

GPS COORDINATES : 30.116636056347513, -82.70741190542753



## GENERAL PROJECT & JURISDICTIONAL NOTES

**APPLICABLE BUILDING CODES:**  
018 INTERNATIONAL BUILDING CODE  
018 INTERNATIONAL RESIDENTIAL CODE  
018 INTERNATIONAL FIRE CODE  
017 NATIONAL ELECTRIC CODE  
020 FLORIDA BUILDING CODE  
020 FLORIDA RESIDENTIAL CODE

BUILDING OCCUPANCY: R-3  
RISK CATEGORY: II  
ASCE 7-16 WIND SPEED: 118  
EXPOSURE CATEGORY: Exposure C  
SNOW LOAD: 0  
SNOW EXPOSURE: N/A  
CONSTRUCTION TYPE: IIIA

**ROOF MOUNTED PV (SOLAR) PROJECT GRID-TIED  
W/O BATTERY STORAGE**

| PROPOSED SOLAR EQUIPMENT |             |                                     | SITE / PROJECT DETAILS |               |
|--------------------------|-------------|-------------------------------------|------------------------|---------------|
| QTY.                     | EQUIPMENT   | DESCRIPTION/(MFG)/MODEL             | CONNECTION             | WIRE TAP      |
| 31                       | MODULES     | PEIMAR SM325M /SB                   | 1 SYSTEM SIZE DC       | 10.075 KW     |
| 1                        | INVERTER    | SolarEdge SE7600US-10 (240V)        | 1 SYSTEM SIZE AC       | 7.600 KW      |
| 58                       | NACKING     | Ironridge X80 LVL                   | 10.075 KW /CCT         |               |
| N/A                      | STANCHIONS  | SolarRoofHok Quickbolt (Part#17667) | ELECT. SERVICE         | 120/240V - 1Φ |
| N/A                      | RSD DEVICE  | INTEGRATED IN INV & OPT             | ROOF COVERING          | Comp Shingle  |
| 0                        | BATTERIES   |                                     | MAX ARRAY HGT.         | N/A           |
| 0                        | COMBINER(S) |                                     | TILT                   | 23°,18°,30°   |
| (E)                      | MSP RATINGS | 200A BUS/200A MAIN BREAKER          | AZIMUTH                | 179°,85°,269° |

**CONTRACTOR:**  
Daybreak Install LLC  
2100 N Main St Ste. 212  
Fort Worth, TX 76164  
**CONTRACTOR LIC #:** CVC56966  
**PHONE:** (817) 995-9572  
**CONTACT NAME:** Sherrie Ledbetter  
**PHONE:** (817) 501-4922  
**EMAIL:** sherrie.ledbetter@Daybreakinstall.com

**ELECTRICAL UTILITY:**  
FPL - Florida Power & Light  
**METER NUMBER:**  
**PHONE:**  
**AUTHORITY HAVING JURISDICTION:**  
**BUILDING:** County Of Lake  
**PHONE:**

**ENGINEERED BY:**  
Scott E. Wyssling  
76 North Meadowbrook Dr  
Alpine, UT 84004  
LICENSE #: 81558  
LICENSE TYPE: Civil  
PHONE: (202) 874-3483  
EMAIL: [swyssling@wysslingconsulting.com](mailto:swyssling@wysslingconsulting.com)

| SHEET NUMBER | SHEET TITLE          |
|--------------|----------------------|
| PV-001       | COVER SHEET          |
| N-001        | GENERAL NOTES        |
| PV-100R      | PV ARRAY LAYOUT      |
| S-100R       | RACKING LAYOUT       |
| S-200        | SECTION ELEVATION    |
| S-201        | ATTACHMENT DETAILS   |
| E-001        | EQUIP. CALCULATION   |
| E-002        | WIRE AND COND. CALCS |
| E-003        | THREE LINE DIAGRAM   |
| E-100        | ELECTRICAL LAYOUT    |
| P-001        | STANDARD PLACARDS    |
| P-002        | DYNAMIC PLACARDS     |
| R-1xx        | EQUIP CUT SHEETS     |

## INSPECTION REQUIREMENTS

1. A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH ALL OSHA REGULATIONS.
2. PENDING LOCAL JURISDICTIONAL REQUIREMENTS AND WHEN APPLICABLE ALL ELECTRICAL ENCLOSURE DEAD FRONTS, COVERS, DOORS, ETC. SHALL BE OPEN AND ACCESSIBLE FOR INSPECTIONS. WHEN TRENCH AND ROOF INSPECTIONS ARE REQUIRED WORK SHALL BE OPEN AND ACCESSIBLE FOR INSPECTOR.

## JURISDICTIONAL & LISTING REQUIREMENTS

2. WHEN APPLICABLE A SAKSI DETECTOR APPROVED AND LISTED BY THE FBI FIREFINDER LIST, 217 CERTIFIED TO NATIONAL STANDARDS FOR DETECTION AND SIGNALING CODE, NFPA 750 SHALL BE INSTALLED, FUNCTIONAL, OR INSTALLED IN ALL APPLICABLE CODE REQUIRED LOCATIONS.
3. ALL APPLICABLE EQUIPMENT TO BE US, LISTED OR LISTED BY OTHER RECOGNIZED AND UTILITY APPROVED ASSOCIATION OR NATIONALLY RECOGNIZED ORGANIZATION.
4. FULL SCOPE OF WORK SHALL COMPLY WITH ALL APPLICABLE CODES LISTED AND RECOGNIZED BY THE CITY OF ALBUQUERQUE, NM. ALL MANUFACTURED LISTINGS, INSTALLATION INSTRUCTIONS AND SPECIFICATIONS AND JURISDICTIONAL REQUIREMENTS.
5. REVISED PLANS WILL BE REQUIRED TO BE RESUBMITTED TO THE LOCAL JURISDICTION IF THE INSTALLED ARRAY AND ASSOCIATED EQUIPMENT DOES NOT MATCH THE APPROVED BUILDING PLANS. ADDITIONAL FEES MAY ALSO APPLY.
6. THE PLACEMENT OF A UTILITY PV PRODUCTION METER SHALL BE PROVIDED AND IN-PLACED BY THE CONTRACTOR AS PER APPLICABLE UTILITY OR AUV REQUIREMENTS.

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**DESIGN BY:**

**Sherrie Ledbetter**  
**PHONE:** (817) 501-4922  
**EMAIL:**

**PROJECT DRAFTER:**

**Advanced Solar Solutions**  
39650 Mallard  
Bass Lake, CA 93604



PHONE: 559-321-7000  
EMAIL: [info@advpermits.com](mailto:info@advpermits.com)

**HOME OWNER PROJECT LOCATION:**

Grantham, Wiley  
200 SW Brandy Way, Lake City, FL 32024

CONTACT NAME: Grantham, Wiley  
PHONE:  
EMAIL:

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Daybreak Install LLC

CVC56966  
21100 N Main St Ste. 212  
Fort Worth, TX 76164  
(817) 501-4922



10.075 kW PHOTOVOLTAIC PLANS

|         |                   |
|---------|-------------------|
| NAME    | Grantham, Wiley   |
| ADDRESS | 200 SW Brandy Way |

|         |     |                      |
|---------|-----|----------------------|
| ADDRESS | APN | CARE CITY, F 6 32024 |
|---------|-----|----------------------|

COVER SHEET

PV-001

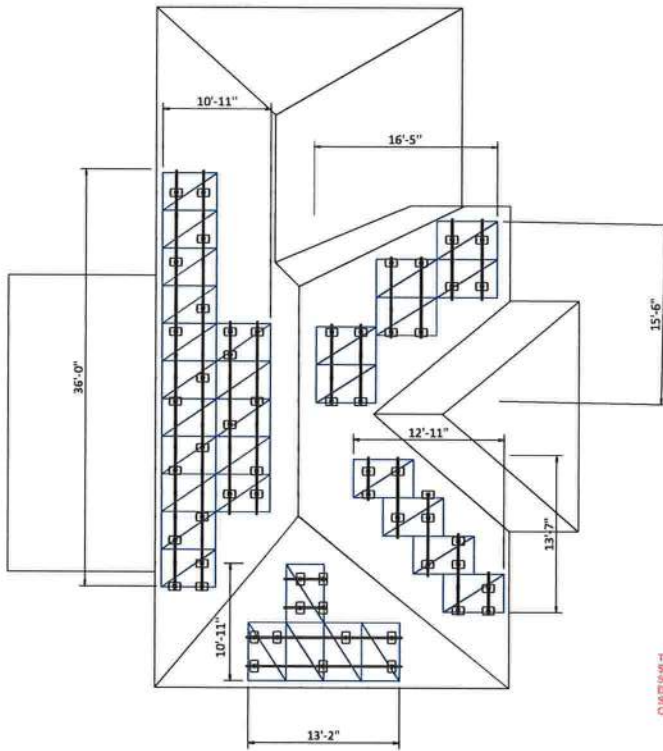
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|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------|--|------------------------------|--|---------------|------|---------|
|  <b>Sunrise Solar</b><br>Daybreak install LLC | 2100 N Main St Ste. 212<br>Fort Worth, TX 76164<br>(817) 301-4922 | CVC56866 |  | 10.075 kW PHOTOVOLTAIC PLANS |  | REV           | DATE | RELEASE |
|                                                                                                                                  |                                                                   | NAME     |  | Grantham, Wiley              |  |               |      |         |
|                                                                                                                                  |                                                                   | ADDRESS  |  | 200 SW Brandy Way            |  |               |      |         |
|                                                                                                                                  |                                                                   | ADDRESS  |  | Lake City, FL 32024          |  |               |      |         |
|                                                                                                                                  |                                                                   | APN      |  |                              |  |               |      |         |
|                                                                                                                                  |                                                                   |          |  | N-001                        |  | GENERAL NOTES |      |         |

**Daybreak Install LLC**



|                                                                                                                                                                                      |          |  |                              |  |                 |      |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--|------------------------------|--|-----------------|------|---------|
|  <b>Daybreak install LLC</b><br>2100 N Main St Ste. 212<br>Fort Worth, TX 76164<br>(817) 501-4922 | CVC56966 |  | 10.075 kW PHOTOVOLTAIC PLANS |  | REV             | DATE | RELEASE |
|                                                                                                                                                                                      |          |  | NAME Grantham, Wiley         |  |                 |      |         |
|                                                                                                                                                                                      |          |  | ADDRESS 200 SW Brandy Way    |  |                 |      |         |
|                                                                                                                                                                                      |          |  | ADDRESS Lake City, FL 32024  |  |                 |      |         |
|                                                                                                                                                                                      |          |  | APN                          |  |                 |      |         |
|                                                                                                                                                                                      |          |  |                              |  | PV-100R         |      |         |
|                                                                                                                                                                                      |          |  |                              |  | PV ARRAY LAYOUT |      |         |





QTY 31 PEIMAR SM325M (F8) MODULES QTY 1 SolarEdge SE7600H-US (240V) INVERTER

#### SHEET NOTES

A. FOR MANUFACTURED PLATED WOOD TRUSSES AT SLOPES OF FLAT TO 8:12, THE HORIZONTAL ANCHOR SPACING SHALL NOT EXCEED 5'-0" AND ANCHORS IN ADJACENT ROWS SHALL BE STAGGERED, UNLESS NOTED OTHERWISE PER RACKING MANUFACTURER CERTIFIED ENGINEERED PRODUCT AND LOCAL REQUIREMENTS.

B. ANCHORS ARE ALSO KNOWN AS "STAND-OFFS," "MOUNTS," OR "STANDHOLDS." HORIZONTAL ANCHOR SPACING IS ALSO KNOWN AS "CROSS-SLOPE" OR "EAST-WEST" ANCHOR SPACING. MAXIMUM HORIZONTAL ANCHOR SPACING SHOWN IN DETAIL, UNLESS NOTED OTHERWISE PER RACKING MANUFACTURER CERTIFIED ENGINEERED PRODUCT AND LOCAL REQUIREMENTS. SEE "TABLE OF DIMENSIONS" EACH SECTION DETAILED FOR HORIZONTAL ANCHOR SPACING.

