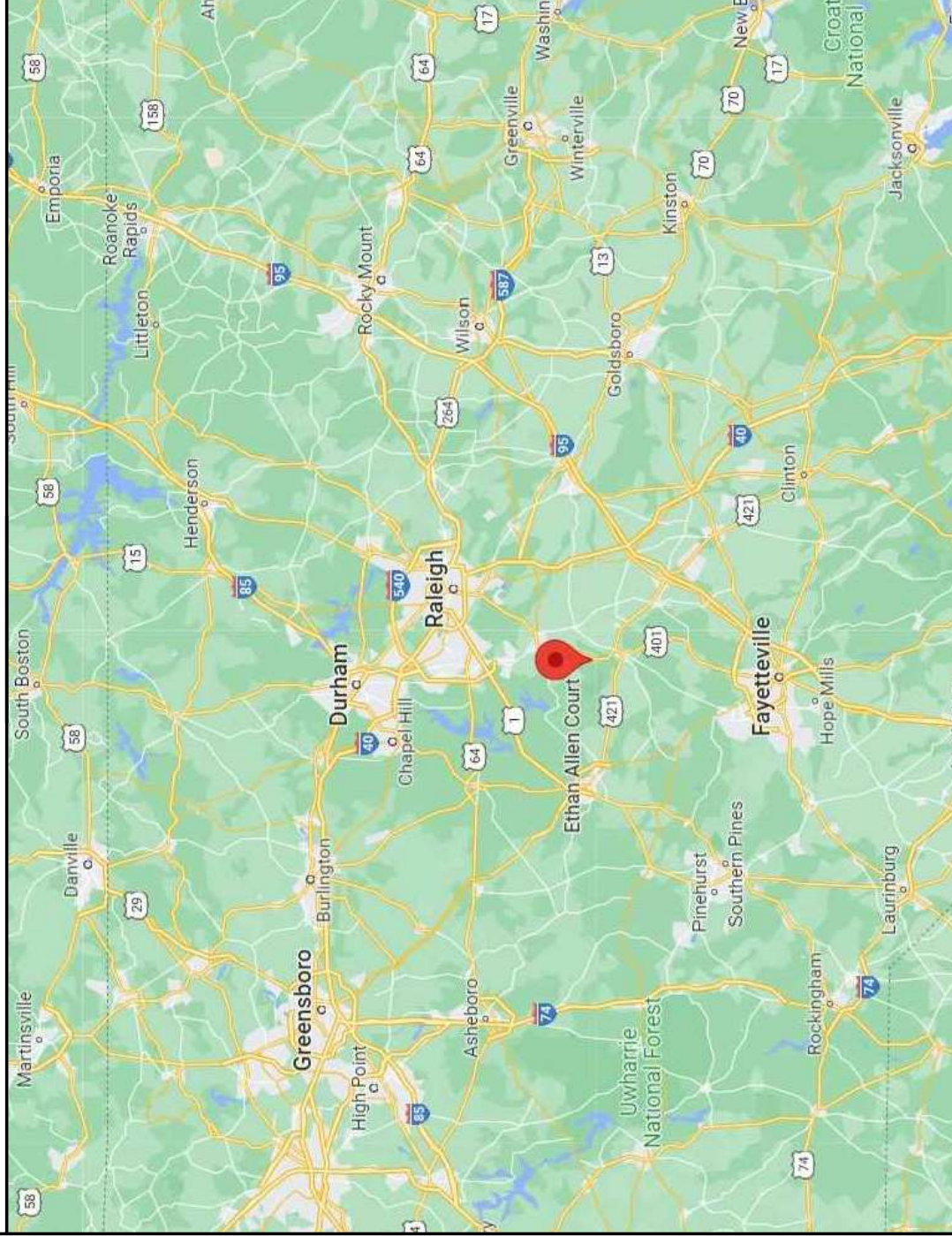


VICINITY MAP



PROPERTY



SCOPE OF WORK

- (31) URECO FBM400MFG-BB
- (2) SOLAR EDGE SE7600H-US
- (31) SOLAR EDGE S440
- ROOF MOUNT: IRONRIDGE FLASHFOOT 2
- MOUNTING RAILS: IRONRIDGE XR10

