

DEPARTMENT OF PLANNING & SUSTAINABILITY

Chief Executive Officer
Michael Thurmond

Interim Director
Cedric Hudson

Application for Certificate of Appropriateness

Date submitted: 10/14/24 Date Received: _____

Address of Subject Property: 1722 Coventry Rd Decatur, Ga 30030

Applicant: Gaines Moore E-Mail: gaines@bettertomorrowsolar.com

Applicant Mailing Address: 1074 Memorial Dr SE Atlanta, GA 30316

Applicant Phone: 404-398-2840

Applicant's relationship to the owner: Owner Architect Contractor/Builder Other

Owner(s): Marion Carter Email: mwcarter@fastmail.com

Owner(s): _____ Email: _____

Owner(s) Mailing Address: 1722 Coventry Rd Decatur, Ga 30030

Owner(s) Telephone Number: 404-825-6101

Approximate date of construction of the primary structure on the property and any other structures affected by this project: _____

Nature of work (check all that apply):

New construction	<input type="checkbox"/>	New Accessory Building	<input type="checkbox"/>	Other Building Changes	<input type="checkbox"/>
Demolition	<input type="checkbox"/>	Landscaping	<input type="checkbox"/>	Other Environmental Changes	<input type="checkbox"/>
Addition	<input type="checkbox"/>	Fence/Wall	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>
Moving a Building	<input type="checkbox"/>	Sign Installation	<input type="checkbox"/>	Solar Panels	

Description of Work:

Installation of rooftop solar system

This form must be completed in its entirety and be accompanied by supporting documents, such as plans, list of materials, color samples, photographs, etc. All documents should be in PDF format, except for photographs, which may be in JPEG format. Email the application and supporting material to plansustain@dekalbcountyga.gov and pvjennings@dekalbcountyga.gov. An incomplete application will not be accepted.

Signature of Applicant: 



DEPARTMENT OF PLANNING & SUSTAINABILITY

Authorization of a Second Party to Apply for a Certificate of Appropriateness

This form is required if the individual making the request is not the owner of the property.

I/ We: Marion Carter

being owner(s) of the property at: 1722 Coventry Rd Decatur, Ga 30033

hereby delegate authority to: Gaines Moore

to file an application for a certificate of appropriateness in my/our behalf.

Signature of Owner(s): Marion Carter

Date:

Please review the following information

Approval of this Certificate of Appropriateness does not release the recipient from compliance with all other pertinent county, state, and federal regulations.

Before making any changes to your approved plans, contact the preservation planner (404/371- 2155). Some changes may fall within the scope of the existing approval, but others will require review by the preservation commission. If work is performed which is not in accordance with your certificate, a Stop Work Order may be issued.

If your project requires that the county issue a Certificate of Occupancy at the end of construction, an inspection may be made to verify that the work has been completed in accord with the Certificate of Appropriateness. If the work as completed is not the same as that approved in the Certificate of Appropriateness you will not receive a Certificate of Occupancy. You may also be subject to other penalties including fines and/or required demolition of the non-conforming work.

If you do not commence construction within twelve months of the date of approval, your Certificate of Appropriateness will become void and you will need to apply for a new certificate if you still intend to do the work.

PHOTOVOLTAIC ROOF MOUNT SYSTEM

16 MODULES-ROOF MOUNTED - 6.400 KW DC, 7.600 KW AC
1722 COVENTRY RD, DECATUR GA 30030, USA

PHOTOVOLTAIC SYSTEM SPECIFICATIONS:

SYSTEM SIZE: 6.400 KW DC
7.600 KW AC
MODULE TYPE & AMOUNT: (16) Q CELL Q PEAK DUO BLK ML-G10+ (400W) MODULES
MODULE DIMENSIONS: (L/W/H) 74.0" / 41.1" / 1.26"
INVERTER: (1) EP CUBE HYBRID INVERTER
RAPID SHUTDOWN: (16) TIGO TS44-A-F MODULE-LEVEL RAPID SHUTDOWN
INTERCONNECTION METHOD: BACKFEED BREAKER
BATTERY: (1) EP CUBE HYBRID NA510G BATTERY (9.9kwh)
SMART GATEWAY: (1) EP CUBE SMART GATEWAY

GOVERNING CODES

ALL WORK SHALL CONFORM TO THE FOLLOWING CODES
INTERNATIONAL BUILDING CODE 2018 (IBC 2018),
INTERNATIONAL RESIDENTIAL CODE 2018 (IRC 2018),
INTERNATIONAL FIRE CODE 2018 (IFC 2018),
INTERNATIONAL ENERGY CONSERVATION CODE 2015 (IECC 2015),
NATIONAL ELECTRICAL CODE, 2020.



1 SATELLITE VIEW

PV.0.0

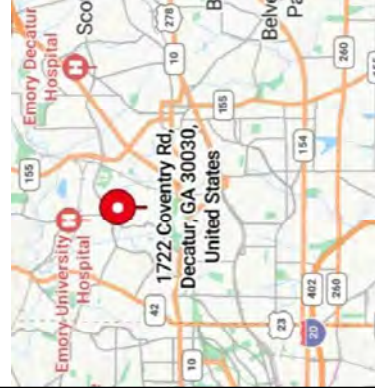
SCALE: NTS

SHEET INDEX:

- PV 0.0: COVER SHEET
- PV 1.0: PLOT PLAN WITH ROOF PLAN
- PV 1.1: ROOF PLAN WITH MODULES
- PV 1.2: STRING LAYOUT
- PV 1.3: ATTACHMENT DETAIL
- PV 1.4: ATTACHMENT DETAIL
- PV 1.5: ATTACHMENT DETAIL
- PV 1.6: BOM
- E 1.1: 3-LINE DIAGRAM
- E 1.2: WIRE CALCULATION
- E 1.3: LABELS
- E 1.4: PLACARDS
- D 1.1: EQUIPMENT SPEC SHEET

SIGNATURE

Project Name & Address



2 VICINITY MAP

PV.0.0

SCALE: NTS



BETTER TOMORROW
SOLAR
1014 Normal Dr SE, Marietta, GA 30066

CONTRACTOR	
Description	Date
Installation	10-05-2024

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name
COVER SHEET

Sheet Size

ANSI B
11" X 17"

Sheet Number

PV.0.0

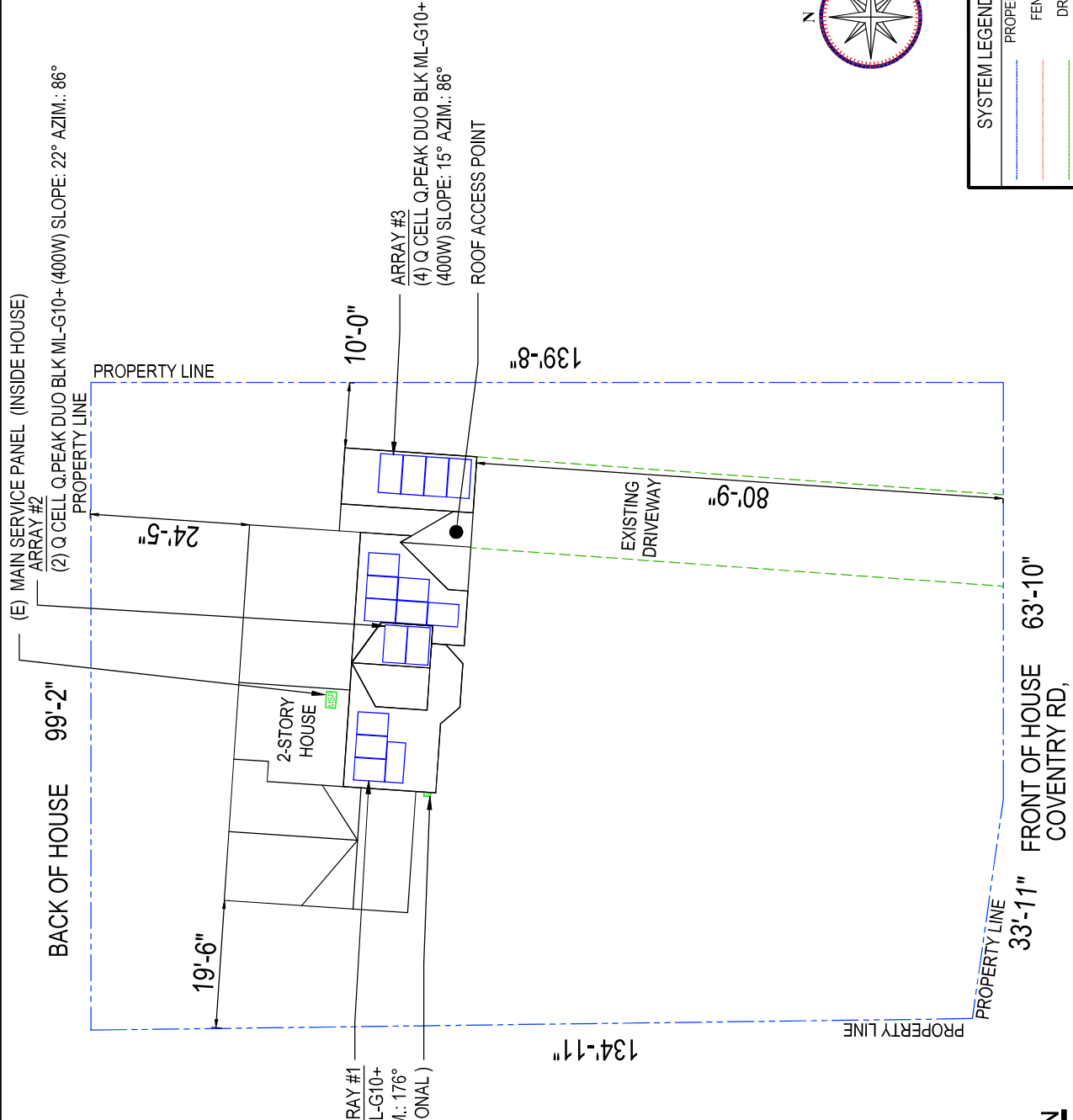
SYSTEM SUMMARY

- 16 Q CELL Q,PEAK DUO BLK ML-G10+ (400W) MODULES
- 1 TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN
- 1 EP CUBE HYBRID INVERTER
- 1 EP CUBE HYBRID NA510G BATTERY (9.9kWh)
- 1 SYSTEM SIZE: 6.400 KW DC STC, 7.600 KW AC

ROOF ACCESS POINT

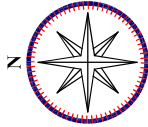
ROOF ACCESS POINT SHALL NOT BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.

