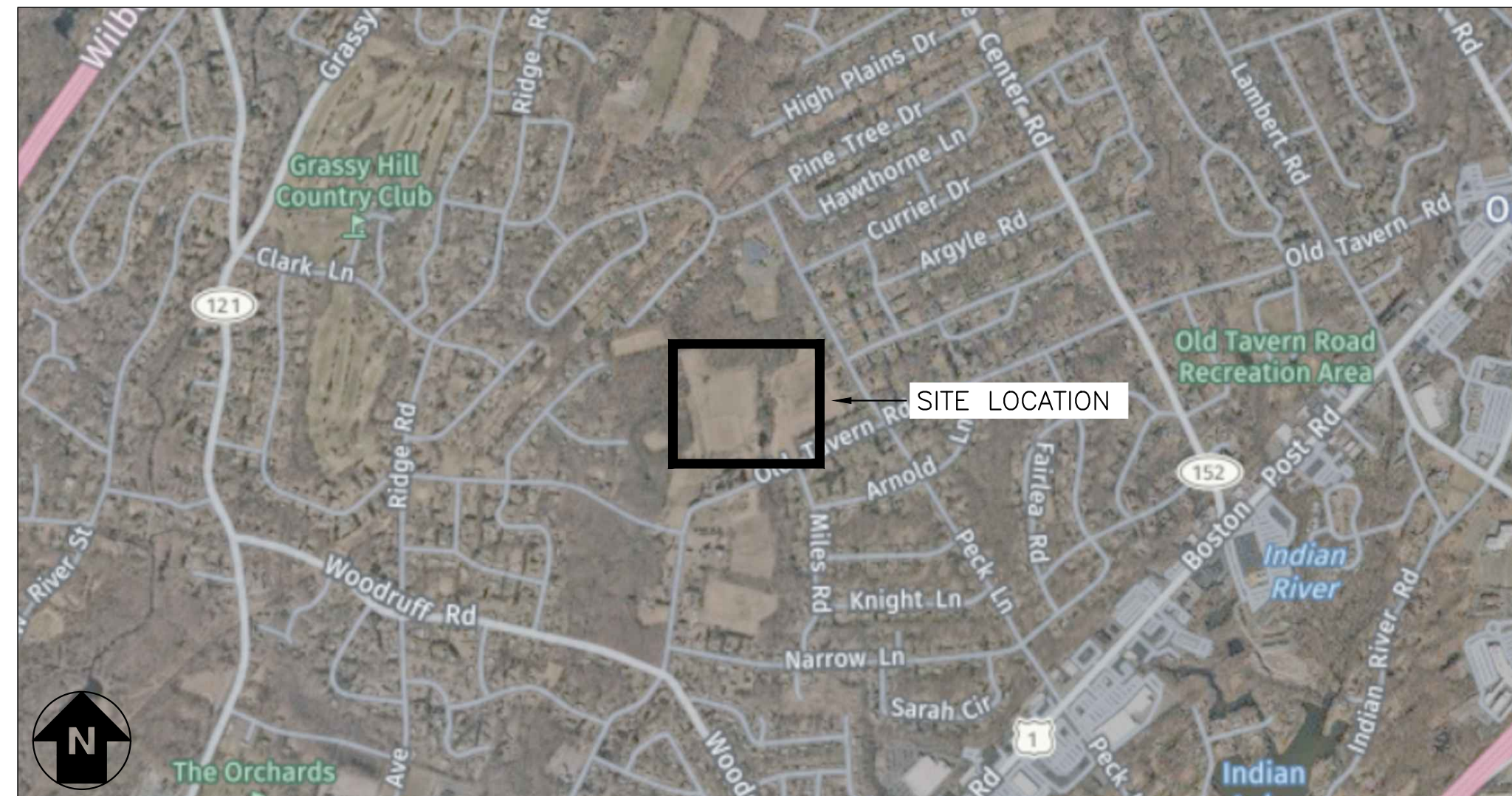
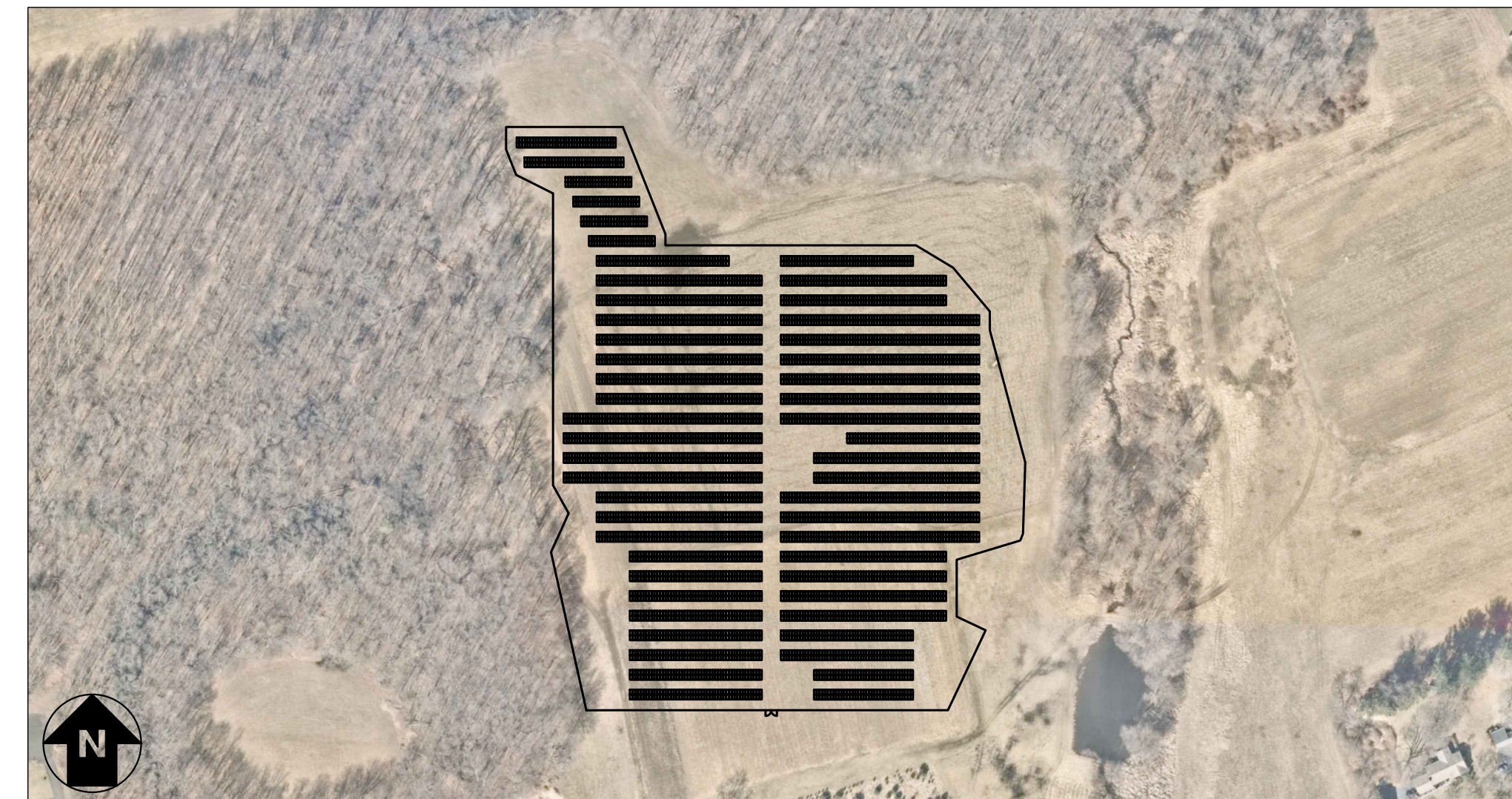


