PROJECT DESCRIPTION:

24 X 400 HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400 MODULES
GROUND MOUNTED SOLAR PHOTOVOLTAIC MODULES

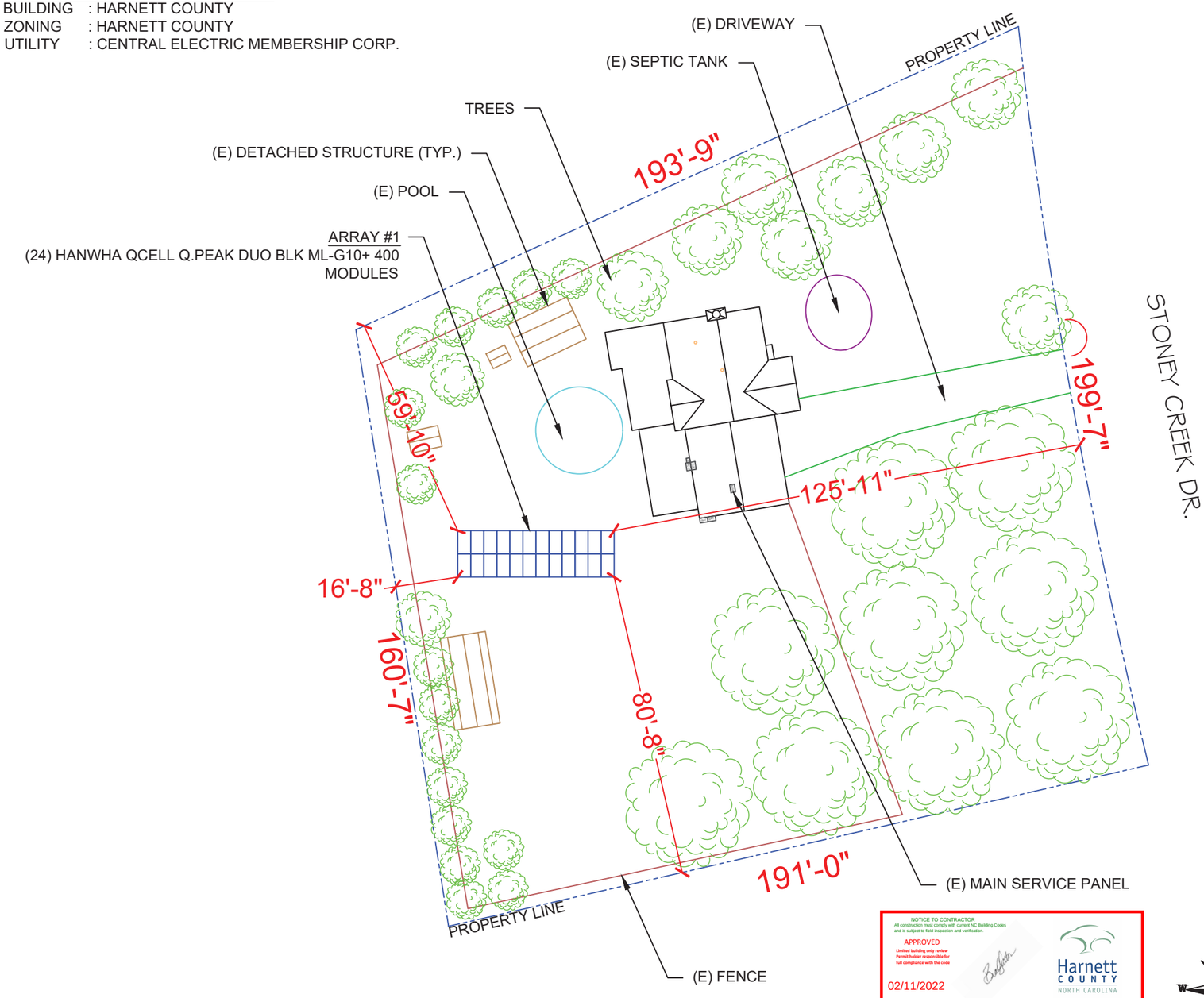
SYSTEM SIZE:9.60 kW DC STC
ARRAY AREA: #1 - 506.88 SQ FT

AUTHORITIES HAVING JURISDICTION
BUILDING : HARNETT COUNTY
ZONING : HARNETT COUNTY
UTILITY : CENTRAL ELECTRIC MEMBERSHIP CORP.

DESIGN SPECIFICATION
OCCUPANCY: II
CONSTRUCTION: SINGLE-FAMILY
FIRE: RESIDENTIAL
GROUND SNOW LOAD: 10 LB/S
WIND EXPOSURE: B
WIND SPEED: 117 MPH

EQUIPMENT SUMMARY
24 HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400 MODULES
04 GENERAC PV LINK S2502 POWER OPTIMIZERS
01 GENERAC PWRCELL XVT076A03 (7.6KW) INVERTER

APPLICABLE CODES & STANDARDS
NORTH CAROLINA RESIDENTIAL CODE 2018
NEC 2017



NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
02/11/2022
Harnett COUNTY NORTH CAROLINA

NOTE: GROUNDMOUNT LOCATION TBD ON-SITE

1 PLOT PLAN & VICINITY MAP
PV-1 SCALE: 1/32" = 1'-0"

2 HOUSE PHOTO
PV-1 SCALE: NTS

3 VICINITY MAP
PV-1 SCALE: NTS

SHEET INDEX

PV-1	PLOT PLAN & VICINITY MAP
PV-2	ROOF PLAN & MODULES
PV-2A	STRING LAYOUT
PV-3	RACKING DETAILS
PV-3A	RACKING DETAILS
PV-3B	RACKING DETAILS
PV-4	ELECTRICAL LINE DIAGRAM
PV-5	WIRING CALCULATIONS
PV-6 to 11	EQUIPMENT SPECIFICATIONS

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Email: info@powerhome.com
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REVISIONS

DESCRIPTION	DATE	REV

Signature with Seal

DATE:02/03/2022

PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

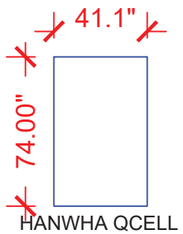
SHEET NAME
PLOT PLAN & VICINITY MAP

SHEET SIZE
ANSI B
11" X 17"

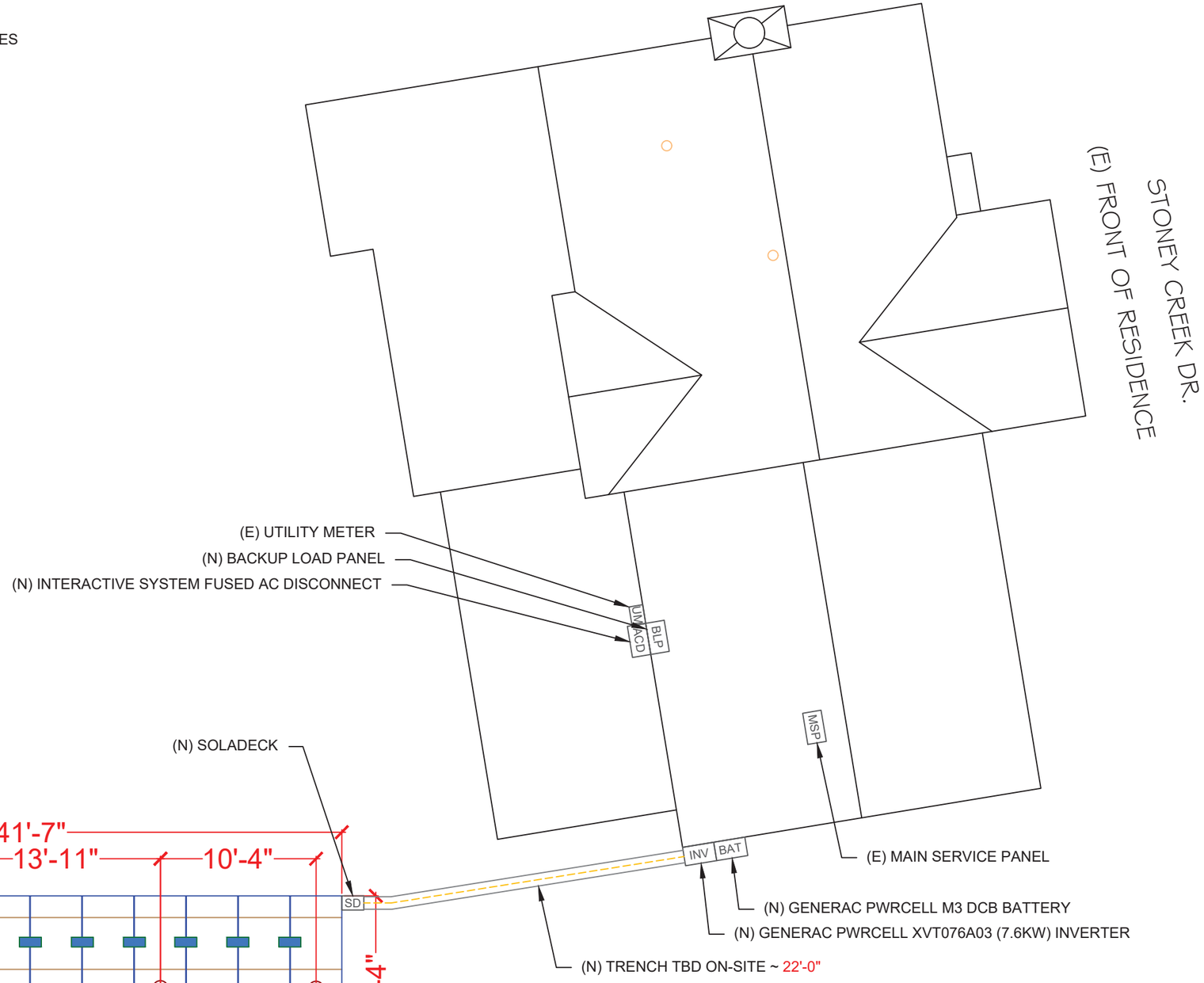
SHEET NUMBER
PV-1

MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 24 MODULES
MODULE TYPE = HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400 MODULES
MODULE WEIGHT = 48.5 LBS / 22.0 KG.
MODULE DIMENSIONS = 74.00"x 41.1" = 21.12 SF
UNIT WEIGHT OF ARRAY = 2.30 PSF



