

- ALL MATERIALS, EQUIPMENT, INSTALLATION AND WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
- 2019 CBC / 2018 IBC
 - 2019 CRC / 2018 IRC
 - 2019 CEC / 2017 NEC
 - 2019 CMC / 2018 UMC
 - 2019 CPC / 2018 UPC
 - 2019 CFC / 2018 IFC
1. ALL WORK TO COMPLY WITH CEC ARTICLE 11.690.
 2. UTILITY SHALL BE NOTIFIED BEFORE ACTIVATION OF PV SYSTEM.
 3. REMOVAL OF A UTILITY-INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BUILDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR AND THE PV SOURCE AND/OR OUTPUT CIRCUIT GROUNDED CONDUCTOR.
 4. ALL PV SYSTEM COMPONENTS SHALL BE LISTED BY A RECOGNIZED TESTING AGENCY.
 5. WIRING MATERIALS SHALL COMPLY WITH MAXIMUM CONTINUOUS CURRENT OUTPUT AT 25°C; WIRE SHALL BE WET RATED AT 90°C.
 6. EXPOSED PHOTOVOLTAIC SYSTEM CONDUCTORS ON THE ROOF WILL BE USE-2 OR PV TYPE WIRE.
 7. ALL EXTERIOR CONDUIT, FITTINGS, AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS (CEC 314.15).
 8. ALL METALLIC RACEWAYS AND EQUIPMENT SHALL BE BONDED AND ELECTRICALLY CONTINUOUS (CEC 250.90, 250.96).
 9. FOR UNGROUNDED SYSTEMS, THE PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUITS SHALL BE PROVIDED WITH A GROUND-FAULT PROTECTION DEVICE OR SYSTEM THAT DETECTS A GROUND FAULT 20. INDICATES THAT FAULT HAS OCCURRED.

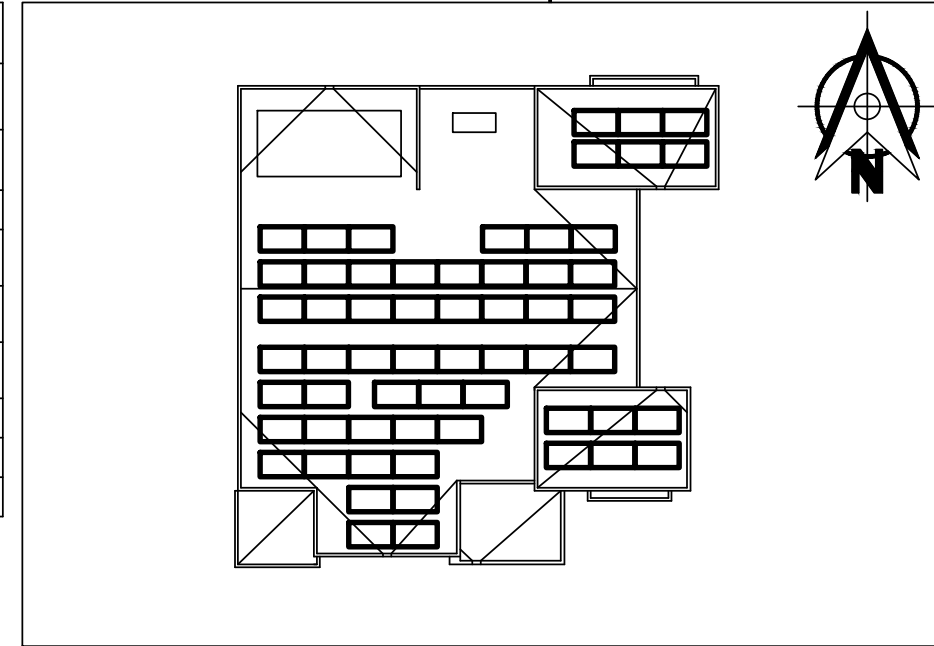
10. ANY REQUIRED GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AT BUSBARS WITHIN LISTED EQUIPMENT (CEC 250.64C).
11. ALL PV MODULES AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED FROM ANY PHYSICAL DAMAGE.
12. ALL FIELD-INSTALLED JUNCTION, PULL, AND OUTLET BOXES LOCATED BEHIND MODULES SHALL BE ACCESSIBLE DIRECTLY OR BY DISPLACEMENT OF A MODULE SECURED BY REMOVABLE FASTENERS.
13. FOR GROUNDED SYSTEMS, THE INVERTER IS EQUIPPED WITH GROUND FAULT PROTECTION AND A GFI FUSE PORT FOR GROUND FAULT INDICATION.
14. WHEN BACKFED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION, THE BREAKERS SHALL NOT READ "LINE AND LOAD".
15. THE INSTALLED SOLAR SYSTEM HAS A DISTRIBUTED WEIGHT OF LESS THAN 4 PSF.
16. THE CONCENTRATED LOAD FOR EACH VERTICAL SUPPORT IS LESS THAN 45 LBS.
17. THE WORKING CLEARANCES AROUND THE ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH CEC 110.26.
18. THE PHOTOVOLTAIC INVERTER WILL BE LISTED AS UL 1741 COMPLIANT.
19. WHEN APPLYING THE 120% RULE OF CEC 705.12(B), THE SOLAR BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUS FROM THE MAIN BREAKER PER 705.12(B).
20. PLUMBING AND MECHANICAL VENTS THROUGH THE ROOF SHALL NOT BE COVERED BY SOLAR MODULES - NO BUILDING, PLUMBING, OR MECHANICAL VENTS TO BE COVERED OR OBSTRUCTED.