NOTE: VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER



SYSTEM LEGEND

---	PROPERTY LINE
---	FENCE LINE
---	DRIVEWAY



1 PLOT PLAN WITH ROOF PLAN
SCALE: 1/8" = 1'-0"

BETTER TOMORROW SOLAR		
1914 Norwood Dr. SE, Marietta, GA 30066		
CONTRACTOR		
REVISIONS		
Description	Date	Rev
Initial Design	10-05-2024	01
	10-06-2024	01
Signature with Seal		

Project Name & Address
MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #	
Sheet Name	PLOT PLAN WITH ROOF PLAN
Sheet Size	ANSI B 11" X 17"
Sheet Number	PV 0.1

MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 16 MODULES
 MODULE TYPE = Q CELL Q, PEAK DUO BLK ML-G10+ (400W) MODULES
 MODULE WEIGHT = 48.5 LBS / 22.0 KG.
 MODULE DIMENSIONS = 74.0" X 41.1" = 21.12 SF
 UNIT WEIGHT OF ARRAY = 2.30 PSF
 SYSTEM SUMMARY
 16 Q CELL Q, PEAK DUO BLK ML-G10+ (400W) MODULES
 16 TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN
 1 EP CUBE HYBRID INVERTER
 1 EP CUBE HYBRID NA510G BATTERY (9.9kWh)
 SYSTEM SIZE: 6.400 KW DC STC; 7.600 KW AC

RACKING MATERIAL LIST

RAIL:	8
END CLAMP:	28
MID CLAMP:	18
ATTACHMENT:	48
GROUNDING LUG:	7
SPLICE KIT:	0

ROOF DESCRIPTION

ROOF	ROOF TILT	ROOF AZIMUTH	COMPOSITE SHINGLE FRAMING SIZE
#1	36°	176°	2"x4" 16"
#2	22°	86°	2"x4" 16"
#3	15°	86°	2"x4" 16"

SYSTEM LEGEND

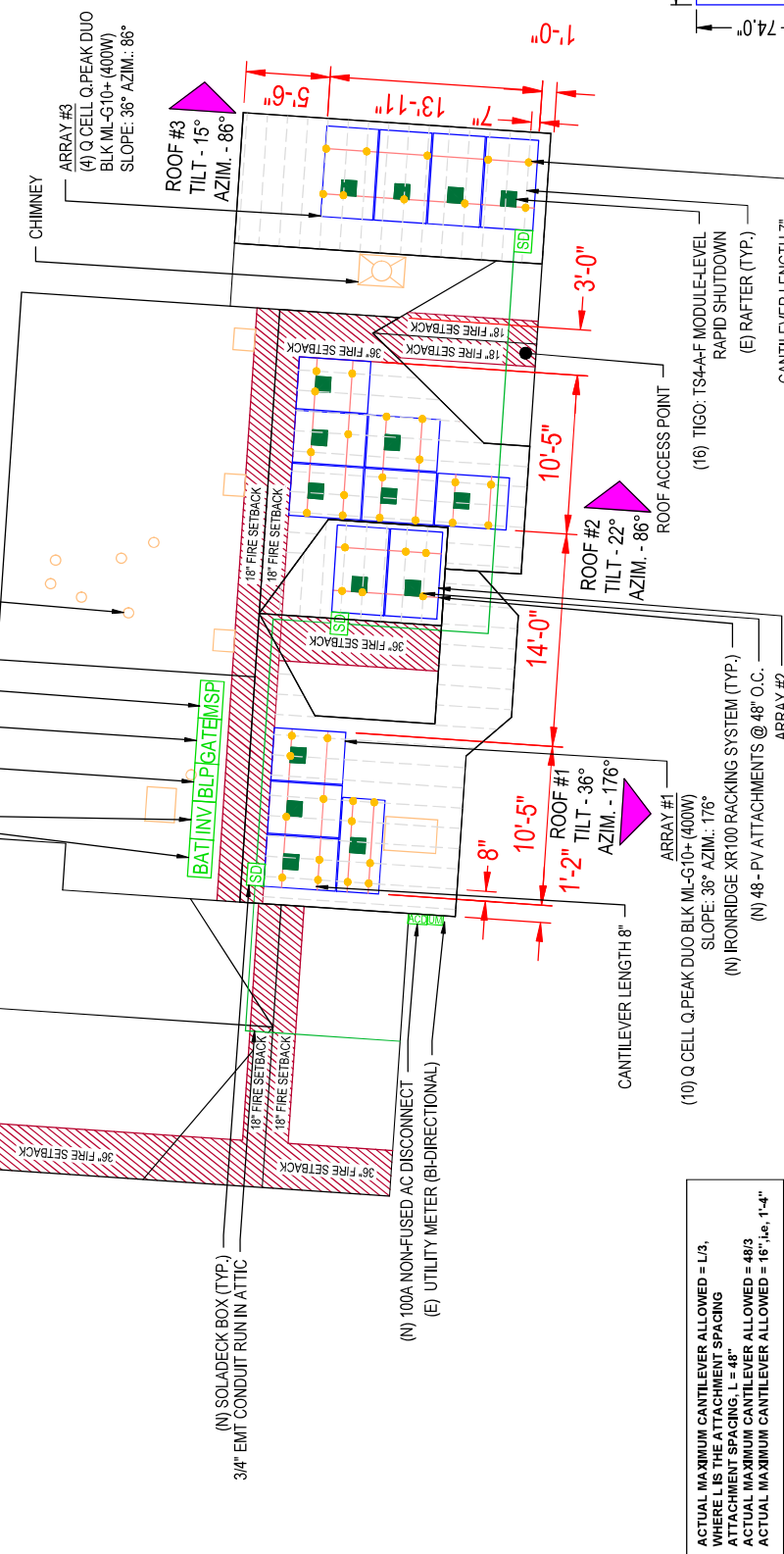
- (M) MAIN SERVICE PANEL (INSIDE OF HOUSE)
- (UM) UTILITY METER (BI-DIRECTIONAL) IN A PHOTOVOLTAIC UTILITY DISCONNECT SWITCH, LOCATED WITHIN 10' OF EP CUBE HYBRID INVERTER
- (INV) EP CUBE HYBRID INVERTER
- (BAT) EP CUBE HYBRID NA510G BATTERY (9.9kWh)
- (BLP) BACKUP LOAD PANEL
- (SD) SOLADECK BOX
- 16 NEW Q CELL Q, PEAK DUO BLK ML-G10+ (400W) MODULES WITH TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN MOUNTED ON THE BACK OF EACH MODULE.
- FIRE SETBACK
- ROOF OBSTRUCTIONS
- EMT CONDUIT
- ROOF RAIL
- ROOF ATTACHMENT

BACK OF HOUSE

- (N) EP CUBE HYBRID INVERTER WITH BATTERY
- (N) BACKUP LOAD PANEL
- (N) EP CUBE SMART GATEWAY
- (E) MAIN SERVICE PANEL (INSIDE HOUSE)
- VENTS (TYP.)

TOTAL ARRAY AREA WITH MOUNTING ROOF AREA

ROOF	# OF MODULES	ARRAY AREA (Sq. Ft.)	MOUNTING ROOF AREA COVERED BY ARRAY (%)	ROOF AREA COVERED BY ARRAY (%)
#1	10	211.21	438.47	48.06
#2	2	42.24	64.26	65.74
#3	4	84.48	174.132	48.52



**FRONT OF HOUSE
COVENTRY RD,**

Service #

Sheet Name
ROOF PLAN WITH MODULES

Sheet Size
ANSI B 11" X 17"

Sheet Number
PV 1.1

PROJECT INFORMATION

Project Name & Address
**MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA**

APN # 1800405024

REVISIONS

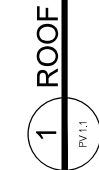
Description	Date	Rev
Initial Design	10-05-2024	01

Signature with Seal

1 ROOF PLAN & MODULES

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

ACTUAL MAXIMUM CANTILEVER ALLOWED = L/3,
 WHERE L IS THE ATTACHMENT SPACING
 ATTACHMENT SPACING, L = 48"
 ACTUAL MAXIMUM CANTILEVER ALLOWED = 48/3
 ACTUAL MAXIMUM CANTILEVER ALLOWED = 16", i.e., 1'-4"



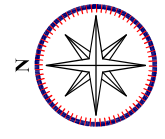
SYSTEM SUMMARY

- 16 Q CELL Q-PEAK DUO BLK ML-G10-, (400W) MODULES
 - 16 TI60; TS44-F; MODULE-LEVEL RAPID SHUTDOWN
 - 1 EP CUBE HYBRID INVERTER
 - 1 EP CUBE HYBRID NA510G BATTERY (3.9kWh)
- SYSTEM SIZE: 6.400 KW DC STC; 7.600 KW AC



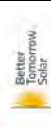
CIRCUIT(S)