C. SEE SHEET S-200 FOR SPECIFIC RACKING COMPONENT MANUFACTURERS.

#### PV RACKING LEGEND

|                                              |           |              |
|----------------------------------------------|-----------|--------------|
| ROOF RACKING RAIL                            | SECTION   | PV ARRAY TAG |
| ROOF RACKING RAIL SPICE                      | SECTION # | MODULE GROUP |
| ROOF RACKING STANCHION W/ RETRO FIT FLASHING | 1         |              |

\* DETAILS IN TOP VIEW

#### EXISTING ROOF CONSTRUCTION

| COMPONENT                    | TYPE                          |
|------------------------------|-------------------------------|
| ROOF STRUCTURAL CONSTRUCTION | Pre-Eng Roof Trusses 24" O.C. |
| FRAMING INFO                 | 2"x4" @ 24" MAX OC            |
| ROOFING COVERING             | Comp Shingle                  |
| RACKING MAX PSF              | 2 BT PSF                      |

#### RACKING BILL OF MATERIALS (BOM)

| COMPONENT               | QTY | MODEL | LENGTH |
|-------------------------|-----|-------|--------|
| PV RAIL 1               |     |       |        |
| PV RAIL SPICE 1         |     |       |        |
| PV RAIL 2               |     |       |        |
| PV RAIL SPICE 2         |     |       |        |
| RAIL TO ROOF ATTACHMENT |     |       |        |

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\* EXISTING ROOF DIMENSIONS ARE APPROX. CONFIRM ALL DIMENSIONS SHOWN

SCALE: 1/8" = 1'-0" @ SHEET SIZE A3

|                              |            |                         |            |
|------------------------------|------------|-------------------------|------------|
| REV                          | DATE       | RELEASE                 | FOR PERMIT |
|                              | 09/21/2021 |                         |            |
| 10.075 KW PHOTOVOLTAIC PLANS |            |                         |            |
| NAME                         |            | Grantham, Wiley         |            |
| ADDRESS                      |            | 200 SW Brandy Way       |            |
| ADDRESS                      |            | Lake City, FL 32024     |            |
| APN                          |            |                         |            |
| Daybreak Install LLC         |            |                         |            |
| CVC56966                     |            | 2100 N Main St Ste. 212 |            |
|                              |            | Fort Worth, TX 76164    |            |
|                              |            | (817) 501-4922          |            |
| S-100 RACKING LAYOUT         |            |                         |            |



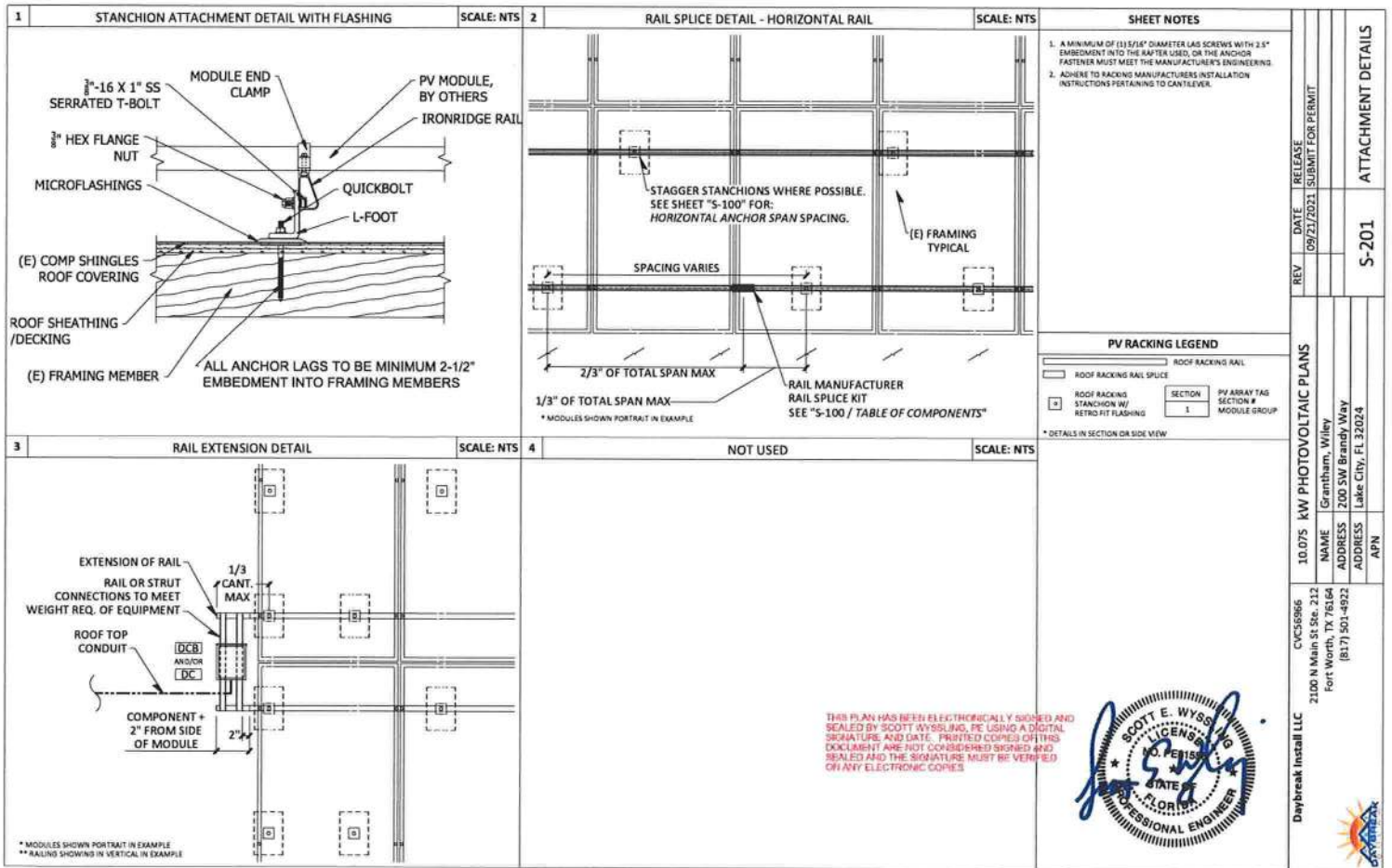


| TABLE OF DIMENSIONS   |                          |               |     |                          |                  |
|-----------------------|--------------------------|---------------|-----|--------------------------|------------------|
| DIM                   | COMPONENT                | DIMENSIONS    | DIM | COMPONENT                | DIMENSIONS       |
| H1                    | PV MODULE HST ABOVE ROOF | 3" - 6" PITCH | R1E | ROOF PITCH               | 23"              |
| DH1                   | OVERHANG IN THIS AREA    |               |     | MAX RAFTER SPAN          | ENGINEERED TRUSS |
| UPSIDE ANCHOR SPACING |                          |               |     |                          |                  |
| D1                    | RAIL OVERHANG            | 16.39"        | G3  | STANCHION O.C.           | 33.03"           |
| D2                    | STANCHION O.C.           | 32.78"        | D4  | MIN./MAX. STANCHION O.C. |                  |



| TABLE OF DIMENSIONS    |                            |             |      |                          |                 |
|------------------------|----------------------------|-------------|------|--------------------------|-----------------|
| DIM                    | COMPONENT                  | DIMENSIONS  | RISE | COMPONENT                | DIMENSIONS      |
| H1                     | PPV MODULE HGT. ABOVE ROOF | 3" - 6" TYP | D1E  | ROOF PITCH               | 23°             |
| OH1                    | OVERHANG IN THIS AREA      |             |      | MAX RAFTER SPAN          | ENGINEERED TRUE |
| UPSLOPE ANCHOR SPACING |                            |             |      |                          |                 |
| D1                     | RAIL OVERHANG              | 9.86"       | D3   | STANCHION O.C.           | 19.98"          |
| D2                     | STANCHION O.C.             | 19.73"      | D4   | MIN./MAX. STANCHION O.C. |                 |







| PV MODULE #1 SPECIFICATIONS             |                                               |          |
|-----------------------------------------|-----------------------------------------------|----------|
| MANUFACTURER                            | PEIMAR                                        |          |
| MODEL NUMBER                            | SM325M (F8)                                   |          |
| WEIGHT                                  | 41.01                                         | lbs      |
| DIMENSIONS                              | 65.55 x 39.45 x 1.57 " L" x "W" x "D" / THICK |          |
| PEAK POWER @ STC (P <sub>max</sub> )    | 325                                           | WATTS    |
| V <sub>oc</sub> (OPEN-CIRCUIT VOLTAGE)  | 41.67                                         | VOLTS DC |
| V <sub>mp</sub> (MAX POWER VOLTAGE)     | 34.15                                         | VOLTS DC |
| I <sub>sc</sub> (SHORT-CIRCUIT CURRENT) | 10.08                                         | AMPS     |
| I <sub>mp</sub> (OPERATING CURRENT)     | 9.52                                          | AMPS     |
| MFR. VOLT. TEMP. COEFFICIENT            | 0.28                                          | %/K      |
| MAX SERIES FUSE RATING                  | 20.0                                          | AMPS     |
| TEMP. CORRECTED V <sub>oc</sub>         | 37.92                                         | VOLTS DC |

| DC/DC OPTIMIZER (IF APPL.)        |                        |       |
|-----------------------------------|------------------------|-------|
| MANUFACTURER                      | SolarEdge Technologies |       |
| MODEL NUMBER                      | P370 Single (240V)     |       |
| WEIGHT                            | 1.5                    | lbs   |
| RATED OUTPUT I <sub>sc</sub>      | 15                     | AMPS  |
| MAX OUTPUT VOLTAGE                | 60                     | VOLTS |
| MAX INPUT VOLTAGE V <sub>oc</sub> | 60                     | VOLTS |

| DC COMBINER / DISCONNECT #1       |             |  |
|-----------------------------------|-------------|--|
| MANUFACTURER                      |             |  |
| MODEL NUMBER                      |             |  |
| DCPD (DISCONNECT TYPE)            |             |  |
| WEIGHT                            |             |  |
| NEMA RATING                       |             |  |
| LOCATION OF COMPONENT             |             |  |
| DC INPUT                          |             |  |
| SERIES FUSE RATING FOR PV MODULES | AMPS (DCPD) |  |
| QUANTITY OF PV SOURCE CIRCUITS    | QTY         |  |
| MAX PV MODULE V <sub>oc</sub>     | VOLTS DC    |  |
| MAX # OF MODULES IN CIRCUIT       | VOLTS DC    |  |
| MAX ALLOWED INPUT VOLTAGE         | VOLTS DC    |  |
| MAX INPUT FUSE/BREAKER RATING     | AMPS        |  |

| DC COMBINER / DISCONNECT #2 (IF APPL.) |  |             |
|----------------------------------------|--|-------------|
| MANUFACTURER                           |  |             |
| MODEL NUMBER                           |  |             |
| DCPD (DISCONNECT TYPE)                 |  |             |
| WEIGHT                                 |  | lbs         |
| NEMA RATING                            |  |             |
| LOCATION OF COMPONENT                  |  |             |
| DC INPUT                               |  |             |
| SERIES FUSE RATING FOR PV MODULES      |  | AMPS (DCPD) |
| QUANTITY OF PV SOURCE CIRCUITS         |  | QTY         |
| MAX PV MODULE V <sub>oc</sub>          |  | VOLTS DC    |
| MAX # OF MODULES IN CIRCUIT            |  | QTY         |
| MAX ALLOWED INPUT VOLTAGE              |  | VOLTS DC    |
| MAX INPUT FUSE/BREAKER RATING          |  | AMPS DC     |
| DC OUTPUT                              |  |             |
| MAX CIRCUIT OUTPUT CURRENT             |  | AMPS        |
| MAX CONT. OUTPUT CURRENT               |  | AMPS        |

| DC COMBINER / DISCONNECT #3 (IF APPL.) |     |             |
|----------------------------------------|-----|-------------|
| MANUFACTURER                           |     |             |
| MODEL NUMBER                           |     |             |
| DCPD (DISCONNECT TYPE)                 |     |             |
| WEIGHT                                 | lbs |             |
| NEMA RATING                            |     |             |
| LOCATION OF COMPONENT                  |     |             |
| DC INPUT                               |     |             |
| SERIES FUSE RATING FOR PV MODULES      |     | AMPS (DCPO) |
| QUANTITY OF PV SOURCE CIRCUITS         |     | QTY         |
| MAX PV MODULE V <sub>oc</sub>          |     | VOLTS DC    |
| MAX # OF MODULES IN CIRCUIT            |     | QTY         |
| MAX ALLOWED INPUT VOLTAGE              |     | VOLTS DC    |
| MAX INPUT FUSE/BREAKER RATING          |     | AMPS        |
| DC OUTPUT                              |     |             |
| MAX CIRCUIT OUTPUT CURRENT             |     | AMPS        |
| MAX CONT. OUTPUT CURRENT               |     | AMPS        |

| STRING INVERTER #1 SPECIFICATIONS |                   |                      |
|-----------------------------------|-------------------|----------------------|
| MANUFACTURER                      | SolarEdge         |                      |
| MODEL NUMBER                      | SE7600H-US (240V) |                      |
| QUANTITY                          | 1                 | INVERTER(S)          |
| NOMINAL POWER RATING              | 7600              | WATT AC              |
| WEIGHT                            | 26.2              | lbs                  |
| DC INPUT                          |                   |                      |
| Max INPUT DC VOLTAGE              | 480               | VOLTS DC             |
| Min. MPPT VOLTAGE RANGE           | 400               | VOLTS DC             |
| Max. MPPT VOLTAGE RANGE           | 480               | VOLTS DC             |
| Max INPUT CURRENT                 | 20                | AMPS                 |
| MPPT QTY                          | N/A               |                      |
| INTEGRATED DC DISCONNECT          | Yes               | COMPLY W/ NEC 690.17 |
| INTEGRATED AC DISCONNECT          | NO                |                      |
| AC OUTPUT                         |                   |                      |
| NOMINAL VOLTAGE OUTPUT            | 240               | VOLTS AC             |
| Max. AC APPARENT POWER            | 7600              | WATTS                |
| MAX OVERCURRENT PROTECTION (OCPS) | 40                | AMPS                 |
| MAX. OUTPUT CURRENT               | 32                | AMPS - MAX           |