COVERED BY SOLAR MODULES - NO BUILDING, PLUMBING, OR MECHANICAL VENTS TO BE COVERED OR OBSTRUCTED.

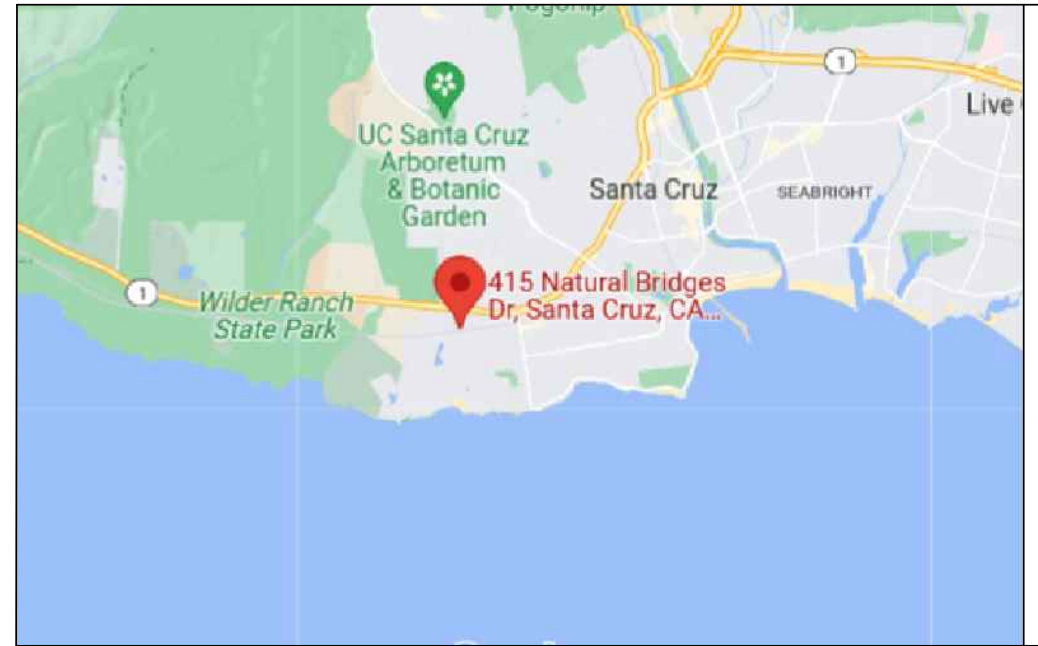
| INDEX | |
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| PV-01 | SITE PLAN |
| PV-02 | ELECTRICAL DETAILS |
| PV-03+ | SPECIFICATION SHEET |