HANWHA QCELL
Q.PEAK DUO BLK
ML-G10+ 400
MODULES



ON- SITE CUSTOMER APPROVAL: _____

LEGEND

- SD - SOLADECK
- INV - INVERTER
- BLP - BACKUP LOAD PANEL
- MSP - MAIN SERVICE PANEL
- BAT - BATTERY
- OP - PV LINK OPTIMIZER
- ACD - INTERACTIVE SYSTEM AC DISCONNECT
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- ROOF ATTACHMENT
- RAFTERS
- CONDUIT
- RAPID SHUTDOWN

1 ROOF PLAN & MODULES

PV-2 SCALE: 1/8" = 1'-0"

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Signature with Seal

DATE:02/03/2022

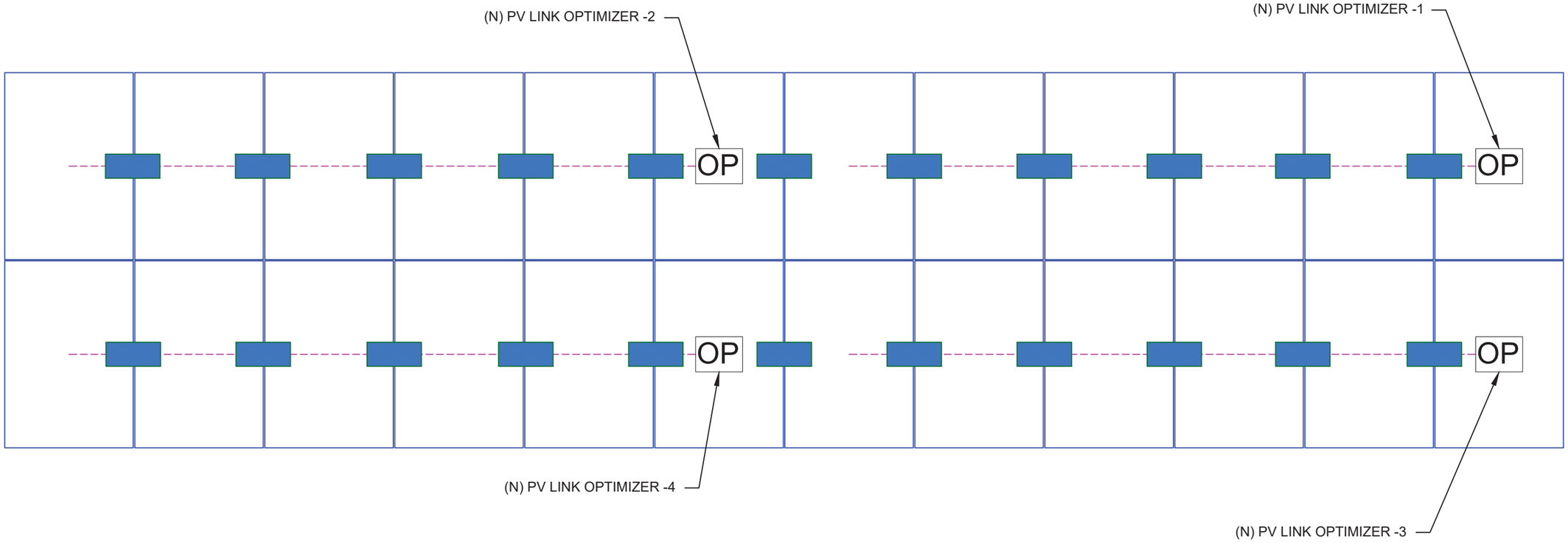
PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
ROOF PLAN & MODULES

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-2



1 STRING LAYOUT

PV-2A

SCALE: 1/3" = 1'-0"

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DATE:02/03/2022

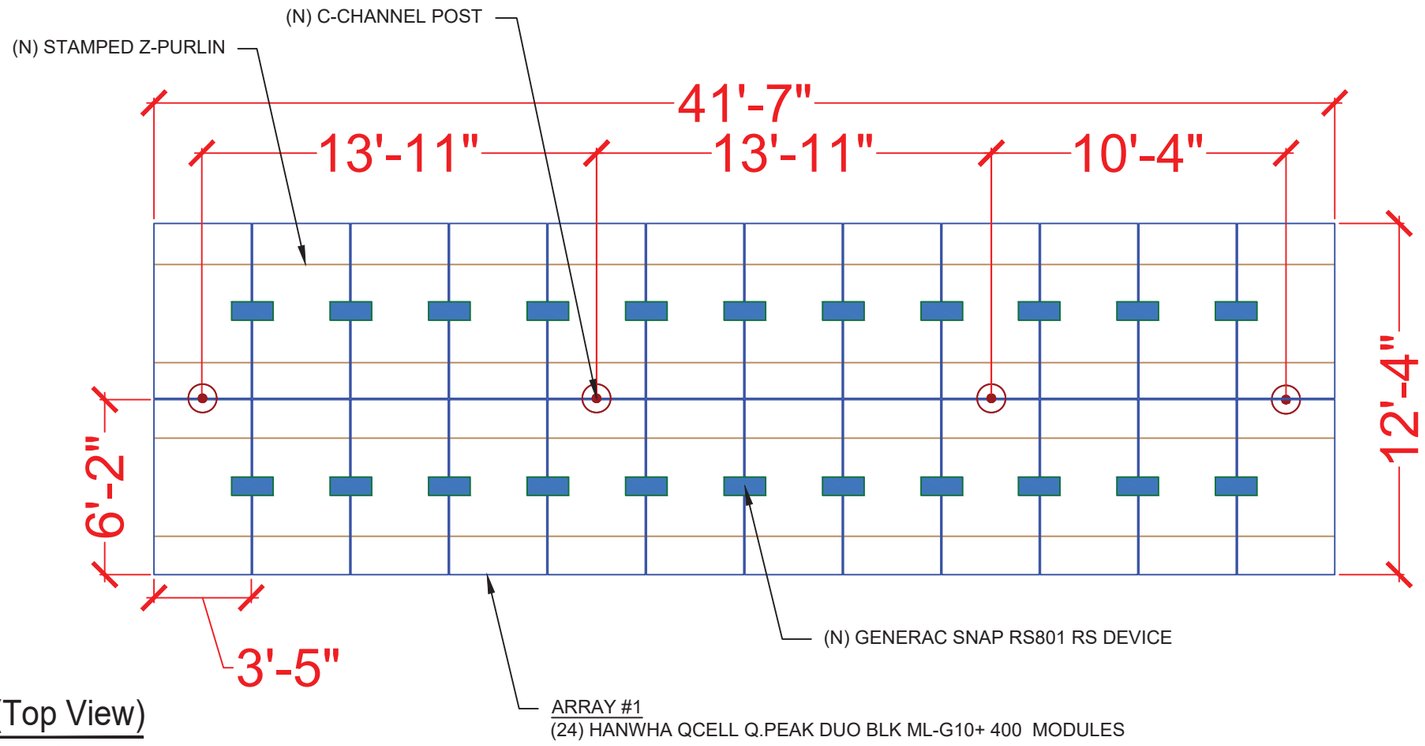
PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
STRING LAYOUT

SHEET SIZE
ANSI B
11" X 17"

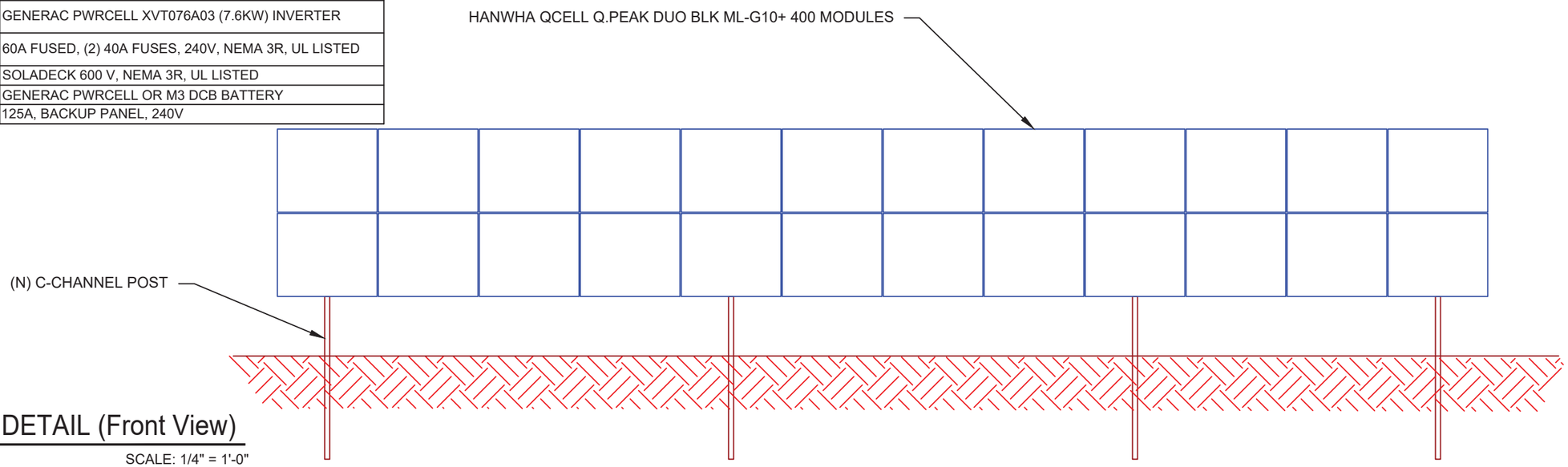
SHEET NUMBER
PV-2A



1 RACKING DETAIL (Top View)

PV-3 SCALE: 3/16" = 1'-0"

BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	24	HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400 MODULES
OPTIMIZER	4	GENERAC PV LINK S2502 POWER OPTIMIZERS
GENERAC SNAP RS	24	GENERAC SNAPRS MODEL RS801
INVERTER	01	GENERAC PWRCELL XVT076A03 (7.6KW) INVERTER
INTERACTIVE SYSTEM AC DISCONNECT	1	60A FUSED, (2) 40A FUSES, 240V, NEMA 3R, UL LISTED
SOLADECK	1	SOLADECK 600 V, NEMA 3R, UL LISTED
BATTERY	1	GENERAC PWRCELL OR M3 DCB BATTERY
BACKUP PANEL	1	125A, BACKUP PANEL, 240V



2 RACKING DETAIL (Front View)

PV-3 SCALE: 1/4" = 1'-0"

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REVISIONS

DESCRIPTION	DATE	REV

NORTH CAROLINA PROFESSIONAL SEAL 43963 ENGINEER JERMEY L. POWERS

Signature with Seal

DATE: 02/03/2022

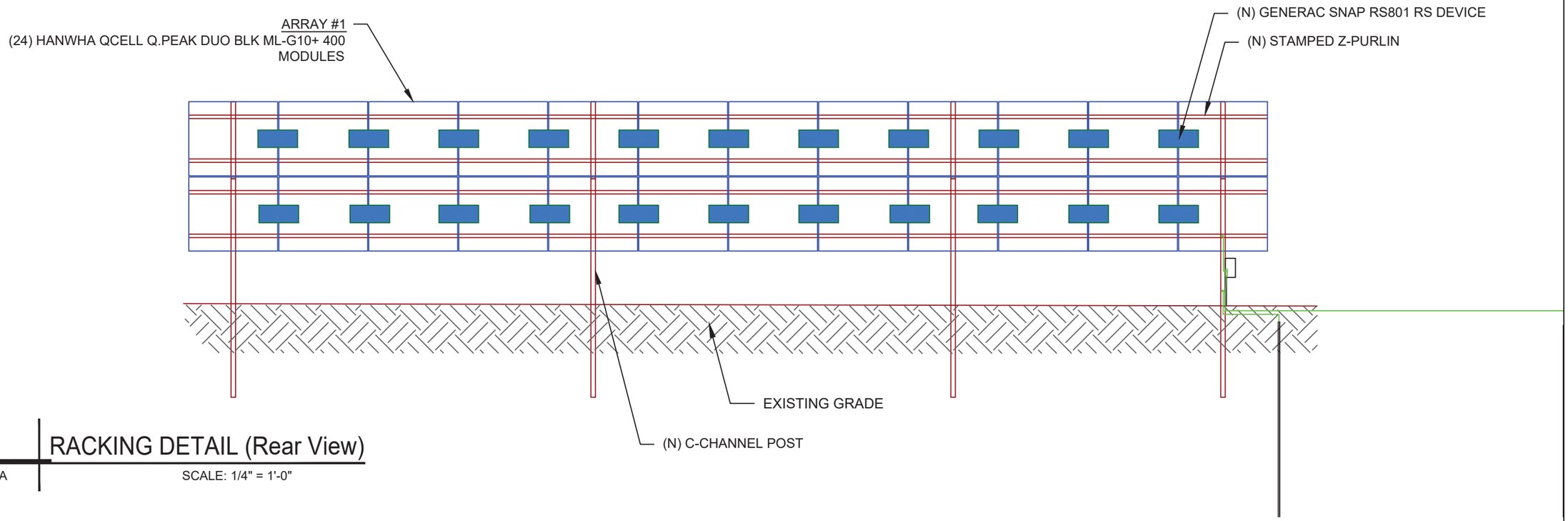
PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
RACKING DETAIL

SHEET SIZE
ANSI B
11" X 17"

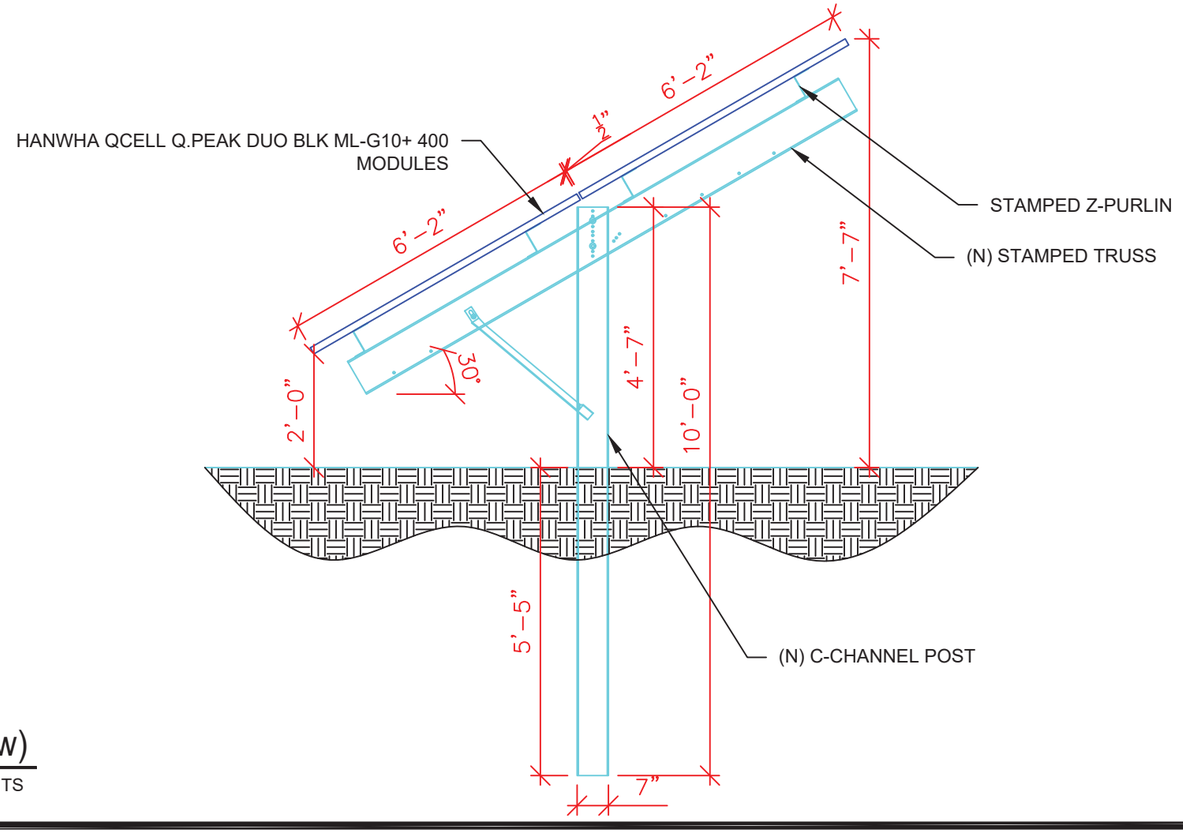
SHEET NUMBER
PV-3



1 RACKING DETAIL (Rear View)

PV-3A SCALE: 1/4" = 1'-0"

Column -	C3.9x6.9x.14
Main -	C3.9x6.9x.12
Purlin -	Z5.15x2.1x0.12
Main Beam Column Connection	
(2) Diameter 3/4 Bolts	
Purlin to Main Beam Connection	
(1) Diameter 3/4 Bolts	



2 RACKING DETAIL (Side View)

PV-3A SCALE: NTS

IBC 2015		
1603.1.1 Floor Live Load	N/A	
1603.1.2 Roof Live Load	20	psf
1603.1.3 Roof Snow Load		
P_g =	15	psf
P_f =	9.07	psf
C_e =	0.9	
I_S =	0.80	
C_t =	1.2	
1603.1.4 Wind Load		
V=	105	MPH
I_w =	1.00	
Exposure =	C	
1603.1.5 Earthquake Design Data		
S_{Ds} =	0.204	
S_{D1} =	0.142	
Site Class =	D	
I_e =	1.00	
SDC =	C	
Base Shear V =	20.57	lb
Soil Assumed to be Stiff		