| STRING INVERTER #2 SPECIFICATIONS (IF APPL.) |                    |  |
|----------------------------------------------|--------------------|--|
| MANUFACTURER                                 |                    |  |
| MODEL NUMBER                                 |                    |  |
| QUANTITY                                     | INVERTER(S)        |  |
| NOMINAL POWER RATING                         | WATT AC            |  |
| WEIGHT                                       | lbs.               |  |
| DC INPUT                                     |                    |  |
| Max INPUT DC VOLTAGE                         | VOLTS DC           |  |
| Min. MPPT VOLTAGE RANGE                      | VOLTS DC           |  |
| Max. MPPT VOLTAGE RANGE                      | VOLTS DC           |  |
| Max INPUT CURRENT                            | AMPS               |  |
| MPPT QTY                                     |                    |  |
| INTEGRATED DC DISCONNECT                     |                    |  |
| INTEGRATED AC DISCONNECT                     | COMPLY W/NEC 690.3 |  |
| AC OUTPUT                                    |                    |  |
| NOMINAL VOLTAGE OUTPUT                       | VOLTS AC           |  |
| MAX. AC APPARENT POWER                       | WATTS              |  |
| MAX OVERCURRENT PROTECTION (OCPS)            | AMPS               |  |
| MAX. OUTPUT CURRENT                          | AMPS - MAX         |  |

| AC COMBINER #1 (SOLAR LOAD CENTER) |  |  |
|------------------------------------|--|--|
| MANUFACTURER                       |  |  |
| MODEL NUMBER                       |  |  |
| RATED OPERATIONAL VOLTAGE          |  |  |
| RATED CURRENT                      |  |  |
| NUMBER OF POLES                    |  |  |
| NEMA RATING                        |  |  |
| MAIN BREAKER SIZE                  |  |  |
| TOTAL INPUT CURRENT                |  |  |
| NUMBER OF BRANCH CIRCUITS          |  |  |

| AC COMBINER #2 (SOLAR LOAD CENTER) |  |  |
|------------------------------------|--|--|
| MANUFACTURER                       |  |  |
| MODEL NUMBER                       |  |  |
| RATED OPERATIONAL VOLTAGE          |  |  |
| RATED CURRENT                      |  |  |
| NUMBER OF POLES                    |  |  |
| NEMA RATING                        |  |  |
| MAIN BREAKER SIZE                  |  |  |
| TOTAL INPUT CURRENT                |  |  |
| NUMBER OF BRANCH CIRCUITS          |  |  |

| AC DISCONNECT #1 (IF APPL.) |          |               |
|-----------------------------|----------|---------------|
| MANUFACTURER                | Eaton    |               |
| MODEL NUMBER                | DG222NRB |               |
| QUANTITY                    | 1        | AC DISCO. (S) |
| DISCONNECT DEVICE TYPE      | Fusible  |               |
| RATED OPERATIONAL VOLTAGE   | 240      | VOLTS         |
| RATED CURRENT               | 60       | AMPS          |
| NUMBER OF POLES             | 3        | P             |
| NEMA RATING                 | 3R       |               |
| FUSE RATING                 | 40       | AMPS          |
| TOTAL INPUT CURRENT         | 32       | AMPS          |

| AC DISCONNECT #2 (IF APPL.) |  |  |
|-----------------------------|--|--|
| MANUFACTURER                |  |  |
| MODEL NUMBER                |  |  |
| QUANTITY                    |  |  |
| DISCONNECT DEVICE TYPE      |  |  |
| RATED OPERATIONAL VOLTAGE   |  |  |
| RATED CURRENT               |  |  |
| NUMBER OF POLES             |  |  |
| NEMA RATING                 |  |  |
| FUSE RATING                 |  |  |
| TOTAL INPUT CURRENT         |  |  |

| AC SUB-PANEL #1 (IF APPL.)        |  |  |
|-----------------------------------|--|--|
| NEW OR EXISTING                   |  |  |
| MAKE / MODEL                      |  |  |
| TYPE OF PANEL                     |  |  |
| NUMBER OF POLES                   |  |  |
| NEMA RATING                       |  |  |
| BUS BAR RATING                    |  |  |
| SUB-PANEL MAIN BREAKER            |  |  |
| MAIN SERVICE PANEL P.O.C. BREAKER |  |  |
| SUM OF EXISTING CIRCUIT BREAKERS  |  |  |
| MAX ALLOWABLE SOLAR CURRENT       |  |  |
| PV BACKFEED BREAKER #1            |  |  |
| PV BACKFEED BREAKER #2            |  |  |
| PV BACKFEED BREAKER #3            |  |  |
| PV BACKFEED BREAKER #4            |  |  |

| MAIN SERVICE PANEL (IF APPL.)           |                       |  |
|-----------------------------------------|-----------------------|--|
| NEW OR EXISTING                         |                       |  |
| ELECTRICAL SERVICE                      | 120/240V Single Phase |  |
| BUS BAR RATED CURRENT                   | 200                   |  |
| MAIN BREAKER RATED CURRENT              | 200                   |  |
| SUM OF EXISTING CIRCUIT BREAKERS        |                       |  |
| MAX ALLOWABLE SOLAR CURRENT 100%        | 0                     |  |
| MAX ALLOWABLE SOLAR CURRENT 120%        | 40                    |  |
| PV BACKFEED BREAKER #1                  |                       |  |
| PV BACKFEED BREAKER #2                  |                       |  |
| PV BACKFEED BREAKER #3                  |                       |  |
| PV BACKFEED BREAKER #4                  |                       |  |
| ALT. ENERGY BACKFEED BREAKER (IF APPL.) |                       |  |

|                              |                         |                      |         |
|------------------------------|-------------------------|----------------------|---------|
| EQUIP. CALCULATIONS          | DATE                    | 09/21/2021           | RELEASE |
|                              | REV                     |                      | DATE    |
|                              | SUBMIT FOR PERMIT       |                      |         |
|                              | E-001                   |                      |         |
| 10.075 kW PHOTOVOLTAIC PLANS | NAME                    | Grantham, Wiley      | CVC5966 |
|                              | ADDRESS                 | 200 SW Brandy Way    |         |
|                              | ADDRESS                 | Lake City, FL 32024  |         |
|                              | APN                     |                      |         |
| Daybreak Install LLC         | 2100 N Main St Ste. 212 | Fort Worth, TX 76164 |         |
|                              | (817) 501-4922          |                      |         |



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| PV SYSTEM MAXIMUM VOLTAGE (MODULE V <sub>oc</sub> MAX) |                      |                                                                |                                                           |           |                             |                              |                                            |  |  |
|--------------------------------------------------------|----------------------|----------------------------------------------------------------|-----------------------------------------------------------|-----------|-----------------------------|------------------------------|--------------------------------------------|--|--|
| DATA SOURCE                                            |                      | SOLARBCS.ORG/ABOUT/PUBLICATIONS/REPORTS/ EXPEDITED-PERMIT/MAP/ |                                                           |           |                             |                              |                                            |  |  |
| EXTREME MIN. TEMP. (°C)                                | STC TEMPERATURE (°C) | CORRECTED TEMPERATURE                                          | MFR. P <sub>max</sub> TEMP. COEFFICIENT (-0.001/°C) * 100 | FORMULA   | CORRECTED TEMP. COEFFICIENT | MODULE V <sub>oc</sub> (VOC) | TEMPERATURE CORRECTED OPEN CIRCUIT VOLTAGE |  |  |
| -6                                                     | 25                   | -31                                                            | 0.28%                                                     | -0.09 + 1 | 0.91                        | 41.67                        | 37.92                                      |  |  |

### WIRE AND CONDUCTOR NOTES

1. ANY CONDUCTOR LENGTH UNDER 50' DOESN'T REQUIRE VOLTAGE DROP CALCULATIONS.
2. BECAUSE WE ARE UNABLE TO DETERMINE THE EXACT PATH THE INSTALLER WILL RUN CONDUCTORS, WORST CASE SCENARIOS, ROUNDING UP SIZES OF CONDUCTORS THAT ARE DEMAND QUESTIONABLE TO PREVENT ISSUES RELATED TO EXCEEDING VOLTAGE CONSTRAINTS THAT ARE IMPROPERLY SIZED.
3. WIRING METHODS IN THESE CALCULATIONS DON'T EXCEED 1000 VOLTS.
4. CIRCUM 251.5(A)(4) [AS APPLICABLE] WHERE TWO CONDUCTORS APPLY TO ADJACENT PORTIONS OF A CIRCUIT, THE HIGHER AMPACITY SHALL BE PERMITTED TO BE USED BEYOND THE POINT OF TRANSITION, A DISTANCE EQUAL TO 10' OR 1/3 METERS OR 10% OF THE CIRCUIT LENGTH FIGURED AT THE HIGHER AMPACITY, WHICHEVER IS LESSER. WHEN LESS THAN 10' OR 10% OF THE CIRCUIT LENGTH, THE LOWER AMPACITY MAY BE USED.

| WIRE COLOR CODING (2017) NEC SECTIONS 250.119 & 200.6         |                                                                                                                                      |                                                      |                                                                                                     |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| PV DC WIRING                                                  |                                                                                                                                      | AC WIRING                                            |                                                                                                     |
| EQUIPMENT GROUND<br>GROUNDING CONDUCTOR<br>TYPICALLY NEGATIVE | GREEN OR BARE, OR GREEN/YELLOW<br><br>WHITE OR GRAY                                                                                  | EQUIPMENT GROUND<br>GROUNDING CONDUCTOR<br>(NEUTRAL) | GREEN OR BARE, OR GREEN/YELLOW<br><br>WHITE OR GRAY                                                 |
| UNGROUNDING CONDUCTOR(S)<br>TYPICALLY POSITIVE                | ANY COLOR OTHER THAN GREEN OR WHITE/GRAY<br>CONVENTION IS RED FOR GROUNDING SYSTEMS<br>RED (+) AND BLACK (-) FOR UNGROUNDING SYSTEMS | UNGROUNDING CONDUCTOR(S) HOT:<br>L1 AND L2           | ANY COLOR OTHER THAN GREEN OR WHITE/GRAY/ALLOYED.<br>CONVENTION IS L1 BLACK<br>CONVENTION IS L2 RED |

| TAG | CIRCUIT ORIGIN  | CIRCUIT DESTINATION | CONDUCTOR SPECIFICATIONS  |                  |            | REQUIRED CONDUCTOR AMPACITY |                              |   |                               |   |                         | CONDUCTOR TEMPERATURE DERATING |                            |   |                   |                     | CONDUIT FILL DERATING |                     | CORRECTED AMPACITY CALCULATION  |                  |                                     |                  |                                     | AMPACITY CHECK |   |               |   |                       |   |                    |                   |     |                    |  |
|-----|-----------------|---------------------|---------------------------|------------------|------------|-----------------------------|------------------------------|---|-------------------------------|---|-------------------------|--------------------------------|----------------------------|---|-------------------|---------------------|-----------------------|---------------------|---------------------------------|------------------|-------------------------------------|------------------|-------------------------------------|----------------|---|---------------|---|-----------------------|---|--------------------|-------------------|-----|--------------------|--|
|     |                 |                     | CITY IN PARALLEL MATERIAL | TEMP RATING (°C) | TRADE SIZE | AMPACITY @ 90°C PER 310.14  | N (AMPS) OR EQUIVALENT (MCM) | X | RFC COMBINED PARALLEL STRINGS | X | MAX CURRENT 600 A (N/A) | X                              | EONT OPERATION 600 A (REF) | = | REQUIRED AMPACITY | CIRCUIT ENVIRONMENT | AMBIENT TEMP (°C)     | HST ABOVE ROOF (ft) | TEMP ADJUST PER 310.15 (REF)(A) | OPERAT TEMP (°C) | AMPACITY CONNECTION 310.15 (REF)(A) | # OF UNRND COND. | AMPACITY CORRECTION 310.15 (REF)(A) | COND. AMPACITY | X | TEMP DERATING | X | CONDUIT FILL DERATING | = | CORRECTED AMPACITY | REQUIRED AMPACITY | +/- | CORRECTED AMPACITY |  |
| DC1 | PV MODULE       | DC/AC CONVERTER     | (1) CU                    | 90               | #12 AWG    | 30                          | 10.08                        | X | 1                             | X | 1.25                    | X                              | 1.25                       | = | 15.75             | ROOFTOP             | 35                    | >7'8"               | 0                               | 35               | 0.96                                | 2                | N/A                                 | 30             | X | 0.96          | X | 1.0                   | = | 28.8               | 15.75             | <   | 28.8               |  |
| DC2 | DC/AC CONVERTER | JUNCTION BOX        | (1) CU                    | 90               | #10 AWG    | 40                          | 15                           | X | 1                             | X | 1                       | X                              | 1.25                       | = | 18.75             | ROOFTOP             | 35                    | >7'8"               | 0                               | 35               | 0.96                                | 4                | N/A                                 | 40             | X | 0.96          | X | 1.0                   | = | 38.4               | 18.75             | <   | 38.4               |  |
| DC3 | JUNCTION BOX    | INVERTER            | (1) CU                    | 90               | #10 AWG    | 40                          | 15                           | X | 1                             | X | 1                       | X                              | 1.25                       | = | 18.75             | ATTIC               | 35                    | IN ATTIC            | 0                               | 35               | 0.96                                | 4                | 0.80                                | 40             | X | 0.96          | X | 0.80                  | = | 30.7               | 18.75             | <   | 30.7               |  |
| DC4 |                 |                     |                           |                  |            |                             |                              | X |                               | X |                         | X                              |                            | = |                   |                     |                       |                     |                                 |                  |                                     |                  | X                                   |                | X |               | X |                       |   |                    |                   |     |                    |  |
| DC5 |                 |                     |                           |                  |            |                             |                              |   | X                             |   | X                       |                                | X                          |   | =                 |                     |                       |                     |                                 |                  |                                     |                  | X                                   |                | X |               | X |                       |   |                    |                   |     |                    |  |
| DC6 |                 |                     |                           |                  |            |                             |                              | X |                               | X |                         | X                              |                            | = |                   |                     |                       |                     |                                 |                  |                                     |                  | X                                   |                | X |               | X |                       |   |                    |                   |     |                    |  |
| DC7 |                 |                     |                           |                  |            |                             |                              |   | X                             |   | X                       |                                | X                          |   | =                 |                     |                       |                     |                                 |                  |                                     |                  | X                                   |                | X |               | X |                       |   |                    |                   |     |                    |  |
| DC8 |                 |                     |                           |                  |            |                             |                              |   | X                             |   | X                       |                                | X                          |   | =                 |                     |                       |                     |                                 |                  |                                     |                  | X                                   |                | X |               | X |                       |   |                    |                   |     |                    |  |