CIRCUIT #1 - 8 MODULES
 CIRCUIT #2 - 8 MODULES



FRONT OF HOUSE
COVENTRY RD,

1 **CIRCUIT LAYOUT**
 SCALE: 3/16" = 1'-0"
 PV.12



**BETTER TOMORROW
SOLAR**
1014 Normal Dr. SE, Marietta, GA 30066

CONTRACTOR

REVISIONS		
Description	Date	Rev
Initial Design	10-05-2024	01

Signature with Seal

MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Project Name & Address

Service #


Sheet Name
**STRING
LAYOUT**

Sheet Size
**ANSI B
11" X 17"**

Sheet Number
PV 1.2

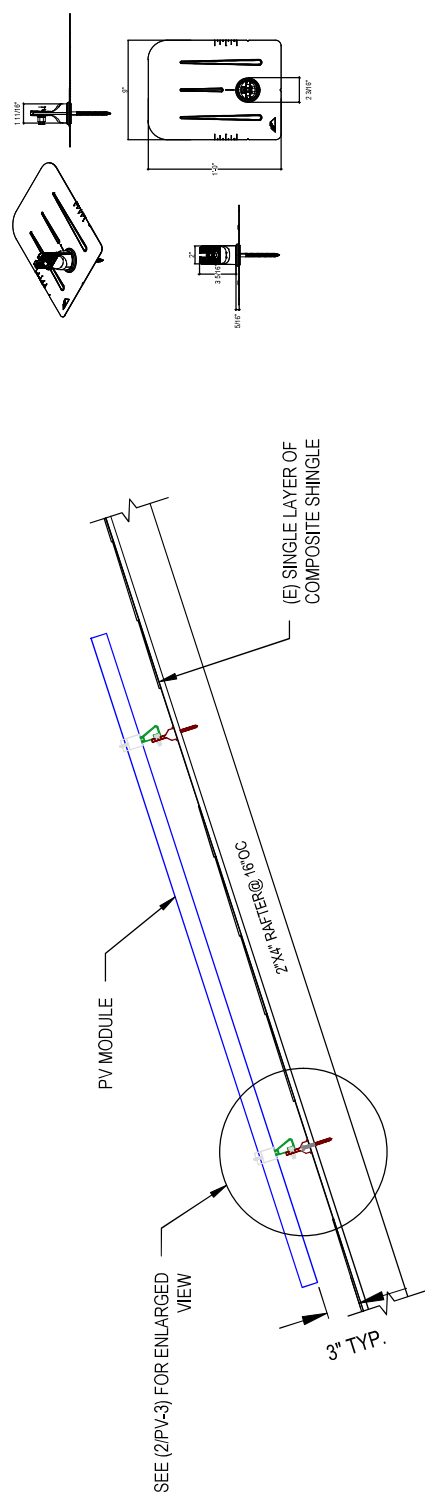
SYSTEM SUMMARY

- 16 C CELL C/PEAK DUO BLK ML-G/0+ (400W) MODULES
- 1 TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN
- 1 EP CUBE HYBRID INVERTER
- 1 EP CUBE HYBRID NA510G BATTERY (9.9kWh)
- SYSTEM SIZE: 6.400 KW DC STC, 7.600 KW AC

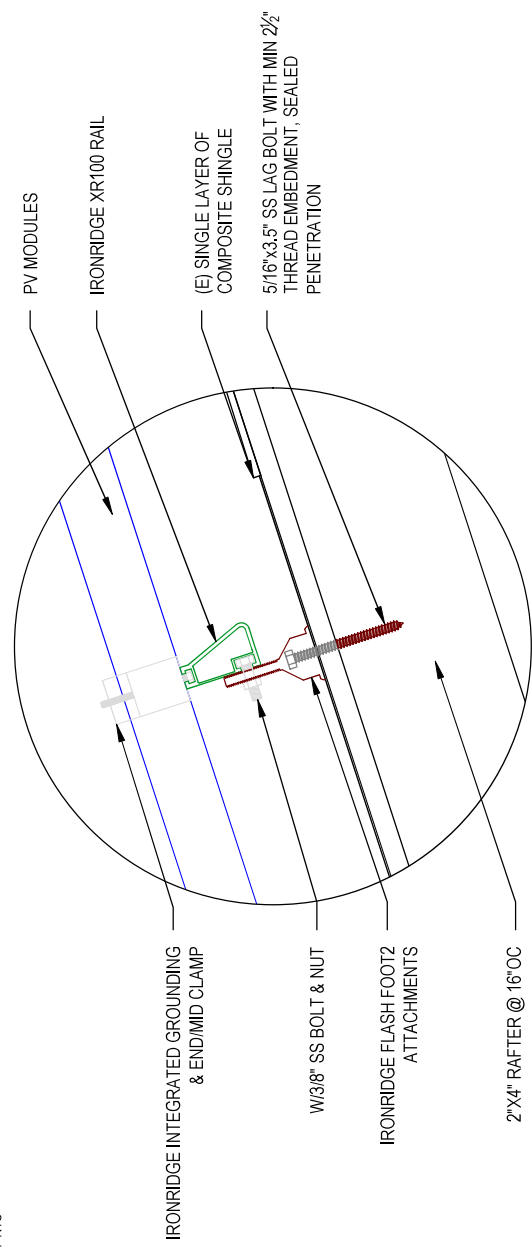
	
BETTER TOMORROW SOLAR <small>1704 Norwood Dr SE, Marietta, GA 30066</small>	
CONTRACTOR	
REVISIONS	
Description	Date
Initial Design	10-05-2024
	15-05-2024
	01
Signature with Seal	

Project Name & Address
MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

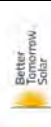
Service #	
Sheet Name	ATTACHMENT DETAIL
Sheet Size	ANSI B 11" X 17"
Sheet Number	PV 1.3



1 ATTACHMENT DETAIL
 PV-3 SCALE: NTS



2 ATTACHMENT DETAIL (ENLARGED VIEW)
 PV-3 SCALE: NTS



BETTER TOMORROW SOLAR
 1014 Norwood Dr. Marietta, GA 30066
 CONTRACTOR

REVISIONS	
Description	Date
Initial Design	10-05-2024
	10-06-2024

Signature with Seal

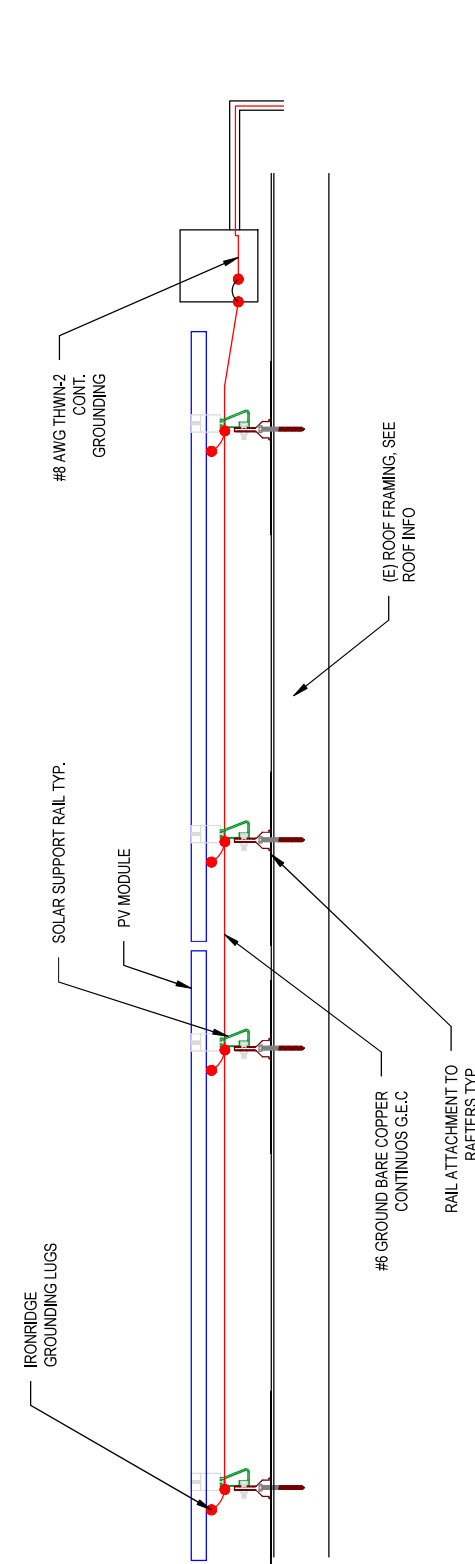
Project Name & Address
MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Service #

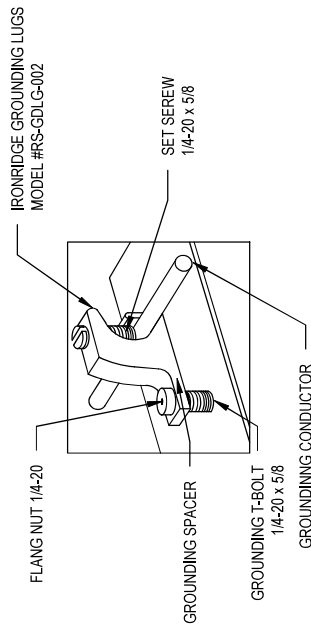
Sheet Name
ATTACHMENT DETAIL

Sheet Size
ANSI B 11" X 17"

