

SITE VERIFICATION NOTES:

1. PRIOR TO SUBMISSION TO MUNICIPALITY OF THE PLANS, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO SUBMISSION OF THE PLANS. SUBMISSION OF PLANS SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF WORK. IF EXISTING CONDITIONS VARY FROM PLANS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY PROJECT ENGINEER A.S.A.P. CONTRACTOR ASSUMES ALL RESPONSIBILITY AND LIABILITY THEREFROM.
3. THE OWNER/CONTRATOR SHALL OBTAIN ALL NECESSARY PERMITS, VERIFY ALL CONDITIONS, EXAMINE THE DESIGN DOCUMENTS AND BE RESPONSIBLE FOR ALL MEASUREMENTS, DIMENSIONS AND CONDITIONS.

PROJECT DESIGN DATA:

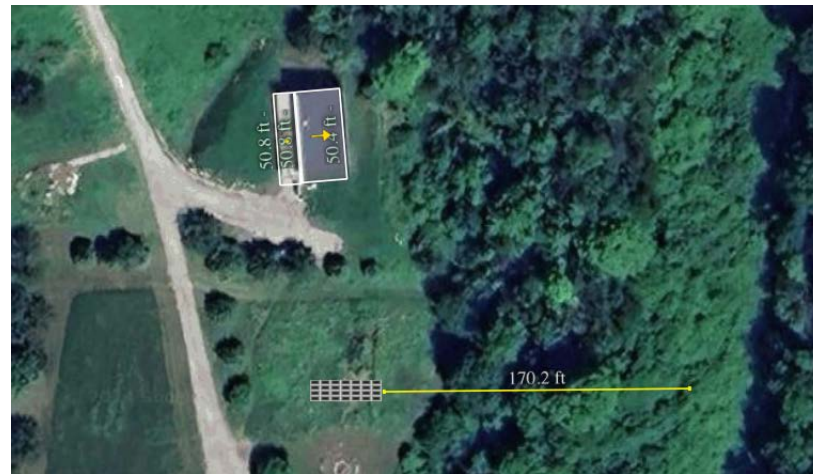
WORK SHALL BE COMPLETED AS PER 2020 RESIDENTIAL CODE OF NEW YORK STATE, PUBLICATION DATE: NOVEMBER 2019, NFPA 70, 2020 NATIONAL ELECTRICAL CODE AND 2018 WOOD FRAME CONSTRUCTION MANUAL LOAD CRITERIA AS FOLLOWS
 EXPOSURE CATEGORY: "B"
 GROUND SNOW LOAD: 50 PSF
 WIND SPEED: 120 MPH, 35SPF

GENERAL NOTES:

1. ALL SOLAR MODULES TO BE REC420W AND SHALL BE INSTALLED AS PER REC INSTALLATION MANUAL.
2. ALL INVERTERS TO BE SOLAR EDGE INVERTERS ALL RACKING AS PER DETAILS FOR GROUND MOUNT INSTALLATION

SURVEY NOTES:

** GROUND MOUNT ARRAY SHALL BE STAKED OUT BY A LICENSED PROFESSIONAL SURVEYOR PRIOR TO INSTALLATION



SETBACKS ARE BASED ON COUNTY G.I.S. DATA, HOMEOWNER IS FILING FOR A LOT MERGER, SETBACKS REFLECT MEASUREMENTS ONCE MERGER IS COMPLETED

HOUSE & ARRAY NOTES:

THERE IS (1) GROUND MOUNT ARRAY FOR A TOTAL OF +/- 577 SQ.FT.
 PRINCIPAL STRUCTURE IS 1,344 SQ.FT.

GROUND MOUNTED SOLAR ARRAY IS SOLELY TO BE TIED TO THE RESIDENTIAL PROPERTY LOCATED ON PARCEL 192244

GROUND MOUNT

OTHER HOME ON SEPARATE PARCEL



RESIDENTIAL SOLAR PANEL INSTALLATION

LOCATED AT 390 OLD RT. 22, AMENIA, NY 12501

TOWN OF AMENIA, DUTCHESS COUNTY, NEW YORK



SOLAR PANEL INSTALLATION BROUGHTON RESIDENCE

390 OLD RT. 22,
 AMENIA
 NEW YORK 12501

REVISIONS NOTES

①	AUGUST 1, 2024
②	OCTOBER 15, 2024

DWG. BY: MEM	SCALE: AS-NOTED
CHECKED BY: MEM	PROJECT #: ES-0085-23
DATE: JUNE 9, 2024	SBL #: 7166-00-192244
MUNICIPALITY: TOWN OF AMENIA	COUNTY: DUTCHESS

SYSTEM NOTES:

TOTAL SYSTEM SIZE: 11.48KW DC SYSTEM
 PANEL TYPE: REC 410W
 OF PANELS: 22
 INVERTER: SOLAREGE SE11,400H-US
 # OF INVERTERS: 1
 ARRAY #1
 AZIMUTH: 180
 TILT: 35
 # OF PANELS 22

PROFESSIONAL NOTES:

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SEAL & SIGNATURE



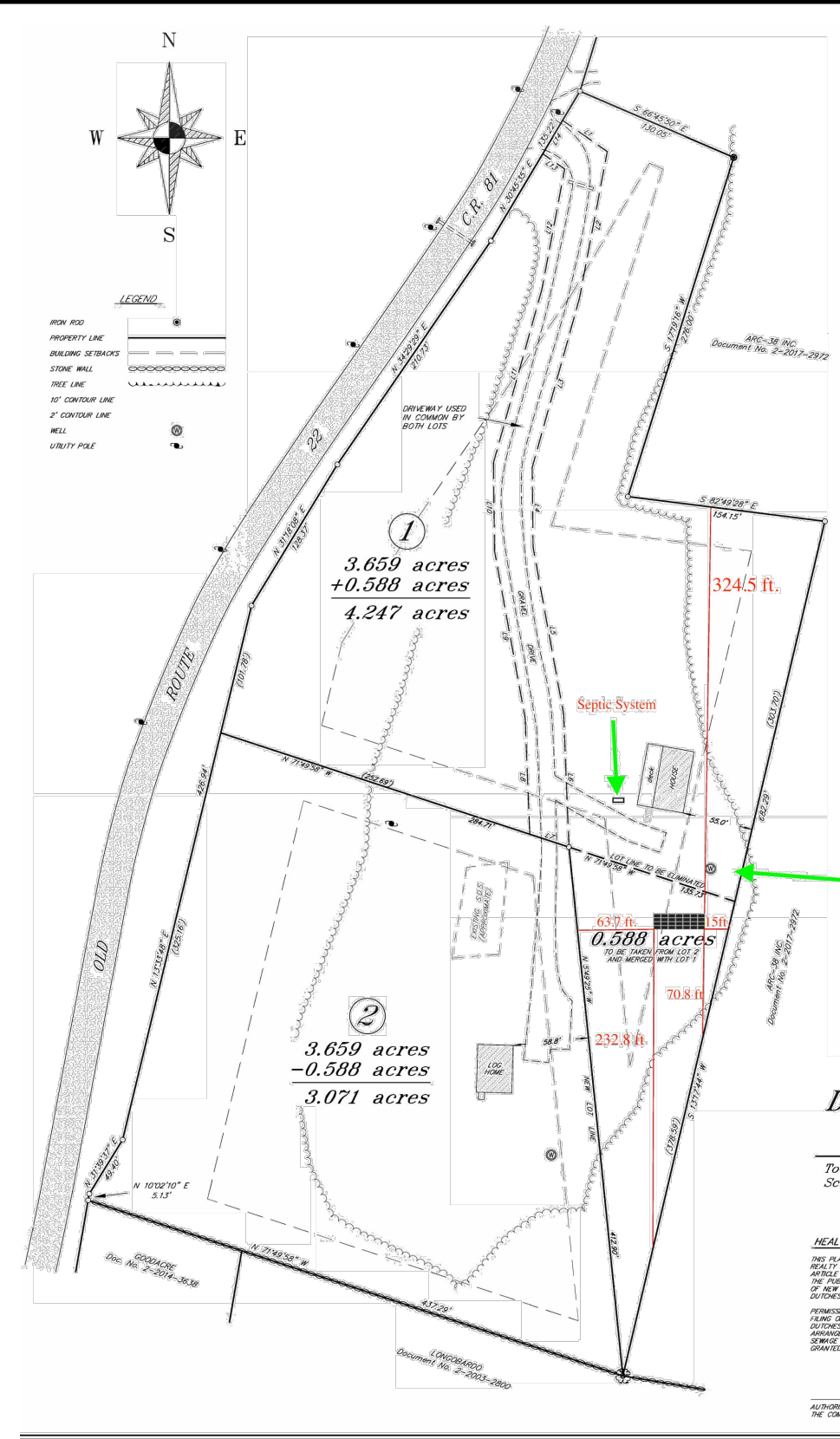
DWG#

S-1

PROJECT SITE PLAN AND NOTES

DWG.

1 OF 5



COMMON DRIVEWAY EASEMENT OVER LOT 1

ALIGN	BEARING	DISTANCE
1.1	S 87°45'30" W	48.22'
1.2	S 70°45'30" W	176.15'
1.3	S 70°45'30" W	186.45'
1.4	S 70°45'30" W	85.94'
1.5	S 70°45'30" W	132.84'
1.6	S 70°45'30" W	103.82'
1.7	N 71°49'58" W	32.02'
1.8	N 71°49'58" W	86.12'
1.9	N 70°21'50" W	152.22'
1.10	N 70°21'50" W	88.24'
1.11	N 70°21'50" W	138.48'
1.12	N 70°42'34" E	85.40'
1.13	N 50°42'58" E	25.25'
1.14	N 30°42'58" E	30.02'

ZONE = SP

MINIMUM FRONT YARD SETBACK	75' (COUNTY ROAD)
MINIMUM SIDE YARD SETBACK	30'
MINIMUM REAR YARD SETBACK	50'

**Lot Line Adjustment
Dimitriou Subdivision
Filed Map No. 11766**

Town of Amenia Dutchess County
Scale 1"=50'
October 27, 2023
REVISED: JANUARY 22, 2024

HEALTH DEPARTMENT NOTE
THIS PLAN DOES NOT CONSTITUTE A HEALTH SUBDIVISION AS DEFINED BY ARTICLE 16, TITLE 8, SECTION 1115 OF THE PUBLIC HEALTH LAW OF THE STATE OF NEW YORK, AND ARTICLE 16 OF THE DUTCHESS COUNTY SANITARY CODE. PERMISSION IS HEREBY GRANTED FOR THE FILING OF THIS MAP WITH THE CLERK OF DUTCHESS COUNTY, IN REPLY TO THE SANITARY CODE ENFORCEMENT DIVISION'S REQUEST FOR SANITARY CODE ENFORCEMENT. SEWAGE DISPOSAL IS NEITHER SOUGHT NOR GRANTED.