| TAG  | CIRCUIT ORIGIN | CIRCUIT DESTINATION    | CONDUCTOR SPECIFICATIONS   |                   |            |                            | REQUIRED CONDUCTOR AMPACITY  |   |                                                  |   | CONDUCTOR TEMPERATURE DERATING |                     |                    |                     |                                 | CONDUCTOR FILL DERATING |                                      | CORRECTED AMPACITY CALCULATION |                                      |                |   |                | AMPACITY CHECK |                         |   |                    |                   |                    |      |
|------|----------------|------------------------|----------------------------|-------------------|------------|----------------------------|------------------------------|---|--------------------------------------------------|---|--------------------------------|---------------------|--------------------|---------------------|---------------------------------|-------------------------|--------------------------------------|--------------------------------|--------------------------------------|----------------|---|----------------|----------------|-------------------------|---|--------------------|-------------------|--------------------|------|
|      |                |                        | QTY IN PARALLEL & MATERIAL | TEMP. RATING (°C) | TRADE SIZE | AMPACITY @ 90°C PER 310.15 | COND. OPERATION 695.8 (B)(1) | X | MAX. INV. OUTPUT CURRENT (AMPS) COMPONENT (AMPS) | X | REQUIRED AMPACITY              | CIRCUIT ENVIRONMENT | AMBIENT TEMP. (°C) | HST ABOVE ROOF (in) | TEMP. ADJ. PER 310.15 (B)(2)(a) | OPERAT. TEMP. (°C)      | AMPACITY CORRECTION 310.15 (B)(2)(a) | # OF UNSHD. COND.              | AMPACITY CORRECTION 310.15 (B)(3)(a) | COND. AMPACITY | X | TEMP. DERATING | X              | CONDUCTOR FILL DERATING | X | CORRECTED AMPACITY | REQUIRED AMPACITY | CORRECTED AMPACITY |      |
| AC1  | INVERTER       | AC DISCONNECT          | (1) CU                     | 75                | #8 AWG     | 50                         | 1.25                         | X | 32.0                                             | X | 40.0                           | EXT. WALL           | 35                 | N/A                 | 0                               | 35                      | 0.94                                 | 3                              | 1.0                                  | 50             | X | 0.94           | X              | 1.0                     | = | 47.0               | 40.0              | <                  | 47.0 |
| AC2  | AC DISCONNECT  | EXISTING SERVICE PANEL | (1) CU                     | 75                | #8 AWG     | 65                         | 1.25                         | X | 32.0                                             | X | 40.0                           | EXT. WALL           | 35                 | N/A                 | 0                               | 35                      | 0.94                                 | 3                              | 1.0                                  | 65             | X | 0.94           | X              | 1.0                     | = | 61.1               | 40.0              | <                  | 61.1 |
| AC3  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC4  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC5  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC6  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC7  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC8  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC9  |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |
| AC10 |                |                        |                            |                   |            |                            |                              | X |                                                  | X |                                |                     |                    |                     |                                 |                         |                                      |                                | X                                    | X              | X | =              |                |                         | < |                    |                   |                    |      |

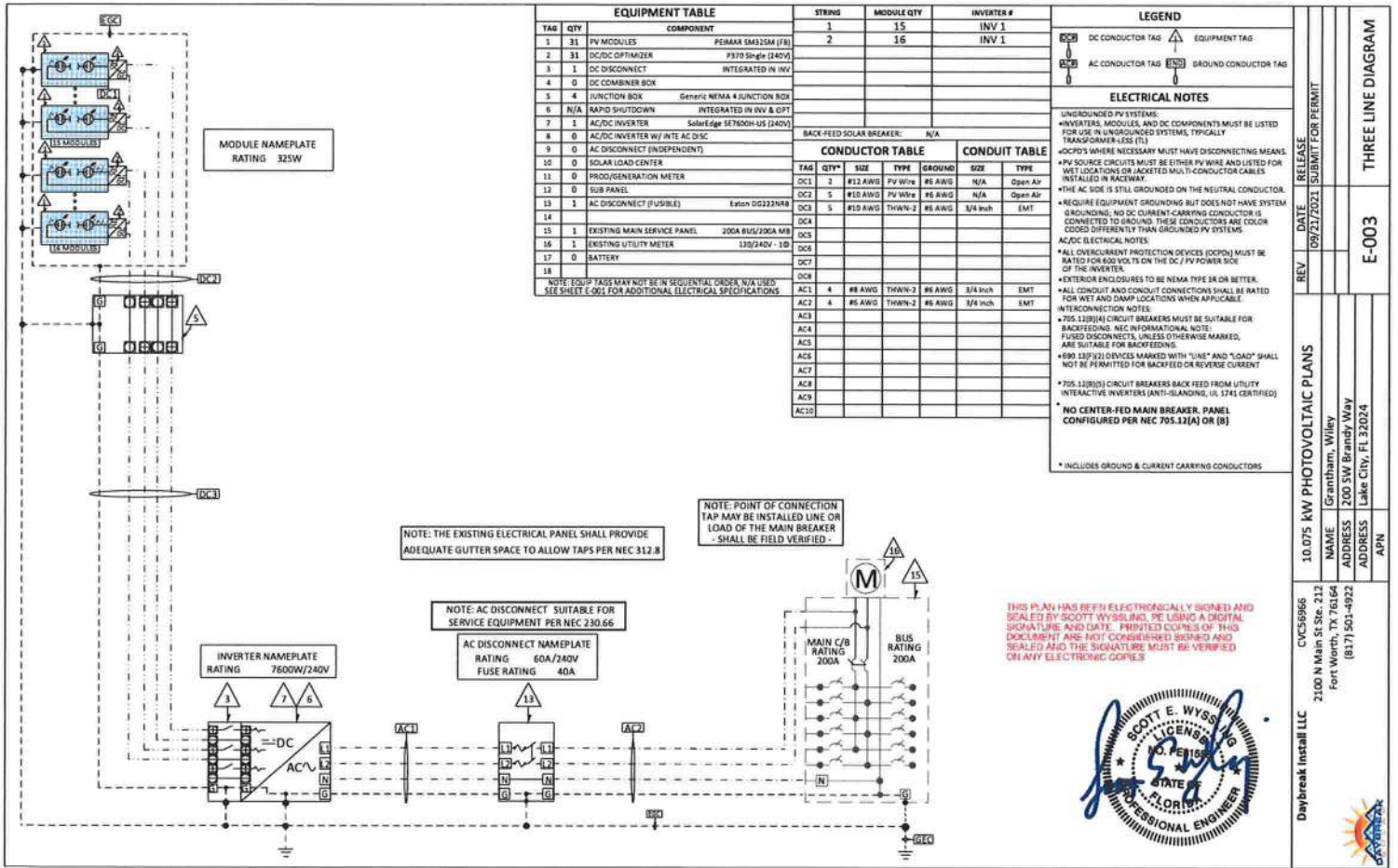
Daybreak Install LLC

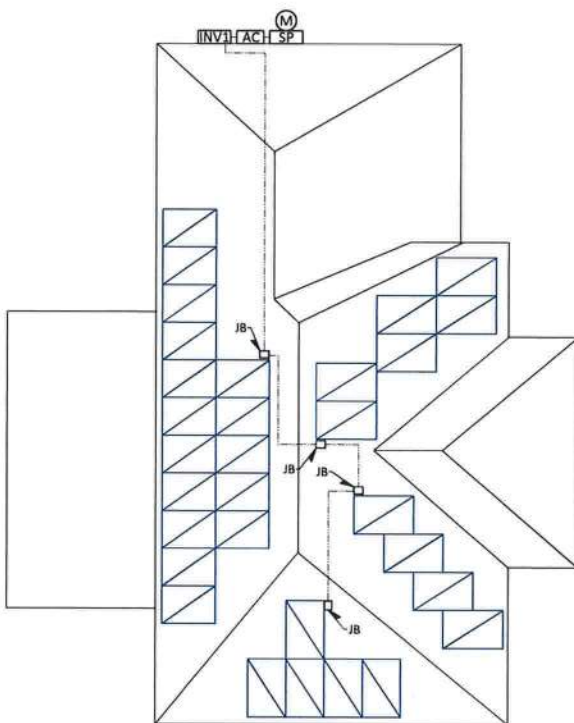
CVC50966

2100 N Main St Ste. 212  
Fort Worth, TX 76164  
(817) 501-4922









- ### EQUIPMENT GROUNDING
1. METAL PV MODULE FRAMES MUST BE CONNECTED TO THE EGC (EQUIPMENT GROUNDING CONDUCTOR).
  - 1.1. WEBS MAY BE USED IN LIEU OF MODULE GROUND CLAMPS OR LUGS, WITH APPROVAL OF AHJ AND RACKING MFG. WEBS ARE ONE TIME USE ONLY. SEE "WEB-2007" FOR RACKING SPECIFIC WEB, INSTALL INSTRUCTIONS, AND UL 2703 CERT.
  - 1.2. FOR "L-A-I-N" LUG MODULE GROUNDING: CORRECT HARDWARE OF PROPER METAL MATERIAL TO AVOID CORROSION MUST BE USED. TYPICALLY DIRECT BURIAL RATED, TINNED, OR STAINLESS STEEL. GROUNDING LUGS MUST BE ATTACHED AT MARKED LOCATION ON EACH MODULE.
  2. THE EGC (EQUIPMENT GROUNDING CONDUCTOR) IS USED TO BOND ALL NON-CURRENT CARRYING CONDUCTORS AND EXPOSED METAL PARTS THAT MIGHT COME INTO CONTACT WITH CURRENT-CARRYING CONDUCTORS, INCLUDING THE FOLLOWING:
    - 2.1. PV MODULE FRAMES, ARRAY MOUNTING RACKING; THE METAL CHASSIS OF EQUIPMENT SUCH AS INVERTERS, DISCONNECTS, METERS, JUNCTION BOXES AND COMBINER BOXES; AND METAL CONDUIT HOLDING CIRCUITS > 250 VOLTS TO GROUND PER NEC 250.37.
    3. THE GEC (GROUNDING ELECTRODE CONDUCTOR) IS THE CONDUCTOR USED TO CONNECT THE GE OR GE SYSTEM TO THE SYSTEM GEC, TO THE EGC, OR TO BOTH.
    4. THE GE (GROUNDING ELECTRODE) IS A CONDUCTING OBJECT, OFTEN A ROD, RING, OR PLATE ESTABLISHING A DIRECT CONNECTION TO EARTH. THE AC SYSTEM GROUND IS EXISTING, USUALLY AT THE EXISTING MAIN PANEL, AND/OR UTILITY METER. THE GROUND CAN ONLY OCCUR IN ONE PLACE AND MUST NOT BE DUPLICATED IN SUB-PANELS OR ANYWHERE ELSE ON AC SIDE.

### ELECTRICAL SYMBOL LEGEND

|       |                       |       |                      |
|-------|-----------------------|-------|----------------------|
| (CB)  | DC COMBINER BOX       | (AT)  | AUTO TRANSFORMER     |
| (DC)  | DC DISCONNECT         | (SLC) | SOLAR LOAD CENTER    |
| (AC)  | AC COMBINER           | (ZC)  | AC COMBINER          |
| (DC)  | DC DISCONNECT         | (BAT) | BATTERY              |
| (DC)  | DC/AC STRING INVERTER | (AC)  | AC DISCONNECT        |
| (LPS) | CRITICAL LOADS PANEL  | (SP)  | SERVICE PANEL        |
| (RSD) | RAPID SHUTDOWN        | (PM)  | PERFORMANCE METER    |
| (SUB) | SUB-PANEL             | (UM)  | UTILITY METER        |
| (PV)  | PV ARRAY TAG          | (TR)  | TRANSFORMER          |
| (S)   | SECTION #             | (JB)  | JUNCTION BOX         |
| (M)   | MODULE GROUP          | (ATS) | AUTO TRANSFER SWITCH |

PV AC DISCONNECT LOCATED ON ACCESSIBLE EXTERIOR WALL WITH EXTERNAL HANDLE VISIBLE, LOCKABLE & LABELED WITHIN 10 FEET OF THE METER.