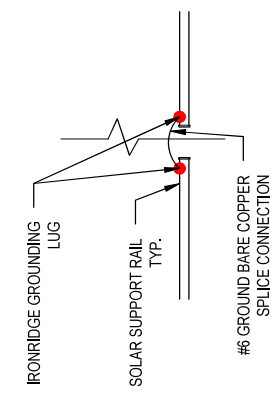
Sheet Number
PV 1.4



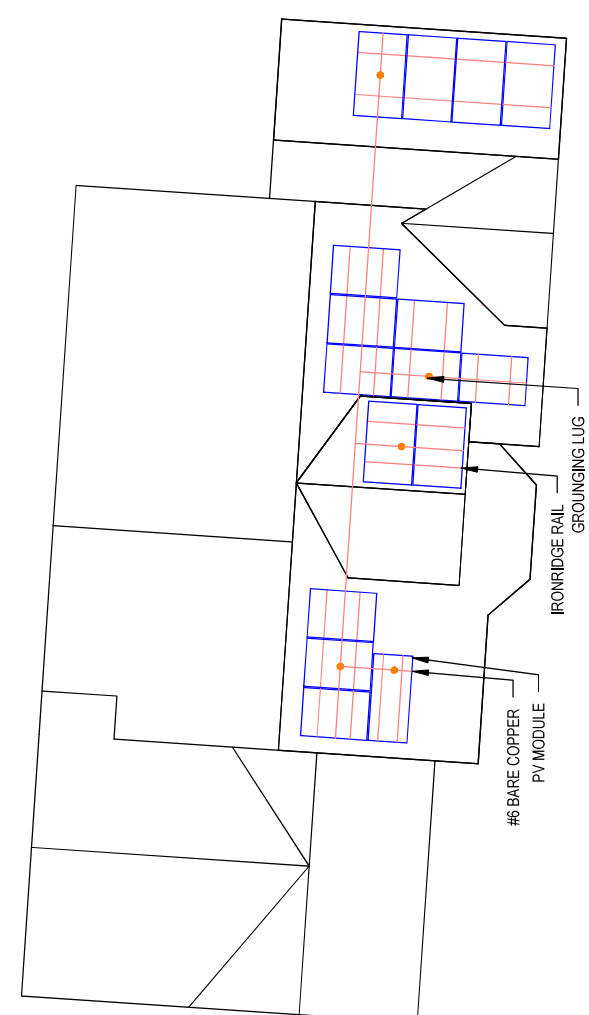
1 GROUNDING DETAIL
 SCALE: NTS
 PV-3A



3 DETAIL
 SCALE: NTS
 PV-3A



4 DETAIL
 SCALE: NTS
 PV-3A

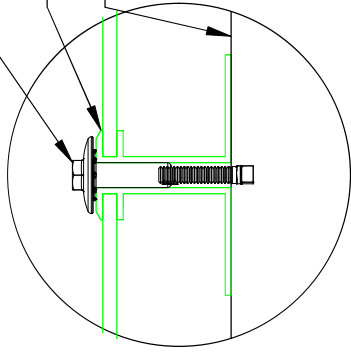


2 GROUNDING DETAIL
 SCALE: NTS
 PV 1.4

SYSTEM SUMMARY

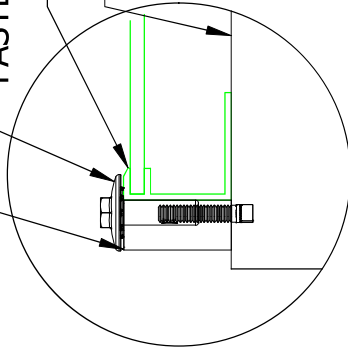
- 16 Q CELL QPEAK DUO BLK ML-G10+ (400W) MODULES
 - 1 TIGO TS4A-F MODULE-LEVEL RAPID SHUTDOWN
 - 1 EP CUBE HYBRID INVERTER
 - 1 EP CUBE HYBRID NA510G BATTERY (9.9kwh)
- SYSTEM SIZE: 6.400 KW DC STC, 7.600 KW AC

IRONRIDGE UNIVERSAL FASTENING OBJECT
PV MODULE FRAME
IRONRIDGE XR100 RAIL



1 | **DETAIL, MID CLAMP FRONT**
PV 1.5 | Scale: 6" = 1'-0"

IRONRIDGE STOPPER SLEEVE
IRONRIDGE UNIVERSAL FASTENING OBJECT
PV MODULE FRAME
IRONRIDGE XR100 RAIL



2 | **DETAIL, END CLAMP (UFO) FRONT**
PV 1.5 | Scale: 6" = 1'-0"



BETTER TOMORROW SOLAR
1014 Norwood Dr SE, Marietta, GA 30066

CONTRACTOR

REVISIONS

Description	Date	Rev
Initial Design	10-05-2024	01
	10-05-2024	01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name

ATTACHMENT
DETAIL

Sheet Size

ANSI B
11" X 17"

Sheet Number

PV 1.5

BILL OF MATERIALS

MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 16 MODULES
 MODULE TYPE = Q CELL Q-PEAK DUO BLK ML-G10+ (400W) MODULES
 MODULE WEIGHT = 48.5 LBS / 22.0 KG.
 MODULE DIMENSIONS = 74.0"X 41.1" = 21.12 SF
 UNIT WEIGHT OF ARRAY = 2.30 PSF

SYSTEM SUMMARY

- 16 Q CELL Q-PEAK DUO BLK ML-G10+ (400W) MODULES
 - 16 TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN
 - 1 EP CUBE HYBRID INVERTER
 - 1 EP CUBE HYBRID NA510G BATTERY (9.9kwh)
- SYSTEM SIZE: 6.400 KW DC STC, 7.600 KW AC

EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	16	Q CELL Q-PEAK DUO BLK ML-G10+ (400W) MODULES
INVERTER	1	EP CUBE HYBRID INVERTER
RAPID SHUTDOWN	16	TIGO: TS4-A-F MODULE-LEVEL RAPID SHUTDOWN
BATTERY	1	EP CUBE HYBRID NA510G BATTERY (9.9kwh)
SOLADECK	3	SOLADECK
AC DISCONNECT	1	100A NON-FUSED AC DISCONNECT 240A UL LISTED
ATTACHMENTS	48	FALSHFOOT 2 PV ATTACHMENTS [FF2-01-B1]
RAILS	8	IRONRIDGE XR100 RAIL-168" SECTION
RAIL SPLICE	0	SPLICE KIT
MID CLAMPS	18	MID CLAMPS / UFO
END CLAMPS	28	END CLAMPS / STOPPER SLEEVE
GROUNDING LUG	7	GROUNDING LUG

DISCLAIMER: MATERIALS REQUIRED LIST FOR CONCEPTUAL USE ONLY THE INTENT IS TO AID CONTRACTOR FOR ORDERING REQUIRED MATERIALS FOR THE PROJECT. CONTRACTOR RESPONSIBLE TO VERIFY PRIOR TO SOLAR EQUIPMENT ORDERING



BETTER TOMORROW SOLAR
 1024 N. Main St. #100, Decatur, GA 30030

CONTRACTOR

REVISIONS	Date	Rev
Description	10/05/2024	01
Initial Design	10/05/2024	01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Service #

Sheet Name
EQUIPMENT SPECIFICATION

Sheet Size
**ANSI B
 11" X 17"**

Sheet Number
BOM1.1

SYSTEM SIZE: 6.400 KW DC STC, 7.600 KW AC
 (16) 0 CELL O-PEAK DUO BLM (M-510+-(400W)) MODULES
 (16) TGO-TS44-F MODULE-LEVEL RAPID SHUTDOWN
 (1) EP CUBE HYBRID INVERTER
 (1) EP CUBE HYBRID 14S10C BATTERY (9.9kWh)
 (02) STRINGS OF 08 MODULES CONNECTED IN SERIES PER STRING

NOTE:
 VISIBLE, LABELABLE DISCONNECT LOCATED
 LESS THAN 10' FROM UTILITY METER

QTY	CONDUCTOR INFORMATION	CONDUIT TYPE	CONDUIT SIZE
(4)	#10AWG- PV WIRE/USE-2	N/A	N/A
(1)	#8AWG- BARE COPPER IN FREE AIR		
(4)	#10AWG- THWN-2	EMT OR LFMC IN ATTIC	3/4"
(2)	#8AWG- THWN-2	EMT, LFMC OR PVC	3/4"
(1)	#8AWG- THWN-2 GND		
(2)	#8AWG- THWN-2 N		
(1)	#8AWG- THWN-2 GND		
(1)	#8AWG- THWN-2 N		
(1)	#8AWG- THWN-2 GND		

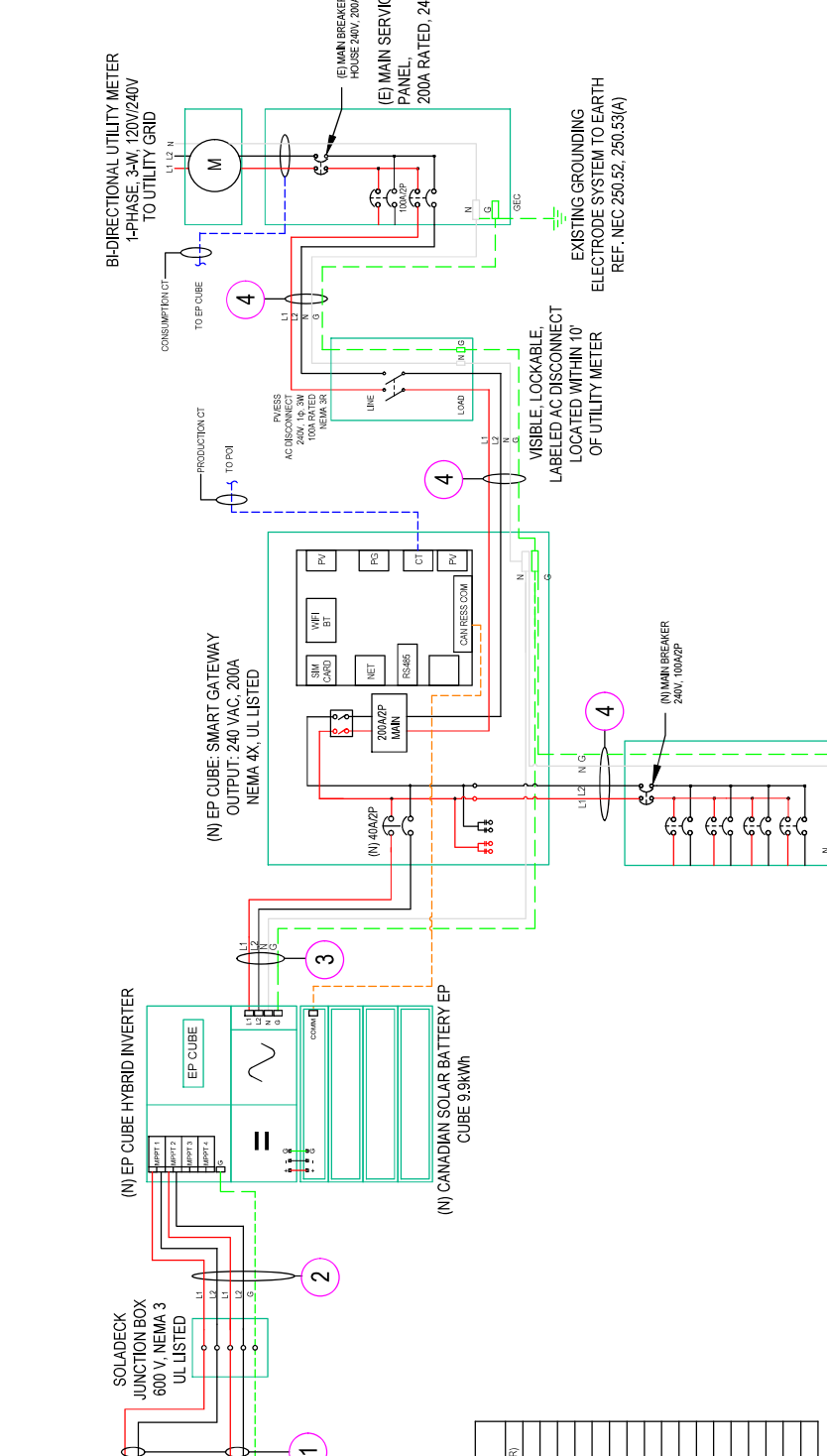
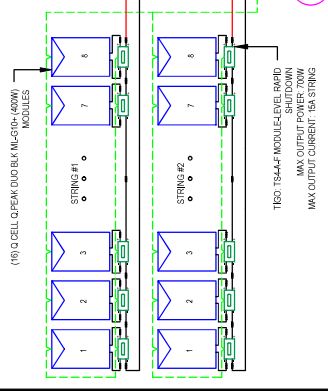
- INTERCONNECTION NOTES:**
- INTERCONNECTION SIZING, LIMITATIONS AND COMPLIANCE DETERMINED IN ACCORDANCE WITH (NEC 705.12) AND (NEC 690.59).
 - GROUND FAULT PROTECTION IN ACCORDANCE WITH (NEC 215.9), (NEC 230.95).
 - ALL EQUIPMENT TO BE RATED FOR BACKFEEDING.
 - PV BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUSBAR RELATIVE TO THE MAIN BREAKER.
- DISCONNECT NOTES:**
- DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS)
 - AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH (NEC 225.31) AND (NEC 225.32).
- RACKING NOTE:**
- BOND EVERY OTHER RAIL WITH #6 BARE COPPER