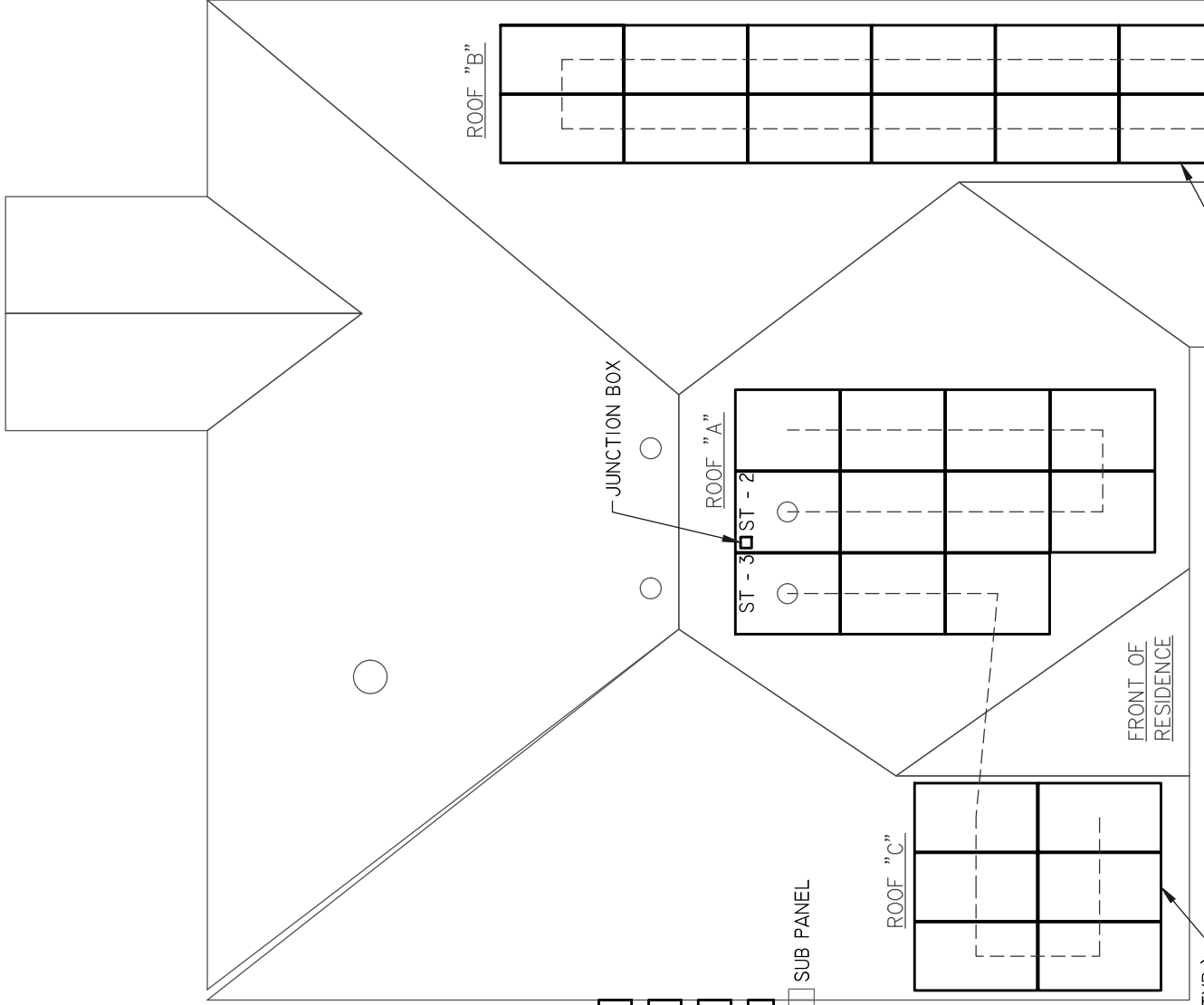
SITE CONDITION

ASCE 7-10 WIND SPEED - 116 MPH
 EXPOSURE CATEGORY - B
 RISK CATEGORY - II

INTERCONNECTIONS TYPE

CODE REFERENCES

- PV1.1
- PV2.1
- PV3.1 -
- PV4.1 -
- PV5.1 -



ROOF "B"

JUNCTION BOX

ROOF "A"

ST - 2

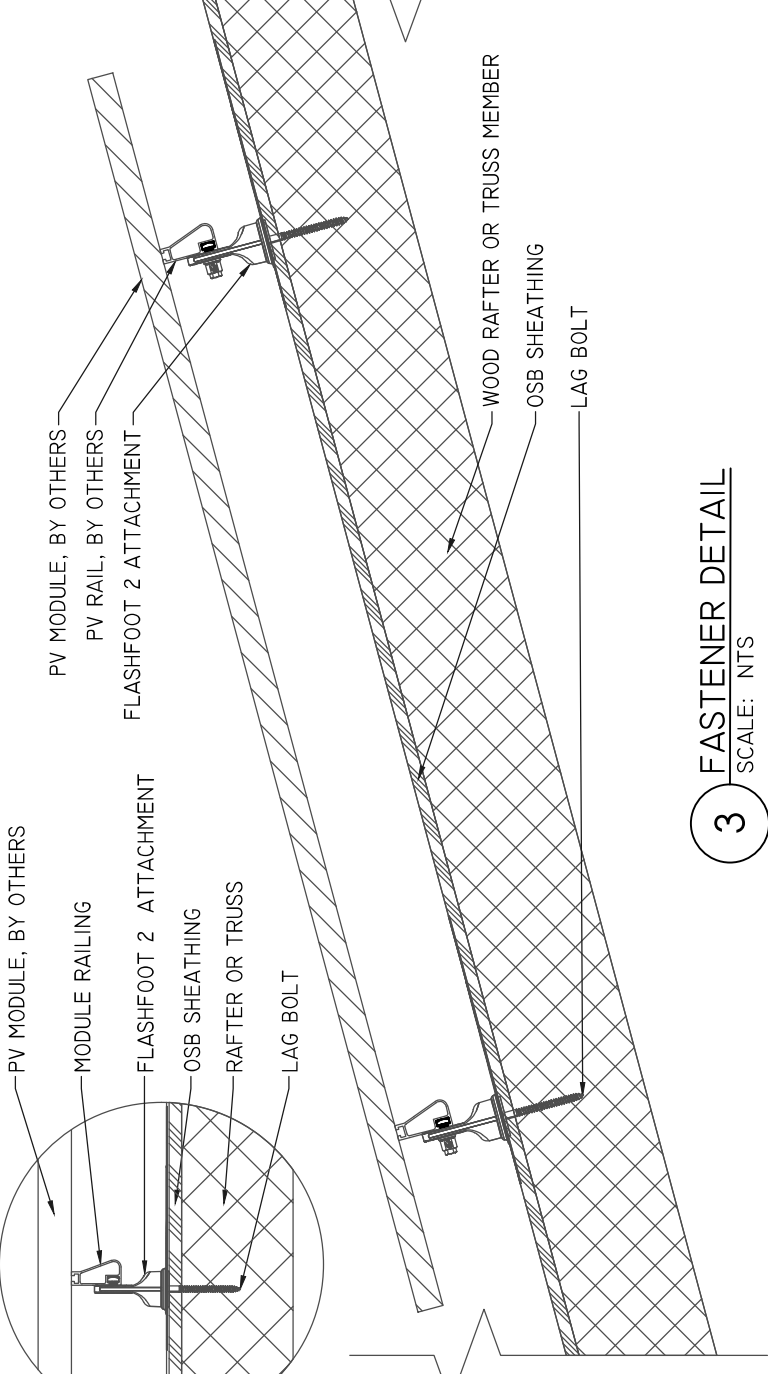
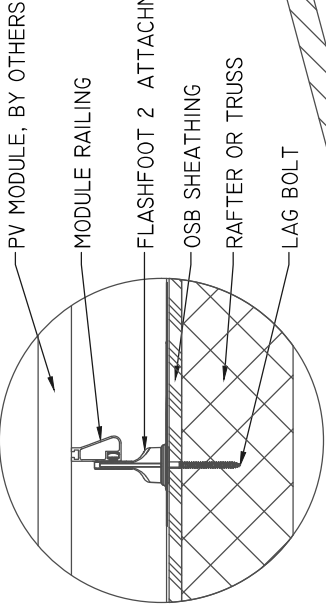
ST - 3