THIS PLAN HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY SCOTT E. WYSS, PE, USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



SCALE: 1/8" = 1'0" @ SHEET SIZE A3

QTY 31 PEIMAR SM325M (FB) MODULES QTY 1 SolarEdge SE7600H-US (240V) INVERTER

|                              |                         |         |                   |
|------------------------------|-------------------------|---------|-------------------|
| REV                          | DATE                    | RELEASE | SUBMIT FOR PERMIT |
|                              | 09/27/2021              |         |                   |
| E-100                        |                         |         |                   |
| ELECTRICAL LAYOUT            |                         |         |                   |
| 10.075 kW PHOTOVOLTAIC PLANS |                         |         |                   |
| NAME                         | Grantham, Wiley         |         |                   |
| ADDRESS                      | 200 SW Brandy Way       |         |                   |
| APN                          | Lake City, FL 32024     |         |                   |
| CVC50966                     | 2100 N Main St Ste. 212 |         |                   |
|                              | Fort Worth, TX 76164    |         |                   |
|                              | (817) 501-4922          |         |                   |
| Daybreak Install LLC         |                         |         |                   |



|                                                                                                                                                                                                                                                                                                                                      |                                         |                        |                                                                                                                                                                                                                                                                                                                                                                                                       |                                       |                        |                                                                                                                                                                                                                                                                                                                                                             |                 |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1                                                                                                                                                                                                                                                                                                                                    | CONDUIT, RACEWAY, J-BOX, AND PULL BOXES | SCALE:<br>1/2" = 1'-0" | 2                                                                                                                                                                                                                                                                                                                                                                                                     | J-BOX, DC COMBINER, AND DC DISCONNECT | SCALE:<br>1/4" = 1'-0" | 3                                                                                                                                                                                                                                                                                                                                                           | DC COMBINER BOX | SCALE:<br>1/2" = 1'-0" | SHEET NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| <div>WARNING: PHOTOVOLTAIC POWER SOURCE</div> <div>1. PLACE ON CONDUIT AND/OR RACEWAYS EVERY 10' (90"), 12" FROM BENDS, 12" ABOVE AND BELOW PENETRATIONS.<br/>2. CODE REFERENCE: NEC 690.31(D)(3)<br/>3. MINIMUM OF 1 1/8" x 5 1/4"<br/>4. FONT: 3/8" AND .8 WIDTH FACTOR<br/>5. REFLECTIVE WHITE LETTERS ON A RED BACKGROUND.</div> |                                         |                        | <div>WARNING: ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED</div> <div>1. ONLY FOR UNGROUNDED SYSTEMS.<br/>2. PLACED ON ALL ENCLOSURES WITH UNGROUNDED CIRCUITS OR DEVICES WHICH ARE ENERGIZED AND MAY BE EXPOSED DURING SERVICE.<br/>3. MINIMUM OF 3" x 10 1/2"<br/>4. FONT: 3/8"<br/>5. WHITE LETTERS ON A RED BACKGROUND.</div>         |                                       |                        | <div>DC COMBINER BOX</div> <div>COMBINER # 1</div> <div>1. USE PLACARD "COMBINER # 1" WHEN MORE THAN 1 DC COMBINER IS USED. NUMBER ACCORDING TO THREE LINE DIAGRAM AND CALCULATIONS.<br/>2. MINIMUM OF 1" x 4"<br/>3. FONT: 3/8" AND .75 TO .8 WIDTH FACTOR<br/>4. WHITE LETTERS ON A RED BACKGROUND.</div>                                                 |                 |                        | <div>CODE ABBREVIATIONS:<br/>NATIONAL ELECTRICAL CODE (NEC)<br/>INTERNATIONAL BUILDING CODE (IBC)<br/>INTERNATIONAL RESIDENTIAL CODE (IRC)<br/>INTERNATIONAL FIRE CODE (IFC)<br/>UNDERWRITERS LABORATORY (UL)</div> <div>1. COMBINATION PLACARDS MAY BE USED IN PLACE OF MULTIPLE PLACARDS FOR THE SAME DEVICE. ALL INFORMATION FROM THE MULTIPLE PLACARDS MUST BE PRESENT.<br/>2. BLACK LETTERS WITH YELLOW BACKGROUND MAY BE USED IN PLACE OF THE STANDARD WHITE LETTERS WITH RED BACKGROUND WITH AN APPROVAL.<br/>3. ALL INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS ARE MARKED. (NEC 690.31(D), NEC 690.15 &amp; 690.55)<br/>4. THE MARKINGS ON THE CONDUITS, RACEWAYS AND CABLE ASSEMBLIES ARE EVERY 10 FEET, WITHIN ONE FOOT OF ALL TURNS OR BENDS AND WITHIN ONE FOOT ABOVE AND BELOW ALL PENETRATIONS OF ROOF/FLOORING ASSEMBLIES, WALLS AND BARRIERS. (IFC 605.11.4, NEC 690.31(D)(3))<br/>5. WHERE PV CIRCUITS ARE EMBEDDED IN BUILT-UP, LAMINATE OR MEMBRANE ROOFING MATERIALS IN ROOF AREAS NOT COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT, THE LOCATION OF CIRCUITS SHALL BE CLEARLY MARKED.<br/>6. REQUIRED LABELS SHALL BE PERMANENT AND SUITABLE FOR THE ENVIRONMENT. MATERIALS USED FOR MARKING MUST BE WEATHER RESISTANT. UL STANDARD IS RECOMMENDED TO DETERMINE WEATHER RATING. UL LISTING OF MARKINGS IS NOT REQUIRED. SEE UL LABELING SYSTEM 969 (UL 969)<br/>7. MARKING CONTENT AND FORMAT:<br/>7.1. ARIAL OR SANSER FONT, NON-BOLD<br/>7.2. MINIMUM 3/8" LETTER HEIGHT FOR HEADERS<br/>7.3. MINIMUM 1/8" LETTER HEIGHT FOR DATA<br/>7.4. CONTRASTING BACKGROUND AND LETTERING<br/>7.5. ALL CAPITAL LETTERS<br/>7.6. CONTRASTING SPACE BETWEEN ROWS OF TEXT<br/>7.7. DIMENSIONS OF PLACARDS ARE APPROXIMATE. MAY BE REDUCED AND / OR INCREASED TO UL APPROVED MANUFACTURED PRODUCT</div> |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| <div>DO NOT OPEN UNDER LOAD</div> <div>1. CODE REFERENCE: NEC 690.13(C)<br/>2. USE ON NON-LOAD BREAK RATED DISCONNECTION.<br/>3. MINIMUM OF 1" x 6"<br/>4. FONT: 3/8" AND .8 WIDTH FACTOR<br/>5. WHITE LETTERS ON A RED BACKGROUND.</div>                                                                                            |                                         |                        | <div>WARNING: ELECTRIC SHOCK HAZARD DO NOT TOUCH TERMINALS TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION</div> <div>1. PLACED ON DC DISCONNECTS AND ON ANY EQUIPMENT THAT STAYS ENERGIZED IN THE OFF POSITION FROM THE PV SUPPLY.<br/>2. CODE REFERENCE: NEC 690.13(B)<br/>3. MINIMUM OF 3 1/2" x 10"<br/>4. FONT: 3/8"<br/>5. WHITE LETTERS ON A RED BACKGROUND.</div> |                                       |                        | <div>WARNING: ELECTRIC SHOCK HAZARD IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED</div> <div>2. MINIMUM OF 3 1/2" x 10 1/2"<br/>3. FONT: 3/8"<br/>4. WHITE LETTERS ON A RED BACKGROUND.</div>                                                                                                                 |                 |                        | <div>7 RAPID SHUTDOWN SWITCH</div> <div>SCALE:<br/>1/4" = 1'-0"</div> <div>1. A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3M (9.7 FT) FROM THE SWITCH THAT INCLUDES THE FOLLOWING:<br/><div>RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM</div><div>2. THE LABEL SHALL BE REFLECTIVE WITH ALL LETTERS CAPITALIZED AND HAVING A MINIMUM HEIGHT OF 8.3 MM (1/8 IN.) IN WHITE ON RED BACKGROUND.</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| <div>DO NOT DISCONNECT UNDER LOAD</div>                                                                                                                                                                                                                                                                                              |                                         |                        | <div>INVERTER(S)</div> <div>SCALE:<br/>1/2" = 1'-0"</div> <div>8</div> <div>INVERTER(S)</div> <div>SCALE:<br/>1/2" = 1'-0"</div> <div>INVERTER # 1</div> <div>1. USE PLACARD "INVERTER # 1" WHEN MORE THAN 1 INVERTER IS USED. NUMBER ACCORDING TO THREE LINE DIAGRAM AND CALCULATIONS.<br/>2. MINIMUM OF 1" x 4"<br/>3. FONT: 3/8"<br/>4. WHITE LETTERS ON A RED BACKGROUND.</div>                   |                                       |                        | <div>AC AND DC DISCONNECTS</div> <div>SCALE:<br/>1/4" = 1'-0"</div> <div>9</div> <div>AC DISCONNECT # 1</div> <div>DC DISCONNECT # 1</div> <div>PV SYSTEM DISCONNECT</div> <div>1. PLACE ON ALL AC AND DC DISCONNECTS<br/>2. CODE REFERENCE: NEC 690.13(B)<br/>3. MINIMUM OF 1" x 10 1/2"<br/>4. FONT: 3/8"<br/>5. WHITE LETTERS ON A RED BACKGROUND.</div> |                 |                        | <div>SOLAR kWh METER</div> <div>SCALE:<br/>1/2" = 1'-0"</div> <div>10</div> <div>SOLAR PRODUCTION METER CUSTOMER OWNED</div> <div>PHOTOVOLTAIC SYSTEM kWh METER</div> <div>1. USE PLACARD ON CUSTOMER GENERATION METER.<br/>2. VERIFY WHICH PLACARD IS REQUIRED WITH AHJ.<br/>3. MINIMUM OF 1" x 4"<br/>4. FONT: 3/8" AND .8 WIDTH FACTOR<br/>5. WHITE LETTERS ON A RED BACKGROUND.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  | <div>11</div> <div>MAIN SERVICE PANEL</div> <div>SCALE:<br/>1/4" = 1'-0"</div> <div>SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN</div> <div>TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY.</div> <div>1. LOCATE NO MORE THAN 1 m FROM THE SERVICE DISCOUNT MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.<br/>2. CODE REFERENCE: NEC 690.56(C)(1)(a)<br/>3. TITLE: MIN. 3/8" BLACK CHARACTERS ON YELLOW BACKGROUND, REMAINING CHARACTERS MIN. 3/16" IN BLACK ON WHITE BACKGROUND.</div> |  |
| QTY 31 PEIMAR SM325M (FB) MODULES                                                                                                                                                                                                                                                                                                    |                                         |                        | QTY 1 SolarEdge SE7600H-US (240V) INVERTER                                                                                                                                                                                                                                                                                                                                                            |                                       |                        | 10.075 kW PHOTOVOLTAIC PLANS                                                                                                                                                                                                                                                                                                                                |                 |                        | NAME Grantham, Wiley<br>ADDRESS 200 SW Brandy Way<br>ADDRESS Lake City, FL 32024<br>APN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |





[illegible]



## SM325M (FB)

### 60-CELL LINE

MADE IN ITALY MODULE

Peimar monocrystalline solar panels, produced using a combination of innovative production processes and advanced engineering techniques, provide customers with maximum output and super high performance. This allows fewer panels to be used to generate more energy, ideal if space is restricted or environmental conditions are challenging. Modern design, using matching black cells and frame and a very long lifespan ensure this monocrystalline is a great option.