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NORTH CAROLINA PROFESSIONAL SEAL 43963 ENGINEER JERMEY L. ROWERS

Signature with Seal

DATE: 02/03/2022

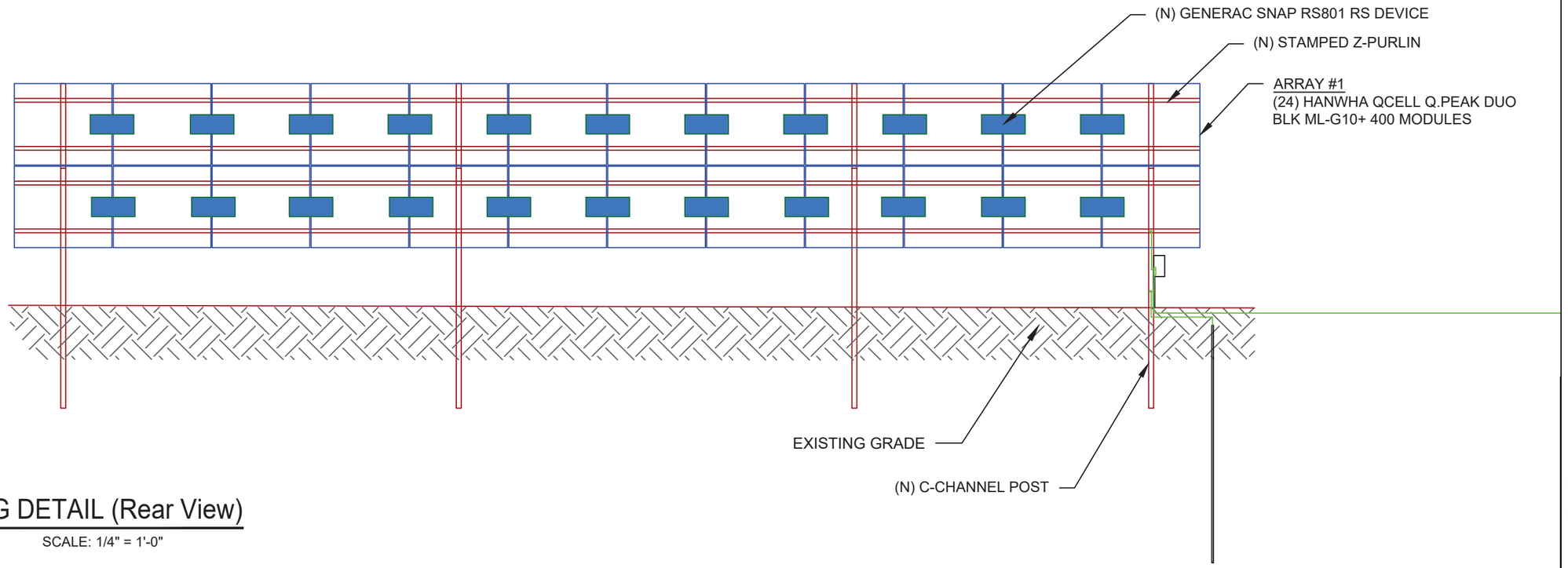
PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR. RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
RACKING DETAIL

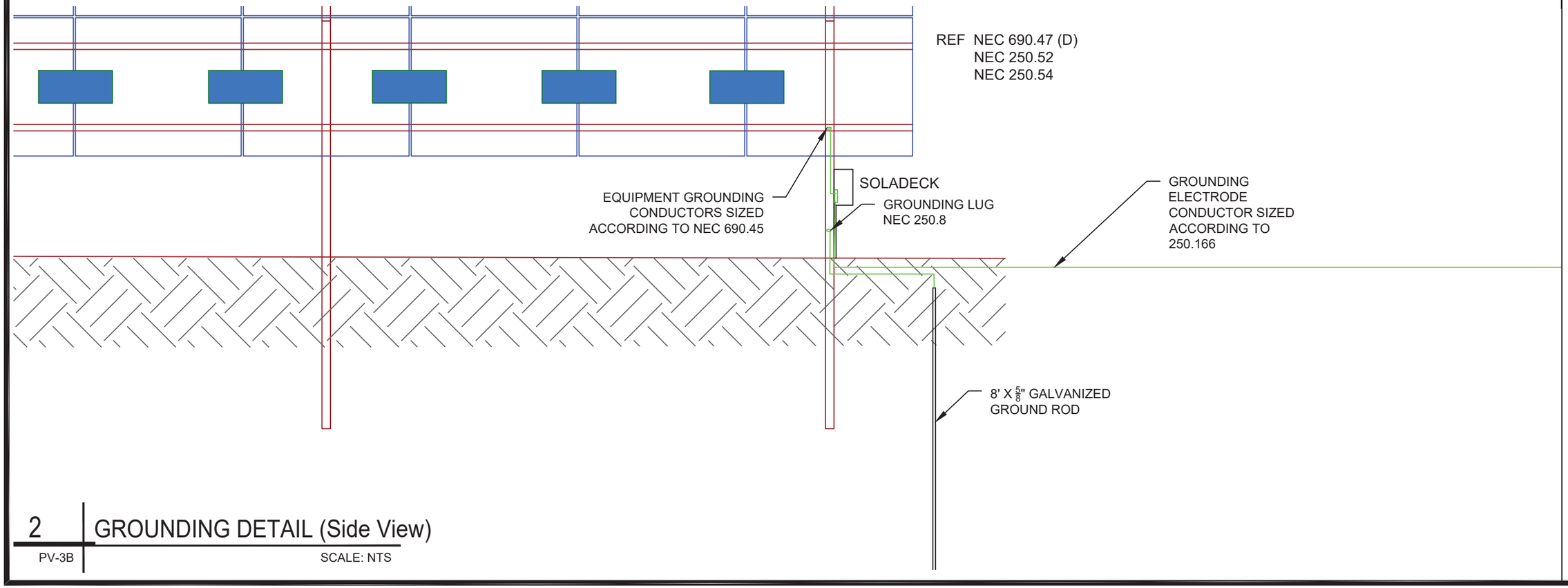
SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-3A



1 RACKING DETAIL (Rear View)

PV-3B SCALE: 1/4" = 1'-0"



2 GROUNDING DETAIL (Side View)

PV-3B SCALE: NTS

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REVISIONS

DESCRIPTION	DATE	REV

NORTH CAROLINA PROFESSIONAL SEAL 43963 ENGINEER JERMEY L. ROWERS

Signature with Seal

DATE: 02/03/2022

PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR. RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
RACKING DETAIL

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-3B

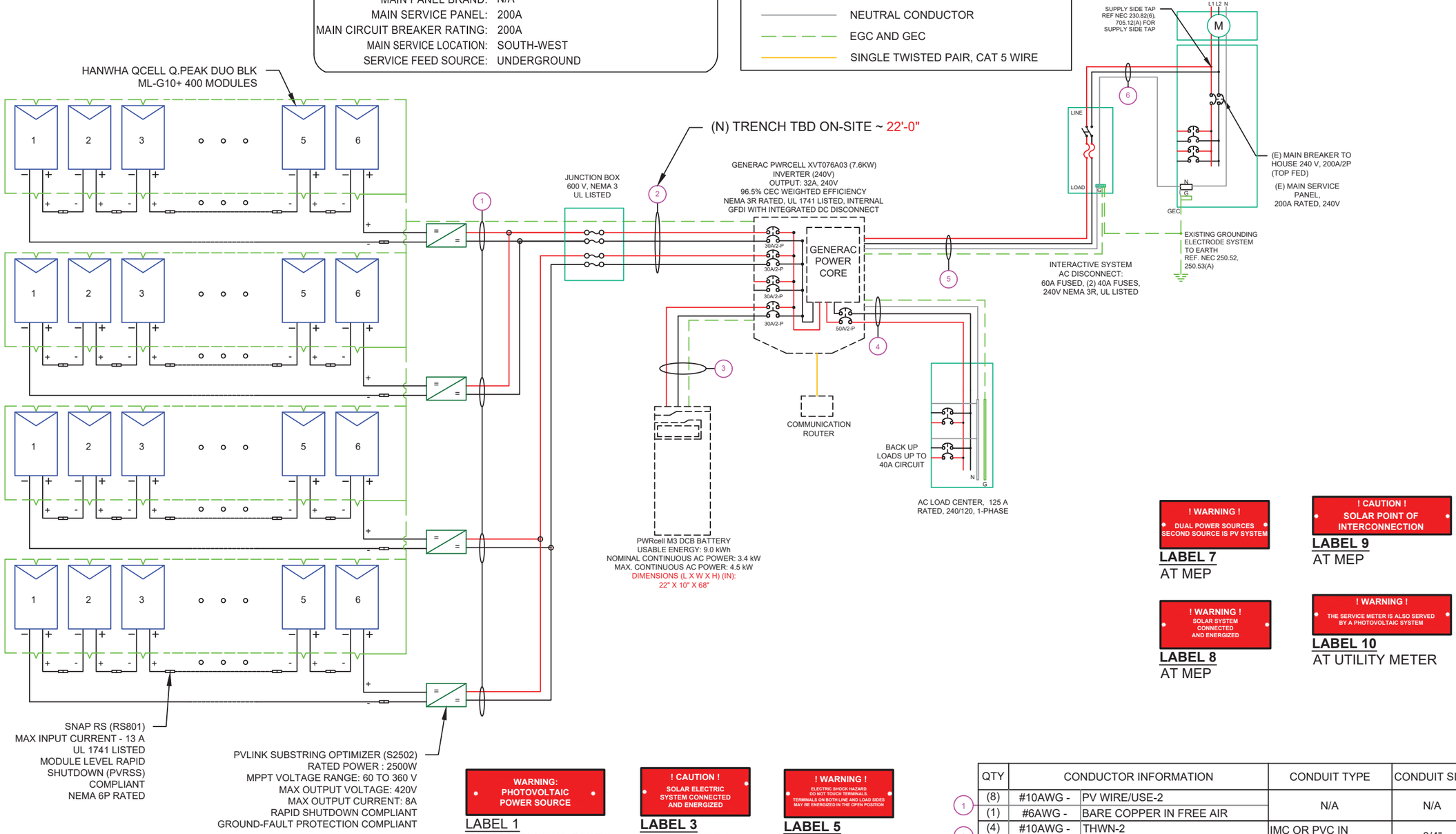
(24) HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400 MODULES
(4) PV LINKS OF 6 MODULES CONNECTED IN SERIES
TOTAL AC SYSTEM SIZE: 7.6kW
TOTAL DC SYSTEM SIZE: 9.6kW