AUTHORIZED REPRESENTATIVE OF THE COMMISSIONER OF HEALTH DATE
KIRK K. HORTON, L.S. 048854
9 BROADWAY, AMENIA, NY 12501
(845) 475-7829

OWNERS OF RECORD

MARIA LAURA QUINTERO & DOUGLAS C. BROUGHTON
390 OLD ROUTE 22
AMENIA, NY 12501

TAX GRID Nos.

132000-7166-00-192244-0000 (LOT 2)
132000-7166-00-192244-0000 (LOT 1)

DEEDS OF RECORD

DOCUMENT No. 2-2019-6664 (LOT 1)
DOCUMENT No. 2-2018-2318 (LOT 2)

OWNERS CONSENT

THE UNDERSIGNED OWNERS OF THE PROPERTY SHOWN HEREON STATE THAT THEY ARE FAMILIAR WITH THIS MAP AND ITS CONTENTS, AND HEREBY CONSENT TO ALL THE TERMS AND CONDITIONS AS STATED HEREON, AND TO THE FILING OF THIS MAP BY THE OFFICE OF THE CLERK OF DUTCHESS COUNTY.

DOUGLAS C. BROUGHTON DATE

MARIA LAURA QUINTERO DATE

APPROVED
TOWN OF AMENIA PLANNING BOARD
DUTCHESS COUNTY, NEW YORK

CHAIRMAN DATE

BULK INFORMATION:

FRONT YARD SETBACK PROPOSED - 63.7' **	REQUIRED - 75'
SIDE YARD SETBACK PROPOSED - 70.8' & 324.5'	REQUIRED - 30'
REAR YARD SETBACK PROPOSED - 15' **	REQUIRED - 50'

** SEEING AN AREA VARIANCE FOR 35' FROM REAR PROPERTY LINE AND 11.3' FROM FRONT PROPERTY LINE



**SOLAR PANEL
INSTALLATION
BROUGHTON
RESIDENCE**
390 OLD RT. 22,
AMENIA
NEW YORK 12501

REVISIONS NOTES

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②	OCTOBER 15, 2024

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DATE: JUNE 9, 2023	SBL #: 7166-00-192244
MUNICIPALITY: TOWN OF AMENIA	COUNTY: DUTCHESS

SYSTEM NOTES:

TOTAL SYSTEM SIZE:	18.48KW DC SYSTEM
PANEL TYPE:	REC 405W
OF PANELS:	44
INVERTER:	SOLAREEDGE SE10,000H-US
# OF INVERTERS:	2
ARRAY	#1
AZIMUTH:	180
TILT:	35
# OF PANELS	44

PROFESSIONAL NOTES:

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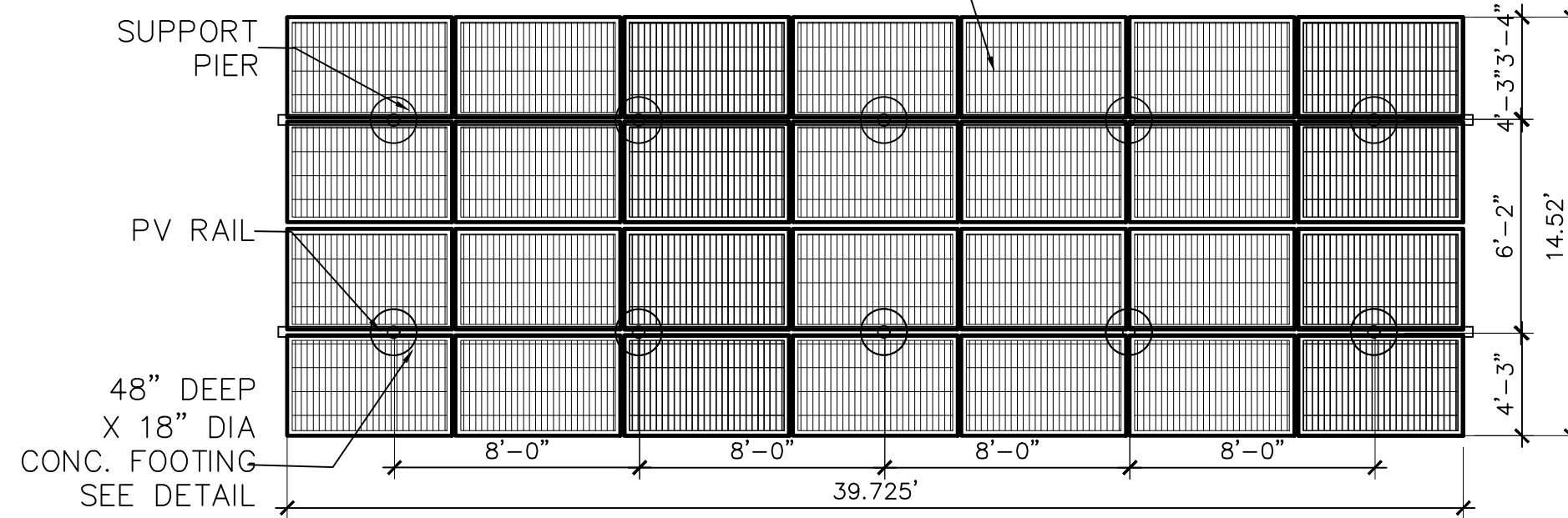
S-1

**PROJECT
SITE PLAN
AND NOTES**

DWG.