ROOF "C"

FRONT OF RESIDENCE

- DC/AC INVERTER #2
- DC/AC INVERTER #1
- PV COMBINER PANEL
- AC DISCONNECT
- METER/DISCONNECT COMBO
- SUB PANEL

PV MODULE (TYP)



3 FASTENER DETAIL

SCALE: NTS

| PV MODULES | |
|------------|--------------|
| MAKE | URECO |
| MODEL | FBM400MFG-BB |
| WIDTH | 44.6" |
| LENGTH | 67.8" |
| THICKNESS | 1.4" |
| WEIGHT | 4.8 LBS |

| ROOF "B" ZONES: | |
|--|---------------------------------|
| ALL ZONES | MAX. RAIL OVERHANG = 16" |
| <input type="checkbox"/> ZONE 1 | MAX. FASTENER SPAN ZONE 1 = 72" |
| <input type="checkbox"/> ZONE 2 | MAX. FASTENER SPAN ZONE 2 = 48" |
| <input checked="" type="checkbox"/> ZONE 3 | MAX. FASTENER SPAN ZONE 3 = 24" |

| ROOF "A" ZONES: | |
|--|---------------------------------|
| ALL ZONES | MAX. RAIL OVERHANG = 16" |
| <input type="checkbox"/> ZONE 1 | MAX. FASTENER SPAN ZONE 1 = 48" |
| <input type="checkbox"/> ZONE 2 | MAX. FASTENER SPAN ZONE 2 = 48" |
| <input checked="" type="checkbox"/> ZONE 3 | MAX. FASTENER SPAN ZONE 3 = 24" |

| ARRAY "B" SUMMARY | |
|-------------------|-----------|
| # MODULES | 14 |
| # ROOF MOUNTS | 36 |
| RAIL LENGTH | 166 FT. |
| ARRAY AREA | 294 SQFT. |
| ARRAY WEIGHT | 878 LBS. |
| AZIMUTH @ SN | 100° |
| TILT ANGLE | 34° |

| ARRAY "A" SUMMARY | |
|-------------------|-----------|
| # MODULES | 11 |
| # ROOF MOUNTS | 38 |
| RAIL LENGTH | 90 FT. |
| ARRAY AREA | 231 SQFT. |
| ARRAY WEIGHT | 638 LBS. |
| AZIMUTH @ SN | 190° |
| TILT ANGLE | 34° |

| MOUNTING RAILS | |
|----------------|---------------|
| MAKE | IRONRIDGE |
| MODEL | XRIO |
| MATERIAL | ALUMINUM |
| WEIGHT | 1.25 LBS/SOFT |
| SPACING | 34" |

STATE: _____

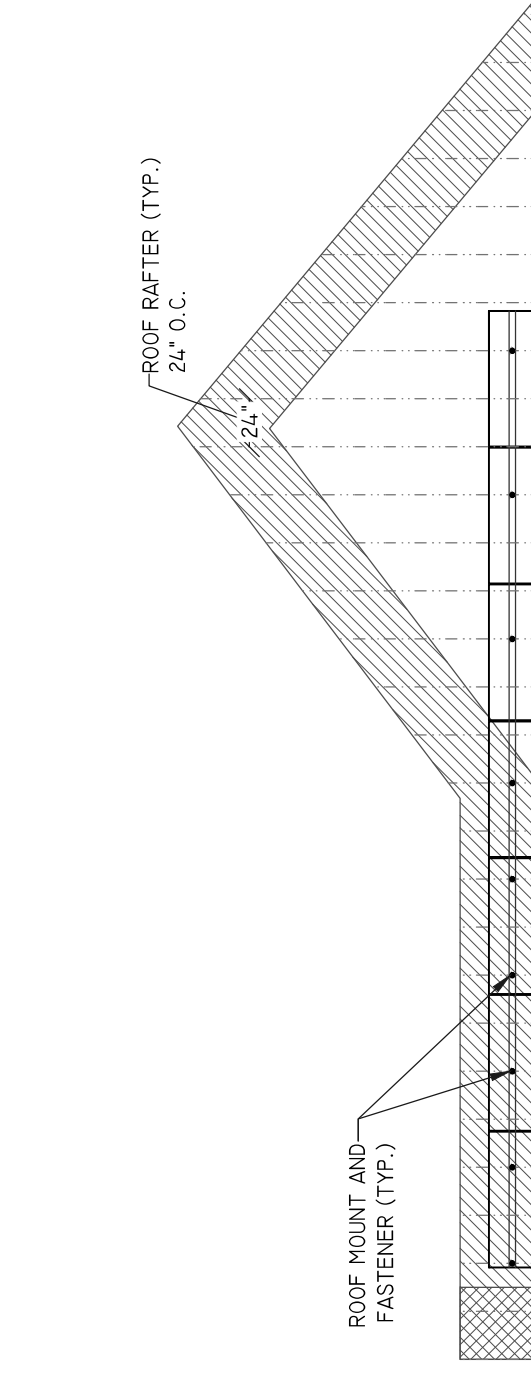
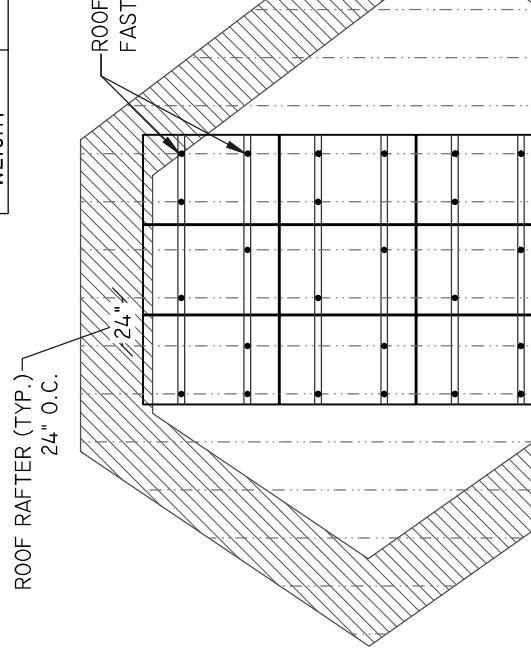
THE EXISTING ROOF LOADS OF THE PV SYSTEM SHALL BE DESIGN CONDITION RACKING AND FASTENERS.