SERVICE INFO

UTILITY PROVIDER:	CENTRAL ELECTRIC MEMBERSHIP CORP.
MAIN SERVICE VOLTAGE:	240V
MAIN PANEL BRAND:	N/A
MAIN SERVICE PANEL:	200A
MAIN CIRCUIT BREAKER RATING:	200A
MAIN SERVICE LOCATION:	SOUTH-WEST
SERVICE FEED SOURCE:	UNDERGROUND

WIRE LEGEND

- PV ARRAY +VE CONDUCTOR AND L1
- PV ARRAY -VE CONDUCTOR AND L2
- NEUTRAL CONDUCTOR
- EGC AND GEC
- SINGLE TWISTED PAIR, CAT 5 WIRE



! WARNING !
DUAL POWER SOURCES
SECOND SOURCE IS PV SYSTEM

LABEL 7
AT MEP

! CAUTION !
SOLAR POINT OF
INTERCONNECTION

LABEL 9
AT MEP

! WARNING !
SOLAR SYSTEM
CONNECTED
AND ENERGIZED

LABEL 8
AT MEP

! WARNING !
THE SERVICE METER IS ALSO SERVED
BY A PHOTOVOLTAIC SYSTEM

LABEL 10
AT UTILITY METER

WARNING:
PHOTOVOLTAIC
POWER SOURCE

LABEL 1
ON ALL PV CONDUITS
SPACED AT MAX 10FT

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

LABEL 2
AT INVERTER

! CAUTION !
SOLAR ELECTRIC
SYSTEM CONNECTED
AND ENERGIZED

LABEL 3
AT INVERTER

PHOTOVOLTAIC
DC DISCONNECT

LABEL 4
AT EACH DC
DISCONNECT

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

LABEL 5
AT EACH AC
DISCONNECT

PHOTOVOLTAIC
AC
DISCONNECT

LABEL 6
AT EACH AC
DISCONNECT

	QTY	CONDUCTOR INFORMATION		CONDUIT TYPE	CONDUIT SIZE
1	(8)	#10AWG -	PV WIRE/USE-2	N/A	N/A
	(1)	#6AWG -	BARE COPPER IN FREE AIR		
2	(4)	#10AWG -	THWN-2	IMC OR PVC IN TRENCH/ LFNC	3/4"
	(1)	#6AWG -	THWN-2 GND		
3	(2)	#10AWG -	THWN-2	EMT OR FLEX	3/4"
	(1)	#10AWG -	THWN-2 GND		
4	(3)	#6AWG -	THWN-2	EMT OR FLEX	3/4"
	(1)	#6AWG -	THWN-2 GND		
5	(3)	#6AWG -	THWN-2	EMT OR FLEX	3/4"
	(1)	#6AWG -	THWN-2 GND		
6	(3)	#6AWG -	THWN-2	EMT OR FLEX	3/4"

1 ELECTRICAL LINE DIAGRAM
PV-4 SCALE: NTS

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REVISIONS

DESCRIPTION	DATE	REV

Signature with Seal

DATE:02/03/2022

PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
ELECTRICAL LINE DIAGRAM

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-4

SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	HANWHA QCELL Q.PEAK DUO BLK ML-G10+ 400
VMP	37.13V
IMP	10.77A
VOC	45.30V
ISC	11.14A
TEMP. COEFF. VOC	-0.27%/°C
PTC RATING	376.56W
MODULE DIMENSION	74.00"L x 41.1"W x 1.26"D (In Inch)

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	GENERAC PWRCELL XVT076A03 (7.6KW)
AC POWER OUTPUT (LOADS/GRID)	7600VA
AC POWER OUTPUT (BACKUP)	8000VA
NOMINAL OUTPUT VOLTAGE	240 VAC
MAX OUTPUT CURRENT @240V (LOADS/GRID)	32A
MAX OUTPUT CURRENT @240V (BACKUP)	50A
NOMINAL DC INPUT VOLTAGE	380Vdc
MAX DC INPUT VOLTAGE	420Vdc
CEC WEIGHTED EFFICIENCY	96.5%
MAX DC POWER (PV)	10000W
MAX INPUT CURRENT (PV)	20Adc
CONT. PEAK POWER (BATTERY)	8000W

SERIES SUB STRING OPTIMIZER SPECIFICATIONS	
MANUFACTURER / MODEL #	PV LINK S2502
RATED POWER	2500W
MPPT VOLTAGE RANGE	60-360 Vmp
MAXIMUM INPUT VOLTAGE	420Voc
MAXIMUM OUTPUT	420 Adc
NOMINAL OUTPUT	380 Vdc
MAXIMUM OUTPUT CURRENT	8 A
MAXIMUM SHORT CIRCUIT CURRENT	18 A

BATTERY SPECIFICATIONS	
MANUFACTURER / MODEL #	GENERAC PWRCELL M3 DCB BATTERY
USABLE ENERGY	9.0kWH
NOMINAL CONTINUOUS AC POWER	3.4kW
MAX. CONTINUOUS AC POWER	4.5kW
PEAK MOTOR STARTING CURRENT (2 SEC)	25A
REBUS VOLTAGE: INPUT/ OUTPUT	360-420Vdc
MODULE VOLTAGE	46.8Vdc
ROUND-TRIP EFFICIENCY	96.5%

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	-19°
AMBIENT TEMP (HIGH TEMP 2%)	34°
CONDUIT HEIGHT	0.5"
ROOF TOP TEMP	56°

DC CONDUCTOR AMPACITY CALCULATIONS:
PV LINK OPTIMIZER TO JUNCTION BOX:

EXPECTED WIRE TEMP (In Celsius)	56•
TEMP. CORRECTION PER NEC TABLE 310.15 (B)(2)(a)	0.71
NO. OF CURRENT CARRYING CONDUCTORS	8
CONDUIT FILL CORRECTION PER NEC TABLE 310.15(B)(3)(a)	0.7
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY PER NEC TABLE 310.15(B)(16)	40A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	10A
1.25 X Imax	
DERATED AMPACITY OF CIRCUIT CONDUCTOR	19.88A
TEMP. CORRECTION PER TABLE 310.15 (B)(2)(a) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY 310.15 (B)(16)	
Result should be greater than (10A) otherwise less the entry for circuit conductor size and ampacity	

FROM JUNCTION BOX TO INVERTER:

EXPECTED WIRE TEMP (In Celsius)	56•
TEMP. CORRECTION PER NEC TABLE 310.15 (B)(2)(a)	0.71
NO. OF CURRENT CARRYING CONDUCTORS	4
CONDUIT FILL CORRECTION PER NEC TABLE 310.15(B)(3)(a)	0.8
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY PER NEC TABLE 310.15(B)(16)	40A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	20A
1.25 X Imax X # of PV LINKS	
DERATED AMPACITY OF CIRCUIT CONDUCTOR	22.72A
TEMP. CORRECTION PER TABLE 310.15 (B)(2)(a) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY 310.15 (B)(16)	
Result should be greater than (20A) otherwise less the entry for circuit conductor size and ampacity	

FROM BATTERY TO INVERTER:

EXPECTED WIRE TEMP (In Celsius)	34•
TEMP. CORRECTION PER NEC TABLE 310.15 (B)(2)(a)	0.96
NO. OF CURRENT CARRYING CONDUCTORS	2
CONDUIT FILL CORRECTION PER NEC TABLE 310.15(B)(3)(a)	1
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY PER NEC TABLE310.15(B)(16)	40A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	31.25A
1.25 X Imax (= 25A)	
DERATED AMPACITY OF CIRCUIT CONDUCTOR	38.40A
TEMP. CORRECTION PER TABLE 310.15 (B)(2)(a) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY 310.15 (B)(16)	
Result should be greater than (31.25A) otherwise less the entry for circuit conductor size and ampacity	

AC CONDUCTOR AMPACITY CALCULATIONS:
FROM INVERTER TO BACK-UP PANEL:

No. OF INVERTER	1
EXPECTED WIRE TEMP (In Celsius)	34•
TEMP. CORRECTION PER NEC TABLE 310.15(B)(2)(a)	0.96
NO. OF CURRENT CARRYING CONDUCTORS	3
CONDUIT FILL CORRECTION PER NEC TABLE 310.15(B)(3)(a)	1
CIRCUIT CONDUCTOR SIZE	6 AWG
CIRCUIT CONDUCTOR AMPACITY PER NEC TABLE 310.15(B)(16)	75A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	42.5A
1.25 X INVERTER OUTPUT CURRENT (BACKUP POWER)	
DERATED AMPACITY OF CIRCUIT CONDUCTOR	72A
TEMP. CORRECTION PER TABLE 310.15 (B)(2)(a) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY 310.15 (B)(16)	
Result should be greater than (42.5A) otherwise less the entry for circuit conductor size and ampacity	