Better Tomorrow Solar
BETTER TOMORROW SOLAR
 1014 National Dr. E., Mesa, AZ 85206

CONTRACTOR

Signature with Seal

Project Name & Address



OCPD CONDUCTOR SIZE	
BREAKER/RUSE SIZE	WIRE GAUGE SIZE (75°C COPPER)
20A	10 AWG
25A	10 AWG
30A	10 AWG
35A	8 AWG
40A	8 AWG
45A	8 AWG
50A	8 AWG
55A	6 AWG
60A	6 AWG
70A	4 AWG
80A	4 AWG
90A	3 AWG
100A	3 AWG
110A	2 AWG
125A	1 AWG
150A	1 AWG
175A	1 AWG
200A	3/0 AWG

1 ELECTRICAL LINE DIAGRAM
 SCALE: NTS
 E 1.1

MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Service #

Sheet Name
 3-I NE
 DIAGRAM

Sheet Size
 ANSIB
 11" X 17"

Sheet Number
 E 1.1

PV MODULE RATINGS @ STC	
MANUFACTURER	Q CELL O-PEAK DUO BLK ML-G18-(600W)
MAX. POWER-POINT CURRENT (MPP)	10.77 AMPS
MAX. POWER-POINT VOLTAGE (MPP)	37.13 VOLTS
OPEN-CIRCUIT VOLTAGE (VOC)	45.30 VOLTS
SHORT-CIRCUIT CURRENT (ISC)	11.14 AMPS
MAX. SERIES FUSE (OCPD)	20 AMPS
NOM. MAX. POWER AT STC (PMAX)	400 WATTS
MAX. SYSTEM VOLTAGE	1000V
VOC TEMPERATURE COEFFICIENT	-0.27% /°C

Roof-top conductor ampacities designed in compliance with art. 690.8, Tables 310.15(B)(2)(a), 310.15(B)(3)(a), 310.15(B)(3)(c), 310.15(B)(16), Chapter 9 Tables 4, 5, & 9. Location specific temperature obtained from ASHRAE 2017 data tables

RECORD LOW TEMP	-9°
AMBIENT TEMP (HIGH TEMP 2%)	36°
CONDUIT HEIGHT	0.5'
ROOF TOP TEMP	58°
CONDUCTOR TEMPERATURE RATE	90°

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	EP CUBE HYBRID INVERTER
AC POWER (P _{ac}) BATTERY	7.600 KW
NOMINAL OUTPUT VOLTAGE	240 VAC
NOMINAL OUTPUT CURRENT (FULL SUN)	31.6A
NOMINAL OUTPUT CURRENT (NO SUN)	20.6A

NUMBER OF CURRENT CARRYING CONDUCTORS IN CONDUIT	
PERCENT OF VALUES	
.80	4-6
.70	7-9
.50	10-20



BETTER TOMORROW SOLAR
1924 Vermont St. SE, Atlanta, GA 30316

CONTRACTOR	
------------	--

REVISIONS	
Description	Date
Initial Design	10-05-2024 01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30020, USA
APN # 1800405024

Service #

Sheet Name
WIRE
CALCS

Sheet Size
ANSI B
11" X 17"

Sheet Number
E 1.2

DC FEEDER CALCULATIONS

CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA * 1.25 (A)	OCPD SIZE (A)	GROUND SIZE	CONDUCTOR SIZE	75° C AMPACITY (A)	AMBIENT TEMP (°C)	AMBIENT CHECK #1	TOTAL CC CONDUCTORS ORS IN RACEWAY	90° C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90° C AMPACITY DERATED (A)	AMPCITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/FT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
STRING 1	JUNCTION BOX	600	15.00	18.75	20	BARE COPPER #6 AWG	CU #10 AWG	35	36	PASS	2	40	0.91	1	36.4	PASS	38	1.24	0.23%	N/A	#N/A
STRING 1	JUNCTION BOX	600	15.00	18.75	20	BARE COPPER #6 AWG	CU #10 AWG	35	36	PASS	2	40	0.91	1	36.4	PASS	37	1.24	0.22%	N/A	#N/A
JUNCTION BOX	INVERTER	600	15.00	18.75	20	CU #8 AWG	CU #10 AWG	35	36	PASS	6	40	0.91	0.8	29.12	PASS	50	1.24	0.31%	3/4" EMT	30.51914
Bring 2 Voltage Drop 0.596																					
Bring 2 Voltage Drop 0.539																					

AC FEEDER CALCULATIONS

CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA * 1.25 (A)	OCPD SIZE (A)	NEUTRAL SIZE	GROUND SIZE	CONDUCTOR SIZE	75° C AMPACITY (A)	AMBIENT TEMP (°C)	AMBIENT CHECK #1	TOTAL CC CONDUCTORS IN RACEWAY	90° C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90° C AMPACITY DERATED (A)	AMPCITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/FT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
INVERTER	GATEWAY	240	31.6	39.5	40	CU #8 AWG	CU #8 AWG	CU #8 AWG	50	36	PASS	2	55	0.91	1	50.05	PASS	5	0.778	0.102	3/4" EMT	27.672
GATEWAY	BACKUP LOAD PANEL	240	100	100	100	CU #8 AWG	CU #8 AWG	CU #8 AWG	100	36	PASS	2	115	0.91	1	104.65	PASS	5	0.245	0.102	1" EMT	38.0208
BACKUP LOAD PANEL	AC DISCONNECT	240	100	100	100	CU #8 AWG	CU #8 AWG	CU #8 AWG	100	36	PASS	2	115	0.91	1	104.65	PASS	5	0.245	0.102	1" EMT	38.0208
AC DISCONNECT	MSP	240	100	100	100	CU #8 AWG	CU #8 AWG	CU #8 AWG	100	36	PASS	2	115	0.91	1	104.65	PASS	19	0.245	0.388	1" EMT	38.0208
CUMULATIVE VOLTAGE 0.69%																						

ELECTRICAL NOTES

- ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
- ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
- 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.
- WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
- WHERE SIZES OF SOLADEX BOX, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
- MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WIEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
- TEMPERATURE RATINGS OF ALL CONDUCTORS, TERMINATIONS, BREAKERS, OR OTHER DEVICES ASSOCIATED WITH THE SOLAR PV SYSTEM SHALL BE RATED FOR AT LEAST 75 DEGREE C.
- CONDUIT INSTALLED AT MINIMUM DISTANCE OF 78 INCHES ABOVE ROOF NEC 310.15(B)(3)(C)

WARNING
SOLAR SYSTEM CONNECTED AND ENERGISED

LABEL 6
AT UTILITY METER (NEC 690.13(B))

WARNING
DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL 8
POINT OF INTERCONNECTION (PER NEC 705.12(D)(3) & NEC 690.59) NET METER PHOTO METER (PER AHJ, UTILITY OPERATIONS)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL LOCATION:
UTILITY SERVICE ENTRANCE METER, INVERTER/DC DISCONNECT IF REQUIRED BY LOCAL AHJ, OR OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ.
PER CODE(S): NEC 2020: 690.56(C)(2)

WARNING
POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
ADJACENT TO PV BREAKER AND ESS OCPD (IF APPLICABLE).
PER CODE(S): NEC 2020: 705.12(B)(3)(2)

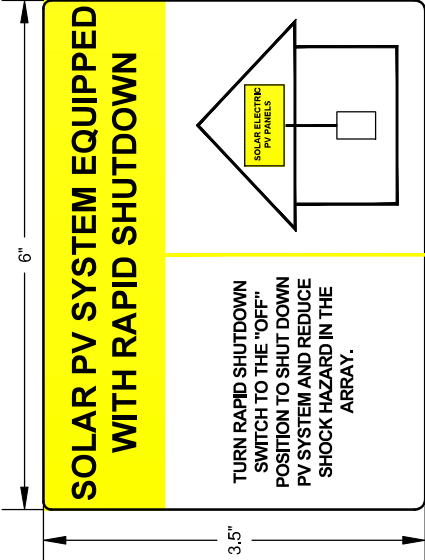
PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT: 31.60A
NOMINAL OPERATING AC VOLTAGE: 240V

NEC 690.54

MAXIMUM DC VOLTAGE OF PV SYSTEM

PER CODE(S): NEC 690.53

WARNING
THIS EQUIPMENT FED BY MULTIPLE SOURCES TOTAL RATING OF ALL OVERCURRENT DEVICES INCLUDING MAIN OVERCURRENT DEVICE SHALL NOT EXCEED CAPACITY OF BUSBAR



LABEL LOCATION:
ON OR NO MORE THAN 1 M (3 FT) FROM THE SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED.
PER CODE(S): NEC 2020: 690.56(C), NEC 2020: 690.56(C)(1)(a)