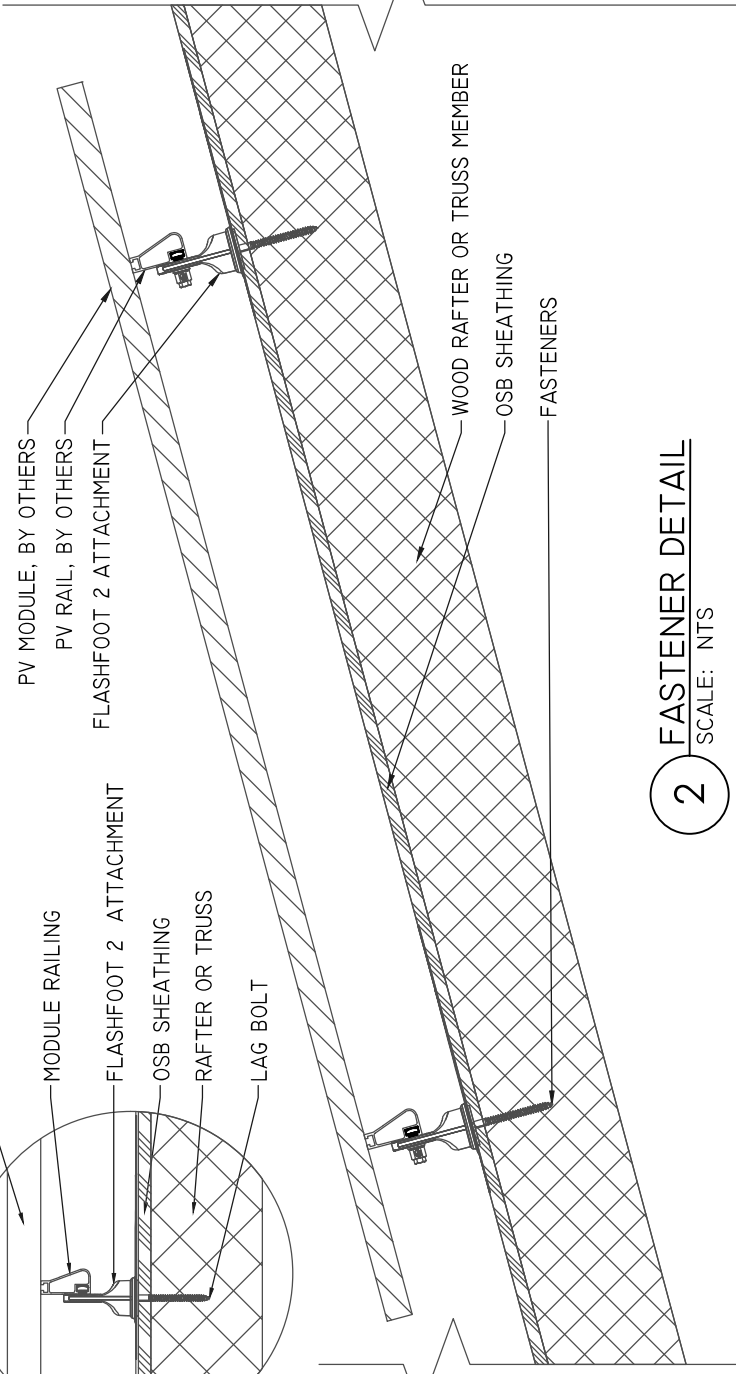
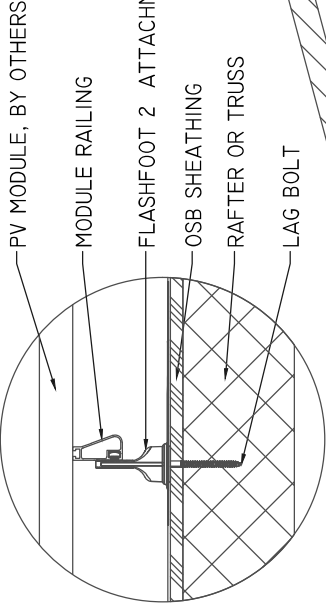
SIGNED: ANDREW _____