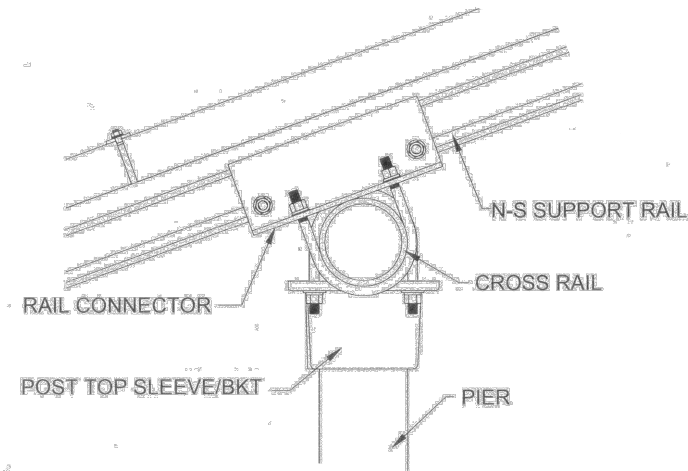
1B OF 5

PROPOSED GROUND MOUNT ARRAY #2
 (28) REC410W SOLAR PANEL MODULES
 7 X 4 GRID
 GROUND MOUNTED PORTRAIT
 CONFIGURATION

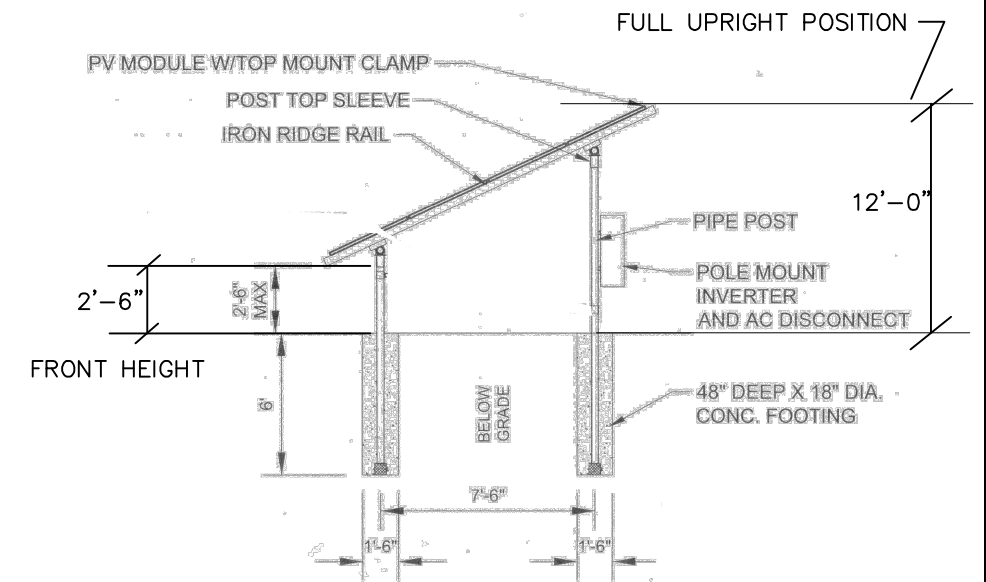


GROUND MOUNT LAYOUT ARRAY

NTS



PIER AND RAIL ASSEMBLY:



SOLAR PANEL ASSEMBLY:



**SOLAR PANEL
 INSTALLATION
 BROUGHTON
 RESIDENCE**

390 OLD RT. 22,
 AMENIA
 NEW YORK 12501

REVISIONS NOTES

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TOTAL SYSTEM SIZE: 11.48KW DC SYSTEM
 PANEL TYPE: REC 410W
 OF PANELS: 28
 INVERTER: SOLAREGE SE11,400H-US
 # OF INVERTERS: 1
 ARRAY #1
 AZIMUTH: 180
 TILT: 35
 # OF PANELS 28

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DWG#

S-2
SOLAR
PANEL
LAYOUT
PLAN

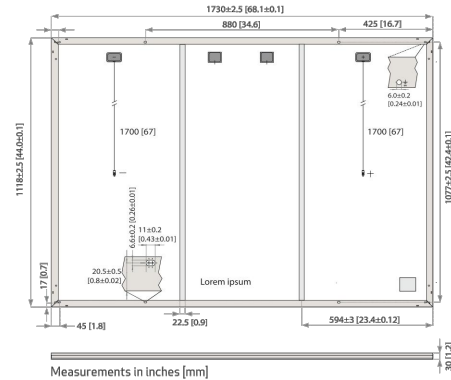
DWG.