AHJ:- CITY OF SANTA CRUZ

1 ROOF OUTLINE
SCALE: NTS

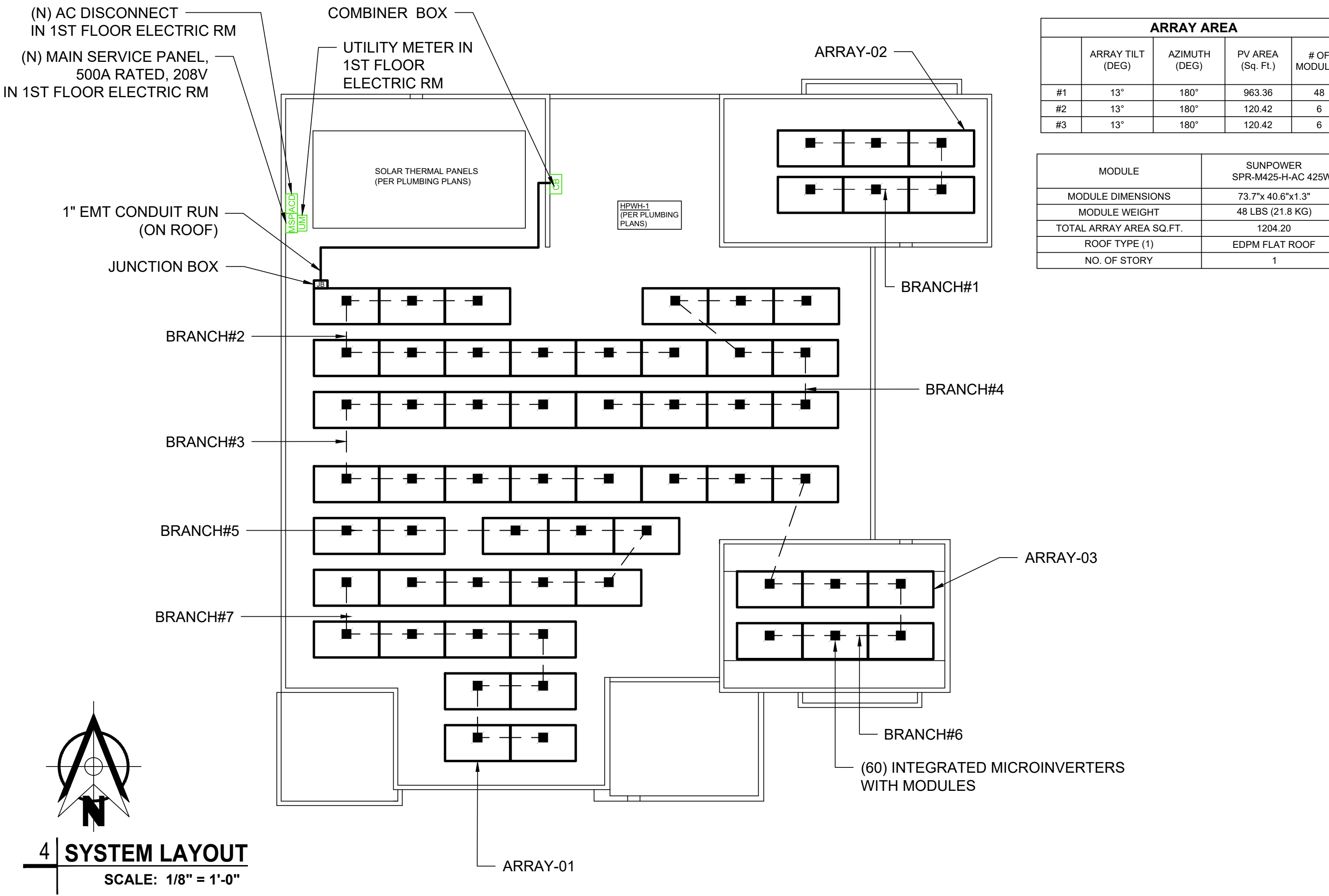
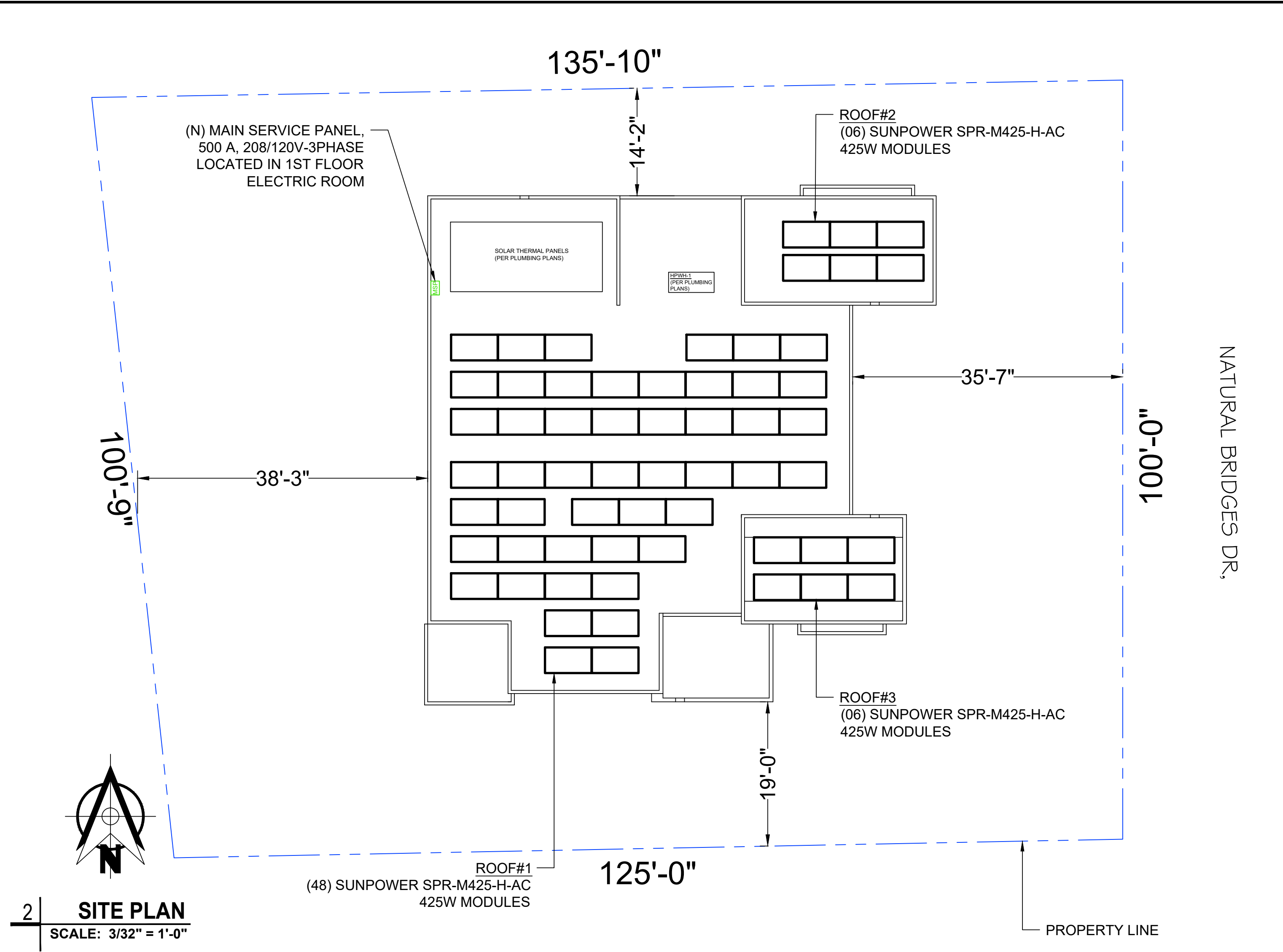