GROUND MOUNT SYSTEM AT ORANGE FARM

361 OLD TAVERN ROAD, ORANGE, CT 06477



LOCATION MAP
SCALE: 1" = 1500'



SYSTEM PLAN
SCALE: 1" = 200'-0

TOTAL SYSTEM SUMMARY:

TOTAL DC SYSTEM SIZE: 3,168.000 kWDC
AC SYSTEM SIZE: 2,500.000 KWAC

MODULE MANUFACTURER: HT-SAAE
MODULE MODEL: HT72-18X 550W
MODULES PER STRING: 24
MODULE QUANTITY: 5,760
STRING QUANTITY: 240

MODULE TILT: 25°
MODULE AZIMUTH: 0°

INVERTER MANUFACTURER: CANADIAN SOLAR
INVERTER MODEL: CSI-125KTL-GS-E
INVERTER QUANTITY: 20

SUBSYSTEM SUMMARIES:

SYSTEM 1		SYSTEM 2	
TOTAL DC SIZE:	2,534.400 KWDC	TOTAL DC SIZE:	633.600 KWDC
AC SYSTEM SIZE:	2,000.000 KWAC	AC SYSTEM SIZE:	500.000 KWAC
MODULE QUANTITY:	4,608	MODULE QUANTITY:	1,152
STRING QUANTITY:	192	STRING QUANTITY:	48

SCOPE OF WORK SUMMARY

- GROUND MOUNT PV ARRAY:**
- INSTALL SOLAR MODULES AND RACKING SYSTEM ON GROUND LEVEL.
 - INSTALL INVERTERS AND ELECTRICAL DISTRIBUTION EQUIPMENT.
 - INTERCONNECT AT NEW ELECTRICAL SERVICE & DISTRIBUTION EQUIPMENT.

DEVELOPER:



127 WASHINGTON AVENUE
WEST BUILDING, GARDEN LEVEL
NORTH HAVEN, CT 06473

ENGINEERED BY:



111 RIVER STREET, SUITE 1110
HOBOKEN, NEW JERSEY, 07030

DRAWING INDEX

GENERAL	CONCEPTUAL DESIGN	CONCEPTUAL DESIGN REV1	CONCEPTUAL DESIGN REV2	UTILITY COMMENTS
G001 TITLE SHEET	●	●	●	●
ELECTRICAL				
E001 ELECTRICAL NOTES & SYMBOL LIST				
E100 AC ELECTRICAL PLAN	●	●	●	●
E110 ELECTRICAL ROOM PLAN & INVERTER AREA				
E200 DC ELECTRICAL PLAN				
E300 ONE LINE DIAGRAM - MEDIUM VOLTAGE	●	●	●	●
E301 ONE LINE DIAGRAM - SYSTEM 1	●	●	●	●
E302 ONE LINE DIAGRAM - SYSTEM 2	●	●	●	●
E303 ONE LINE DIAGRAM - SYSTEM 3	●	X		
E310 SCHEDULES & CALCULATIONS				
E401 GROUNDING DETAILS				
E402 ELECTRICAL DETAILS				
E500 LABELS & SIGNAGE				
E600 EQUIPMENT DATA SHEETS				

LEGEND:

UPDATED DRAWING ISSUED	●
UNCHANGED, PREVIOUSLY ISSUED DRAWING STILL CURRENT	○
DRAWING REMOVED FROM SET	X

DRAWING TITLE
TITLE SHEET

DRAWING #
G001

DC SYSTEM SIZE: 3,168.000 kW
AC SYSTEM SIZE: 2,500.000 KW
MODULE TYPE: HT72-18X 550W
MODULE QUANTITY: 5,760
STRING QUANTITY: 240
ORIENTATION: 25° TILT, 0° AZIMUTH

PROJECT
GROUND MOUNT SYSTEM AT
ORANGE FARM
361 OLD TAVERN ROAD
ORANGE, CT 06477

PAGE SIZE
3.6" x 24"

PROJECT #
01590.06

DEVELOPER
Greenskies
a Clean Focus company

127 WASHINGTON AVENUE
NORTH HAVEN, CT 06473
WWW.GREENSKIES.COM



PUREPOWER ENGINEERING
111 RIVER STREET, SUITE 1110
HOBOKEN, NJ 07030
WWW.PUREPOWER.COM
RICHARD A. VINS
CT LICENSE NO. 0682862

DATE	REVISION DESCRIPTION	PM	ENG	CHK
08/18/2021	UTILITY COMMENTS	SK	GB	RI
06/19/2021	CONCEPTUAL DESIGN REV1	SK	SK	RI
06/16/2021	CONCEPTUAL DESIGN REV1	SK	PM	RI
04/07/2021	CONCEPTUAL DESIGN	SK	AD	RI

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PLOT DATE: 8/19/2021 1:22 PM

HT72-18X Transparent

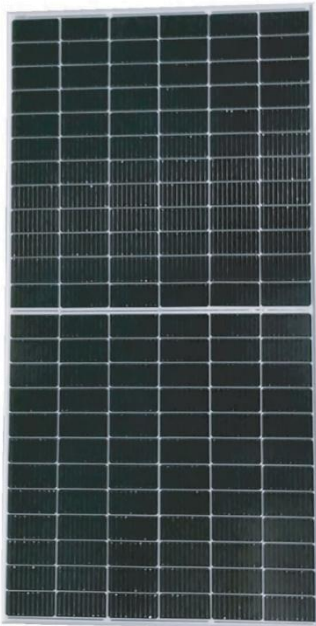
High Efficiency Low LID Bifacial PERC with Half-cut Technology

NEW

Big Size: Cell 182*91 Monocrystalline

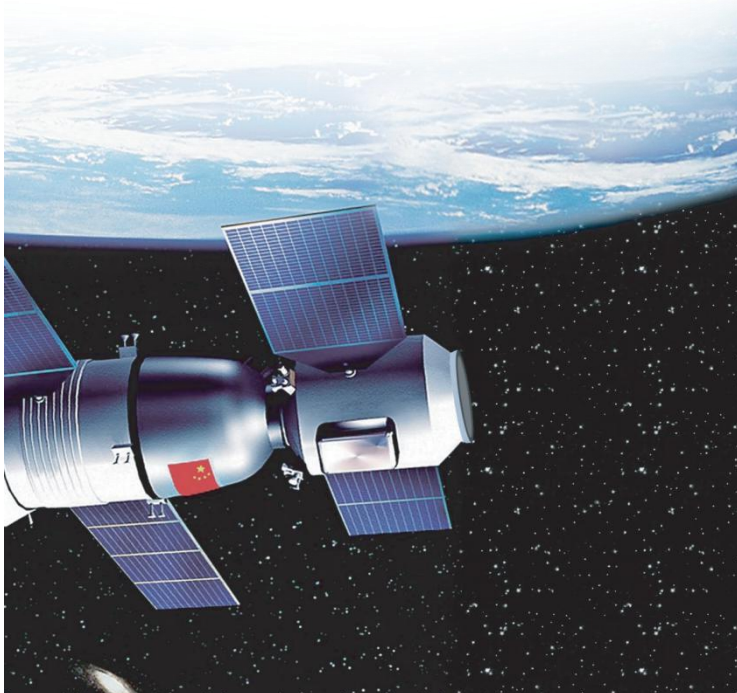
535W/540W

545W / 550W / 555W



- Module Efficiency: 21.1%
- No. of Cells: 144 (6 × 24)
- Weight: 28.5kg
- Dimensions: 2285mm×1133mm×35mm

MULTIWAY+



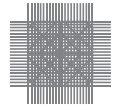
Shanghai Aerospace Automobile Electromechanical Co., Ltd.
website: www.htsolar.com.tr



Factory :
Turkey HT Solar Energy Joint Stock Company
Lianyungang ShenZhou New Energy Co., Ltd.