NAME: _____ ANDREW _____

TITLE: _____ PROFESSOR _____

| ROOF STRUCTURE: | |
|-----------------|--|
| STRUCTURE: | |
| TYPE | |
| MATERIAL | |
| SIZE | |
| SPACING | |
| EFF. SPAN | |
| ROOF "A" | |
| ROOF "B" | |
| PITCH | |
| ROOF "A" | |
| ROOF "B" | |
| DENSITY | |
| DECKING: | |
| TYPE | |
| MATERIAL | |
| THICKNESS | |
| WEIGHT | |
| ROOFING: | |
| TYPE | |
| MATERIAL | |
| WEIGHT | |





ARRAY "C" SUMMARY

| | |
|---------------|-----------|
| # MODULES | 6 |
| # ROOF MOUNTS | 21 |
| RAIL LENGTH | 76 FT. |
| ARRAY AREA | 126 sqFT. |
| ARRAY WEIGHT | 382 LBS. |
| AZIMUTH @ SN | 280° |
| TILT ANGLE | 34° |

MOUNTING RAILS


| | |
|----------|---------------|
| MAKE | IRONRIDGE |
| MODEL | XRI0 |
| MATERIAL | ALUMINIUM |
| WEIGHT | 1.25 LBS/SOFT |
| SPACING | 34" |

PV MODULES

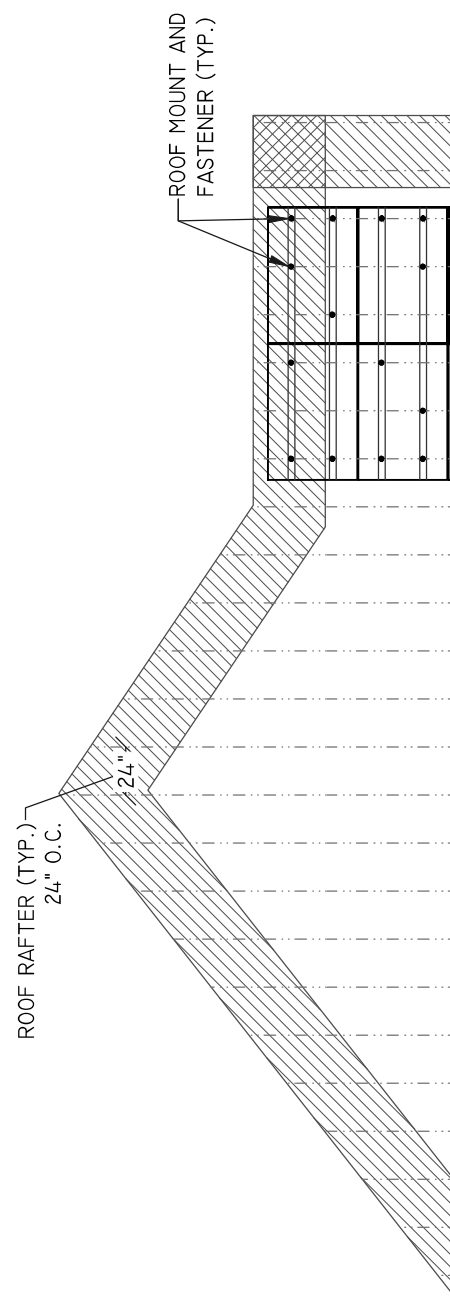
| | |
|-----------|---|
| MAKE | |
| MODEL | F |
| WIDTH | |
| LENGTH | |
| THICKNESS | |
| WEIGHT | |

ROOF "C" ZONES:
 ALL ZONES MAX. RAIL OVERHANG =
 ZONE 1 MAX. FASTENER SPAN Z
 ZONE 2 MAX. FASTENER SPAN Z
 ZONE 3 MAX. FASTENER SPAN Z