REC ALPHA PURE-R SERIES

PRODUCT SPECIFICATIONS



GENERAL DATA	
Cell type:	80 half-cut REC bifacial, heterojunction cells with lead-free, gapless technology
Glass:	0.13in (3.2mm) solar glass with anti-reflective surface treatment in accordance with EN 12150
Backsheet:	Highly resistant polymer (black)
Frame:	Anodized aluminum (black)
Junction box:	4-part, 4 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:	12 AWG (4 mm ²) PV wire, 67 + 67 in (1.7 + 1.7 m) in accordance with IEC 60309
Dimensions:	68.1 x 44.0 x 1.2 in (20.77 ft) / 1730 x 1118 x 30 mm (59.3 m)
Weight:	47.4 lbs (21.5 kg)
Origin:	Made in Singapore



ELECTRICAL DATA		Product Code: RECxxAA PURE-R			
Power Output - P _{MAX} (Wp)	400	410	420	430	430
Watt Class Sorting - (W)	0/+10	0/+10	0/+10	0/+10	0/+10
Nominal Power Voltage - V _{MPP} (V)	48.8	49.4	50.0	50.5	50.5
Nominal Power Current - I _{MPP} (A)	8.20	8.30	8.40	8.52	8.52
Open Circuit Voltage - V _{OC} (V)	58.9	59.2	59.4	59.7	59.7
Short Circuit Current - I _{SC} (A)	8.73	8.81	8.89	8.97	8.97
Power Density (W/ft ²)	207	212	218	223	223
Panel Efficiency (%)	20.7	21.2	21.8	22.3	22.3

NIMOT		Product Code: RECxxAA PURE-R			
Power Output - P _{MAX} (Wp)	305	312	320	327	327
Nominal Power Voltage - V _{MPP} (V)	46.0	46.6	47.1	47.6	47.6
Nominal Power Current - I _{MPP} (A)	6.64	6.70	6.78	6.88	6.88
Open Circuit Voltage - V _{OC} (V)	55.5	55.8	56.0	56.3	56.3
Short Circuit Current - I _{SC} (A)	7.05	7.12	7.18	7.24	7.24

Values at standard test conditions (STC: air mass AM1.5, irradiance 1075 W/sq ft (1000 W/m²), temperature 77°F (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 (NIMOT: air mass AM1.5, irradiance 800 W/m², temperature 68°F (20°C), windspeed 3.3 ft/s (1m/s). *Where xxx indicates the nominal power class (P_{MAX}) at STC above.

MAXIMUM RATINGS		WARRANTY	
Operational temperature:	-40 ... +85°C	Standard	REC ProTrust
System voltage:	1000 V	Installed by an REC Certified Solar Professional	No Yes Yes
Test load (front):	+7000 Pa (146 lbs/ft ²)	System Size	All <25 kW 25-500 kW
Test load (rear):	-4000 Pa (83.5 lbs/ft ²)	Product Warranty (yrs)	20 25 25
Series fuse rating:	25 A	Power Warranty (yrs)	25 25 25
Reverse current:	25 A	Labor Warranty (yrs)	0 25 10
*See installation manual for mounting instructions. Design load = Test load / 1.5 (safety factor)		Power in Year 1	98% 98% 98%
		Annual Degradation	0.25% 0.25% 0.25%
		Power in Year 25	92% 92% 92%

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%

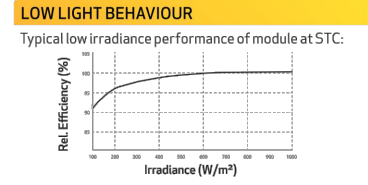
CERTIFICATIONS	
IEC 61215:2016, IEC 61730:2016, UL 61730	
IEC 62804	PID
IEC 61701	Salt Mist
IEC 62716	Ammonia Resistance
UL 61730	Fire Type Class 2
IEC 62782	Dynamic Mechanical Load
IEC 61215-2:2016	Hailstone (35mm)
IEC 62321	Lead-free acc. to RoHS EU 863/2015
ISO 14001, ISO 9001, IEC 45001, IEC 62941	



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:	858 (26 pallets)



Available from:

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.



Single Phase Inverter with HD-Wave Technology for North America

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

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5 ¹⁾							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
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	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380			400				Vdc
Maximum Input Current @240V ²⁾	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V ²⁾	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600ka Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

¹⁾ For other regional settings please contact SolarEdge support
²⁾ A higher current source may be used; the inverter will limit its input current to the values stated

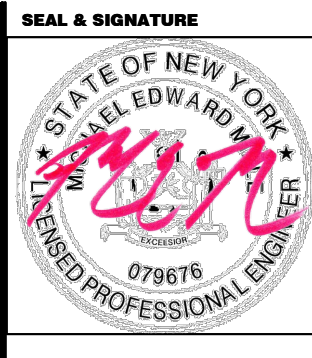


SOLAR PANEL INSTALLATION BROUGHTON RESIDENCE
390 OLD RT. 22, AMENIA NEW YORK 12501

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PANEL TYPE:	REC 410W
OF PANELS:	28
INVERTER:	SOLAREGE SE11,400H-US
# OF INVERTERS:	1
ARRAY	#1
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DWG# **S-3**
SOLAR PANEL & INVERTER SPECIFICATIONS
DWG. 3 OF 5

Rigid Nonmetallic Conduit – Schedule 40

Carlson® Rigid Nonmetallic Conduit (RNC), Fittings & Accessories

Carlson® manufactures the most complete line of nonmetallic conduits and fittings in the electrical industry. Carlson Schedule 40 and Schedule 80 conduits are designed for use aboveground and underground as described in the National Electrical Code. Specify only Carlson conduits and fittings to insure raceway system integrity.