Half cut cell technology can reduce the internal power loss and improve component overall power. Excellent heat dissipation avoids hot spot production.



Transparent Backsheet structure which enhance the Module power increases 5-25% generally (per different reflective condition) lower LCOE and higher IRR

12Ys
Products Warranty



Designed for high voltage systems of up to 1500 VDC, increasing the string length of solar systems and saving on BoS costs

30Ys
Warranty on power output



EL
Microcrack resistant Double glass structure enhance reliability, triple EL tested of high quality control.

All the modules are sorted and packaged by amperage, reducing mismatch losses and maximizing system output.



Entire module certified to stand extreme wind (2400 Pa) and snow loads (5400 Pa)

5W

Positive tolerance 0/+5w guaranteed

PID
PID Resistant

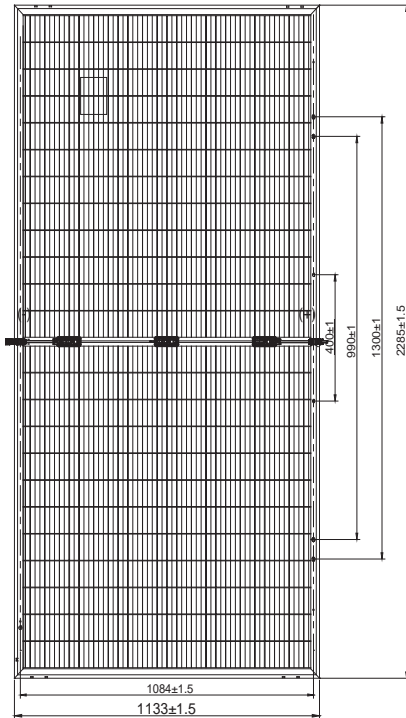
Comprehensive and first-rate certification system

IEC61215: 2016, IEC61730: 2016 Latest Standard and UL 61730 Latest Standard, ISO9001, ISO14001 and OHSAS18001, meeting the highest international standards
Strict quality control



535W/540W/545W/550W/555W

Engineering Drawing



Electrical Characteristics

Module	HT72-18X Transparent				
Maximum Power at STC(Pmax)	535W	540W	545W	550W	555W
Open-Circuit Voltage(Voc)	49.3V	49.4V	49.5V	49.6V	49.7V
Short-Circuit Current(Isc)	14.16A	14.26A	14.36A	14.46A	14.56A
Optimum Operating Voltage (Vmp)	40.8V	40.9V	41.0V	41.1V	41.2V
Optimum Operating Current(Imp)	13.09A	13.18A	13.27A	13.36A	13.45A
Module Efficiency	20.7%	20.9%	21.1%	21.2%	21.4%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1500V DC(UL/IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 C to + 85 C				

*STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

BIFACIAL REAR SIDE POWER GAIN

Electrical characteristics with different rear side power gain (reference to 535W front)

Module		HT72-18X Transparent			
Maximum Power	Pmax Gain	Voc/V	Isc/A	Vmp/V	Imp/A
562W	5%	49.30	14.87	40.8	13.74
589W	10%	49.30	15.58	40.8	14.39
615W	15%	49.30	16.28	40.8	15.05
642W	20%	49.30	16.99	40.8	15.70
669W	25%	49.30	17.70	40.8	16.36

*bifacial gain: the additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

NMOT

Module	HT72-18X Transparent				
Maximum Power	396W	400W	404W	407W	411W
Open Circuit Voltage (Voc)	46.6V	46.7V	46.8V	46.9V	47.0V
Short Circuit Current (Isc)	11.51A	11.59A	11.68A	11.76A	11.84A
Maximum Power Voltage (Vmp)	38.6V	38.7V	38.8V	38.9V	39.0V
Maximum Circuit Current (Imp)	10.26A	10.34A	10.41A	10.46A	10.54A
NMOT	45°C ± 2°C				

*NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1 m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91 mm
No. of Cells	144 (6 × 24)
Dimensions	2285mm × 1133mm × 35mm
Weight	28.5kg
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL/IEC) Length: 1400mm
Connectors	MC4 / MC4 Compatible
Packaging Configuration	30pcs / box, 600pcs / 40'HQ Container

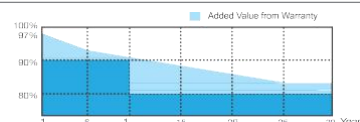
Temperature Characteristics

Temperature Coefficient of Pmax	γ (Pm)	-0.39%/°C
Temperature Coefficient of Voc	β (Voc)	-0.29%/°C
Temperature Coefficient of Isc	α (Isc)	0.049%/°C

Warranty

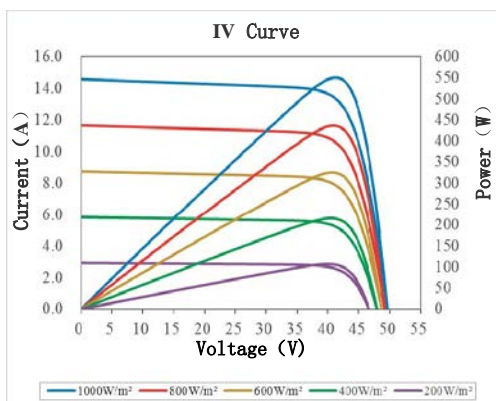
- 12-year product warranty
- 30-year warranty on power output

Specific information is referred to the product quality guarantee



I-V Curves

Current-Voltage & Power-Voltage Curve





THREE-PHASE STRING INVERTER 125 KW CSI-125KTL-GS-E

Canadian Solar's grid-tied, transformer-less string inverters help accelerate the use of three-phase string architecture for commercial rooftop and small ground-mount applications. An NRTL approved, cost-effective alternative to central inverters, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. They provide up to 99.1% conversion efficiency, and a wide operating range for maximum energy harvest.



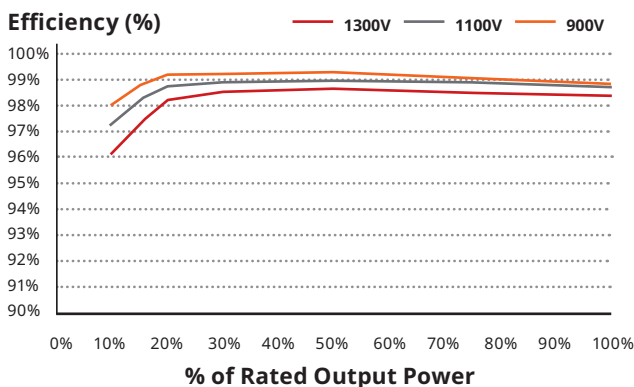
Standard warranty, extension up to 20 years

KEY FEATURES

- Maximum efficiency of 99.1%, CEC efficiency of 98.6%
- Single MPPT for higher conversion efficiency
- Transformerless design
- PID mitigation capability

EFFICIENCY CURVE

CSI-125KTL-GS-E @ 900 V



*For detailed information, please refer to the Installation Manual.