STATE
 THE EXISTING ROOF LOADS OF THE PV SYSTEM SHALL BE DESIGN CONDITION RACKING AND FASTENERS

SIGNED: 
 NAME: ANDREW
 TITLE: PROFESSOR

2 FASTENER DETAIL
 SCALE: NTS

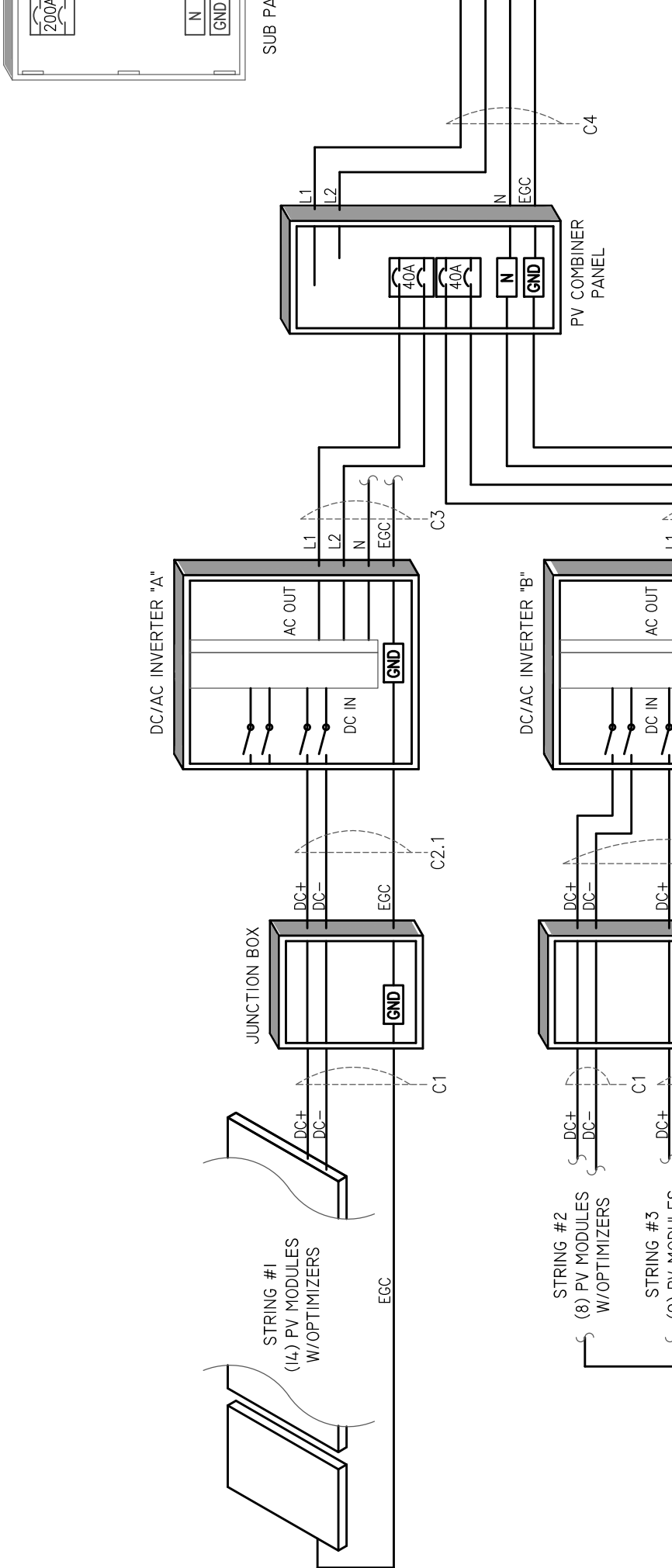


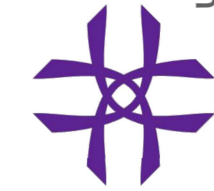
CONDUCTOR SCHEDULE

| TAG | CURRENT CARRYING CONDUCTORS | | | GROUNDING CONDUCTORS | | | | |
|------|-----------------------------|--------|----------|----------------------|------|--------|----------|------------|
| | QTY. | SIZE | MATERIAL | INSULATION | QTY. | SIZE | MATERIAL | INSULATION |
| C1 | 2 | 10 AWG | COPPER | PV WIRE | 1 | 6 AWG | COPPER | PV WIRE |
| C2.1 | 2 | 10 AWG | COPPER | THWN-2 | 1 | 10 AWG | COPPER | THWN |
| C2.2 | 4 | 10 AWG | COPPER | THWN-2 | 1 | 10 AWG | COPPER | THWN |
| C3 | 3 | 8 AWG | COPPER | THWN | 1 | 10 AWG | COPPER | THWN |
| C4 | 3 | 4 AWG | COPPER | THWN | 1 | 8 AWG | COPPER | THWN |
| C5 | 3 | 4 AWG | COPPER | THWN | - | - | - | - |
| XC | - | - | - | - | - | - | - | - |

NOTES:

1. MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED ROOFS
2. CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
3. EXISTING CONDUCTORS, FIELD VERIFY
4. EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF CONDUCTOR
5. PVC, EMT, ROMEX, LFNMC & FMC ARE ACCEPTABLE WHEN USED IN ACCORDANCE WITH ART.
6. SERVICE CONDUCTORS SHALL NOT TRAVEL MORE THAN 5' INSIDE OF THE BUILDING AND MC





URECO

United Renewable Energy Co., Ltd.

EN



URECO

United Renewable Energy Co., Ltd



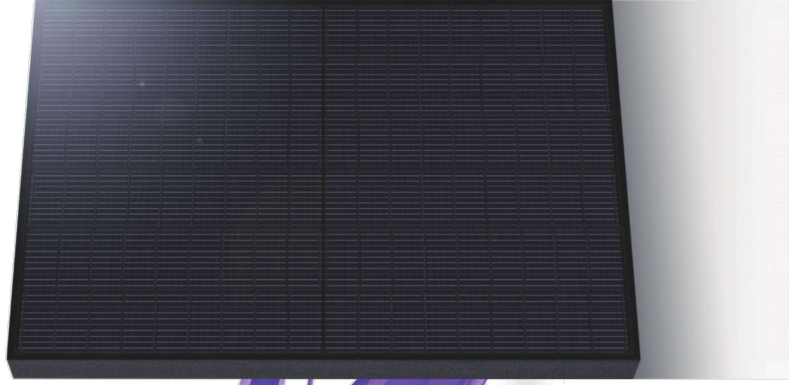
PEACH

FBM_MFG-BB / 108 cells

390W - 405 W

Mono-Crystalline PV Module

URE Peach module uses URE state-of-the-art cell cutting technology, and advanced module manufacturing experiences.