2 VICINITY MAP
SCALE: NTS



| SCOPE OF WORK | |
|---|---|
| INSTALLATION OF GRID-TIED SOLAR PHOTOVOLTAIC SYSTEM | |
| 60 | SUNPOWER SPR-M425-H-AC 425W MODULES |
| 60 | INTEGRATED MICRO INVERTER WITH MODULES |
| 1 | (N) 500A MAIN BREAKER WITH 600A BUS BAR |
| 1 | SYSTEM NAME PLATE POWER 25.50 KW DC |
| 1 | SYSTEM AC POWER 22.14 KW AC |
| | CONSTRUCTION TYPE V-B |
| | OCCUPANCY TYPE R-3-U |

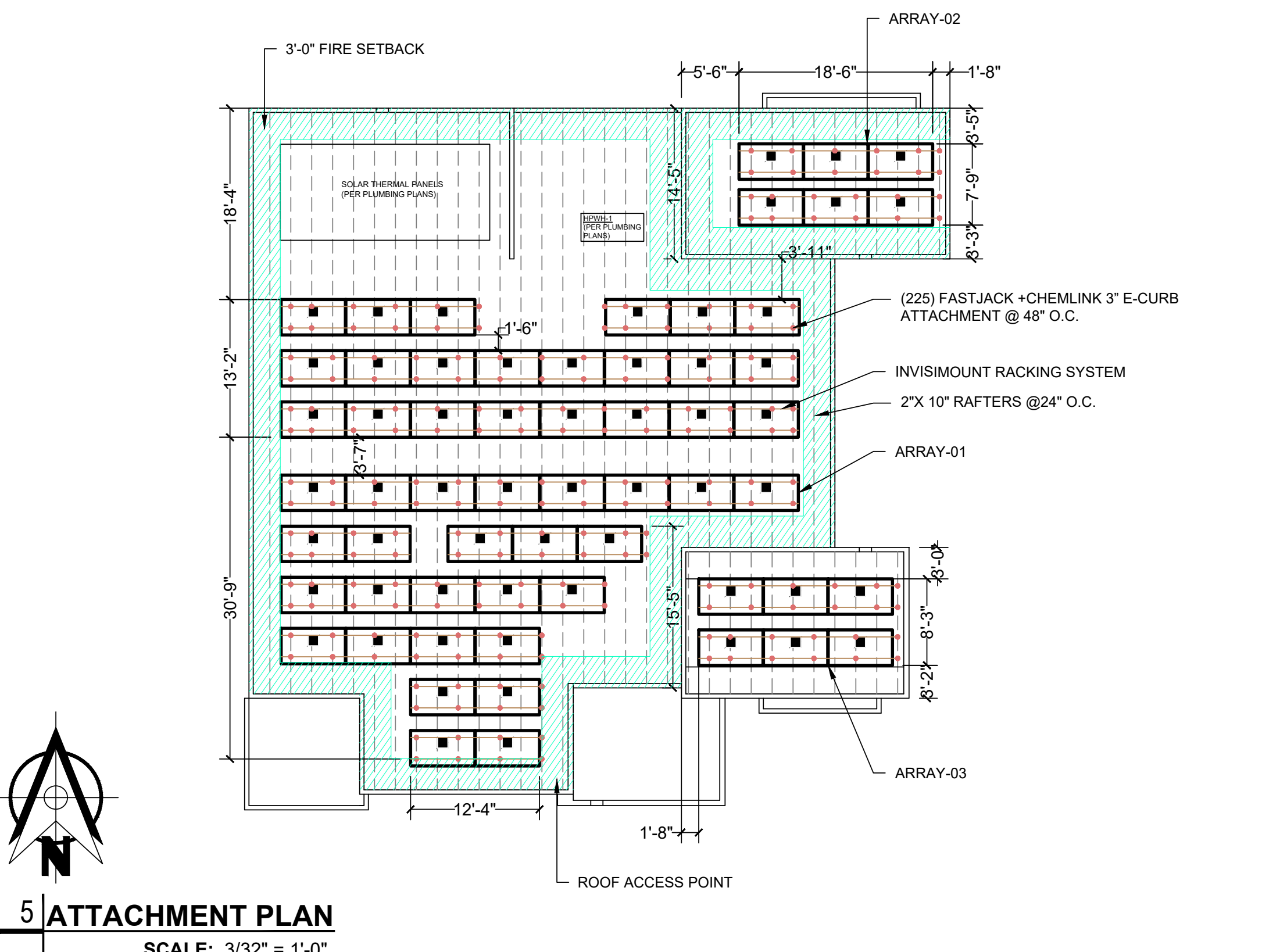
2 SITE PLAN
SCALE: 3/32" = 1'-0"



