current - I _{SC} (A)	8.16	8.20	8.24	8.28	8.32	8.36

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m², temperature 25°C), based on a production spread with a tolerance of P_{MAX}, V_{OC} & I_{SC} ±3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m², temperature 20°C, windspeed 1 m/s). * Where xxx indicates the nominal power class (P_{MAX}) at STC above.

MAXIMUM RATINGS

Operational temperature:	-40 ... +85°C
Maximum system voltage:	1000 V
Maximum test load (front):	+7000 Pa (713 kg/m ²)*
Maximum test load (rear):	-4000 Pa (407 kg/m ²)*
Max series fuse rating:	25 A
Max reverse current:	25 A

* See installation manual for mounting instructions.
Design load = Test load / 1.5 (safety factor)

WARRANTY

	Standard	REC ProTrust	
Installed by an REC Certified Solar Professional	No	Yes	Yes
System Size	All	<25 kW	25-500 kW
Product Warranty (yrs)	20	25	25
Power Warranty (yrs)	25	25	25
Labor Warranty (yrs)	0	25	10
Power in Year 1	98%	98%	98%
Annual Degradation	0.25%	0.25%	0.25%
Power in Year 25	92%	92%	92%

See warranty documents for details. Conditions apply

CERTIFICATIONS

IEC 61215:2016, IEC 61730:2016, UL 61730	
IEC 62804	PID
IEC 61701	Salt Mist
IEC 62716	Ammonia Resistance
ISO 11925-2	Ignitability (Class E)
IEC 62782	Dynamic Mechanical Load
IEC 61215-2:2016	Hailstone (35mm)
IEC 62321	Lead-free acc. to RoHS EU 863/2015
ISO 14001, ISO 9001, IEC 45001, IEC 62941	



TEMPERATURE RATINGS*

Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P _{MAX} :	-0.26 %/°C
Temperature coefficient of V _{OC} :	-0.24 %/°C
Temperature coefficient of I _{SC} :	0.04 %/°C

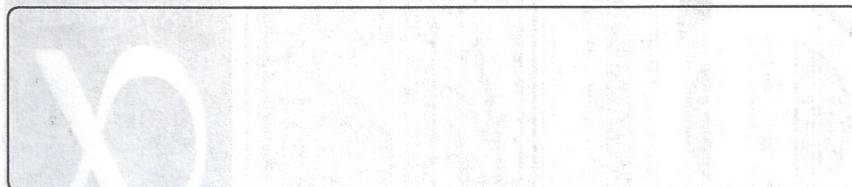
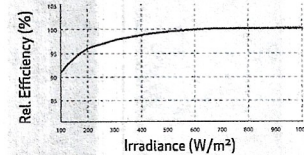
* The temperature coefficients stated are linear values

DELIVERY INFORMATION

Panels per pallet:	33
Panels per 40 ft GP/high cube container:	792 (24 pallets)
Panels per 13.6 m truck:	924 (28 pallets)
Panels per 53 ft truck:	891 (27 pallets)

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.



www.recgroup.com

Specifications subject to change without notice.

Ref: PM-DS-12-06-Rev-F 02.22