Features

Ease of Installation Nonmetallic conduits are 1/4 to 1/5 the weight of metallic systems, can be installed in less than half the time, and are easily fabricated on the job.

Safety Nonmetallic conduits are nonconductive, assuring a safe system.

Impact Resistant Carlson Schedule 40 and Schedule 80 nonmetallic conduits are resistant to sunlight and are listed for exposed or outdoor usage. The use of expansion fittings allows the system to expand and contract with temperature variations.

Corrosion Resistant Carlson conduits and fittings are nonmetallic and will not rust or corrode.

Carlson nonmetallic Schedule 40 and Schedule 80 conduits and elbows are manufactured to NEMA TC-2, Federal specification WC1094A and UL 651 specifications. Fittings are manufactured to NEMA TC-3, Federal specification WC1094A and UL514B. Both conduit and fittings carry respective UL or ETL Listings and UL or ETL labels.



TRENCH NOTES:

1. THE WARNING LABEL FOR THE TRENCH PIPING, SHALL BE INSTALLED EVERY 10'
2. TRENCH BACK FILL BACKFILL SHALL BE (CLEAN SOIL – THE SOIL REMOVED DURING TRENCH EXCAVATION TRENCH WITH THE ROCKS REMOVED)
3. TRENCH LENGTH = 107.7', MIN TRENCH WIDTH 24", MIN TRENCH DEPTH = 24"
4. CONDUIT SHALL BE SCHEDULE 40, (1") SEE SPEC SHEET ON SAME PAGE

Schedule 40 PVC Rigid Nonmetallic Conduit (RNC). (Heavy Wall EPC)

Listed for underground applications encased in concrete or direct burial. Also for use in exposed or concealed applications aboveground.

- Sunlight resistant • Rated for use with 90°C conductors • Superior weathering characteristics



RUS Listed

Schedule 40 Heavy Wall

With Integral Bell*



Part No.			Std. Crate Qty.		Wt. Per	Dimensions		
10'	20'	Nom. Size	10'	20'	100'	O.D.	I.D.	Wall
49005-010		1/2"	6000'		17	.840	.622	.109
49007-010	49007-020	3/4"	4400'	8800'	23	1.050	.824	.113
49008-010	49008-020	1"	3600'	7200'	34	1.315	1.049	.133
49009-010	49009-020	1 1/4"	3300'	6600'	46	1.660	1.380	.140
49010-010	49010-020	1 1/2"	2250'	4500'	55	1.900	1.610	.145
49011-010	49011-020	2"	1400'	2800'	73	2.375	2.067	.154
49012-010	49012-020	2 1/2"	930'	1860'	124	2.875	2.469	.203
49013-010	49013-020	3"	880'	1760'	163	3.500	3.068	.216
49014-010	49014-020	3 1/2"	630'	1260'	196	4.000	3.548	.226
49015-010	49015-020	4"	570'	1140'	232	4.500	4.026	.237
49016-010	49016-020	5"	380'	760'	315	5.563	5.047	.258
49017-010	49017-020	6"	260'	520'	409	6.625	6.065	.280

Rigid nonmetallic conduit is normally supplied in standard 10' lengths, with one belled end per length. For specific requirements, it may be produced in lengths shorter or longer than 10', with or without belled ends.

Use RNC Fittings with Schedule 40 and Schedule 80 Conduit.

- Notes: 1. Special fittings and conduit sizes will be quoted on request.
2. DON'T FORGET TO ORDER CEMENT.
3. Carlson reserves the right to ship to the nearest unitized quantity.



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DWG#

S-3B

TRENCH
DETAILS
AND
NOTES

DWG.

3B OF 5

WARNING
ELECTRIC SHOCK HAZARD !
 THE DIRECT CURRENT CIRCUIT CONDUCTORS OF THIS PHOTOVOLTAIC POWER SYSTEM ARE UNGROUNDED BUT MAY BE ENERGIZED WITH RESPECT TO GROUND DUE TO LEAKAGE PATHS AND/OR GROUND FAULTS

DC WARNING LABEL

WARNING
 INVERTER OUTPUT CONNECTION
 DO NOT RELOCATE THIS OVERCURRENT DEVICE

UTILITY DISCONNECT LABEL

CAUTION
 SOLAR ELECTRIC SYSTEM CONNECTED

AC PANELS

GROUND MOUNT NOTES:

ARRAY RACK ASSEMBLY
 SOLAR GROUND MOUNT RACKING SHOWN FOR ARRANGEMENT ONLY
 RACKING MANUFACTURER TO PROVIDE SEALED SHOP DRAWINGS OF FINAL RACKING ASSEMBLY.
 INSTALL AS PER MANUFACTURER STANDARD INSTALLATION DETAILS.
 POST SUPPORTED RACKING FOUNDATION AS SHOWN
 18" Ø X 48" DEEP CONCRETE FOUNDATION WITH EMBEDDED POST.