| ARRAY AREA | | | |
|------------------|---------------|-------------------|--------------|
| ARRAY TILT (DEG) | AZIMUTH (DEG) | PV AREA (Sq. Ft.) | # OF MODULES |
| #1 13° | 180° | 963.36 | 48 |
| #2 13° | 180° | 120.42 | 6 |
| #3 13° | 180° | 120.42 | 6 |

| MODULE | | SUNPOWER SPR-M425-H-AC 425W |
|-------------------------|--|-----------------------------|
| MODULE DIMENSIONS | | 73.7" x 40.6" x 1.3" |
| MODULE WEIGHT | | 48 LBS (21.8 KG) |
| TOTAL ARRAY AREA SQ.FT. | | 1204.20 |
| ROOF TYPE (1) | | EDPM FLAT ROOF |
| NO. OF STORY | | 1 |

| ARRAY TILT (DEG) | AZIMUTH (DEG) | PV AREA (SQ. FT) | NO. OF MODS | ROOF TYPE | ROOF ATTACHMENT | ROOF HEIGHT | EXPOSURE | MATERIAL | CONSTRUCTION | RAFTER SIZE | RAFTER SPACING | ATTACHMENT SPACING | MAX RAIL OVERHANG | |
|------------------|---------------|------------------|-------------|-----------|-----------------|------------------------------|----------|----------|--------------|--------------------|----------------|--------------------|-------------------|---------|
| AR-01 | 13° | 180° | 963.36 | 48 | EDPM FLAT ROOF | FASTJACK +CHEMLINK 3" E-CURB | 1-STORY | ATTIC | EDPM | SINGLE SPAN RAFTER | 2"X 10" | 24" O.C. | 48" O.C. | 1' - 4" |
| AR-02 | 13° | 180° | 120.42 | 6 | EDPM FLAT ROOF | FASTJACK +CHEMLINK 3" E-CURB | 1-STORY | ATTIC | EDPM | SINGLE SPAN RAFTER | 2"X 10" | 24" O.C. | 48" O.C. | 1' - 4" |
| AR-03 | 13° | 180° | 120.42 | 6 | EDPM FLAT ROOF | FASTJACK +CHEMLINK 3" E-CURB | 1-STORY | ATTIC | EDPM | SINGLE SPAN RAFTER | 2"X 10" | 24" O.C. | 48" O.C. | 1' - 4" |



| BILL OF MATERIALS | | |
|-------------------|------|--|
| EQUIPMENT | QTY. | DESCRIPTION |
| SOLAR PV MODULE | 60 | SUNPOWER SPR-M425-H-AC 425W MODULES |
| INVERTER | 60 | INTEGRATED MICRO INVERTER WITH MODULES |
| JUNCTION BOX | 1 | 4"X4"X4" JUNCTION BOX PVC JCT BOX W/COVR |
| COMBINER BOX | 1 | 200A COMBINER BOX NEMA 3R, 120/208V, 3Ø |
| AC DISCONNECT | 1 | 200A NON-FUSED AC DISCONNECT LOCKABLE, VISIBLE BLADE TYPE, NEMA 3R, 208V, 3Ø |
| ATTACHMENT | 225 | FASTJACK +CHEMLINK 3" E-CURB ATTACHMENTS |
| RAILS | 53 | 14'-0" INVISIMOUNT RACKING SYSTEM |
| RAIL SPLICE | 28 | RAIL SPLICE |
| MID CLAMPS | 90 | MID CLAMPS |
| END CLAMPS | 60 | END CLAMPS |
| GROUNDING LUG | 15 | WEEB LUG |

| MODULE | | SUNPOWER SPR-M425-H-AC 425W |
|-------------------------|--|-----------------------------|
| MODULE DIMENSIONS | | 73.7" x 40.6" x 1.3" |
| MODULE WEIGHT | | 48 LBS (21.8 KG) |
| TOTAL ARRAY AREA SQ.FT. | | 1204.20 |
| TOTAL ROOF AREA SQ.FT. | | 3876.02 |
| ROOF TYPE (1) | | EDPM FLAT ROOF |
| MAX DISTRIBUTED LOAD | | 3 PSF |
| ROOF COVERAGE % | | 31.07 |
| WIND SPEED | | 110 MPH, 3 SEC GUST |
| WIND EXPOSURE | | C |