HIGH RELIABILITY

- Advanced thermal design with variable speed fans
- Ground-fault detection and interruption circuit

BROAD ADAPTIBILITY

- NEMA 4X (IP65), outdoor application
- Utility interactive controls: active power derating, reactive power control and over frequency derating
- Integrated wiring box design
- Integrated DC and AC load rated disconnects
- Wide MPPT range for flexible string sizing
- AC terminals compatible with copper and aluminum conductors
- Supports up to 20 DC string inputs

CANADIAN SOLAR (USA), INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 36 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

CANADIAN SOLAR (USA), INC.

3000 Oak Road, Suite 400, Walnut Creek, CA 94597, USA | www.canadiansolar.com/na | sales.us@canadiansolar.com

SYSTEM/TECHNICAL DATA	
MODEL NAME	CSI-125KTL-GS-E
DC INPUT	
Max. PV Power	187.5 kW
Max. DC Input Voltage	1500 V _{DC}
Operating DC Input Voltage Range	860-1450 V _{DC}
Start-up DC Input Voltage/Power	900 V _{DC}
Number of MPP Trackers	1
Full Power MPPT Voltage Range	860-1300 V _{DC}
Operating Current (Imp)	150 A
Max. Input Current (Isc)	300 A
Number of DC Inputs	20
DC Disconnection Type	Load rated DC switch
AC OUTPUT	
Rated AC Output Power	125 kW
Max. AC Output Power	125 kW
Rated Output Voltage	600 V _{AC}
Operating Voltage Range*	528 - 660 V _{AC}
Grid Connection Type	3 Φ /PE
Nominal AC Output Current @600 Vac	120 A
Rated Output Frequency	60 Hz
Output Frequency Range*	55 - 65 Hz
Power Factor	1 default (\pm 0.8 adjustable)
Current THD	< 3 %
AC Disconnection Type	Load rated AC switch
SYSTEM	
Topology	Transformerless
Max. Efficiency	99.1 %
CEC Efficiency	98.6 %
Night Consumption	< 2 W
ENVIRONMENT	
Protection Degree	NEMA 4X (IP65)
Cooling	Intelligent Redundant Cooling
Operating Temperature Range	-13 ° F to + 140 ° F / -25 ° C to +60 ° C
Storage Temperature Range	-40 ° F to + 158 ° F / -40 ° C to +70 ° C
Operating Humidity	0 - 100 %
Operating Altitude	13,123.4 ft / 4000 m
Audible Noise	<55 dBA @ 1 m
DISPLAY AND COMMUNICATION	
Display	LED
Communication	Standard: RS485 (Modbus RTU), AND either MODBUS over ETHERNET
MECHANICAL DATA	
Dimensions (W / H / D)	46.3 x 28.1 x 12.4in / 1176 x 713.5 x 315mm
Weight	185lbs (84kg)
Installation Angle	Back tilt up to 15 degrees
DC Fuse Rating	20 A standard
SAFETY	
Safety and EMC Standard	UL1741 SA, UL1998, CSA-C22.2 No. 107.1-01, IEEE1547, FCC PART 15
Grid Standard	IEEE1547, Rule 21, ISO-NE
Smart-Grid Features	Voltage-Ride Thru, Frequency-Ride Thru, Soft-Start, Volt-Var, Frequency-Watt, Volt-Watt

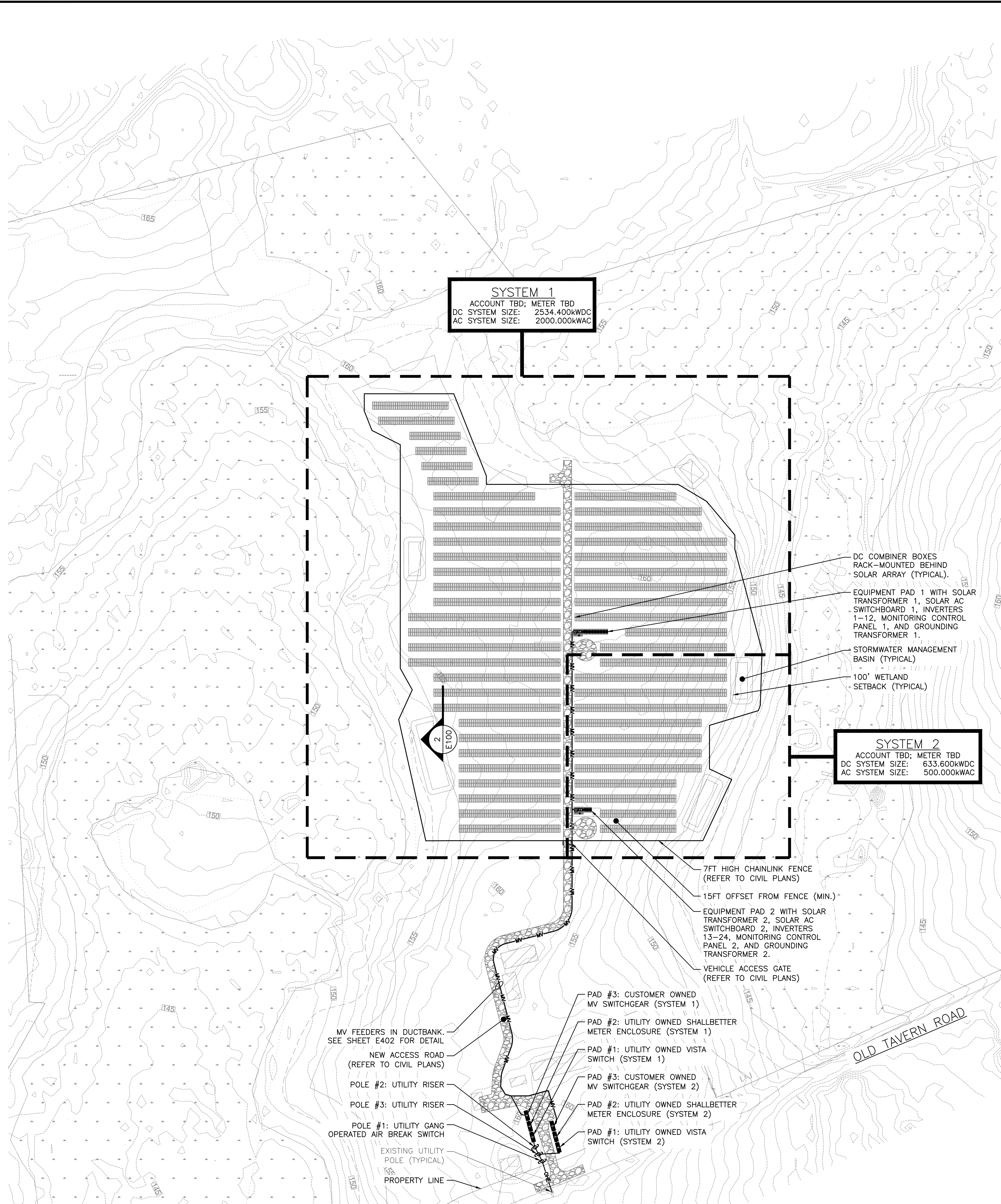
*The "Output Voltage Range" and "Output Frequency Range" may differ according to specific grid standard.