Key Features



Positive power tolerance
+0 ~ +5 watt



Withstand heavy loading
front load 5400 Pa & rear load 2400 Pa



100% EL inline inspection
Better module reliability



Design for 1000 VDC
Reduce the system BOS effectively

Electrical Data

| Model - STC | FBM390MFG-BB | FBM395MFG |
|-----------------------------|--------------|-----------|
| Maximum Rating Power (Pmax) | [W] 390 | 395 |
| Module Efficiency | [%] 19.98 | 20.23 |
| Open Circuit Voltage (Voc) | [V] 36.84 | 37.03 |
| Maximum Power Voltage | [V] 30.82 | 31.00 |
| Short Circuit Current (Isc) | [A] 13.50 | 13.59 |
| Maximum Power Current | [A] 12.66 | 12.75 |

*Standard Test Condition (STC): Cell Temperature 25 °C, Irradiance 1000 W/m², AM 1.5

*Values without tolerance are typical numbers.Measurement tolerance: ± 3%

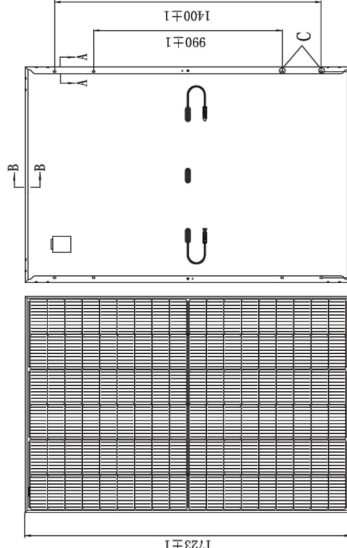
Mechanical Data

| Item | Specification |
|-----------------------|---|
| Dimensions | 1723 mm (L) ¹ x 1133 mm (W) ¹ x 35 mm (D) ² / 67.83" (L) ¹ x 44.61" (W) ¹ x 1.38" (D) ² |
| Weight | 21.7 kg / 47.84 lbs |
| Solar Cell | 12x9 pieces monocrystalline solar cells series st |
| Front Glass | White toughened safety glass, 3.2mm thickness |
| Cell Encapsulation | EVA (Ethylene-Vinyl-Acetate) |
| Frame | Black anodized aluminum profile |
| Junction Box | IP≥ 68, 3 diodes |
| Cable & Connector | Potrait : 500 mm (cable length can be customized compatible with MC4 |
| Package Configuration | 31 pcs Per Pallet, 806 pcs per 40' HQ container |

1 : With assembly tolerance of ± 2 mm [± 0.08"]

2 : With assembly tolerance of ± 0.8 mm [± 0.03"]

Engineering Drawing (mm)



Power Optimizer For Residential Installations

S440, S500



POWER OPTIMIZER

Enabling PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Detects abnormal PV connector behavior, preventing potential safety issues*
- Module-level voltage shutdown for installer and firefighter safety
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Faster installations with simplified cable management and easy assembly using a single bolt
- Flexible system design for maximum space utilization

Power Optimizer For Residential Installation S440, S500

| | |
|--|--|
| Rated Input DC Power ⁽¹⁾ | |
| Absolute Maximum Input Voltage (Voc) | |
| MPPT Operating Range | |
| Maximum Short Circuit Current (Isc) of Connected PV Module | |
| Maximum Efficiency | |
| Weighted Efficiency | |
| Ovenvoltage Category | |

OUTPUT DURING OPERATION

| | |
|---|--|
| Maximum Output Current | |
| Maximum Output Voltage | |
| OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED) | |
| Safety Output Voltage per Power Optimizer | |

STANDARD COMPLIANCE

| | |
|-------------|--|
| EMC | |
| Safety | |
| Material | |
| RoHS | |
| Fire Safety | |

INSTALLATION SPECIFICATIONS

| | |
|--|--|
| Maximum Allowed System Voltage | |
| Dimensions (W x L x H) | |
| Weight (including cables) | |
| Input Connector | |
| Input Wire Length | |
| Output Connector | |
| Output Wire Length | |
| Operating Temperature Range ⁽⁶⁾ | |
| Protection Rating | |
| Relative Humidity | |

(1) Rated power of the module at STC will not exceed the Power Optimizer Rated Input DC Power. Maximum power for other connector types please contact SolarEdge.
 (2) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizer de-rating chart.
 (3) For the 277V/480V grid, it is allowed to install up to 15,000W per string when the maximum power of the module is 150W.
 (4) If the inverters rated AC power is maximum nominal power per string, then the maximum power per string is limited to the maximum nominal power per string. Refer to: <https://www.solaredge.com/sites/default/files/ser-power-optimizer-single-string-limitations.pdf>
 (5) For the 230V/400V grid, it is allowed to install up to 13,500W per string when the maximum power of the module is 135W.
 (6) It is not allowed to mix S-series and P-series Power Optimizers in new installations.

PV System Design Using a SolarEdge Inverter

| Single Phase (S-Series) | Three Phase (P-Series) |
|---|------------------------|
| Minimum String Length (Power Optimizers) | 8 |
| Maximum String Length (Power Optimizers) | 25 |
| Maximum Nominal Power per String ⁽⁴⁾ | 5700 |

Parallel Strings of Different Lengths or Orientations

(4) If the inverters rated AC power is maximum nominal power per string, then the maximum power per string is limited to the maximum nominal power per string. Refer to: <https://www.solaredge.com/sites/default/files/ser-power-optimizer-single-string-limitations.pdf>
 (5) For the 230V/400V grid, it is allowed to install up to 13,500W per string when the maximum power of the module is 135W.
 (6) It is not allowed to mix S-series and P-series Power Optimizers in new installations.