4 SYSTEM LAYOUT
SCALE: 1/8" = 1'-0"

5 ATTACHMENT PLAN
SCALE: 3/32" = 1'-0"

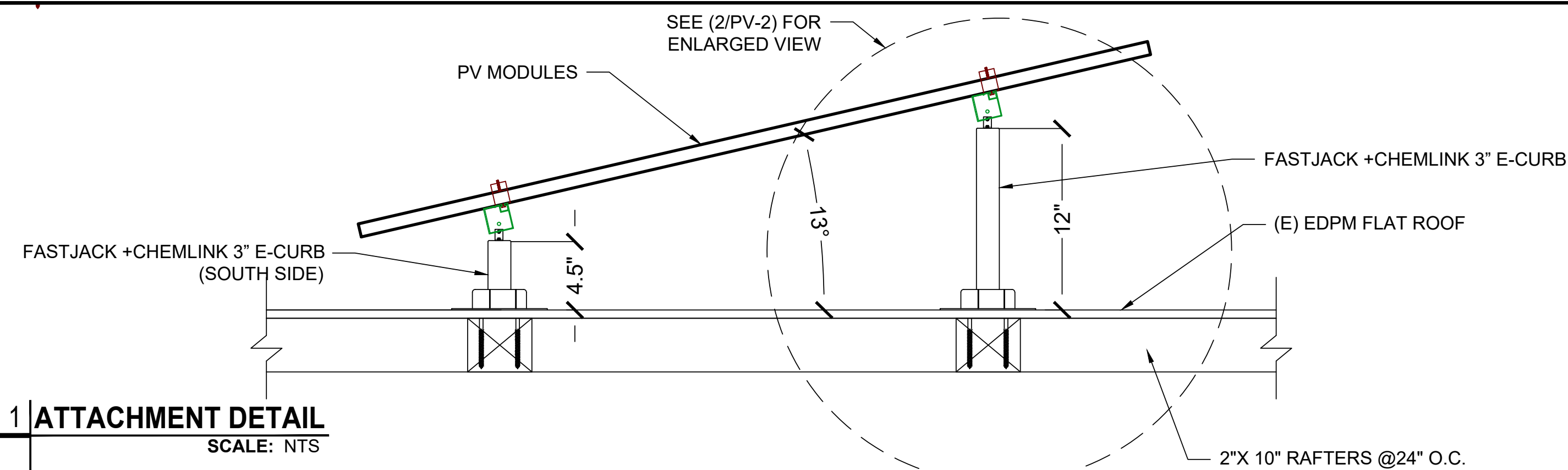
REVISIONS: BY:

MONTEREY ENERGY GROUP
Consulting Mechanical Engineering
26465 Carmel Rancho Blvd., Suite 8, Carmel, CA 93923
831-372-8328 VOICE www.montereyenergygroup.com