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV equipment requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the product.

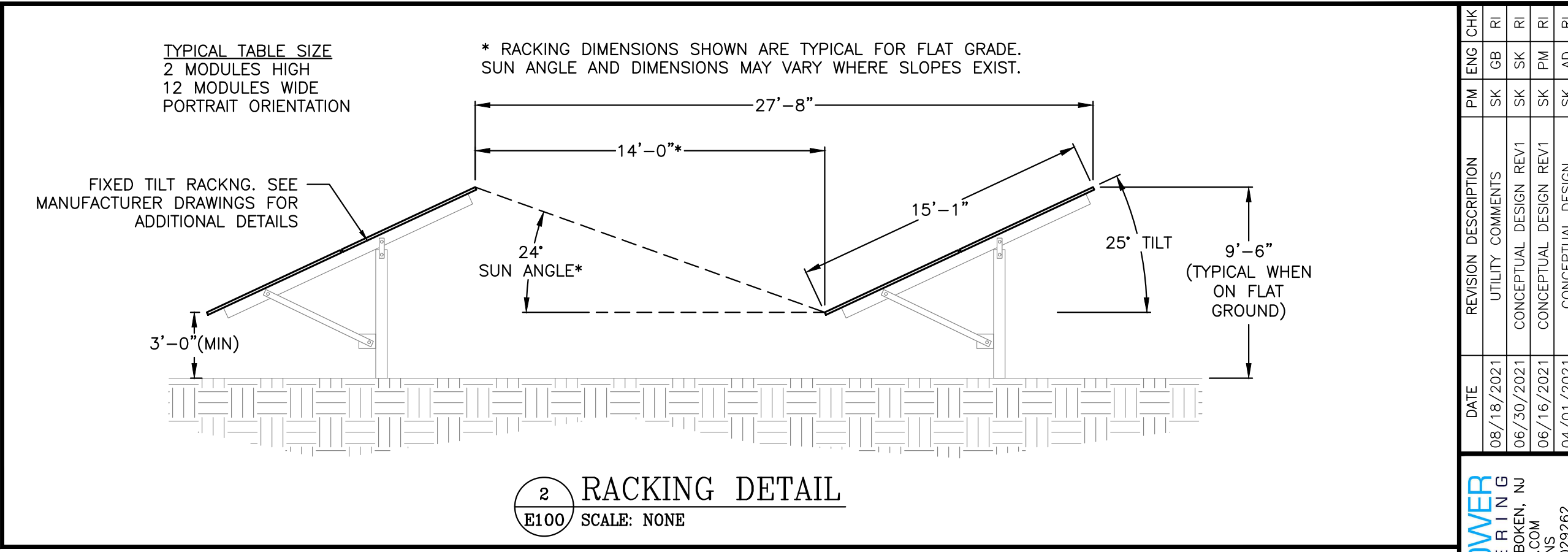
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PLOT DATE: 8/19/2021 1:22 PM



SYSTEM 1
 ACCOUNT TBD; METER TBD
 DC SYSTEM SIZE: 2534.400kWDC
 AC SYSTEM SIZE: 2000.000kWAC

SYSTEM 2
 ACCOUNT TBD; METER TBD
 DC SYSTEM SIZE: 633.600kWDC
 AC SYSTEM SIZE: 500.000kWAC



1 AC ELECTRICAL PLAN
 E100 SCALE: 1" = 100'-0"

LINETYPE LEGEND
 — MV CIRCUIT IN CONDUIT
 — OVERHEAD FEEDER

DRAWING TITLE	DRAWING #
AC ELECTRICAL PLAN	E100

 GREENSKIES 127 WASHINGTON AVENUE NORTH HAVEN, CT 06473 WWW.GREENSKIES.COM	DEVELOPER GREENSKIES a Clean Focus company	PROJECT # 01590.06	PAGE SIZE 3.6" x 24"	DC SYSTEM SIZE: 3,168,000 kW AC SYSTEM SIZE: 2,500,000 kW MODULE TYPE: HT72-18X 550W MODULE QUANTITY: 5,760 STRING QUANTITY: 240 ORIENTATION: 25° TILT, 0° AZIMUTH	DATE 08/18/2021 08/19/2021 08/16/2021 08/19/2021	REVISION DESCRIPTION UTILITY COMMENTS CONCEPTUAL DESIGN REV1 CONCEPTUAL DESIGN REV1 CONCEPTUAL DESIGN	PM ENG CHK SK CB RI SK CB RI SK CB RI SK CB RI SK AD RI
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PLOT DATE: 8/24/2021 1:15 PM