Single Phase Inverter with HD-Wave Technology for North America

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



Optimized installation with HD-Wave technology

Specifically designed to work with power optimizers

Extremely small

INVERTERS

Single Phase Inverter with HD-Wave Technology

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

SE3000H-US SE3800H-US SE5000H-US

OUTPUT

| | | | |
|--|------|----------------------------|-----|
| Rated AC Power Output | 3000 | 3800 @ 240V 3300 @ 208V | 500 |
| Maximum AC Power Output | 3000 | 3800 @ 240V 3300 @ 208V | 500 |
| AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264) | ✓ | ✓ | ✓ |
| AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229) | - | ✓ | - |
| AC Frequency (Nominal) | | | |
| Maximum Continuous Output Current @240V | 12.5 | 16 | 2 |
| Maximum Continuous Output Current @208V | - | 16 | |

GFDI Threshold

Utility Monitoring, Islanding Protection, Country Configurable Thresholds

INPUT

| | | | |
|--|------|------|------|
| Maximum DC Power @240V | 4650 | 5900 | 7750 |
| Maximum DC Power @208V | - | 5100 | - |
| Transformer-less, Ungrounded | | | |
| Maximum Input Voltage | | | 380 |
| Nominal DC Input Voltage | | | |
| Maximum Input Current @240V ⁽²⁾ | 8.5 | 10.5 | 13 |
| Maximum Input Current @208V ⁽²⁾ | - | 9 | - |
| Max. Input Short Circuit Current | | | |
| Reverse-Polarity Protection | | | |
| Ground-Fault Isolation Detection | | | |
| Maximum Inverter Efficiency | 99 | | |
| CEC Weighted Efficiency | | | |
| Nighttime Power Consumption | | | |

ADDITIONAL FEATURES

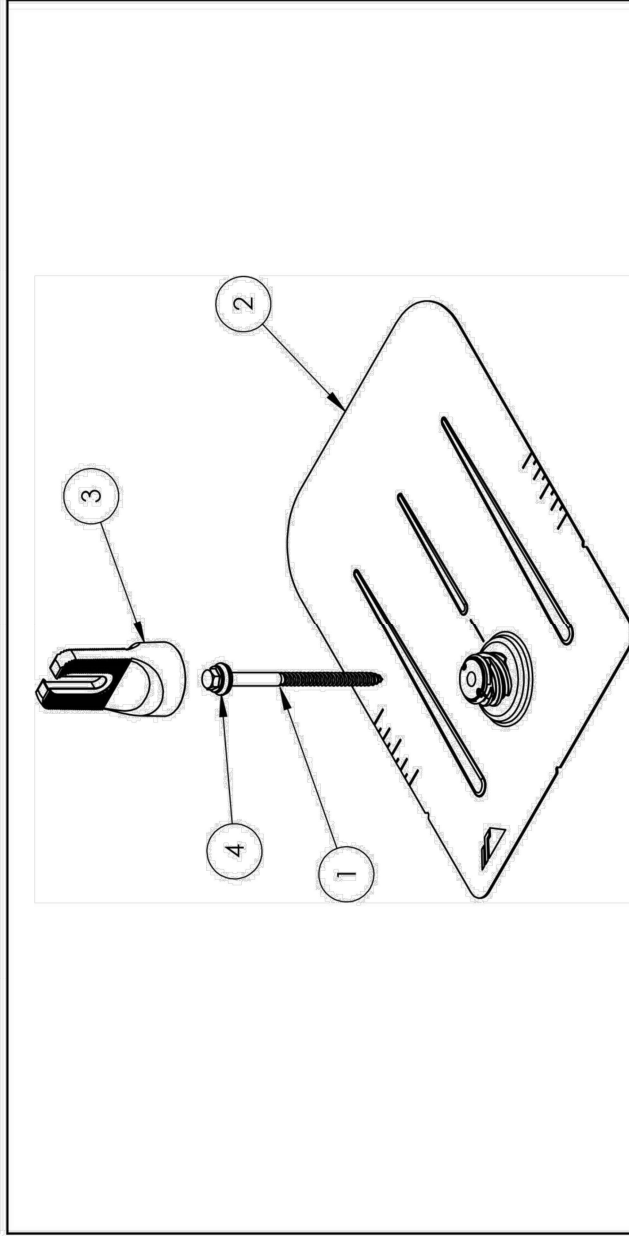
| | |
|---|-------|
| Supported Communication Interfaces | RS485 |
| Revenue Grade Data, ANSI C12.20 | |
| Rapid Shutdown - NEC 2014 and 2017 690.12 | Auto |

STANDARD COMPLIANCE

| | |
|-------------------------------------|-------------------|
| Safety | UL1741, UL1741 SA |
| Grid Connection Standards Emissions | |

INSTALLATION SPECIFICATIONS

FlashFoot2



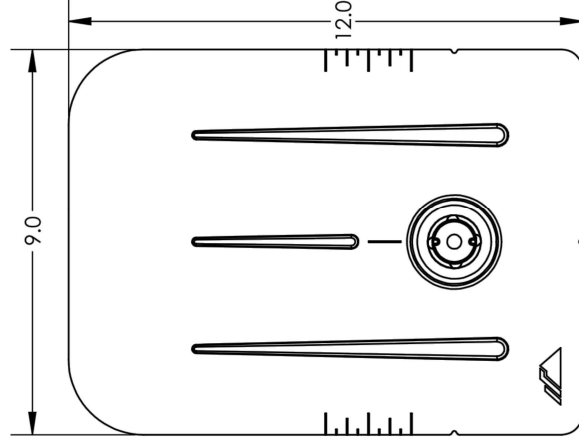
| ITEM NO. | DESCRIPTION |
|----------|-----------------------|
| 1 | BOLT LAG-5/16 X 4.75" |
| 2 | ASSY, FLASHING |
| 3 | ASSY, CAP |
| 4 | WASHER, EPDM BACKED |

FLASHFOOT 2

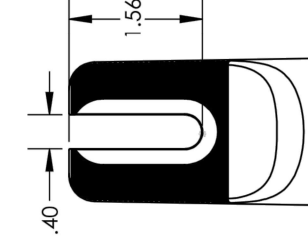
| Part Number | Description |
|-------------|-------------------|
| FF2-01-M1 | FLASHFOOT2, MILL |
| FF2-01-B1 | FLASHFOOT2, BLACK |

1) Bolt, Lag 5/16 x 4.75"

2) Assy, Flashing



3) Assy, Cap





XR10 Bonded Splice

Cut Sheet