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION:
INTERIOR AND EXTERIOR DC CONDUIT EVERY 10 FT. AT EACH TURN, ABOVE AND BELOW PENETRATIONS; ON EVERY JBPULL BOX CONTAINING DC CIRCUITS.
PER CODE(S): NEC 2020: 690.31(D)(2)

CAUTION: MULTIPLE POWER SOURCES

PER CODE(S): NEC 2020: 690.58(B), NEC 2020: 705.10

WARNING
THE DISCONNECTION OF THE GROUNDED CONDUCTOR(S) MAY RESULT IN OVERVOLTAGE ON THE EQUIPMENT

NEC 690.31 (E)

ESS & PV REMOTE DISCONNECT & RAPID POWER SHUTDOWN

LABEL LOCATION:
EMERGENCY STOP BUTTON

BATTERY SYSTEM FUSE LOCATED INSIDE HYBRID INVERTER COVER
DO NOT DISCONNECT OR OPEN UNDER LOAD
MAXIMUM VOLTAGE – 263VDC
MAXIMUM CURRENT – 55A DC

LABEL LOCATION:
RIGHT SIDE OF EP CUBE HYBRID INVERTER

PV SYSTEM RAPID SHUTDOWN SWITCH DC DISCONNECT LOCATED INSIDE EP CUBE HYBRID INVERTER COVER

LABEL LOCATION:
LEFT SIDE OF EP CUBE HYBRID INVERTER COVER

PHOTOVOLTAIC SYSTEM DC DISCONNECT
OPERATING VOLTAGE – 445VDC
OPERATING CURRENT – 12.84A DC
MAXIMUM SYSTEM VOLTAGE – 579VDC
MAXIMUM SHORT CIRCUIT CURRENT – 13.6A DC

LABEL LOCATION:
PV SYSTEM DC DISCONNECT ON HYBRID INVERTER
CODE REF: 690.59

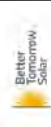
PV & BATTERY INVERTER AC DISCONNECT LOCATED INSIDE EP CUBE SMART GATEWAY MAXIMUM VOLTAGE – 240VAC MAXIMUM CURRENT – 32A AC

LABEL LOCATION:
EP CUBE SMART GATEWAY COVER
CODE REF: NEC 706.15(C) & 690.54

BETTER TOMORROW SOLAR 1024 Vermont St. E. Macon, GA 30910	
CONTRACTOR	
REVISIONS	
Description	Date
Initial Design	10/05/2024
	10/05/2024 01
Signature with Seal	

Project Name & Address
 MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Service #	
Sheet Name	PLACARDS
Sheet Size	ANSI B 11" X 17"
Sheet Number	E 1.3



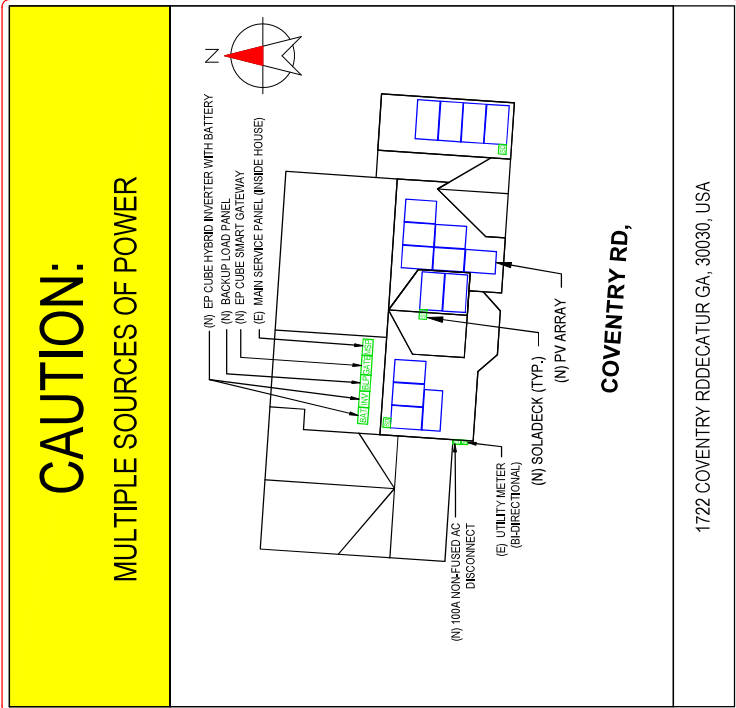
BETTER TOMORROW SOLAR
1024 Memorial Dr SE, Marietta, GA 30066

CONTRACTOR

REVISIONS			
Description	Date	Rev	
Initial Design	10/05/2024	01	
Signature with Seal			

Project Name & Address
MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #
Sheet Name PLACARDS
Sheet Size ANSI B 11" X 17"
Sheet Number E 1.4



**CAUTION:
MULTIPLE SOURCES OF POWER**

1722 COVENTRY RD DECATUR GA, 30030, USA

COVENTRY RD,

DIRECTORY PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(A)(B), NEC 705.10)

LABELING NOTES:

1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2020 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145(f)(7), ANSI Z535.4-2011
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21(B)(1)]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND, REFLECTIVE, AND PERMANENTLY AFFIXED [JFC 605.11.1.3]



powered by

Q. PEAK DUO BLK ML-G10+

385-405

ENDURING HIGH PERFORMANCE





Qualify Controlled PV





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*, Hot-Spot Protect and Traceable Quality Tru.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*.





REAR CELL TECHNOLOGY



LEGISLATIVE CELL TECHNOLOGY

THE IDEAL SOLUTION FOR:

- Rooftop arrays on residential buildings

Engineered in Germany

MECHANICAL SPECIFICATION

Formet	74.0in x 41.1in x 1.25in (Including Frame)
Weight	48.5lb (22.0kg)
Front Cover	0.13in (3.2mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 x 22 monocrystalline Q. ANTUM solar half cells
Junction Box	2.09 x 3.38 in x 1.26 x 2.38 in x 0.59 x 0.71 in (53.10mm x 85.91mm x 32.50mm x 15.18mm), IP67, with bypass diodes
Cable	4 mm² Solar cable, (1) x 49.2in (1250mm), (1) x 49.2in (1250mm)
Connector	Shikell MCA, IP68

ELECTRICAL CHARACTERISTICS

POWER CLASS	385	395	400	405
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS (STC) (POWER TOLERANCE ±5%) (300W)	385	395	400	405
Power at MPP	P _{max} [W]	380	395	400
Short Circuit Current	I _{sc} [A]	11.04	11.10	11.17
Open Circuit Voltage	V _{oc} [V]	45.19	45.33	45.34
Current at MPP	I _{mp} [A]	10.59	10.65	10.71
Voltage at MPP	V _{mp} [V]	38.48	38.62	38.68
Temperature Coefficient	β [1/K]	-0.18	-0.18	-0.18
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS (NOCT) (1000W/m²)				
Power at MPP	P _{max} [W]	286.4	296.3	300.1
Short Circuit Current	I _{sc} [A]	8.90	8.95	8.97
Open Circuit Voltage	V _{oc} [V]	42.52	42.65	42.72
Current at MPP	I _{mp} [A]	8.86	8.84	8.81
Voltage at MPP	V _{mp} [V]	34.59	34.53	34.25
Temperature Coefficient	β [1/K]	-0.18	-0.18	-0.18

Q CELLS PERFORMANCE WARRANTY
Minimum Performance Guarantee: 85% (at 1000W/m²) after 25 years, or 90% after 30 years, according to the standard IEC 61215. See www.q-cells.com for more information.





TEMPERATURE COEFFICIENTS

Temperature Coefficient of P _{max}	β [1/K]	-0.18	Temperature Coefficient of V _{oc}	β [1/K]	-0.27
Temperature Coefficient of I _{sc}	γ [1/K]	+0.04	Temperature Coefficient of I _{mp}	γ [1/K]	-0.27
Temperature Coefficient of P _{max} (NOCT)	β [1/K]	-0.34	Temperature Coefficient of V _{oc} (NOCT)	β [1/K]	-0.27

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{max} [V]	1000 (IEC) / 1000 (UL)	IPF module classification	Class II
Maximum System Current I _{max} [A]	15	IPF module classification	TYPE 2
Maximum System Fuse Rating [A]	20	Fire Retardant	UL 95V V0
Max. Design Load - Snow / Ice [kg/m²]	75 (5000Pa) / 55 (3600Pa)	Permitted Mobile Temperature	-40°C up to +105°C
Max. Design Load - Wind [kg/m²]	115 (5000Pa) / 84 (4000Pa)	Permitted Mobile Temperature	-40°C up to +65°C

QUALIFICATIONS AND CERTIFICATES







PACKAGING INFORMATION

Dimensions	74.0in x 41.1in x 1.25in	Weight	48.5lb
Dimensions	1840mm x 1040mm x 32mm	Weight	22.0kg

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

Q CELLS America Inc.
400 Spectrum Center Drive, Suite 1100, Irvine, CA 92618, USA | TEL: +1 949 368 55 56 | EMAIL: info@q-cells.com | www.q-cells.com

	BETTER TOMORROW SOLAR 1024 Nevada St. SE, Mesa, AZ 85205 CONTRACTOR	Signature with Seal	Project Name & Address MARION CARTER RESIDENCE 1722 COVENTRY RD DECATUR GA 30030, USA APN # 1800405024												
REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Description</th> <th>Date</th> <th>Rev</th> </tr> </thead> <tbody> <tr> <td>Initial Design</td> <td>10-05-2024</td> <td>01</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Description	Date	Rev	Initial Design	10-05-2024	01							Service # Sheet Name EQUIPMENT SPECIFICATION Sheet Size ANSI B 11" X 17" Sheet Number D 1.1	
Description	Date	Rev													
Initial Design	10-05-2024	01													



TS4-A-F

Module-level rapid shutdown

The TS4-A-F (Fire Safety) is the advanced add-on rapid shutdown solution that brings smart module functionality to standard PV modules for higher reliability. Ensure safety by upgrading existing PV systems or by adding safety features to new installations.

The TS4-A-F complies with NEC 2017, 2020, and 2023 690.12 Rapid Shutdown specifications when installed with the Tigo RSS Transmitter or an inverter with a built-in Tigo certified transmitter.