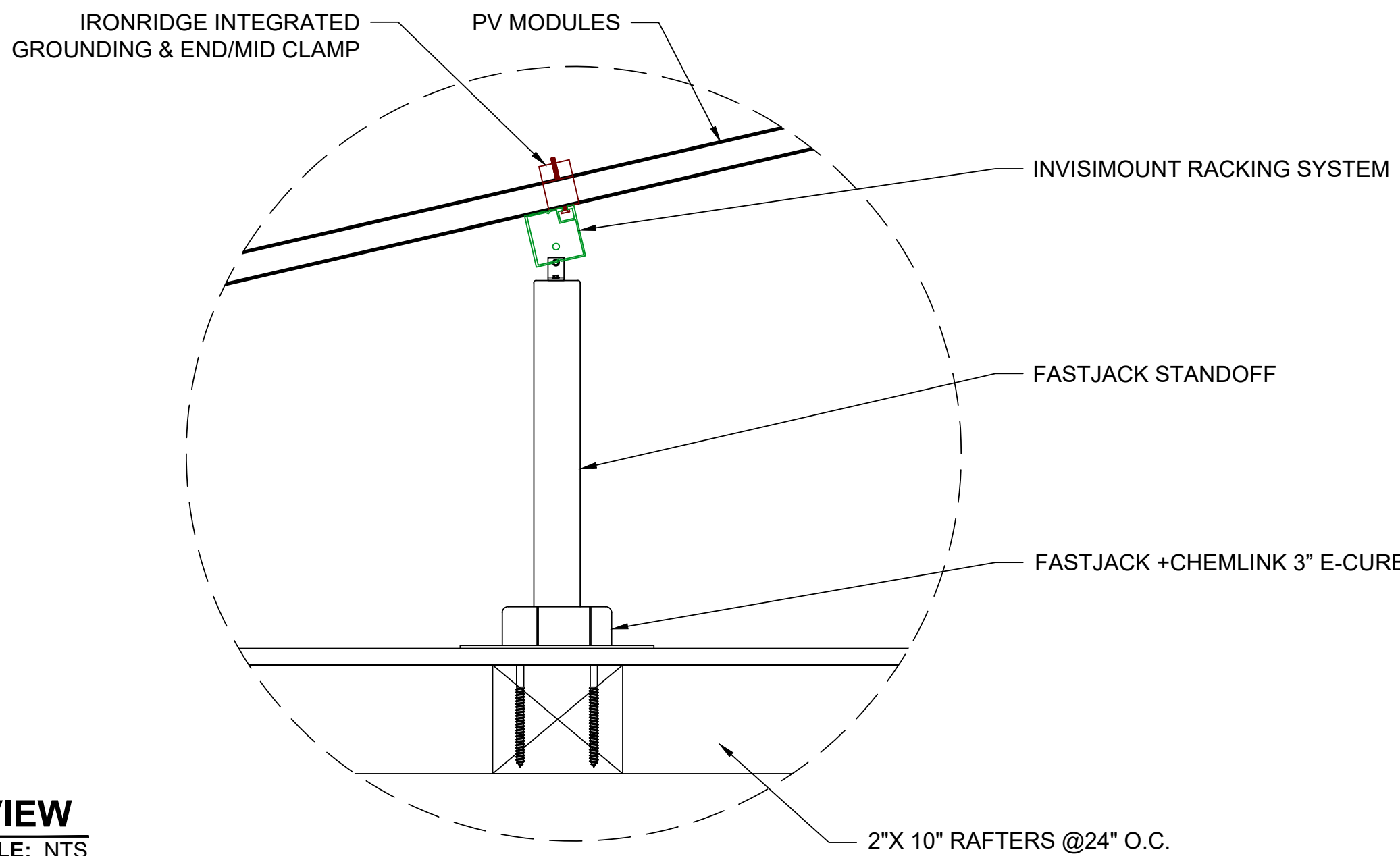
AFFORDABLE HOUSING
415 NATURAL BRIDGES DR,
SANTA CRUZ, CA 95060
APN:- 00301106

SOLAR PHOTOVOLTAIC
SITE PLAN

DATE:
11/29/2022
SHEET SIZE
ARCH_D
24" X 36"
SHEET NUMBER
PV-1.0



1 ATTACHMENT DETAIL
SCALE: NTS



2 ENLARGED VIEW
SCALE: NTS

SYSTEM SIZE:- 25.50 KW DC & 22.14 KW AC

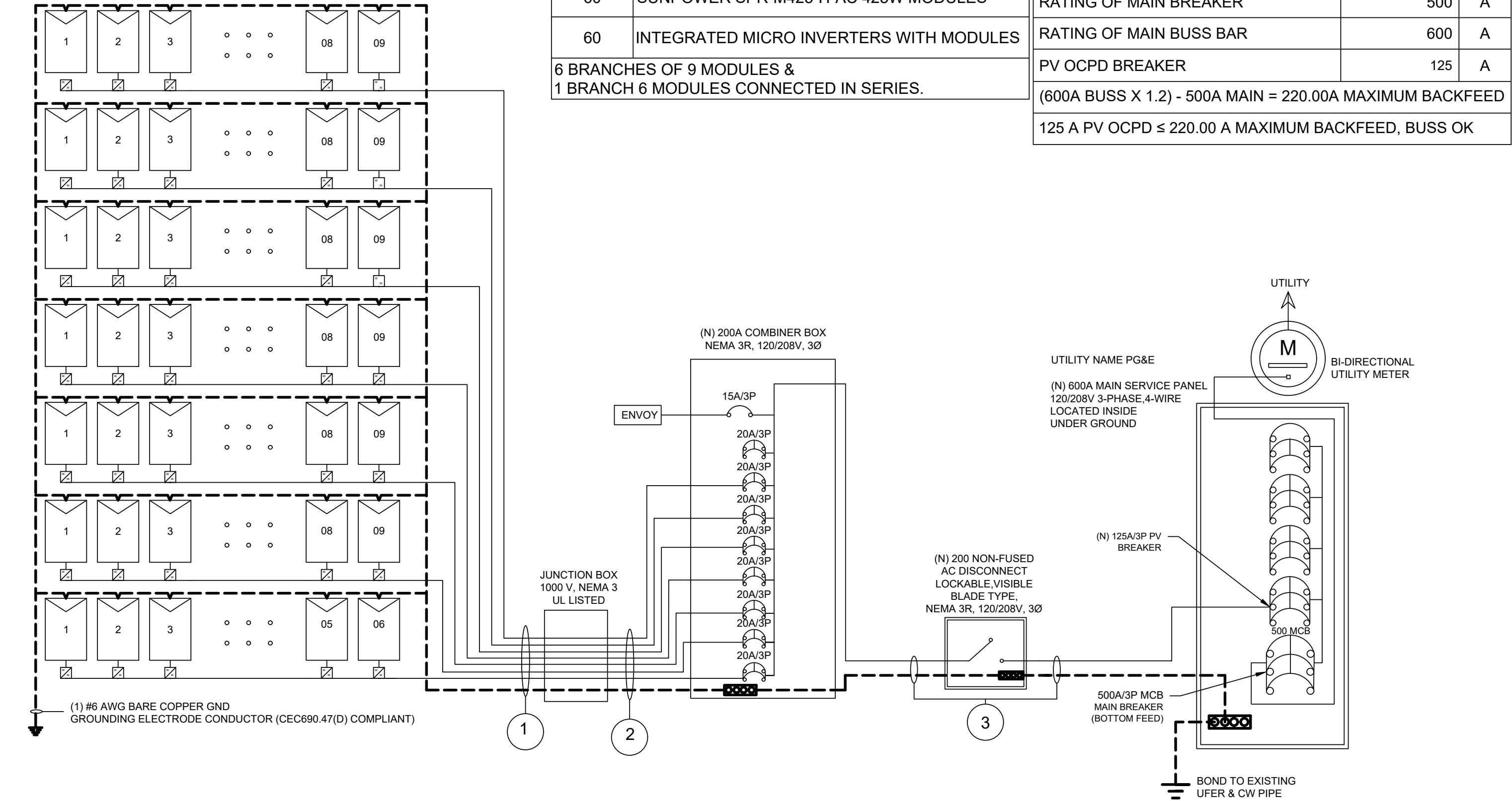
| | |
|----|---|
| 60 | SUNPOWER SPR-M425-H-AC 425W MODULES |
| 60 | INTEGRATED MICRO INVERTERS WITH MODULES |