#### CELLS

60 CELLS  
MONO 183 / 183 M3 | PERC  
158.75x158.75mm / 6.25x6.25"

#### FRAME

COMPACT AND STURDY | 40mm  
ANCHORABLE ALSO ON THE SHORT SIDE

30 YEAR LINEAR POWER WARRANTY  
20 YEAR PRODUCT WARRANTY

PERC TECHNOLOGY

PID FREE

MODULE FIRE PERFORMANCE: CLASS 1

ANTI-REFLECTIVE GLASS

QSE INSURANCE  
Product Liability Insurance QSE

www.peimar.com



#### ELECTRICAL CHARACTERISTICS (STC)

Nominal Output (P<sub>max</sub>)<sup>1</sup>  
Working Voltage  
Voltage at Power (V<sub>mp</sub>)<sup>2</sup>  
Current at Power (I<sub>mp</sub>)<sup>2</sup>  
Open Circuit Voltage (V<sub>oc</sub>)<sup>3</sup>  
Short Circuit Current (I<sub>sc</sub>)<sup>3</sup>  
Maximum System Voltage  
Maximum Series Fuse Rating  
Module Efficiency  
Protection class against electric shock

#### 60-CELL LINE

##### AMC50W (75)

525 W  
54.5 V  
34.19 A  
63.2 A  
61.67 V  
10.18 A  
1000 V  
18 A  
19.40%  
Class II

#### MECHANICAL CHARACTERISTICS

Substrate  
Substrate Size  
Front Cover  
Back Cover  
Interconnect  
Frame  
Frame Mounting  
Backsheet/Backsheet  
Thickness  
Junction Box  
Connector  
Cable Length  
Cable Section  
Dimensions  
Weight  
Max Load (Test Load)<sup>1</sup>

#### TEMPERATURE CHARACTERISTICS

Watt/m²  
Temperature Coefficient of Power  
Temperature Coefficient of Voc  
Temperature Coefficient of Isc  
Operating Temperature

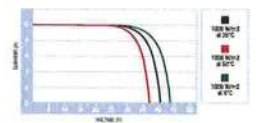
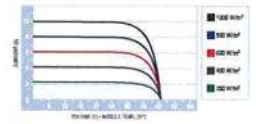
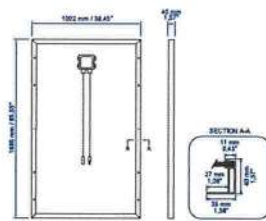
#### PACKAGING

Module dimensions  
Pallet dimensions  
Pallet weight  
Weight

#### CERTIFICATIONS

Fire Resistance Rating  
VDE Test  
TUV Test  
Approval

#### DIMENSIONS



1. STC: Standard Test Conditions (Irradiance 1000W/m², module temperature 25°C, air mass 1.5)  
2. Pmax for 1000W/m² irradiance, 25°C  
3. I<sub>sc</sub> and V<sub>oc</sub> for 1000W/m² irradiance, 25°C  
4. Module with 1000W/m² irradiance, 25°C  
5. Current at maximum power (I<sub>mp</sub>) for 1000W/m² irradiance, 25°C

Peimar reserves the right to change the technical specifications without notice. The information is for reference only and does not constitute a contract.

| REV                          | DATE       | RELEASE | SUBMIT FOR PERMIT    |
|------------------------------|------------|---------|----------------------|
|                              | 09/21/2021 |         |                      |
| 10.075 kW PHOTOVOLTAIC PLANS |            |         |                      |
| NAME Grantham, Wiley         |            |         |                      |
| ADDRESS 200 SW Brandy Way    |            |         |                      |
| ADDRESS Lake City, FL 32024  |            |         |                      |
| APN                          |            |         |                      |
| CVC55966                     |            |         | Daybreak Install LLC |
| 2100 N Main St. Ste. 212     |            |         |                      |
| Fort Worth, TX 76164         |            |         |                      |
| (817) 501-4922               |            |         |                      |
| R-100                        |            |         | EQUIP. CUT SHEETS    |



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



12-25  
YEAR

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

[solaredge.com](http://solaredge.com)



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

| OUTPUT                                                                       |      |                           |      |                            |      |       |                             |     |
|------------------------------------------------------------------------------|------|---------------------------|------|----------------------------|------|-------|-----------------------------|-----|
| Rated AC Power Output                                                        | 1000 | 1800 @ 24V<br>3100 @ 208V | 5000 | 8000 @ 24V<br>15000 @ 208V | 7600 | 10000 | 14000 @ 24V<br>20000 @ 208V | NA  |
| Maximum AC Power Output                                                      | 1000 | 1800 @ 24V<br>3100 @ 208V | 5000 | 8000 @ 24V<br>15000 @ 208V | 7600 | 10000 | 14000 @ 24V<br>20000 @ 208V | NA  |
| AC Output Voltage Min-Hom-Max<br>(211-240-264)                               | ✓    | ✓                         | ✓    | ✓                          | ✓    | ✓     | ✓                           | Vac |
| AC Output Voltage Min-Hom-Max<br>(65-264-278)                                | ✓    | ✓                         | ✓    | ✓                          | ✓    | ✓     | ✓                           | Vac |
| AC Frequency (nominal)                                                       |      |                           |      | 50/3-5-60, 60.5            |      |       |                             | Hz  |
| Maximum Continuous Output<br>Current @240V                                   | 12.5 | 16                        | 21   | 25                         | 32   | 42    | 47.5                        | A   |
| Maximum Continuous Output<br>Current @208V                                   | -    | 16                        | -    | 24                         | -    | -     | 46.5                        | A   |
| UL94 Flammability                                                            |      |                           |      | 1                          |      |       |                             | A   |
| Utility Monitoring, Metering<br>Protection, Country Configurable<br>Breakers |      |                           |      | Yes                        |      |       |                             |     |

|                                  |                  |      |      |      |       |       |                          |     |
|----------------------------------|------------------|------|------|------|-------|-------|--------------------------|-----|
| Maximum DC Power @24V            | ±30              | 1500 | 7750 | 5100 | 18000 | 13100 | 13600                    | W   |
| Maximum DC Power @208V           | -                | 3300 | -    | 7750 | -     | -     | 19100                    | W   |
| Transformerless, Ungrounded      | Yes              |      |      |      |       |       |                          |     |
| Maximum Input Voltage            | 400              |      |      |      |       |       |                          | Vac |
| Typical DC Input Voltage         | 340              |      |      |      |       |       |                          | Vdc |
| Maximum Input Current @24V/4V    | 8.5              | 10.5 | 18.5 | 15.3 | 20    | 27    | 30.5                     | Adc |
| Maximum Input Current @208V/4V   | -                | 9    | -    | 13.3 | -     | -     | 27                       | Adc |
| Max. Input Short Circuit Current | Yes              |      |      |      |       |       |                          | Adc |
| Reverse-Polarity Protection      | Yes              |      |      |      |       |       |                          |     |
| Ground-Fault Isolation Detection | 600% Sensitivity |      |      |      |       |       |                          |     |
| Maximum Inverter Efficiency      | 99               |      |      | 99.2 |       |       | 99 @ 240V<br>98.5 @ 208V | %   |
| CEC Weighted Efficiency          | 99               |      |      |      |       |       |                          | %   |
| Nighttime Power Consumption      | < 2.5            |      |      |      |       |       |                          | W   |

|                                           |                                                         |
|-------------------------------------------|---------------------------------------------------------|
| Supported Communication Interfaces        | RS485, Ethernet, ZigBee (optional), Cellular (optional) |
| Reverse Grade Data, ANSI C12.20           | Optional <sup>1</sup>                                   |
| Rapid Shutdown - NEC 2014 and 2017 §90.12 | Automatic Rapid Shutdown upon AC Grid Disconnect        |

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Safety                    | UL746, UL746 SA, UL9696, CSA C22.2, Canadian APC according to TLL M-07 |
| Grid Connection Standards | IEEE 1547, Rule 21, Rule 14 (3-6)                                      |
| Emissions                 | FCC Part 15 Class B                                                    |

|                                              |                                                                 |            |                                       |                                       |
|----------------------------------------------|-----------------------------------------------------------------|------------|---------------------------------------|---------------------------------------|
| AC Output Current Size / RMS Range           | 3/4" minimum / 1/4-6 RMS                                        |            | 3/4" minimum / 1/4-6 RMS              | 3/4" minimum / 1/4-6 RMS              |
| AC Input Cord Size / # of Strips / RMS Range | 3/4" minimum / 1/2 strips / 1/4-6 RMS                           |            | 3/4" minimum / 1/2 strips / 1/4-6 RMS | 3/4" minimum / 1/2 strips / 1/4-6 RMS |
| Dimensions with Safety Switch (SW-03)        | 17.7 x 14.6 x 8.1 / 450 x 370 x 174                             |            | 21.8 x 14.6 x 8.1 / 540 x 370 x 185   |                                       |
| Weight with Safety Switch                    | 22 / 1                                                          | 25.1 / 1.4 | 26.2 / 1.9                            | 36.8 / 17.6                           |
| Notes                                        | +25                                                             |            | +50                                   |                                       |
| Cooling                                      | Natural Convection                                              |            |                                       |                                       |
| Operating Temperature Range                  | -80 to +140 / -20 to +100 / +075 to +100°C option <sup>10</sup> |            |                                       |                                       |
| Protection Rating                            | NEMA 4X (Inverter with Safety Switch)                           |            |                                       |                                       |
|                                              |                                                                 |            |                                       | 7 / 2 °C                              |

\* For other regional settings please contact iSage support  
 \* Higher current source may be used, the inverter will limit its input current to the values stated  
 \* Revenue grade Inverter P/N: 1500000-02  
 \* For power derating information refer to: <https://www.sageledge.com/sites/default/files/2019-01/Power-Derating-Instructions.pdf>  
 \* -40 version P/N: 1500000-04

**RoHS**

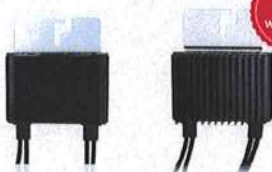
|                                                                                                                                                                                                  |                              |                     |       |     |                   |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------|-------|-----|-------------------|---------|
|  <b>Daybreak install LLC</b><br>CVC58966<br>2100 N Main St Ste. 212<br>Fort Worth, TX 76164<br>(817) 501-4922 | 10.075 kW PHOTOVOLTAIC PLANS |                     |       | REV | DATE              | RELEASE |
|                                                                                                                                                                                                  | NAME                         | Grantham, Wiley     |       |     |                   |         |
|                                                                                                                                                                                                  | ADDRESS                      | 200 SW Brandy Way   |       |     |                   |         |
|                                                                                                                                                                                                  | ADDRESS                      | Lake City, FL 32024 |       |     |                   |         |
|                                                                                                                                                                                                  | APN                          |                     |       |     |                   |         |
|                                                                                                                                                                                                  |                              |                     | R-101 |     | EQUIP. CUT SHEETS |         |



# Power Optimizer

For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505

25  
YEAR  
WARRANTY

## POWER OPTIMIZER

### PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Meets NEC requirements for arc fault protection (AFCD) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

solaredge.com

## Power Optimizer For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505

| Optimizer model (typical module compatibility) | P320 (for 60-cell modules) | P340 (for 60-cell modules) | P370 (for higher-power 60 and 72-cell modules) | P400 (for 72 & 96-cell modules) | P401 (for high-power 60 and 72-cell modules) | P405 (for high-voltage modules) | P485 (for high-voltage modules) | P505 (for higher current modules) |
|------------------------------------------------|----------------------------|----------------------------|------------------------------------------------|---------------------------------|----------------------------------------------|---------------------------------|---------------------------------|-----------------------------------|
|------------------------------------------------|----------------------------|----------------------------|------------------------------------------------|---------------------------------|----------------------------------------------|---------------------------------|---------------------------------|-----------------------------------|

|                                                               |        |        |        |        |                  |                  |                  |     |
|---------------------------------------------------------------|--------|--------|--------|--------|------------------|------------------|------------------|-----|
| Rated Input DC Power <sup>1</sup>                             | 320    | 340    | 370    | 400    | 405              | 485              | 505              | W   |
| Available Maximum Input Voltage (see all listed temperatures) | 48     | 60     | 80     | 80     | 100 <sup>2</sup> | 120 <sup>2</sup> | 120 <sup>2</sup> | Vdc |
| MPP Operating Range                                           | 8 - 48 | 8 - 60 | 8 - 80 | 8 - 80 | 12.5 - 100       | 12.5 - 120       | 12.5 - 120       | Vdc |
| Maximum Short-Circuit Current (Isc)                           | 71     | 71     | 80.1   | 80.1   | 117.5            | 117.5            | 144              | Adc |
| Maximum DC Input Current                                      | 10.75  | 10.75  | 12.5   | 12.5   | 14.68            | 14.68            | 17.5             | Adc |
| Maximum Efficiency                                            |        |        | 99.5   | 99.5   |                  |                  | 99.5             | %   |
| Weighted Efficiency                                           |        |        | 99.8   | 99.8   |                  |                  | 99.8             | %   |
| Overvoltage Category                                          |        |        | II     | II     |                  |                  | III              |     |

### OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREGE INVERTER)

|                        |    |    |    |    |    |    |    |     |
|------------------------|----|----|----|----|----|----|----|-----|
| Maximum Output Current | 10 | 10 | 10 | 10 | 10 | 10 | 10 | Adc |
| Maximum Output Voltage | 80 | 80 | 80 | 80 | 80 | 80 | 80 | Vdc |

### OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREGE INVERTER OR SOLAREGE INVERTER OFF)

|                                 |         |  |  |  |  |  |  |     |
|---------------------------------|---------|--|--|--|--|--|--|-----|
| Safety Output Voltage per Phase | 1 x 0.1 |  |  |  |  |  |  | Vdc |
|---------------------------------|---------|--|--|--|--|--|--|-----|

### STANDARD COMPLIANCE

|          |                                                      |
|----------|------------------------------------------------------|
| EMC      | CEC Part 69 Class B, FCC 47CFR 15.247, IEC 61000-6-3 |
| Safety   | IEC 62321-1 (class II safety), UL1741                |
| Material | UL94 V-0, UV Resistant                               |
| RoHS     | Yes                                                  |