Features

- High input current rating – now rated for 20 A I_{sc} /25 A I_{Lsc} to better accommodate bifacial and high-current modules
- Simple, fast installation – snaps to a standard PV module frame or mounts to racking
- Power-line communications (PLC) signaling – rapid shutdown signaling over PV conductors
- Automatic shutdown – PV array enters rapid shutdown mode in the event of AC grid loss
- UL Standards-certified – tested and certified with hundreds of top inverter models
- 25-year warranty

Specifications

	20 A	25 A
Electrical		
Maximum current (I_{sc}/I_{Lsc})	15 A/20 A	20 A/25 A
Input voltage range (V_{in})	16 – 80 V	
Maximum input voltage	80 V	
Maximum system voltage (V_{max})	1000 V/1500 V*	
Maximum output current (I_{out})	15 A	
Maximum output power (P_{max})	700 W	
Maximum fuse rating	25 A	30 A
Maximum efficiency	99.9%	
Rapid Shutdown		
TS4 conductor AWG	12	
Rapid shutdown time limit	<30 sec.	
PVSE-controlled conductor limits	≤340 VA, ≤18 A, ≤30 V _{oc}	
UL 1741-compliant PVSE	Yes	
Communications	PLC	
Connections		
Input (from module) cable lengths	0.12/0.62 m	
Output (to string) cable lengths	1.2/2 m	
Connectors	MCH/EVO2	

* Depending on UL/IEC certification



tigoenergy.com

©2023.12.20 Tigo Energy, Inc. 002-00093-01 Rev. 3.4



The TS4-A-F (Fire Safety) is the advanced add-on rapid shutdown solution that brings smart module functionality to standard PV modules for higher reliability. Ensure safety by upgrading existing PV systems or by adding safety features to new installations.

The TS4-A-F complies with NEC 2017, 2020, and 2023 690.12 Rapid Shutdown specifications when installed with the Tigo RSS Transmitter or an inverter with a built-in Tigo certified transmitter.

Features

- High input current rating – now rated for 20 A I_{sc} /25 A I_{Lsc} to better accommodate bifacial and high-current modules
- Simple, fast installation – snaps to a standard PV module frame or mounts to racking
- Power-line communications (PLC) signaling – rapid shutdown signaling over PV conductors
- Automatic shutdown – PV array enters rapid shutdown mode in the event of AC grid loss
- UL Standards-certified – tested and certified with hundreds of top inverter models
- 25-year warranty

Specifications

	20 A	25 A
Electrical		
Maximum current (I_{sc}/I_{Lsc})	15 A/20 A	20 A/25 A
Input voltage range (V_{in})	16 – 80 V	
Maximum input voltage	80 V	
Maximum system voltage (V_{max})	1000 V/1500 V*	
Maximum output current (I_{out})	15 A	
Maximum output power (P_{max})	700 W	
Maximum fuse rating	25 A	30 A
Maximum efficiency	99.9%	
Rapid Shutdown		
TS4 conductor AWG	12	
Rapid shutdown time limit	<30 sec.	
PVSE-controlled conductor limits	≤340 VA, ≤18 A, ≤30 V _{oc}	
UL 1741-compliant PVSE	Yes	
Communications	PLC	
Connections		
Input (from module) cable lengths	0.12/0.62 m	
Output (to string) cable lengths	1.2/2 m	
Connectors	MCH/EVO2	

* Depending on UL/IEC certification



tigoenergy.com

©2023.12.20 Tigo Energy, Inc. 002-00093-01 Rev. 3.4



The TS4-A-F (Fire Safety) is the advanced add-on rapid shutdown solution that brings smart module functionality to standard PV modules for higher reliability. Ensure safety by upgrading existing PV systems or by adding safety features to new installations.

The TS4-A-F complies with NEC 2017, 2020, and 2023 690.12 Rapid Shutdown specifications when installed with the Tigo RSS Transmitter or an inverter with a built-in Tigo certified transmitter.

Features

- High input current rating – now rated for 20 A I_{sc} /25 A I_{Lsc} to better accommodate bifacial and high-current modules
- Simple, fast installation – snaps to a standard PV module frame or mounts to racking
- Power-line communications (PLC) signaling – rapid shutdown signaling over PV conductors
- Automatic shutdown – PV array enters rapid shutdown mode in the event of AC grid loss
- UL Standards-certified – tested and certified with hundreds of top inverter models
- 25-year warranty

Specifications

	20 A	25 A
Environmental		
Operating temperature range	-40 – 85 °C (-40 – 185 °F)	
Storage temperature range	-40 – 85 °C (-40 – 185 °F)	
Maximum elevation	3000 m (9840 ft.)	
Outdoor IP rating	IP68/NEMA 3R	
Mechanical		
Dimensions (H/W/D)	138.7 x 138.4 x 22.9 mm (5.4 x 5.5 x 0.9 in.)	
Weight	490 g (1.1 lb.)	
General		
Standards compliance	UL 1741, PVSRE, UL 1741 PVRS, CSA 22.7, IEC 62109, NEC 690.12	
Warranty	25 years	

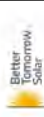
* 2L A.U. rating: -30 – 75 °C (-22 – 167 °F)

Ordering Information

Part Number	V _{max} Certifications UL/IEC	Cable Lengths	Connectors
20 A I_{sc}			
481-00252-20	1500 V/1000 V	1.2/2 m	MCH
481-00252-32	1500 V/1000 V	0.12/1.2 m	MCH
481-00252-62	1500 V/1000 V	0.62/1.2 m	MCH
481-00261-32	1500 V/1500 V	0.12/1.2 m	EVO2
481-00261-62	1500 V/1500 V	0.62/1.2 m	EVO2
481-01252-32	1500 V/1000 V	0.12/1.2 m	MCH
481-01252-62	1500 V/1000 V	0.62/1.2 m	MCH
481-01261-32	1500 V/1500 V	0.12/1.2 m	EVO2
481-01261-62	1500 V/1500 V	0.62/1.2 m	EVO2
25 A I_{sc}			
486-00252-32	1500 V/1000 V	0.12/1.2 m	MCH
486-00252-62	1500 V/1000 V	0.62/1.2 m	MCH
486-00261-32	1500 V/1500 V	0.12/1.2 m	EVO2
486-00261-62	1500 V/1500 V	0.62/1.2 m	EVO2
488-00252-32	1000 V	0.12/1.2 m	MCH
488-00252-62	1000 V	0.62/1.2 m	MCH
488-00261-32	1500 V	0.12/1.2 m	EVO2
488-00261-62	1500 V	0.62/1.2 m	EVO2

* IEC certified only

tigoenergy.com



BETTER TOMORROW SOLAR
1024 Vermont St. E. Mesa, AZ 85205

CONTRACTOR

REVISIONS	Date	Rev.
Description	10/05/2024	01
Initial Design	10/05/2024	01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name
EQUIPMENT SPECIFICATION

Sheet Size

ANSI B
11" X 17"

Sheet Number

D 1.2



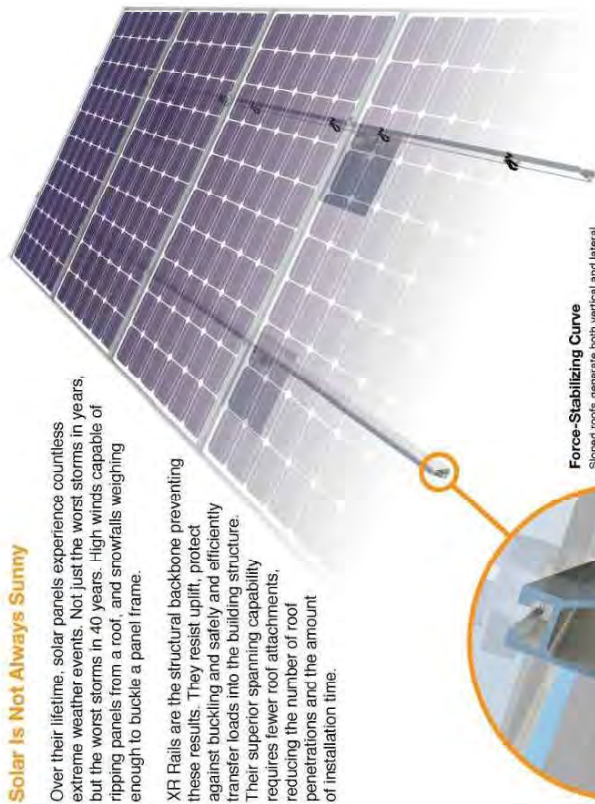
Tech Brief

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior sparring capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails, which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while creating a racking effect to resist weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.



IronEdge offers a range of tilt leg options for flat roof mounting applications.



Corrosion-Resistant Materials

All XR Rails are made of marine-grade aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



Database

XR Rails

XR10 Rail



A low-profile mounting rail for regions with light snow.

- 6" spanning capability
- Moderate load capability
- Clear & black anod. finish

XR100 Rail



The ultimate residential solar mounting rail.

- 8" spanning capability
- Heavy load capability
- Clear & black anod. finish

XR1000 Rail



A heavyweight mounting rail for commercial projects.

- 12" spanning capability
- Extreme load capability
- Clear anodized finish

Internal Splices



All rails use internal splices for seamless connections.

- Self-tapping screws
- Varying versions for rails
- Grounding Straps offered

Attachments

FlashFoot



Anchor, lash, and mount with all-in-one attachments.

- Ships with all hardware
- IBC & IRC compliant
- Certified with XR Rails

Slotted L-Foot



Drop-in design for rapid rail attachment.

- High-friction serrated face
- Heavy-duty profile shape
- Clear & black anod. finish

Standoffs



Raise flush or tilted systems to various heights.

- Works with vent flashing
- Ships pre-assembled
- 4" and 7" Lengths

Tilt Legs



Tilt assembly to desired angle, up to 45 degrees.

- Attaches directly to rail
- Ships with all hardware
- Fixed and adjustable

Clamps & Grounding

End Clamps



Slide in clamps and secure modules at ends of rails.

- Mill finish & black anod.
- Sizes from 1.22" to 2.3"
- Optional Under Clamps

Grounding Mid Clamps



Attach and ground modules in the middle of the rail.