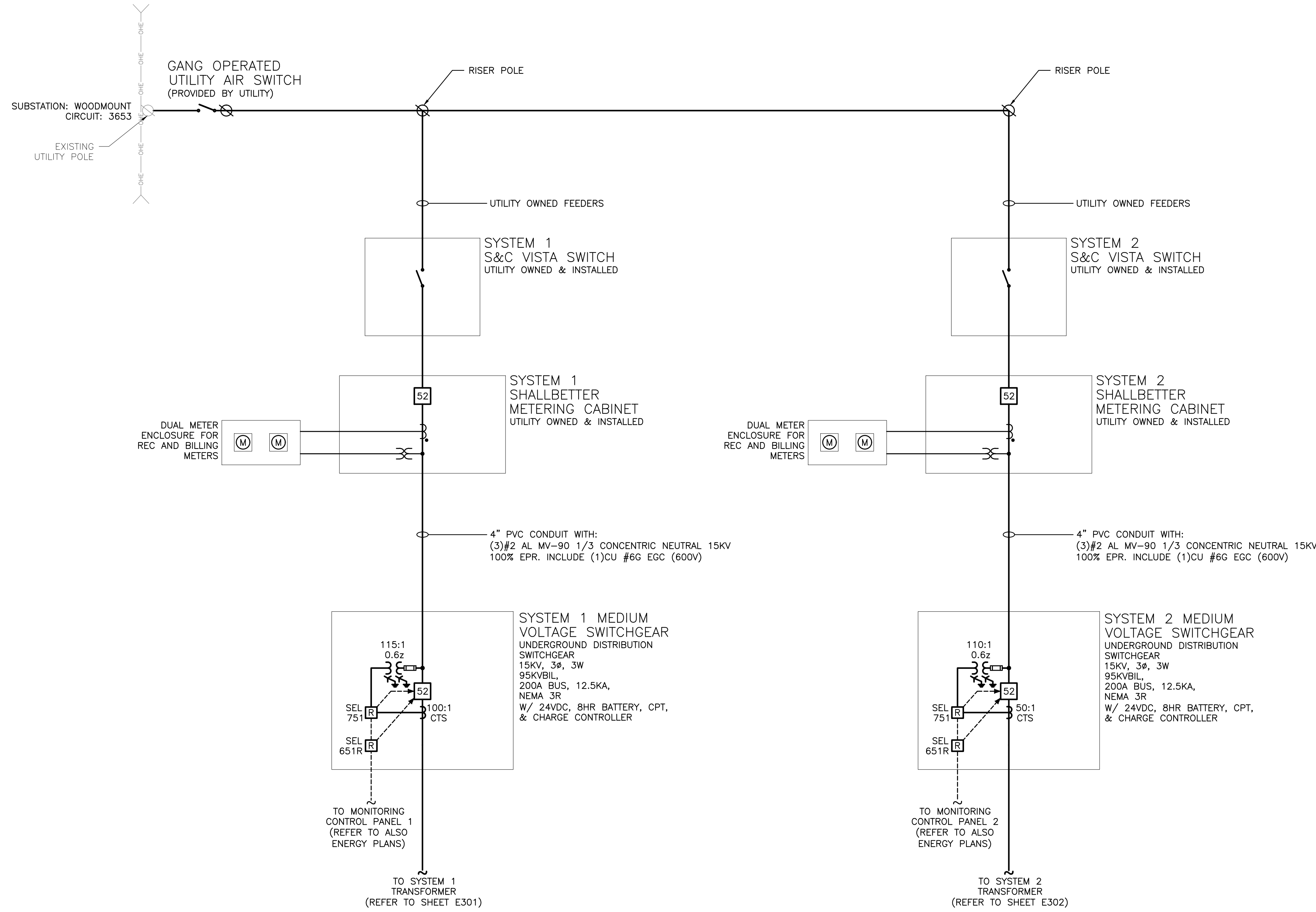
EXTERNAL RELAY SETTINGS								
ANSI ELEMENT #	Pickup	Real	Units	Level	Delay (sec)	Total Clear Time (sec)*	Curve	Description
27	60.96	7010	V	88%	1.95	2.00		Slow UV
27	34.64	3984	V	50%	1.05	1.10		Fast UV
27C	55.42	6373	V	80%				Voltage Pickup for 51C & 51CG
59	76.21	8764	V	110%	1.95	2.00		Slow OV
59	83.13	9560	V	120%	0.11	0.16		Fast OV
59N	9.00	1035	V	13%	1.95	2.00		Neutral Shift
81U-1	56.50	56.50	Hz	94%	0.11	0.16		Fast UF
81U-2	58.50	58.50	Hz	98%	299.95	300.00		Slow UF
81O-1	62.00	62.00	Hz	103%	0.11	0.16		Fast OF
81O-2	61.20	61.20	Hz	102%	299.95	300.00		Slow OF
51C	0.15	15	A	19%	1.95	2.00	U4	Voltage Controlled Phase OC
51CG	0.15	15	A	19%	1.45	1.50	U4	Voltage Controlled Ground OC
51N	0.20	20	A	25%	1.95	2.00	U4	Timed Neutral OC
50P	12.55	1255	A	1500%	0.00	0.05		Instant. Phase OC
51P	1.25	125	A	150%	1.95	2.00	U4	Timed Phase OC
79	65.81	7568	V	95%	299.95	300.00		Min Reclosing Voltage Value
79	72.74	8365	V	105%	299.95	300.00		Max Reclosing Voltage Value
79	59.50	59.50	Hz	99%	299.95	300.00		Min Reclosing Frequency Value
79	60.50	60.50	Hz	101%	299.95	300.00		Max Reclosing Frequency Value
83.67A USED FOR 50/51 ELEMENTS				7967.4V USED FOR 27/59 ELEMENTS				
CT RATIO FACTOR = 100				PT RATIO FACTOR = 115				
* total clear time includes 0.05 sec breaker opening time								

EXTERNAL RELAY SETTINGS								
ANSI ELEMENT #	Pickup	Real	Units	Level	Delay (sec)	Total Clear Time (sec)*	Curve	Description
27	60.96	7010	V	88%	1.95	2.00		Slow UV
27	34.64	3984	V	50%	1.05	1.10		Fast UV
27C	55.42	6373	V	80%				Voltage Pickup for 51C & 51CG
59	76.21	8764	V	110%	1.95	2.00		Slow OV
59	83.13	9560	V	120%	0.11	0.16		Fast OV
59N	9.00	1035	V	13%	1.95	2.00		Neutral Shift
81U-1	56.50	56.50	Hz	94%	0.11	0.16		Fast UF
81U-2	58.50	58.50	Hz	98%	299.95	300.00		Slow UF
81O-1	62.00	62.00	Hz	103%	0.11	0.16		Fast OF
81O-2	61.20	61.20	Hz	102%	299.95	300.00		Slow OF
51C	0.19	4	A	19%	1.95	2.00	U4	Voltage Controlled Phase OC
51CG	0.19	4	A	19%	1.45	1.50	U4	Voltage Controlled Ground OC
51N	0.26	5	A	25%	1.95	2.00	U4	Timed Neutral OC
50P	15.68	314	A	1500%	0.00	0.05		Instant. Phase OC
51P	1.56	31	A	150%	1.95	2.00	U4	Timed Phase OC
79	65.81	7568	V	95%	299.95	300.00		Min Reclosing Voltage Value
79	72.74	8365	V	105%	299.95	300.00		Max Reclosing Voltage Value
79	59.50	59.50	Hz	99%	299.95	300.00		Min Reclosing Frequency Value
79	60.50	60.50	Hz	101%	299.95	300.00		Max Reclosing Frequency Value
20.91A USED FOR 50/51 ELEMENTS				7967.4V USED FOR 27/59 ELEMENTS				
CT RATIO FACTOR = 20				PT RATIO FACTOR = 115				
* total clear time includes 0.05 sec breaker opening time								

OVERALL SYSTEM SUMMARY	
DC SYSTEM SIZE	3,168.000 KW
AC SYSTEM SIZE	2,500.000 KW / 2,500.000 KVA
NOMINAL VOLTAGE	13.8Y/7.97KV
OUTPUT CURRENT	104.58A
MODULE	HT-SAAE HT72-18X 550W
MODULE QTY	5,760
INVERTER	CANADIAN SOLAR CSI-125KTL
INVERTER QTY	20
AZIMUTH / TILT	0° / 25°
UTILITY	UNITED ILLUMINATING