### INSTALLATION SPECIFICATIONS

|                                |                                                      |                                    |                                    |                                    |                                    |                                    |                                    |          |
|--------------------------------|------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|----------|
| Maximum Allowed System Voltage | 1500                                                 |                                    |                                    |                                    |                                    |                                    |                                    | Vdc      |
| Compatible Inverters           | All SolarEdge Single Phase and Three Phase Inverters |                                    |                                    |                                    |                                    |                                    |                                    |          |
| Dimensions (W x H x D)         | 129 x 153 x 27.5 / 5.1 x 6.1 x 1.1                   | 129 x 153 x 33.5 / 5.1 x 6.1 x 1.3 | 129 x 153 x 33.5 / 5.1 x 6.1 x 1.3 | 129 x 153 x 49.5 / 5.1 x 6.1 x 1.9 | 129 x 153 x 49.5 / 5.1 x 6.1 x 1.9 | 129 x 153 x 49.5 / 5.1 x 6.1 x 1.9 | 129 x 153 x 49.5 / 5.1 x 6.1 x 1.9 | mm / in. |
| Weight (including cables)      | 850 / 1.8                                            | 750 / 1.7                          | 655 / 1.5                          | 845 / 1.9                          | 845 / 1.9                          | 1064 / 2.3                         | 1064 / 2.3                         | g / lb.  |
| Input Connector                | MC4 <sup>3</sup>                                     | MC4 <sup>3</sup>                   | MC4 <sup>3</sup>                   | Single or dual MC4 <sup>3</sup>    | Single or dual MC4 <sup>3</sup>    | Single or dual MC4 <sup>3</sup>    | Single or dual MC4 <sup>3</sup>    |          |
| Input Wire Length              | 0.76 / 0.52                                          | 0.76 / 0.52                        | 0.76 / 0.52                        | 1.2 / 0.9                          | 1.2 / 0.9                          | 1.2 / 0.9                          | 1.2 / 0.9                          | m / ft.  |
| Output Wire Length / Connector | 0.8 / 2.36                                           | 0.8 / 2.36                         | 0.8 / 2.36                         | Double insulated / MC4             | Double insulated / MC4             | Double insulated / MC4             | Double insulated / MC4             | m / ft.  |
| Operating Temperature Range    | -40 ~ +85 / -40 ~ +193                               | -40 ~ +85 / -40 ~ +193             | -40 ~ +85 / -40 ~ +193             | -40 ~ +85 / -40 ~ +193             | -40 ~ +85 / -40 ~ +193             | -40 ~ +85 / -40 ~ +193             | -40 ~ +85 / -40 ~ +193             | °C / °F  |
| Protection Rating              | IP68 / NEMA6P                                        | IP68 / NEMA6P                      | IP68 / NEMA6P                      | IP68 / NEMA6P                      | IP68 / NEMA6P                      | IP68 / NEMA6P                      | IP68 / NEMA6P                      |          |
| Relative Humidity              | 0 ~ 100                                              | 0 ~ 100                            | 0 ~ 100                            | 0 ~ 100                            | 0 ~ 100                            | 0 ~ 100                            | 0 ~ 100                            | %        |

(1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +10% power tolerance are allowed.  
 (2) IEC 62321-1 requires max input voltage to be not more than 80V.  
 (3) For other connector types, please contact SolarEdge.  
 (4) For dual output, the parallel connection of two modules is required. In the case of an odd number of PV modules in one string, module one (P401) shall receive power optimizer connected to one PV module, while connecting a single module and the unconnected input connectors with the supplied pair of cables.  
 (5) For ambient temperature above +35°C / +95°F, power derating is applied. Refer to Power Optimizers Temperature Derating Technical Note for more details.

| PV System Design Using a SolarEdge Inverter? | Single Phase HD-Wave                           | Single phase | Three Phase for 208V grid | Three Phase for 277/480V grid |   |
|----------------------------------------------|------------------------------------------------|--------------|---------------------------|-------------------------------|---|
| Minimum String Length (Power Optimizers)     | P320, P340, P370, P400, P401, P405, P485, P505 | 8            | 12                        | 18                            |   |
| Maximum String Length (Power Optimizers)     | 2700 (5000 with SE7500-01 - SE7400-01)         | 25           | 25                        | 30 <sup>4</sup>               |   |
| Maximum Power per String                     | 5700 (5000 with SE7500-01 - SE7400-01)         | 5250         | 6000 <sup>4</sup>         | 12750 <sup>4</sup>            | W |
| Permitted String Lengths or Orientations     | Yes                                            |              |                           |                               |   |

(6) For detailed stringing information refer to <http://www.solaredge.com/resources/technical-stringing-note>.  
 (7) It is not allowed to mix P401/P405 with P320/P340/P370/P400/P401 in one string.  
 (8) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement.  
 (9) For 277V grid it is allowed to install up to 5.0kW per string when the maximum power difference between each string is 1.0kW.  
 (10) For 277/480V grid it is allowed to install up to 12.0kW per string when the maximum power difference between each string is 3.0kW.

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RoHS

|                              |            |                   |                   |
|------------------------------|------------|-------------------|-------------------|
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| 09/21/2021                   | 09/21/2021 | SUBMIT FOR PERMIT |                   |
| 10.075 kW PHOTOVOLTAIC PLANS |            |                   | R-102             |
| 2100 N Main St. Ste. 212     |            |                   |                   |
| Fort Worth, TX 76164         |            |                   |                   |
| NAME Grantham, Wiley         |            |                   |                   |
| ADDRESS 200 SW Brandy Way    |            |                   |                   |
| ADDRESS Lake City, FL 32024  |            |                   |                   |
| APN                          |            |                   |                   |



# RACKING & RAIL CUT SHEET

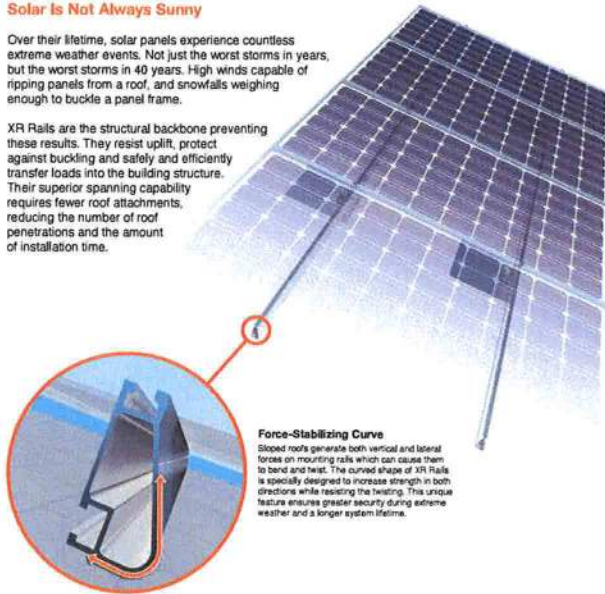


## XR Rail Family

### 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 spanning 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 resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

### Compatible with Flat & Pitched Roofs



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

### Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



Tech Brief

Tech Brief

## XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

### XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 8' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

### XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available

### XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

## Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards.\* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2a, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit [IronRidge.com](http://IronRidge.com) for detailed certification letters.

| Load       |            | Rail Span |    |       |     |        |  |
|------------|------------|-----------|----|-------|-----|--------|--|
| Snow (PSF) | Wind (MPH) | 6'        | 8' | 10'   | 12' |        |  |
| None       | 90         |           |    |       |     |        |  |
|            | 120        |           |    |       |     |        |  |
|            | 140        | XR10      |    | XR100 |     | XR1000 |  |
|            | 160        |           |    |       |     |        |  |
| 20         | 90         |           |    |       |     |        |  |
|            | 120        |           |    |       |     |        |  |
|            | 140        |           |    |       |     |        |  |
|            | 160        |           |    |       |     |        |  |
| 30         | 90         |           |    |       |     |        |  |
|            | 160        |           |    |       |     |        |  |
| 40         | 90         |           |    |       |     |        |  |
|            | 160        |           |    |       |     |        |  |
| 60         | 160        |           |    |       |     |        |  |
|            | 160        |           |    |       |     |        |  |

\*Table is meant to be a simplified span chart for choosing general rail capabilities. Load capacity is not a guarantee for actual design guidance.

|                              |            |         |                   |
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| APN:                         |            |         |                   |
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| R-103                        |            |         |                   |





## Class A Fire Rating

Tech Brief

Tech Brief

## Background

All roofing products are tested and classified for their ability to resist fire.

Recently, these fire resistance standards were expanded to include solar equipment as part of the roof system. Specifically, this requires the modules, mounting hardware and roof covering to be tested together as a system to ensure they achieve the same fire rating as the original roof covering.

These new requirements are being adopted throughout the country in 2016.

## IronRidge Certification

IronRidge was the first company to receive a Class A Fire Rating—the highest possible rating—from Intertek Group plc., a Nationally Recognized Testing Laboratory.

IronRidge Flush Mount and Tilt Mount Systems were tested on sloped and flat roofs in accordance with the new UL 1703 & UL 2703 test standards. The testing evaluated the system's ability to resist flame spread, burning material and structural damage to the roof.

Refer to the table below to determine the requirements for achieving a Class A Fire Rating on your next project.

## Fire Testing Process

## Test Setup

**Solar Modules**  
Solar modules are given a Type classification based on their materials and construction.

**Mounting System**  
Mounting is tested as part of a system that includes type-tested modules and fire-rated roof covering.

**Roof Covering**  
Roof covering products are given a Fire Class Rating of A, B or C based on their tested fire resistance.

## Burning Brand Test

A burning wooden block is placed on module as a fan blows at 12 mph. Flame cannot be seen on underside of roof within 60 minutes.

## Spread of Flame Test

Flame at southern edge of roof is aimed up the roof as a fan blows at 12 mph. The flame cannot spread 6 feet or more in 10 minutes.

| System      | Roof Slope  | Module         | Fire Rating* |
|-------------|-------------|----------------|--------------|
| Flush Mount | Any Slope   | Type 1, 2, & 3 | Class A      |
| Tilt Mount  | ≤ 6 Degrees | Type 1, 2, & 3 | Class A      |

\*Class A-rated PV systems can be installed on Class A, B, and C roofs.

## Frequently Asked Questions

## What is a "module type"?

The new UL1703 standard introduces the concept of a PV module type, based on 4 construction parameters and 2 fire performance parameters. The purpose of this classification is to certify mounting systems without needing to test it with every module.

## What roofing materials are covered?

All fire rated roofing materials are covered within this certification including composition shingle, clay and cement tile, metal, and membrane roofs.

## What if I have a Class C roof, but the jurisdiction now requires Class A or B?

Generally, older roofs will typically be "grandfathered in", and will not require re-roofing. However, if 50% or more of the roofing material is replaced for the solar installation the code requirement will be enforced.

## Where is the new fire rating requirement code listed?

2012 IBC, 1509.7.2 Fire classification. Rooftop mounted photovoltaic systems shall have the same fire classification as the roof assembly required by Section 1505.

## Where is a Class A Fire Rating required?

The general requirement for roofing systems in the IBC refers to a Class C fire rating. Class A or B is required for areas such as Wildland Urban Interface areas (WUI) and for very high fire severity areas. Many of these areas are found throughout the western United States. California has the most Class A and B roof fire rating requirements, due to wild fire concerns.

## Are standard mid clamps covered?

Mid clamps and end clamps are considered part of the PV "system", and are covered in the certification.

## More Resources



## Installation Manuals

Visit our website for manuals that include UL 2703 Listing and Fire Rating Classification.  
Go to [IronRidge.com](http://IronRidge.com)



## Engineering Certification Letters

We offer complete engineering resources and pre-stamped certification letters.  
Go to [IronRidge.com](http://IronRidge.com)

## What attachments and flashings are deemed compatible with Class A?

Attachments and their respective flashings are not constituents of the rating at this time. All code-compliant flashing methods are acceptable from a fire rating standpoint.

## What mounting height is acceptable?

UL fire testing was performed with a gap of 5", which is considered worst case in the standard. Therefore, the rating is applicable to any module to roof gap.

## Am I required to install skirting to meet the fire code?

No, IronRidge achieved a Class A fire rating without any additional racking components.

## What determines Fire Classification?

Fire Classification refers to a fire-resistance rating system for roof covering materials based on their ability to withstand fire exposure.

Class A - effective against severe fire exposure  
Class B - effective against moderate fire exposure  
Class C - effective against light fire exposure

## What if the roof covering is not Class A rated?

The IronRidge Class A rating will not diminish the fire rating of the roof, whether Class A, B, or C.

## What tilt is the tilt mount system fire rated for?

The tilt mount system is rated for 1 degree and up and any roof to module gap, or mounting height.

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Daybreak Install LLC

EQUIP. CUT SHEETS

R-104





# RACKING & RAIL CUT SHEET



## Simplified Grounding for Every Application

The UFO family of components eliminates the need for separate grounding hardware by bonding solar modules directly to IronRidge XR Rails. All system types that feature the UFO family—Flush Mount, Tilt Mount and Ground Mount—are fully listed to the UL 2703 standard.

UFO hardware forms secure electrical bonds with both the module and the rail, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.



**Stopper Sleeve**  
The Stopper Sleeve snaps onto the UFO, converting it into a bonded end clamp.



**Universal Fastening Object (UFO)**  
The UFO securely bonds solar modules to XR Rails. It comes assembled and lubricated, and can fit a wide range of module heights.



**Bonded Splice**  
Each Bonded Splice uses self-drilling screws to form a secure connection. No bonding strap needed.



**Grounding Lug**  
A single Grounding Lug connects an entire row of PV modules to the grounding conductor.



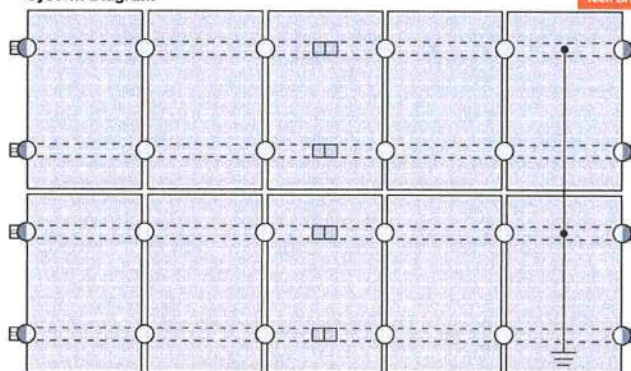
**Bonded Attachments**  
The bonding bolt attaches and bonds the L-foot to the rail. It is installed with the same socket as the rest of the system.