AC CONDUCTOR AMPACITY CALCULATIONS:
FROM INVERTER TO MEP:

No. OF INVERTER	1
EXPECTED WIRE TEMP (In Celsius)	34•
TEMP. CORRECTION PER NEC TABLE 310.15(B)(2)(a)	0.96
NO. OF CURRENT CARRYING CONDUCTORS	3
CONDUIT FILL CORRECTION PER NEC TABLE 310.15(B)(3)(a)	1
CIRCUIT CONDUCTOR SIZE	6 AWG
CIRCUIT CONDUCTOR AMPACITY PER NEC TABLE 310.15(B)(16)	75A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	40A
1.25 X MAX INVERTER OUTPUT CURRENT (LOADS/GRID)	
DERATED AMPACITY OF CIRCUIT CONDUCTOR	72A
TEMP. CORRECTION PER TABLE 310.15 (B)(2)(a) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY 310.15 (B)(16)	
Result should be greater than (40A) otherwise less the entry for circuit conductor size and ampacity	

ELECTRICAL NOTES

1.) ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
2.) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
3.) WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
4.) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
5.) DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
6.) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
7.) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
8.) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
9.) MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
10.) THE POLARITY OF THE GROUNDED CONDUCTORS IS NEGATIVE

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Web: www.powerhome.com

REVISIONS

DESCRIPTION	DATE	REV

Signature with Seal

DATE:02/03/2022

PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
WIRING CALCULATIONS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-5

powered by Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G10+

385-405

ENDURING HIGH PERFORMANCE

25 YR Warranty Product & Performance

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2021

Q CELLS Yield Security

THE IDEAL SOLUTION FOR:

Rooftop arrays on residential buildings

BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.

THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).

A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty[2].

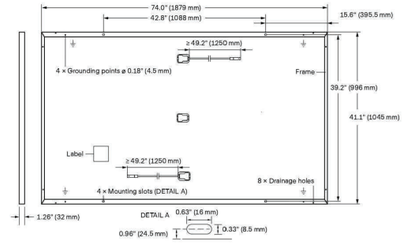
[1] APT test conditions according to IEC / TS 62804-1:2015, method A (–1500 V, 96h)

[2] See data sheet on rear for further information.

Engineered in Germany

MECHANICAL SPECIFICATION

Format	74.0 in × 41.1 in × 1.26 in (including frame) (1879 mm × 1045 mm × 32 mm)
Weight	48.5 lbs (22.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 49.2 in (1250 mm), (–) ≥ 49.2 in (1250 mm)
Connector	Stäubli MC4; IP68

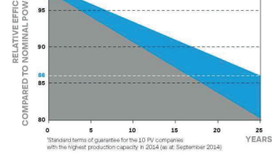


ELECTRICAL CHARACTERISTICS

POWER CLASS				385	390	395	400	405
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / –0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	385	390	395	400	405
Minimum	Short Circuit Current[1]	I_{SC}	[A]	11.04	11.07	11.10	11.14	11.17
Minimum	Open Circuit Voltage[1]	V_{OC}	[V]	45.19	45.23	45.27	45.30	45.34
Minimum	Current at MPP	I_{MPP}	[A]	10.59	10.65	10.71	10.77	10.83
Minimum	Voltage at MPP	V_{MPP}	[V]	36.36	36.62	36.88	37.13	37.39
Minimum	Efficiency[1]	η	[%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	288.8	292.6	296.3	300.1	303.8
Minimum	Short Circuit Current	I_{SC}	[A]	8.90	8.92	8.95	8.97	9.00
Minimum	Open Circuit Voltage	V_{OC}	[V]	42.62	42.65	42.69	42.72	42.76
Minimum	Current at MPP	I_{MPP}	[A]	8.35	8.41	8.46	8.51	8.57
Minimum	Voltage at MPP	V_{MPP}	[V]	34.59	34.81	35.03	35.25	35.46

[1] Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25±2°C, AM 1.5 according to IEC 60904-3 • [2] 800 W/m², NMOT, spectrum AM 1.5

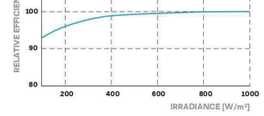
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	–0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	–0.34	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3°C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull[3]	[lbs/ft²]	75 (3600 Pa) / 55 (2660 Pa)	Permitted Module Temperature on Continuous Duty	–40°F up to +185°F (–40°C up to +85°C)
Max. Test Load, Push / Pull[3]	[lbs/ft²]	113 (5400 Pa) / 84 (4000 Pa)		

[3] See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells), QCPV Certification ongoing.

C SP US Certified UL 61730

CE

TÜVRheinland CERTIFIED www.tuv.com ID 1111220277

PACKAGING INFORMATION

Horizontal packaging	76.4 in 1940 mm	43.3 in 1100 mm	48.0 in 1220 mm	1656 lbs 751 kg	24 pallets	24 pallets	32 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

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SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-6

GENERAC®

PWRCELL

7.6kW 1Ø PWRcell Inverter with CTs
Model #: XVT076A03

11.4 kW 3Ø PWRcell Inverter with CTs
Model #: X11402 (Ordering SKU: APKE00013)

C ETL LISTED US
Intertek

Solar + storage is simple with the Generac PWRcell™ Inverter. This bi-directional, REbus™-powered inverter offers a simple, efficient design for integrating smart batteries with solar. Ideal for self-supply, backup power, zero-export and energy cost management, the PWRcell Inverter is the industry's most feature-rich line of inverters, available in single-phase and three-phase models.

FEATURES & BENEFITS

- Single inverter for grid-tied solar with smart battery integration
- Simplified system design: No autotransformer or battery inverter needed
- User-selectable modes for backup power, self-supply, time-of-use, zero-import and export limiting
- Free system monitoring included via PWRview™ Web Portal and Mobile App

AC OUTPUT/GRID-TIE	MODEL XVT076A03	MODEL X11402
CONT. GRID-TIED AC POWER @ 50°C (122°F):	7600 W	11400 W
AC OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 3Ø VAC
AC FREQUENCY:	60 Hz	
MAXIMUM CONTINUOUS OUTPUT CURRENT:	32 A, RMS	
GROUND-FAULT ISOLATION DETECTION:	Included	
CHARGE BATTERY FROM AC:	Yes	
THD (CURRENT):	< 2%	
TYPICAL NIGHTTIME POWER CONSUMPTION[1]:	< 7 W	

DC INPUT	MODEL XVT076A03	MODEL X11402
DC INPUT VOLTAGE RANGE:	360-420 VDC	
NOMINAL DC BUS VOLTAGE:	380 VDC	
DC DISTRIBUTION INPUT BREAKERS:	4 x 2P30 A	
MAX INPUT CURRENT PER DC INPUT:	30 A	
REVERSE-POLARITY PROTECTION:	Yes	
TRANSFORMERLESS, UNGROUNDED:	Yes	
DC BUS EXPORT FUSES (+/-):	40 A	
2-POLE DISCONNECTION:	Yes	

AC OUTPUT/ISLAND MODE	MODEL XVT076A03	MODEL X11402
MAX. CONT. AC POWER WHILE IN ISLAND MODE WITHOUT AN EXTERNAL TRANSFER SWITCH[2]:	7600 W	
MAX. CONT. AC POWER WHILE IN ISLAND MODE W/ EXTERNALTRANSFER SWITCH AND SINGLE 6 MODULE BATTERY CABINET[3]:	9000 W	
MAX. CONT. AC POWER WHILE IN ISLAND MODE W/ EXTERNAL TRANSFER SWITCH AND 2 BATTERY CABINETS (8 MODULES MINIMUM)[3]:	11000 W	9600 W-11000 W*
PEAK MOTOR STARTING CURRENT (2 SEC):	50 A, RMS	
AC BACKUP OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 1Ø VAC
AC FREQUENCY:	60 Hz	
THD (VOLTAGE):	< 2%	
ALLOWABLE SPLIT PHASE IMBALANCE:	Up to 30%	

EFFICIENCY	MODEL XVT076A03	MODEL X11402
PEAK EFFICIENCY:	97.3%	97.7%
CEC WEIGHTED EFFICIENCY:	96.5%	97.5%

[1]Nighttime power consumption depends on the system mode
[2]In Island Mode, continuous power output is restricted to 7.6kW unless backup power is routed through an external transfer switch in a whole home backup application.
[3]Peak performance, values provided for 40°C (104°F).
**In Island mode X11402 protected loads only supply 2 phases 120 VAC L-N, 208 L-L which results in lower power than in a grid tied 3 phase state. The low value of the range is for full L-L loading while high value of the range is full L-N loading*

Specifications

FEATURES AND MODES	
ISLAND MODE[4]:	Yes
GRID SELL:	Yes
SELF CONSUMPTION:	Yes
PRIORITIZED CHARGING FROM RENEWABLES:	Yes
GRID SUPPORT - ZERO EXPORT:	Yes
ESS PCS OPERATION MODES (IMPORT ONLY, EXPORT ONLY):	Yes

ADDITIONAL FEATURES	
SUPPORTED COMMUNICATION INTERFACES:	REbus™, CANbus, Ethernet
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
BACKUP LOADS DISCONNECT[4]:	Yes, 50 A Circuit Breaker
INVERTER BYPASS SWITCH:	Automatic
WARRANTY:	10 Years