INSTALLATION NOTES:
 BRACKET TO POST INSTALLATION HEIGHT MAY VARY WITH SITE GRADING. IT IS NOT NECESSARY FOR ALL POST TOP BRACKETS TO ALIGN AT A COMMON ELEVATION FOR EACH ROW (+/-2")
 INSTALLATION CONTRACTOR SHALL ENSURE THAT ALL GRADING AND COMPACTION OF SITE IS COMPLETED PRIOR TO INSTALLATION OF THE RACKING SYSTEM TO AVOID POTENTIAL DISTURBANCE OF FOUNDATION AND ALIGNMENT.

SEALED SHOP DRAWINGS SHALL BE PROVIDED BY RACKING MANUFACTURER PRIOR TO THE INSTALLATION OF THE PV ARRAY.

THIS DRAWING IS DIAGRAMMATIC FOR THE MODULE/RACK ARRANGEMENT. FINAL RACKING DETAILS AND ASSEMBLY MAY VARY WITH FINAL INSTALLATION.

PHOTOVOLTAIC INVERTER INPUT DC DISCONNECT

WARNING
ELECTRIC SHOCK HAZARD !

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

INTERACTIVE SOLAR PV SYSTEM RATING

RATED DC CURRENT	AMP
RATED DC VOLTAGE	VDC
MAXIMUM SYSTEM VOLTAGE	VDC
SHORT CIRCUIT CURRENT	AMP

SYSTEM INSTALLER: _____
 FOR SERVICE CALL: _____

DC INPUT WARNING LABEL #1
 INVERTER 1

PHOTOVOLTAIC SYSTEM DISCONNECT FOR UTILITY OPERATION

WARNING
ELECTRIC SHOCK HAZARD !

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

INTERACTIVE SOLAR PV SYSTEM RATING

RATED OPERATING CURRENT	AMP
NORMAL OPERATING VOLTAGE	240 VAC

SYSTEM INSTALLER: _____
 FOR SERVICE CALL: _____

UTILITY DISCONNECT WARNING LABEL

6"

1 1/2"

WARNING
DC SOLAR CIRCUIT

DC CIRCUIT LABEL

WARNING
 THIS METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

PV CIRCUITS ONLY
 NO OTHER LOADS SHALL BE APPLIED TO THIS PANEL OTHER THAN PV COMPONENTS AS PER NEC ARTICLE 690



SOLAR PANEL INSTALLATION BROUGHTON RESIDENCE
 390 OLD RT. 22, AMENIA NEW YORK 12501

REVISIONS NOTES

①	AUGUST 1, 2024
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DWG. BY: MEM	SCALE: AS-NOTED
CHECKED BY: MEM	PROJECT #: ES-0085-23
DATE: JUNE 9, 2024	SBL #: 7166-00-192244
MUNICIPALITY: TOWN OF AMENIA	COUNTY: DUTCHESS

SYSTEM NOTES:
 TOTAL SYSTEM SIZE: 11.48KW DC SYSTEM
 PANEL TYPE: REC 410W
 OF PANELS: 28
 INVERTER: SOLAREEDGE SE11,400H-US
 # OF INVERTERS: 1
 ARRAY #1
 AZIMUTH: 180
 TILT: 35
 # OF PANELS 28

PROFESSIONAL NOTES:
 UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS MAP NOT HAVING THE SEAL OF THE ENGINEER SHALL NOT BE VALID



DWG# **S-4**
SOLAR PANEL SIGNAGE
 DWG. 4 OF 5

POWER OUTPUT = PTC RATING X # OF MODULES X INV EFF'
 INVERTER#1=373.54W x 28 x 0.975 =10,197.64W
 TOTAL= 10,197.64W

ALL EXTERIOR MOUNTED COMBINERS, JUNCTION BOXES, TROUGHS, DISCONNECTS, ETC. SHALL BE NEMA 3R RATED.

ALL CONDUCTORS ARE TO BE COPPER UNLESS NOTED OTHERWISE

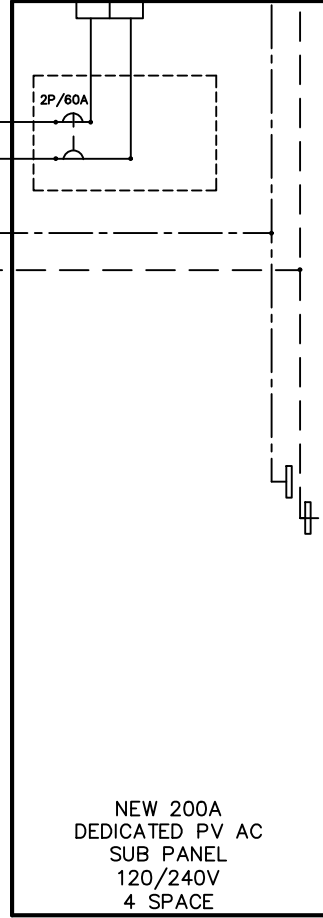
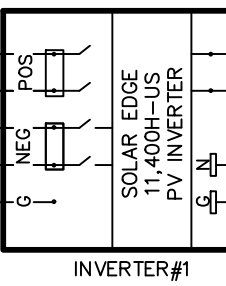
WIRE AMPACITY
 NEC TABLE 310.15(B)(16)
 #10 THWN Cu35A RATED
 #8 THWN Cu50A RATED
 #6 THWN Cu65A RATED
 #4 THWN Cu85A RATED