- Parallel bonding T-bolt
- Reusable up to 10 times
- Mill & black stainless

T-Bolt Grounding Lugs



Ground system using the rail's top slot.

- Easy top-slot mounting
- Eliminates pre-drilling
- Swivels in any direction

Accessories



Provide a finished and organized look for rails.

- Snap-in Wire Clips
- Perfected End Caps
- UV-protected polymer

Free Resources



Design Assistant
Go from rough layout to fully engineered system. For free.
Go to IronRidge.com/mi



NABCEP Certified Training
Earn free continuing education credits, while learning more about our systems.
Go to IronRidge.com/training



BETTER TOMORROW SOLAR
1024 Normal St. SE, Atlanta, GA 30316

CONTRACTOR

REVISIONS	
Description	Rev.
Initial Design	10/05/2024
	10/05/2024 01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name
EQUIPMENT SPECIFICATION

Sheet Size

ANSI B
11" X 17"

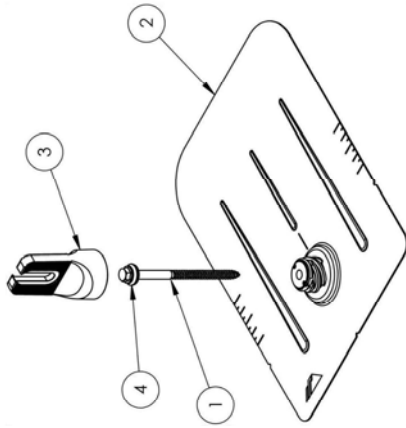
Sheet Number

D 1.4



FlashFoot2

Call Sheet



ITEM NO.	DESCRIPTION
1	BOLT LAG 5/16 X 4.75"
2	ASSY. FLASHING
3	ASSY. CAP
4	WASHER, EPDM BACKED

FLASHFOOT 2

Part Number	Description
FF2-01-01	FLASHFOOT2, MILL
FF2-01-01	FLASHFOOT2, BLACK

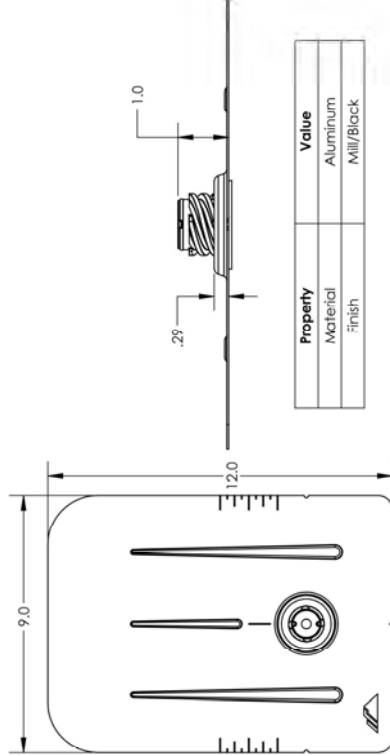
1) Bolt, Lag 5/16 x 4.75



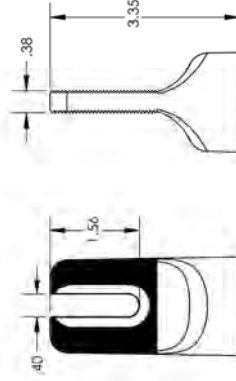
Property	Value
Material	300 Series Stainless Steel
Finish	Clear

v1.21

2) Assy, Flashing

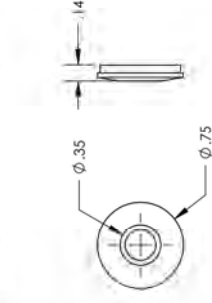


3) Assy, Cap



Property	Value
Material	Aluminum
Finish	Mill/Black

4) Washer, EPDM Backed



Property	Value
Material	300 Series Stainless Steel
Finish	Clear

v1.21



**BETTER TOMORROW
SOLAR**

1024 Hammond St. Marietta, GA 30066

CONTRACTOR

REVISIONS	Date	Rev.
Description	10/05/2024	
Issued/Design	10/05/2024	01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name
**EQUIPMENT
SPECIFICATION**

Sheet Size

**ANSI B
11" X 17"**

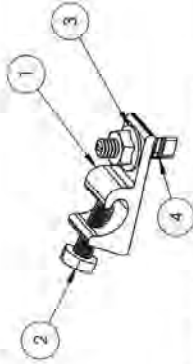
Sheet Number

D 1.5



IRONRIDGE

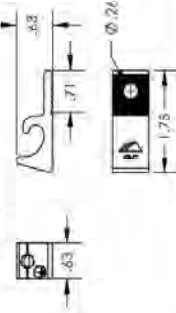
Grounding Lug



ITEM NO.	DESCRIPTION
1	LUG, GROUNDING, LAY-IN - LOW PROFILE
2	BOLT, 1/4-28 X .750" HEX CS SST
3	NUT, FLANGE HEX 1/4-20 SST
4	BOLT, T. CSTM 1/4-20 X 1.188" LOCK SS

Part Number	Description	Wire Size Range (AWG)
XR-LUG-03-A1	GROUNDING LUG, LOW PROFILE	4-10

1) Lug/ Grounding



Property	Value
Material	1in Plated Copper
Finish	Clear Matte

2) Bolt, 1/4-28 x .750 Hex



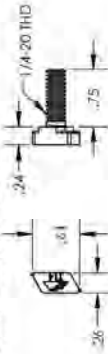
Property	Value
Material	300 Series Stainless Steel
Finish	Clear

3) Nut, Flange Hex 1/4-20



Property	Value
Material	300 Series Stainless Steel
Finish	Clear

4) Bolt, T. CSTM 1/4-20 x .750



Property	Value
Material	300 Series Stainless Steel
Finish	Clear

1/1.13



BETTER TOMORROW SOLAR
1024 Norwood St. Marietta, GA 30066

CONTRACTOR

REVISIONS	Date	Rev
Description	10/05/2024	
Initial Design	10/05/2024	01

Signature with Seal

Project Name & Address

MARION CARTER RESIDENCE
1722 COVENTRY RD
DECATUR GA 30030, USA
APN # 1800405024

Service #

Sheet Name
EQUIPMENT SPECIFICATION

Sheet Size
ANSI B 11" X 17"

Sheet Number
D 1.6



25800 Commcentre Drive
Lake Forest, CA 92630 USA
Telephone: 949.448.4100
Facsimile: 949.448.4111
www.intertek.com

Test Verification of Conformity

In the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address:

IronRidge, Inc.
1495 Zephyr Ave.
Hayward, CA 94544

Product Description:

XR Rails with Integrated Grounding.

Ratings & Principle Characteristics:

- Fire Class Resistance Rating:**
- Class A for Steep Slope Flush-Mount (symmetrical) Applications when using Type 1 and Type 2, Listed Photovoltaic Module.
 - Class A for Low Slope Flush-Mount and Tilt-Mount (symmetrical and asymmetrical) Applications when using Type 1, Listed Photovoltaic Module.

Models:

51-61GD-005, 51-61GD-005B, 51-5000-001, and 51-65-001

Brand Name:

N/A

Relevant Standards:

UL Subject 2703 (Section 15.2 and 15.3) Outline of Investigation for Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels, Issue Number: 2, Nov 13, 2012 Referencing UL1703 (Section 31.2) Standard for Safety for Flat-Plate Photovoltaic Modules and Panels, May 20, 2014

Verification Issuing Office:

Intertek Testing Services NA, Inc.
25800 Commcentre Dr.
Lake Forest, CA 92630

Date of Tests:

08/27/2014 to 01/07/2015

Test Report Number(s):

101541132LAX-002

This verification is part of the full test report(s) and should be read in conjunction with them. This report does not automatically imply product certification.

Completed by:

Amar Kacel
PV Engineer

Reviewed by:

Andrew Koretoff
Reviewer

Signature:

01/26/2015

01/26/2015

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observational and test/question results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

GFI-OP-11a (24-MAR-2014)

BETTER TOMORROW SOLAR 1024 Nevada St. E. Mesa, AZ 85205 CONTRACTOR	
REVISIONS	
Description	Date
Initial Design	10/05/2014
	10/05/2014
	01
Signature with Seal	

Project Name & Address
MARION CARTER RESIDENCE
 1722 COVENTRY RD
 DECATUR GA 30030, USA
 APN # 1800405024

Service #

Sheet Name
EQUIPMENT SPECIFICATION

Sheet Size
ANSI B 11" X 17"

Sheet Number
D 1.7



HARRIS
W
T



HARRIS
W



HARVEY
WILLIAMS





From: [Warner McConaughey](#)
To: [Paige V. Jennings](#)
Subject: Re: Questions Regarding COA Application - 1122 Springdale Road
Date: Thursday, November 14, 2024 9:09:21 AM

**** WARNING:** The sender of this email could not be validated and may not match the person in the "From" field. ******

Double hung. The addition built about 20 years ago is essentially one large living room. The windows on the north facing wall are double hung windows. For some reason they installed two oversized glass block openings on the southside. We will be changing these out to match the other regular windows.

Please let me know if you need additional information.

W

Warner McConaughey
HammerSmith, Inc
807 Church Street
Decatur, Georgia 30030
404.886.0847 c 404.377.1021 o

www.hammersmith.net

Please like us on Facebook

we want to thank you for your trust and confidence as we celebrate
30 Years of Design-Build Excellence

On Thu, Nov 14, 2024 at 9:12 AM Paige V. Jennings <pvjennings@dekalbcountyga.gov> wrote:

Good Morning,

Hope that this email finds you well!

We are finalizing our staff reviews for the upcoming HPC meeting on Monday, November 18th. Before finalizing our report on the application for 1122 Springdale Road. , could you please provide information for the following questions?

1. Will the windows be casement or double-hung windows?

Please provide all information that you can, as soon as possible. Our reports will be finalized no later than Friday afternoon and will be sent out along with the agenda for the meeting to applicants.

Thank You,

Paige



Government Services Center
178 Samis Street
Decatur, GA 30030


Paige V. Jennings


Senior Planner (they/them)

Historic Preservation

Planning & Sustainability Department

Current Planning Division

 pvjennings@dekalbcountyga.gov

 470.829.7341 County Cell



DeKalbCountyGa.gov/planning