2 RELAY SETTING SYSTEM 1
E300 SCALE: NONE

3 RELAY SETTING SYSTEM 2
E300 SCALE: NONE



1 ONE LINE DIAGRAM - MEDIUM VOLTAGE
E300 SCALE: NONE

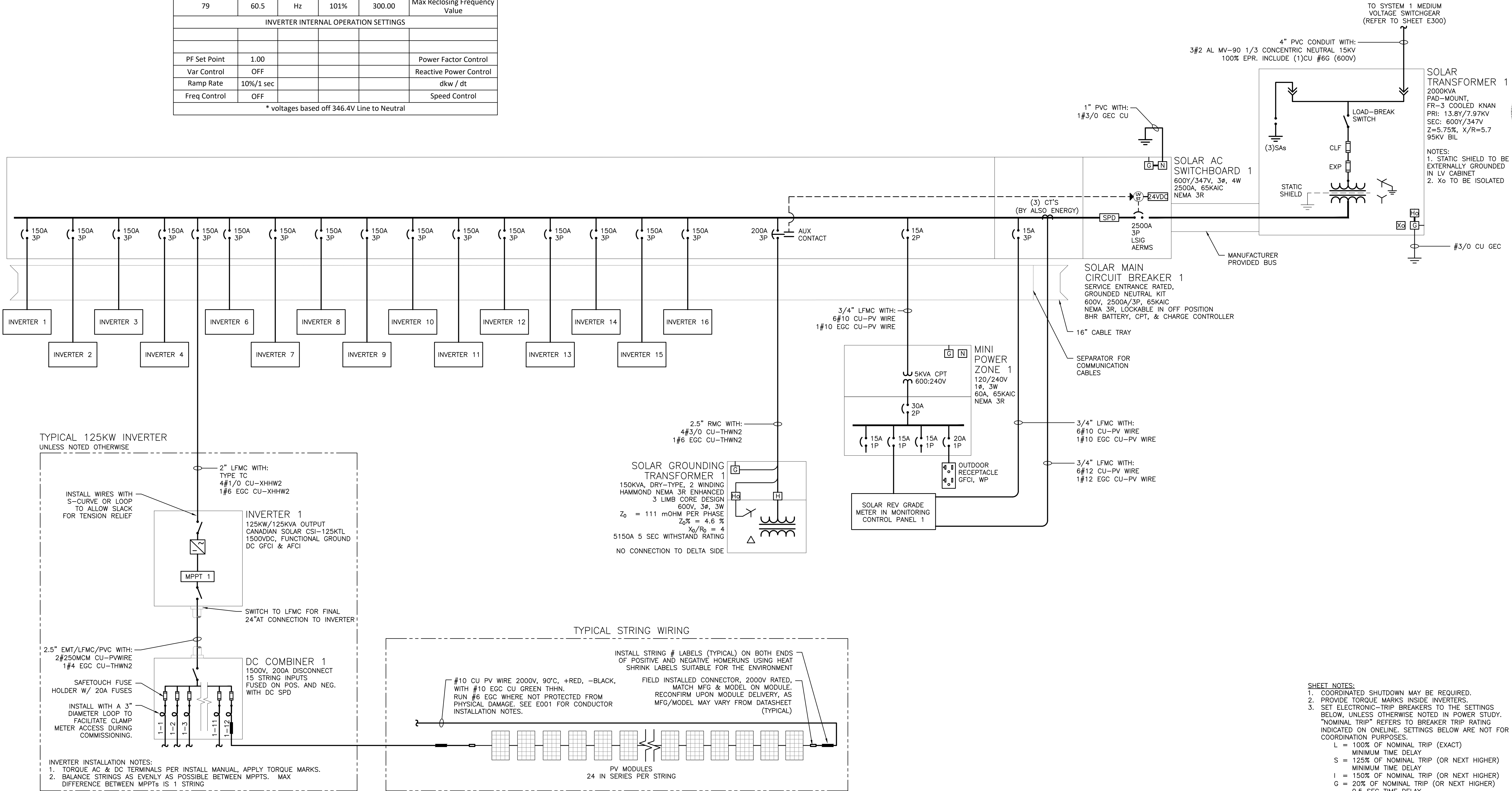
DRAWING TITLE	DRAWING #
ONE LINE DIAGRAM MEDIUM VOLTAGE	E300

PROJECT: GROUND MOUNT SYSTEM AT ORANGE FARM 361 OLD TAVERN ROAD ORANGE, CT 06477
 DRAWING # E300
 PROJECT # 01590.06
 PAGE SIZE 36" x 24"
 DEVELOPER Greenskies a CleanFocus company
 GREENSKIES 127 WASHINGTON AVENUE NORTH HAVEN, CT 06473 WWW.GREENSKIES.COM
 PURE POWER 111 RIVER STREET WATERBURY, VT 05671 WWW.PUREPOWER.COM
 DATE 08/18/2021 08/19/2021 08/19/2021
 REVISION DESCRIPTION SK GB RI SK GB RI SK GB RI SK GB RI
 UTILITY COMMENTS CONCEPTUAL DESIGN REVISIONS CONCEPTUAL DESIGN
 CT LICENSE NO. 00828262
 DC SYSTEM SIZE: 3,168.000 KW
 AC SYSTEM SIZE: 2,500.000 KW
 MODULE TYPE: HT72-18X 550W
 MODULE QUANTITY: 5,760
 STRING QUANTITY: 240
 ORIENTATION: 25° TILT, 0° AZIMUTH

INVERTER INTERNAL PROTECTIVE SETTINGS: UL1741-SA COMPLIANT					
ANSI ELEMENT #	Pickup	Units*	Level	Total Clear Time (sec)	Description
27	304.8	V	88%	2.00	Slow UV
27	173.2	V	50%	1.10	Fast UV
59	381.1	V	110%	2.00	Slow OV
59	415.7	V	120%	0.16	Fast OV
81U-1	56.50	Hz	94%	0.16	Fast UF
81U-2	58.50	Hz	98%	300.00	Slow UF
81O-1	62.00	Hz	103%	0.16	Fast OF
81O-2	61.20	Hz	102%	300.00	Slow OF
79	329.1	V	95%	300.00	Min Reclosing Voltage Value
79	363.7	V	105%	300.00	Max Reclosing Voltage Value
79	59.6	Hz	99%	300.00	Min Reclosing Frequency Value
79	60.5	Hz	101%	300.00	Max Reclosing Frequency Value
INVERTER INTERNAL OPERATION SETTINGS					
PF Set Point	1.00				Power Factor Control
Var Control	OFF				Reactive Power Control
Ramp Rate	10%/1 sec				dkw / dt
Freq Control	OFF				Speed Control

* voltages based off 346.4V Line to Neutral

SYSTEM 1 SUMMARY	
DC SYSTEM SIZE	2,534.400 KW
AC SYSTEM SIZE	2,000.000 KW / 2,000.000 KVA
NOMINAL VOLTAGE	13.8Y/7.97KV
OUTPUT CURRENT	83.67A
MODULE	ST-SAAE GT72-18X 550W
MODULE QTY	4,608
INVERTER	CANADIAN SOLAR CSI-125KTL
INVERTER QTY	16
AZIMUTH / TILT	0° / 25°
UTILITY	UNITED ILLUMINATING



PURE POWER
111 SWING STREET, EUREKA, CA 95501
WWW.PUREPOWER.COM
CT LICENSE NO. 0529262

GREENSKIES
127 WASHINGTON AVENUE
NORTH HAVEN, CT 06473
WWW.GREENSKIES.COM

DEVELOPER: Greenskies a Clean Focus company

DC SYSTEM SIZE: 3,168,000 KW
AC SYSTEM SIZE: 2,500,000 KW
MODULE TYPE: HT72-18X 550W
STRING QUANTITY: 5,760
ORIENTATION: 25° TILT, 0° AZIMUTH

PROJECT: GROUND MOUNT SYSTEM AT ORANGE FARM 361 OLD TAVERN ROAD ORANGE, CT 06477

DATE: 08/18/2021
REVISION DESCRIPTION: UTILITY COMMENTS: CONCEPTUAL DESIGN REVISION
DATE: 08/19/2021
REVISION DESCRIPTION: UTILITY COMMENTS: CONCEPTUAL DESIGN REVISION
DATE: 08/19/2021
REVISION DESCRIPTION: UTILITY COMMENTS: CONCEPTUAL DESIGN REVISION