(6 WIRES) #10 PV WIRE #8 GND

(3 WIRES) #6 THWN #6 GND 1-1/4" CONDUIT

28 REC410W PANELS
 1 STRINGS OF 10
 2 STRINGS OF 9
 28 P300 OPTIMIZERS

(6 WIRES) #10 THWN-2 #8 GND 3/4" CONDUIT



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

PHOTOVOLTAIC MAIN SOLAR SYSTEM AC DISCONNECT

PHOTOVOLTAIC SYSTEM AC DISCONNECT
 RATED AC OUTPUT CURRENT A
 NOMINAL OPERATING AC VOLTAGE V

CONFIRM LINE SIDE VOLTAGE AT ELECTRIC UTILITY SERVICE ENTRANCE BEFORE CONNECTING INVERTER AND ENSURE PROPER OPERATIONAL RANGE REQUIRED BY SYSTEM INVERTER.

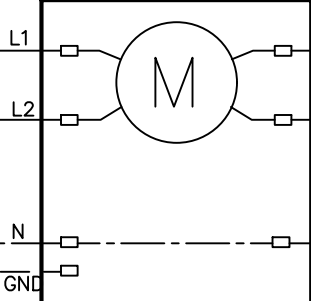
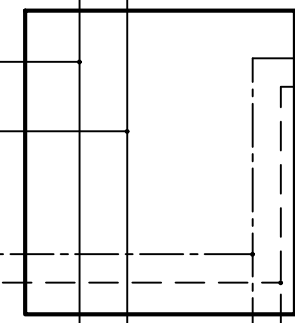
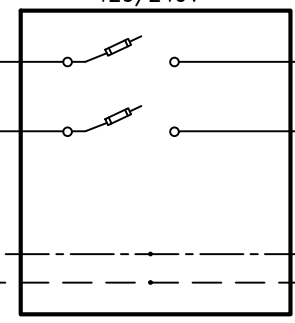
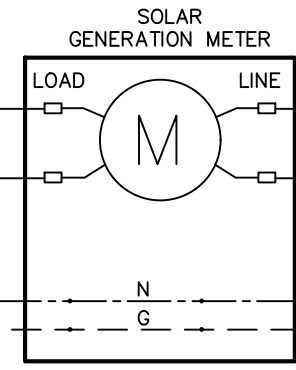
AC & DC GROUNDING CONDUCTORS PER NEC ARTICLE 690.47(c)(2) CONNECTED AS PER 250.64(c)(2)

INTERCONNECTION TO UTILITY AND SYSTEM GROUNDING PER NEC-2020 ARTICLE 690
 PROVIDE SIGNAGE AS REQUIRED BY NEC-2020 ARTICLE 690.
 ALL OUTDOOR EQUIPTMEN SHALL BE A MINIMUM OF NEMA-3R RATED.

(3 WIRES) #6 THWN #6 GND 1-1/2" CONDUIT

(3 WIRES) #6 THWN #6 GND 1-1/2" CONDUIT

89L DISCONNECT 60A RATED 60A FUSED DISCONNECT 120/240V



WARNING
 INVERTER OUTPUT CONNECTION
 DO NOT RELOCATE THIS OVERCURRENT DEVICE

CONTRACTOR TO ENABLE RAPID SHUTDOWN FUNCTIONALITY ON SOLAR EDGE INVERTER PER S.E DOC.#MAN-01-00186-1.6 AS REQUIRED PER NEC 2020 ARTICLE 690.12 (1) THRU (4)

ELECTRICAL CONTRACTOR TO VERIFY INTERCONNECTION REQUIREMENTS WITH ELECTRICAL UTILITY FOR CONNECTION LOCATION AND STANDARDS

ELECTRICAL CONTRACTOR TO PROVIDE EXPANSION JOINTS AND ANCHORING OF ALL CONDUIT RUNS AS PER NEC REQUIREMENTS

PROVIDE LABEL/PLACARD AT EXISTING UTILITY CONNECTION WITH "WARNING - CUSTOMER OWNED ELECTRIC GENERATION EQUIPMENT CONNECTED" WITH APPROPRIATE HAZARD AND OUTPUT RATING OF PV SYSTEM



SOLAR PANEL INSTALLATION BROUGHTON RESIDENCE
 390 OLD RT. 22, AMENIA NEW YORK 12501

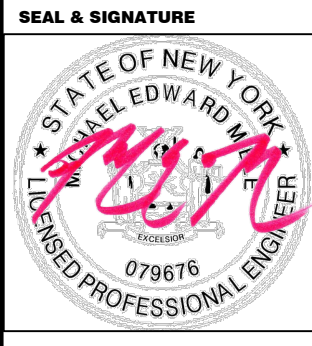
REVISIONS NOTES

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DWG# **S-5**
SOLAR 3-LINE DIAGRAM
 DWG. 5 OF 5