## UFO Family of Components

Tech Brief

## System Diagram

Tech Brief



○ UFO    ● Stopper Sleeve    ● Grounding Lug    □ Bonded Splice    ⊥ Ground Wire

Approved Enphase microinverters can provide equipment grounding of IronRidge systems, eliminating the need for grounding lugs and field installed equipment ground conductors (EGC). A minimum of two microinverters mounted to the same rail and connected to the same Engage cable is required. Refer to installation manuals for additional details.

## UL Certification

The IronRidge Flush Mount, Tilt Mount, and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

Go to [IronRidge.com/UFO](http://IronRidge.com/UFO)

## Cross-System Compatibility

| Feature                           | Flush Mount                                                                                                                                | Tilt Mount | Ground Mount |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|
| XR Rails                          | ✓                                                                                                                                          | ✓          | XR1000 Only  |
| UFO/Stopper                       | ✓                                                                                                                                          | ✓          | ✓            |
| Bonded Splice                     | ✓                                                                                                                                          | ✓          | N/A          |
| Grounding Lugs                    | 1 per Row                                                                                                                                  | 1 per Row  | 1 per Array  |
| Microinverters & Power Optimizers | Enphase - M250-72, M250-60, M215-60, C250-72<br>Darfon - MIG240, MG300, G320, G840<br>SolarEdge - P300, P320, P400, P405, P600, P700, P730 |            |              |
| Fire Rating                       | Class A                                                                                                                                    | Class A    | N/A          |
| Modules                           | Tested or Evaluated with over 400 Framed Modules<br>Refer to installation manuals for a detailed list.                                     |            |              |

|                              |                     |      |         |                   |
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EQUIP. CUT SHEETS

R-105





11



We also carry a line of Flashed L-Foot and U-Foot products.

UI Certification    Specs & Test Results    AZ Test Results    Rack Compatibility    Installation Instructions    Videos

UL Certification

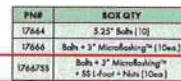
### Specs & Test Results

### AZ Test Results

Rocking  
Couches

### Installation

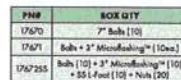
## Videos



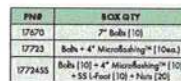
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With 3" Microfishing™ | Adjustable



**7" QUICKBOLT**  
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|                                                                                                  |          |                              |                     |       |      |                   |
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|                                                                                                  |          | APN                          |                     | R-106 |      | EQUIP. CUT SHEETS |



STANCHION - ROOF ATTACHMENT CUT SHEET

**LOW PROFILE QUICKBOLT**  
FOR ASPHALT SHINGLE ROOFS; PATENT #8448407



| Part # | Box Quantity                | Screw Size    |
|--------|-----------------------------|---------------|
| 17667  | 10 Washers;                 | N/A           |
|        | 10 Bolts;                   | 5/16" x 5.25" |
|        | 10 Offset L-Foot;           | N/A           |
|        | 10 Serrated Hex Flange Nuts | 5/16"         |



5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732  
Phone: (844) 671-6045 | Fax: (800) 689-7975 | [www.solarroofhook.com](http://www.solarroofhook.com)  
SolarRoofHook is a division of Quickscrews International Corp.

|                                                                                                              |         |                       |     |            |                   |
|--------------------------------------------------------------------------------------------------------------|---------|-----------------------|-----|------------|-------------------|
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|                                                                                                              | ADDRESS | Lake City, FL 32024   |     |            |                   |
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|                                                                                                              |         |                       |     |            | R-107             |
|                                                                                                              |         |                       |     |            | EQUIP. CUT SHEETS |





STANCHION - ROOF ATTACHMENT CUT SHEET

AHJ CONDENSED PERMIT PACKAGE  
2019

Version 3

**17667SS**  
17664, 17666

LOW PROFILE QUICKBOLT<sup>®</sup> WITH 3" MICROFLASHING<sup>®</sup>  
FOR ASPHALT SHINGLE ROOFS  
PATENT # 8448407



**QuickBOLT**  
A DIVISION OF QUICKSCREWS INTERNATIONAL CORP

**SPEC SHEET**

| Part #  | Box Quantity                                                                                           |
|---------|--------------------------------------------------------------------------------------------------------|
| 17664   | 5.25" Bolts (10)                                                                                       |
| 17666   | 3" Microflashing <sup>®</sup> (10); 5.25" Bolts (10)                                                   |
| 17667SS | 3" Microflashing <sup>®</sup> (25); 5.25" Bolts (25); L-Foot (25); 5/16" Serrated Hex Flange Nuts (25) |



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Phone: (844) 671-6043 | Fax: (800) 689-7975 | www.quickbolt.com  
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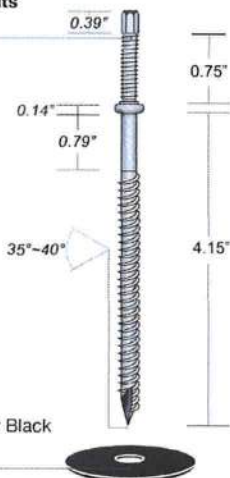
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| APN                          |                     |         |                            |



# STANCHION - ROOF ATTACHMENT CUT SHEET

Part # 17664

5/16-18 X 5.25"  
304 Stainless Steel  
Removable Hanger Bolts



Part # 17669

5/16" x 3"  
304 Stainless Steel  
Compression Washer Black

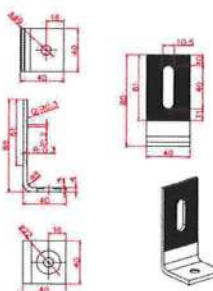


Natural color/Black

15894SS

15794SS

4mm Thick



Technical requirement : The dimensions of the books are in accordance with the drawings.  
Surface smooth, without burr.

|                         |          |
|-------------------------|----------|
| Bolting tolerance       | ± 2 mm   |
| Hole tolerance          | ± 0.5 mm |
| Hole distance tolerance | ± 0.5 mm |
| Form tolerance          | ± 2 mm   |
| Thickness tolerance     | ± 0.1 mm |
| Angle tolerance         | ± 1°     |

Material: 304SS  
Date: 2017. 11. 28

Mapper:  
Auditor:



## STANCHION - ROOF ATTACHMENT CUT SHEET

## CERTIFICATE OF COMPLIANCE

Certificate Number 20180725-E493748  
Report Reference E493748-20170817  
Issue Date 2018-JULY-25

Issued to: SolarRoofHook, a Division of Quickscrews International Corp  
5830 Las Positas Rd, Livermore CA 94551

This is to certify that  
representative samples of COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES,  
CLAMPING DEVICES AND GROUND LUGS FOR USE WITH  
PHOTOVOLTAIC MODULES AND PANELS  
Refer to Addendum Page for Models/Product.

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 2703 Standard for Mounting Systems, Mounting  
Devices, Clamping/Retention Devices, and Ground Lugs for  
Use with Flat-Plate Photovoltaic Modules and Panels.

Additional Information: See the UL Online Certifications Directory at  
[www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's  
Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog  
number, model number or other product designation as specified under "Marking" for the particular  
Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products  
that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark  
may be used in conjunction with the required Recognized Mark. The Recognized Component Mark is  
required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual  
recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance  
capabilities and are intended for use as components of complete equipment submitted for investigation rather  
than for direct separate installation in the field. The final acceptance of the component is dependent upon its  
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

*Barclay*

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UL LLC

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## CERTIFICATE OF COMPLIANCE

Certificate Number 20180725-E493748  
Report Reference E493748-20170817  
Issue Date 2018-JULY-25

This is to certify that representative samples of the product as specified on this certificate were tested  
according to the current UL requirements.

## Models/Product

USR - Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16958 16990  
16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520  
17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543  
17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559  
17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585  
17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612  
17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628  
17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649  
17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686  
17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711  
17712 17717 17718 17759 15691-10 15691BULK-10 15987A 15987B 17667SS 17672SS 17680SS  
17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15694SS  
15691SS 15987BSS.

*Barclay*

Barclay International, Division North American Certification Program

UL LLC

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|                              |                     |         |                   |
|------------------------------|---------------------|---------|-------------------|
| REV                          | DATE                | RELEASE | SUBMIT FOR PERMIT |
|                              | 09/21/2021          |         |                   |
| 10.075 KW PHOTOVOLTAIC PLANS |                     |         |                   |
| NAME                         | Grantham, Wiley     |         |                   |
| ADDRESS                      | 200 SW Brandy Way   |         |                   |
| ADDRESS                      | Lake City, FL 32024 |         |                   |
| APN                          |                     |         |                   |
| CVC56966                     |                     |         |                   |
| 2100 N Main St Ste. 212      |                     |         |                   |
| Fort Worth, TX 76164         |                     |         |                   |
| (817) 501-4922               |                     |         |                   |
| Daybreak Install LLC         |                     |         |                   |
| R-110                        |                     |         |                   |
| EQUIP. CUT SHEETS            |                     |         |                   |







Powering Business Worldwide

## General Duty Cartridge Fuse Safety Switch

DG222NRB

UPC:782113144221

### Dimensions:

- Height: 7 IN
- Length: 6.41 IN
- Width: 8.4 IN

Weight: 9 LB

Notes: Maximum hp ratings apply only when dual element fuses are used. 3-Phase hp rating shown is a grounded B phase rating. UL listed.

### Warranties:

- Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

### Specifications:

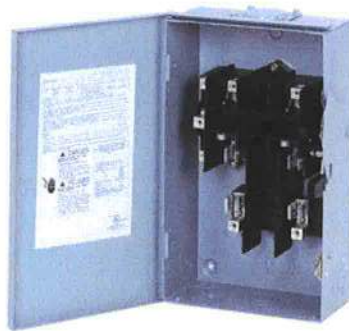
- Type: General Duty/Cartridge Fuse
- Amperage Rating: 60A
- Enclosure: NEMA 3R
- Enclosure Material: Painted galvanized steel
- Fuse Class Provision: Class H fuses
- Fuse Configuration: Fusible with neutral
- Number Of Poles: Two-pole
- Number Of Wires: Three-wire
- Product Category: General Duty Safety Switch
- Voltage Rating: 240V

### Supporting documents:

- Eatons Volume 2-Commercial Distribution
- Eaton Specification Sheet - DG222NRB

### Certifications:

- UL Listed



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## 1.1

### Switching Devices

Safety Switches

1

All general-duty switches above 100A and all heavy-duty switches incorporate three X-Series switch design features.

- Two points of contact provide a positive open and close, easier operation, and also help prevent contact burning for longer contact life.



Visible Switch Break Away

- Protects against accidental contact with energized parts. Probe holes enable the user to test if the line side is energized without removing the shield. Not provided on general-duty switches, but available as a field kit or factory installed.



Clear View Shield



Clearly Visible Handle

- The position (ON or OFF) can be clearly seen from a distance and the length provides for easy operation.



Rigid Fastlocking Capability

- Personnel safety feature because the large handle can accommodate up to three 3/8-inch (9.5 mm) shank locks.



Additional Locking Capability

- Cabinet door can be further padlocked at the top and bottom as applicable.



Interlocking Mechanism

- Door cannot be opened when the handle is in the ON position. Front and side operable deflector mechanism provides for user access when necessary on single-throw switches.



Top and Bottom Enclosures

- An ample number are provided on the top, bottom and sides of both NEMA Types 1 and 3R enclosures through 200A.



Lock-On Kit

- For switches in a NEMA Type 3R, 3D-200A. Use a Myers type hub for all others.

### Standards and Certifications

- UL listed File No. E5238
- Meets UL 88 for enclosed switches and NEMA Std. KS-1



### Seismic Qualifications

- General-duty switches exceed the requirements of Uniform Building Code (UBC) and California Code Title 24 (CSF-001-10, DSP-001-10, DSP-001-10).



|                                                                                                                                  |                         |                              |                   |  |  |       |                   |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------|-------------------|--|--|-------|-------------------|
| <div>Daybreak Install LLC</div> <div></div> | CVC56966                | 10.075 KW PHOTOVOLTAIC PLANS |                   |  |  | R-111 | EQUIP. CUT SHEETS |
|                                                                                                                                  | 2100 N Main St Ste. 212 |                              |                   |  |  |       |                   |
|                                                                                                                                  | Fort Worth, TX 76164    |                              |                   |  |  |       |                   |
|                                                                                                                                  | (817) 501-4922          |                              |                   |  |  |       |                   |
|                                                                                                                                  | NAME                    | Grantham, Wiley              |                   |  |  |       |                   |
|                                                                                                                                  | ADDRESS                 | 200 SW Brandy Way            |                   |  |  |       |                   |
|                                                                                                                                  | ADDRESS                 | Lake City, FL 32024          |                   |  |  |       |                   |
|                                                                                                                                  | APN                     |                              |                   |  |  |       |                   |
|                                                                                                                                  |                         |                              |                   |  |  |       |                   |
|                                                                                                                                  |                         |                              |                   |  |  |       |                   |
| REV                                                                                                                              | DATE                    | RELEASE                      | SUBMIT FOR PERMIT |  |  |       |                   |
|                                                                                                                                  | 09/21/2021              |                              |                   |  |  |       |                   |

V2-T1-28

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Product compliance: No Data

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