STANDARDS COMPLIANCE	
SAFETY:	UL 1741 SA, CSA 22.2 #107.1, UL 1998
GRID CONNECTION STANDARDS:	IEEE 1547, Rule 21, Rule 14H (HECO V1.1), CSIP, UL 1741 PCS CRD (Import Only, Export Only)
EMISSIONS:	FCC Part 15 Class B

DIMENSIONS AND INSTALLATION SPECIFICATIONS		
ENCLOSURE KNOCKOUTS - QTY, SIZE - IN (MM):	6 x Combo 3/4" x 1" (19 x 25.4) 7 x Combo 1/2" x 3/4" (12.7 x 19)	1 x 0.575" exclusively for optional LTE antenna mounting
DIMENSIONS L x W x H - IN (MM):	24.5" x 19.25" x 8" (622.3 x 488.9 x 203.2)	
WEIGHT - LB (KG):	62.7 (28.4)	
COOLING:	Forced convection	
AUDIBLE NOISE:	< 40 dBA	
OPERATING TEMPERATURE:	-4 to 122 °F (-20 to 50 °C)[5]	
ENCLOSURE TYPE:	Type 3R	

INSTALLATION GUIDELINES	
BATTERY TYPES SUPPORTED:	PWRcell™ Battery
MODULE SUBSTRING SIZE PER PV LINK OPTIMIZER:	Varies, refer to PV Link Installation Manual
MAXIMUM RECOMMENDED DC POWER FROM PV[6]:	10 kW (1Ø), 15 kW (3Ø)

[4]3Ø inverters offer backup for [single phase] 208 V loads.
[5]Includes ambient temperature rising from inverter operation. Reduced power at extreme temperatures.
[6]Values provided for PV-only or small storage systems. Additional PV power is permissible if sufficient battery storage capacity is installed.

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PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-7

GENERAC

SnapRS™

Inline Disconnect Switch
Model #: RS801 (Ordering SKU: APKE00011)

Intertek

Generac SnapRS are a simple way to satisfy rapid shutdown compliance for solar + storage systems. Generac SnapRS are 2017/2020 NEC 690.12 compliant, don't require any extra hardware to mount, and need no pairing or fussy digital communications.

FEATURES & BENEFITS

- Fast, easy, and simple to install
- One SnapRS device per PV module
- Achieves PVRSS Compliance
- Low cost, high efficiency solution

SYSTEM DESIGN

Snap a Generac SnapRS disconnect device (RS) to the negative lead (-) of each module in the solar array for simple module-level rapid shutdown compliance. SnapRS devices isolate array voltage when a rapid shutdown is initiated at a PWRcell™ Inverter. When rapid shutdown is initiated, SnapRS units isolate each PV module in the array, reducing array voltage to <80V in seconds.

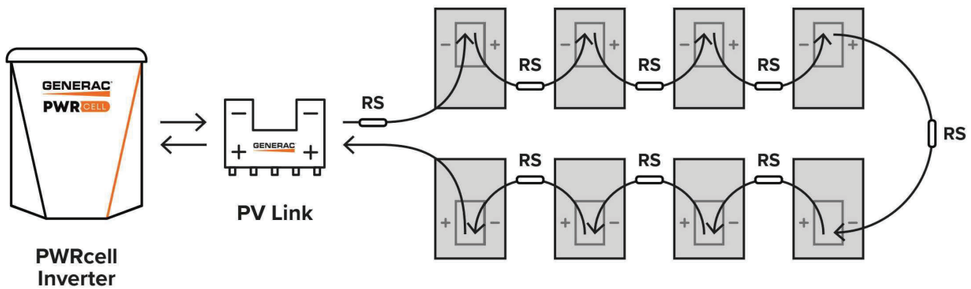

Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

SnapRS™ (APKE00011)	
PV MODULE MAX VOC:	75 V
EFFICIENCY:	99.8%*
MAX INPUT CURRENT:	13 A
MAX TOTAL QTY IN SUBSTRING:	10
SHUTDOWN TIME:	< 10 Seconds
ENCLOSURE RATING:	NEMA 6P
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-40 to 158 °F (-40 to 70 °C)
CERTIFICATIONS:	UL1741
PROTECTIONS:	PVRSE
WEIGHT - LB (KG):	0.17 (0.08)
DIMENSIONS, L x W x H - IN (MM):	7" x 1" x 1" (177.8 x 25.4 x 25.4)
WARRANTY:	25 Years

**When used with a 50V panel*

Connect one SnapRS device to the negative lead of each PV module in the PV Link controlled array for complete PV Rapid shutdown performance

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SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-8

GENERAC

PWRCELL

3.0kWh DCB BATTERY MODULE

3.0kWh PWRcell DCB Battery Module
Model #: BJ-DCB05ZKBG (Ordering SKU: G0080040)

Intertek

Build a better backup system with the Generac DCB Battery Module for PWRcell™. Add capacity and backup power with as few as three or as many as six modules. Upgrade a PWRcell Battery post-installation with the addition of more DCB modules for more power and capacity.

FEATURES & BENEFITS

- Suitable for indoor and outdoor cabinets
- Modular: Stack the right number of battery modules for the application
- Upgradeable: Add more modules later when consumer needs change
- Easy to install: At just 55lbs, installers won't need special equipment to move and install these batteries

SPECIFICATIONS	
NOMINAL VOLTAGE:	46.8 VDC
USABLE CAPACITY @ TYPICAL VOLTAGE:	3.00 kWh
MAXIMUM AMBIENT OPERATING TEMPERATURE:	14 to 122 °F (-10 to 50 °C)
OPTIMAL AMBIENT OPERATING TEMPERATURE:	41 to 104 °F (5 to 40 °C)
STORAGE TEMPERATURE RANGE:	-4 to 68 °F (-20 to 20 °C)
SCALABILITY:	3-6 pcs in series
DIMENSIONS, L x W x H - IN (MM):	17.3" x 17.7" x 3.3" (440 x 450 x 84)
WEIGHT - LB (KG):	55 (25)
BATTERY CHEMISTRY:	Lithium Nickel Manganese Cobalt (NMC)
WARRANTY:	10 years or 7.56MWh Throughput (per module)
COMPLIANCE:	UL 1973

Note: Charge/discharge rate may be reduced at temperature extremes

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Specifications

PWRcell™ BATTERY CONFIGURATIONS				
BATTERY MODULE SERIES:	3.0 kWh DCB / 3.0 kWh EX			
BATTERY MODULES:	3	4	5	6
USABLE ENERGY:	9 kWh	12 kWh	15 kWh	18 kWh
NOMINAL CONT. AC POWER[1]:	3.4 kW	4.5 kW	5.6 kW	6.7 kW
MAX. CONT. AC POWER[2]:	4.5 kW	6 kW	7.5 kW	9 kW
NOMINAL CONT. DC (CHARGE/DISCHARGE) - A:	11.6	15.5	19.4	23.3
PEAK MOTOR STARTING CURRENT (2 SEC) - A, RMS:	25	33	42	50
REbus™ VOLTAGE - INPUT/OUTPUT:	360-420 VDC			
NOMINAL VOLTAGE:	380 VDC			
DC-DC ROUND-TRIP EFFICIENCY:	96.5%			
MAXIMUM AMBIENT OPERATING TEMPERATURE:	14 TO 122 °F (-10 TO 50 °C)			
OPTIMAL AMBIENT OPERATING TEMPERATURE:	41 to 104 °F (5 to 40 °C)			
MAXIMUM INSTALLATION ALTITUDE - FT (M):	9834 (3000)			
DIMENSIONS, L x W x H - IN (MM):	22" x 10" x 68" (559 x 254 x 1727)			
WEIGHT, ENCLOSURE - LB (KG):	115 (52)			
WEIGHT, INSTALLED W/ DCB MODULES - LB (KG):	280 (127)	335 (152)	390 (177)	445 (202)
WEIGHT, INSTALLED W/ EX MODULES - LB (KG):	287 (130)	344 (156)	401 (182)	459 (208)
WEIGHT, ACCESSORY MOUNTING HARDWARE - LB (KG):	21 (10)			
ENCLOSURE TYPE:	Type 3R			
WARRANTY - LI-ION MODULES:	10 Years, (7.56MWh)			
WARRANTY - ELECTRONICS AND ENCLOSURE:	10 Years			
COMMUNICATION PROTOCOL:	REbus™ DC Nanogrid™			
SEISMIC RATING:	IEEE 693-2018 (HIGH)			
COMPLIANCE:	UL 9540, UL 1973, UL 1642, CSA 22.2 #107.1			

[1]Average AC power over a complete discharge cycle. | [2]Peak Performance, values provided for 40°C (104°F).
Note: Charge/discharge rate may be reduced at temperature extremes

PWRcell ACCESSORIES

Inside of the PWRcell Battery Cabinet, battery modules are stacked two deep on three levels, allowing for up to six modules to be connected in series. You can upgrade an existing PWRcell Battery Cabinet by adding Battery Modules and a Module Spacer (APKE00008). A Module Spacer is only required for battery configurations with an odd number of modules (i.e. 3 or 5).

Generac offers a convenient PWRcell Battery Upgrade Kit (APKE00009) to help replace lost or misplaced hardware.

Note: When adding modules, be sure all modules within an individualcabinet are of the same series type (i.e., EX or DCB).