FIG. DATE: 8/19/2021, 1:22 PM

RULER IN INCHES: 0, .5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

1 ONE LINE DIAGRAM - SYSTEM 1
E301 SCALE: NONE

DRAWING TITLE: ONE LINE DIAGRAM SYSTEM 1
DRAWING #: E301

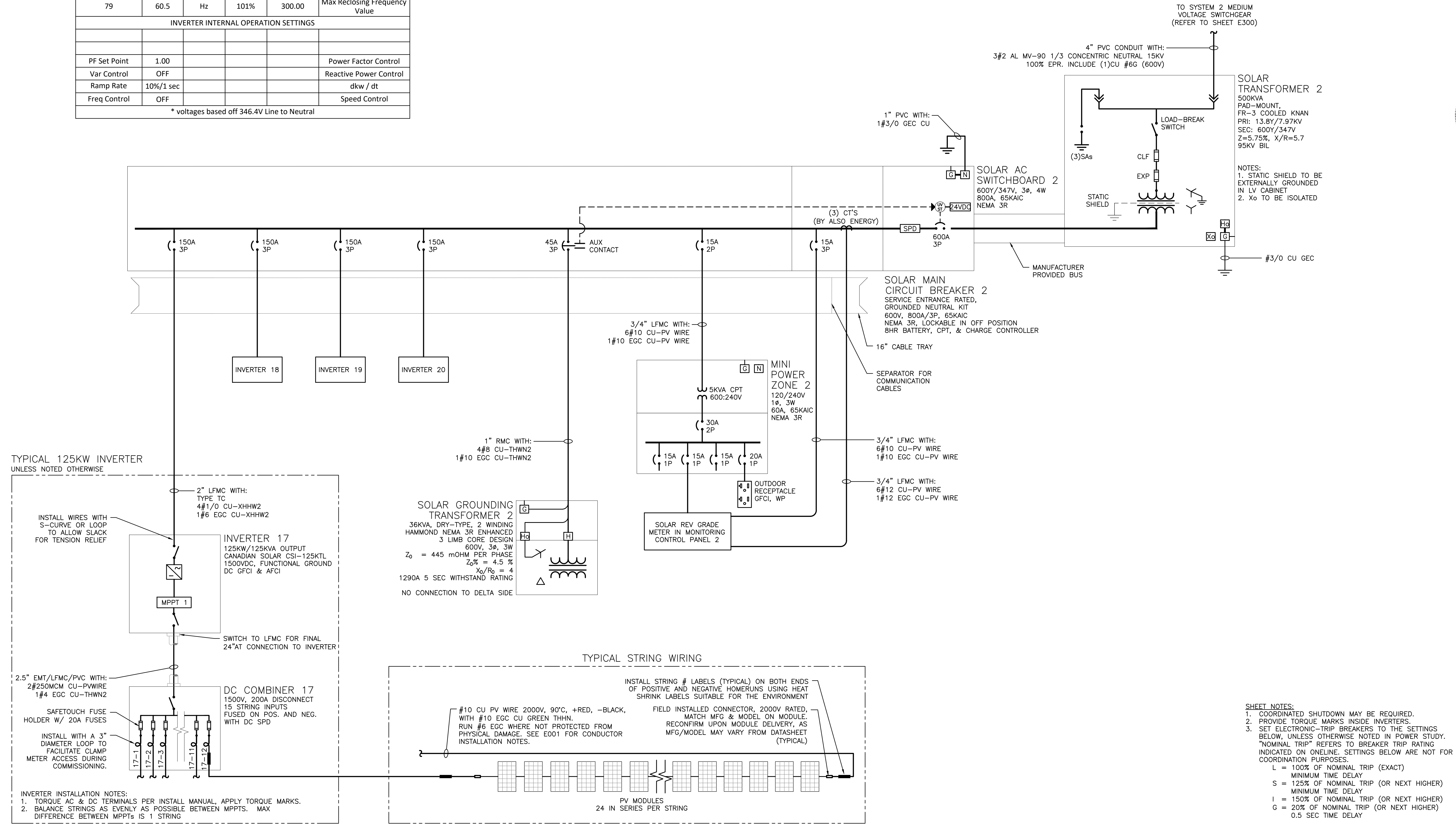
- SHEET NOTES:**
- COORDINATED SHUTDOWN MAY BE REQUIRED.
 - PROVIDE TORQUE MARKS INSIDE INVERTERS.
 - SET ELECTRONIC-TRIP BREAKERS TO THE SETTINGS BELOW, UNLESS OTHERWISE NOTED IN POWER STUDY. "NOMINAL TRIP" REFERS TO BREAKER TRIP RATING INDICATED ON ONELINE. SETTINGS BELOW ARE NOT FOR COORDINATION PURPOSES.
L = 100% OF NOMINAL TRIP (EXACT) MINIMUM TIME DELAY
S = 125% OF NOMINAL TRIP (OR NEXT HIGHER) MINIMUM TIME DELAY
I = 150% OF NOMINAL TRIP (OR NEXT HIGHER)
G = 20% OF NOMINAL TRIP (OR NEXT HIGHER) 0.5 SEC TIME DELAY

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

INVERTER INTERNAL PROTECTIVE SETTINGS: UL1741-SA COMPLIANT					
ANSI ELEMENT #	Pickup	Units*	Level	Total Clear Time (sec)	Description
27	304.8	V	88%	2.00	Slow UV
27	173.2	V	50%	1.10	Fast UV
59	381.1	V	110%	2.00	Slow OV
59	415.7	V	120%	0.16	Fast OV
81U-1	56.50	Hz	94%	0.16	Fast UF
81U-2	58.50	Hz	98%	300.00	Slow UF
81O-1	62.00	Hz	103%	0.16	Fast OF
81O-2	61.20	Hz	102%	300.00	Slow OF
79	329.1	V	95%	300.00	Min Reclosing Voltage Value
79	363.7	V	105%	300.00	Max Reclosing Voltage Value
79	59.6	Hz	99%	300.00	Min Reclosing Frequency Value
79	60.5	Hz	101%	300.00	Max Reclosing Frequency Value
INVERTER INTERNAL OPERATION SETTINGS					
PF Set Point	1.00				Power Factor Control
Var Control	OFF				Reactive Power Control
Ramp Rate	10%/1 sec				dkw / dt
Freq Control	OFF				Speed Control

* voltages based off 346.4V Line to Neutral

SYSTEM 2 SUMMARY	
DC SYSTEM SIZE	633.600 KW
AC SYSTEM SIZE	500.000 KW / 500.000 KVA
NOMINAL VOLTAGE	13.8Y/7.97KV
OUTPUT CURRENT	20.91A
MODULE	HT-SAAE HT72-18X 550W
MODULE QTY	1,152
INVERTER	CANADIAN SOLAR CSI-125KTL
INVERTER QTY	4
AZIMUTH / TILT	0° / 25°
UTILITY	UNITED ILLUMINATING



1 ONE LINE DIAGRAM - SYSTEM 2
E302 SCALE: NONE

DRAWING TITLE: ONE LINE DIAGRAM SYSTEM 2
DRAWING #: E302

PROJECT: GROUND MOUNT SYSTEM AT ORANGE FARM, 361 OLD TAVERN ROAD, ORANGE, CT 06477
 DC SYSTEM SIZE: 3,168,000 KW
 AC SYSTEM SIZE: 2,500,000 KW
 MODULE TYPE: HT72-18X 550W
 STRING QUANTITY: 5,760
 ORIENTATION: 25° TILT, 0° AZIMUTH
 PAGE SIZE: 3.6" x 24"
 PROJECT #: 01590.06
 DEVELOPER: Greenskies, a CleanFocus company
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 111 BOWER STREET, EUREKA, CA 95631
 WWW.PUREPOWER.COM
 RICHARD A. VINSKY
 04/09/2021
 CT LICENSE No. 0582862
 PURE POWER
 REVISION DESCRIPTION: SK GB RI
 DATE: 08/18/2021
 UTILITY COMMENTS: SK GB RI
 CONCEPTUAL DESIGN REVISION: SK SK RI
 CONCEPTUAL DESIGN: SK AD RI