PWRcell MODEL BUILDER

PRODUCT SERIES	ENCLOSURE TYPE	# OF MODULES	BATTERY SERIES
PWRcell	OR	M3	DCB
	IR (Indoor Rated) OR (Outdoor Rated)	3 Modules 4 Modules 5 Modules 6 Modules	DCB EX

Sample Model Name: **PWRcell OR M3 DCB**

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ANSI B
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SHEET NUMBER
PV-9

GENERAC®

PWRcell

OUTDOOR RATED BATTERY

C ETL LISTED US
Intertek

PWRcell Outdoor Rated Battery Cabinet (Ordering SKU: APKE00028)

3.0kWh PWRcell DCB Battery Module
Model #: BJ-DCB05ZKBG (Ordering SKU: G0080040)

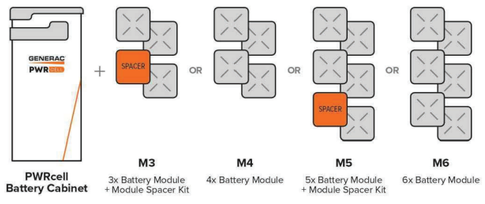
3.0kWh PWRcell EX Battery Module
Model #: G0080001

The PWRcell™ Outdoor Rated (OR) Battery Cabinet is a Type 3R smart battery enclosure that allows for a range of configurations to suit any need, small or large, indoor or outdoor. No other smart battery offers the power and flexibility of PWRcell.

PWRcell BATTERY CABINET DESIGN

The PWRcell Battery Cabinet allows system owners the flexibility to scale from an economical 9kWh to a massive 18kWh by installing additional battery modules to the PWRcell Battery Cabinet. An existing PWRcell Battery Cabinet can be upgraded with additional modules. Use the graphic below and the chart on the back of this sheet to understand what components you need for your chosen PWRcell configuration.

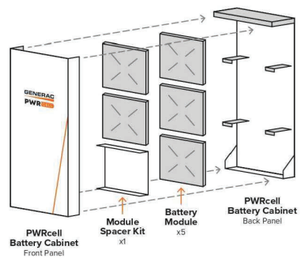
BATTERY CONFIGURATION GUIDE



FEATURES & BENEFITS

- Connect 2 PWRcell Battery Cabinets to a single PWRcell Inverter for up to 36kWh of storage
- Best-in-class battery backup power
- Plug-and-play with PWRcell Inverter and PV Link™
- Time-of-use (TOU) and zero-export ready
- Residential and commercial application ready.
- 3R-rated cabinet allows for outdoor or indoor installation
- Additional mounting hardware for outdoor installations comes standard to provide additional ground clearance and support

BATTERY CABINET ASSEMBLY



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SHEET NAME
EQUIPMENT SPECIFICATION

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11" X 17"

SHEET NUMBER
PV-9A

GENERAC

PV Link™

2500W MPPT Substring Optimizer
Model #: S2502 (Ordering SKU: APKE00010)

C ETL LISTED US
Intertek

PV Link is the simple solar optimizer for quick installation and long-lasting performance. Connect PV modules to each PV Link to overcome shading and challenging roof lines.

FEATURES & BENEFITS

- Fast, simple installation
- Lower failure risk than module-level optimizers
- 2017/2020 NEC rapid shutdown compliant with SnapRS™
- Quick connections with MC4 connectors
- Exports up to 2500W
- Compatible with PWRcell™ Inverters
- Cost-effective solution for high-performance PV
- Ground-fault protection

SINGLE-STRING PV ARRAY WITH SnapRS DEVICES

Where PV module-level rapid shutdown is required (NEC 690.12), a SnapRS device (RS) is installed to negative (-) lead of each PV module.

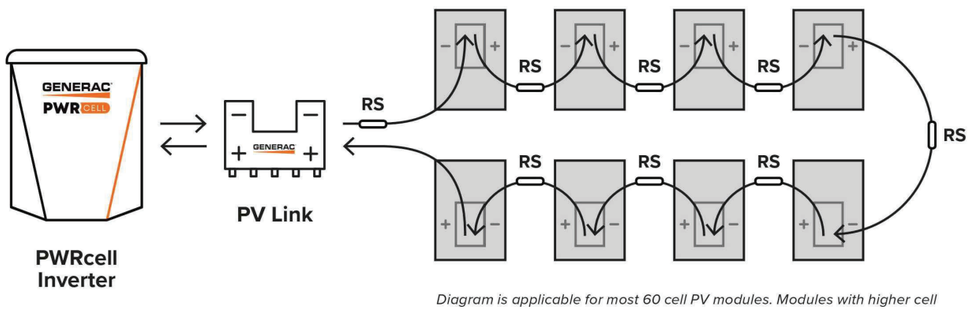

Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

PV Link™ (APKE00010)	
RATED POWER*:	2500W
PEAK EFFICIENCY:	99%
MPPT VOLTAGE RANGE:	60-360 VMP
MAX INPUT VOLTAGE:	420 VOC; max when cold
MAX OUTPUT:	420 VOC
NOMINAL OUTPUT (REbus™):	380 VDC
MAX OUTPUT CURRENT (CONTINUOUS):	8 A
MAX OUTPUT CURRENT (FAULT):	10 A
MAX INPUT CURRENT (CONTINUOUS):	13 A @ 50°C, 10 A @ 70°C
MAX INPUT SHORT CIRCUIT CURRENT (ISC):	18 A
STANDBY POWER:	< 1 W
PROTECTIONS:	Ground-fault, Arc-fault (Arc-fault Type 1 AFCI, Integrated), PVRSE
MAX OPERATING TEMP: FAHRENHEIT (CELSIUS)	158 °F (70 °C)
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
ENCLOSURE:	Type 4X
WEIGHT - LB (KG):	7.3 lb (3.3 kg)
DIMENSIONS, L x W x H - IN (MM):	15.4" x 2" x 9.6" (391.2 x 50.8 x 243.8)
COMPLIANCE:	UL 1741, CSA 22.2
WARRANTY:	25 Years

**PV Link can tolerate higher than rated power at its input if Max Input Voltage and Short Circuit Current specifications are not exceeded*

Generac Power Systems, Inc.
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www.Generac.com | 888-GENERAC (436-3722)

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Web: www.powerhome.com

REVISIONS

DESCRIPTION	DATE	REV

Signature with Seal

DATE:02/03/2022

PROJECT NAME & ADDRESS

RIVERA FRANCISCO JR.
RESIDENCE
480 STONEY CREEK DR.,
SANFORD, NC 27332

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-10

Sinclair Designs & Engineering
Your One-Stop-Shop for Solar Racking Solutions

Carport Systems | Pole Mount Trackers | Ground Mount Systems | Commercial Roof Mount Systems

T - Y - L –A Carports | Fixed, Single, Dual Axis Sun Trackers | 5 – 45 Degree GroPost/Ballastund Mount Systems | 5 – 7 – 10 Degree Roof Mounts

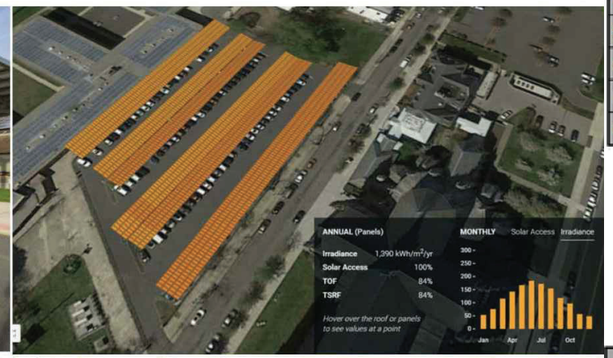
SDE: Project Development Support (Using Aurora PV Software & Solid-Works)

Our NABCEP certified PV designers and Engineers can support you through every phase of your project.

Preliminary Designs for Quick Proposals: 3D Modeling, PV Production, Shade Analysis, & Site Drawings

Ballast Calculations with PSF Analysis

Accurate Component Pricing & Project Bill of Materials



Need Installation Support? Our new business partners can provide geotechnical support and offer installation pricing for all of our racking systems. Together, we are on track to install over 80 Megawatts of power throughout the USA in 2019.

PRODUCT SPEC SHEET

Fixed Tilt System - Module Clamp Kits or Direct to Frame Season Adjust - Manual

TILT ANGLE	5 - 40 DEGREES	TERRAIN	+/- 5 DEG E/W
MODULE ORIENTATION	2 HIGH PORTRAIT	WIRE MANAGEMENT	ZIP TIE HOLES AVAILABLE
WIND LOAD	125 MPH	WARRANTY	20 - 25 YEAR OPTIONS
SNOW LOAD	60 PSF	MATERIAL	GRADE 50 - 60 HSLA STEEL
GROUND CLEARANCE	24 - 36 IN	COATING	GALVANIZED
MODULE CLAMPS OR DIRECT TO FRAME	OPTIONAL	MANUFACTURING	USA - MICHIGAN MADE

Note: Higher wind load/snow load options are available.
Formal site specific structural calculations available upon request.

4X MAIN COMPONENTS	ADDITIONAL COMPONENTS	MINIMAL HARDWARE
1. C-CHANNEL-POST	HIGH WIND/SNOW	2 X 5/8-11 X 1 3/4 BOLTS
2. STRUT-40	STRONG-BACKS	2 X 5/8-11 SERRATED NUTS
3. TRUSS/GIRDER	CANTILEVERS	14 X 1/2-13 X 1 3/4 BOLTS
4. Z-PURLIN (2-5 PANEL LENGTHS)	STRUT-50	14 X 1/2-13 SERRATED NUTS

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