6 BRANCHES OF 9 MODULES & 1 BRANCH 6 MODULES CONNECTED IN SERIES.

MAIN PANEL - 120% CALCULATION

| | | |
|-------------------------|-----|---|
| RATING OF MAIN BREAKER | 500 | A |
| RATING OF MAIN BUSS BAR | 600 | A |
| PV OCPD BREAKER | 125 | A |

(600A BUSS X 1.2) - 500A MAIN = 220.00A MAXIMUM BACKFEED
125 A PV OCPD ≤ 220.00 A MAXIMUM BACKFEED, BUSS OK



3 ELECTRICAL LINE DIAGRAM

| TAG | CONDUCTOR | CONDUCTOR SIZE | NUMBER OF CONDUCTORS | CONDUIT/CABLE TYPE | CONDUIT SIZE |
|-----|----------------------|----------------|----------------------|--------------------|--------------|
| 1 | THHN/THWN-2 | 8 AWG | 14 | EMT | 1" |
| | EGC/GEC: THHN/THWN-2 | 6 AWG | 1 | | |
| 2 | LINE: THHN/THWN2 | 8 AWG | 14 | EMT | 1" |
| | EGC/GEC: THHN/THWN-2 | 8 AWG | 1 | | |
| 3 | LINE: THHN/THWN2 | 2/0 AWG | 2 | EMT | 2" |
| | NEUTRAL: THHN/THWN-2 | 2/0 AWG | 1 | | |
| | EGC/GEC: THHN/THWN-2 | 1 AWG | 1 | | |

- SYSTEM NOTES:
- PV SYSTEM IS UNGROUNDED
 - MODULES ARE BONDED TO RAIL USING EVEREST INTEGRATED GROUNDING.
 - RAILS ARE BONDED USING UL 2703 RATED LAY-IN LUGS BARE COPPER IS TRANSITIONED TO THHN/THWN-2 VIA IRREVERSIBLE CRIMP; GEC TO BE CONTINUOUS PER CEC 250.64(C)
 -

1 PV AC CONDUCTOR AMPACITY CALCULATIONS: TO ROOF TOP JUNCTION BOX

AMBIENT TEMPERATURE ADJUSTMENT FOR EXPOSED CONDUIT PER NEC 310.15(B)(2)(C): +22'

EXPECTED WIRE TEMP (°C): 30' + 22' = 52'

TEMP CORRECTION PER TABLE 310.15: 0.76

OF CURRENT CARRYING CONDUCTORS: 14

CIRCUIT FILL CORRECTION PER NEC 310.15(B)(3)(a): 0.50

CIRCUIT CONDUCTOR SIZE: 8 AWG

CIRCUIT CONDUCTOR AMPACITY: 55 A

BRANCHES #1 - #6

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B):

1.25 X MAX AC OUTPUT CURRENT X # OF INVERTERS PER STRING

1.25 X (1.77 X 09) = 19.91A

BRANCH #7

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B):

1.25 X MAX AC OUTPUT CURRENT X # OF INVERTERS PER STRING

1.25 X (1.77 X 06) = 13.28A

DERATED AMPACITY OF CIRCUIT CONDUCTOR PER NEC TABLE 310.15

TEMP CORR. PER NEC TABLE 310.15 X CONDUIT FILL CORR. PER NEC 310.15(B)(3)(a) X CIRCUIT CONDUCTOR AMPACITY =

0.76 X 0.50 X 55 = 20.90 A

3 AC CONDUCTOR AMPACITY CALCULATIONS: FROM COMBINER BOX TO MSP

EXPECTED WIRE TEMP (°C): 30'

TEMP CORRECTION PER NEC TABLE 210.096

OF CURRENT CARRYING CONDUCTORS: 4

CIRCUIT FILL CORRECTION PER NEC 310.15(B)(2)(A): 0.80

CIRCUIT CONDUCTOR SIZE: 2/0 AWG

CIRCUIT CONDUCTOR AMPACITY: 195A

CONDUIT FILL PER NEC 310.15(B)(3)(A):

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(B)

1.25 X AC OUTPUT CURRENT X # OF INVERTERS

1.25 X 1.77 X 60 = 132.75A

DERATED AMPACITY OF CIRCUIT CONDUCTORS PER NEC TABLE 310.16:

TEMP CORR. PER NEC 310.16 X CONDUIT FILL CORR. PER NEC 310.15(B)(3)(a) X

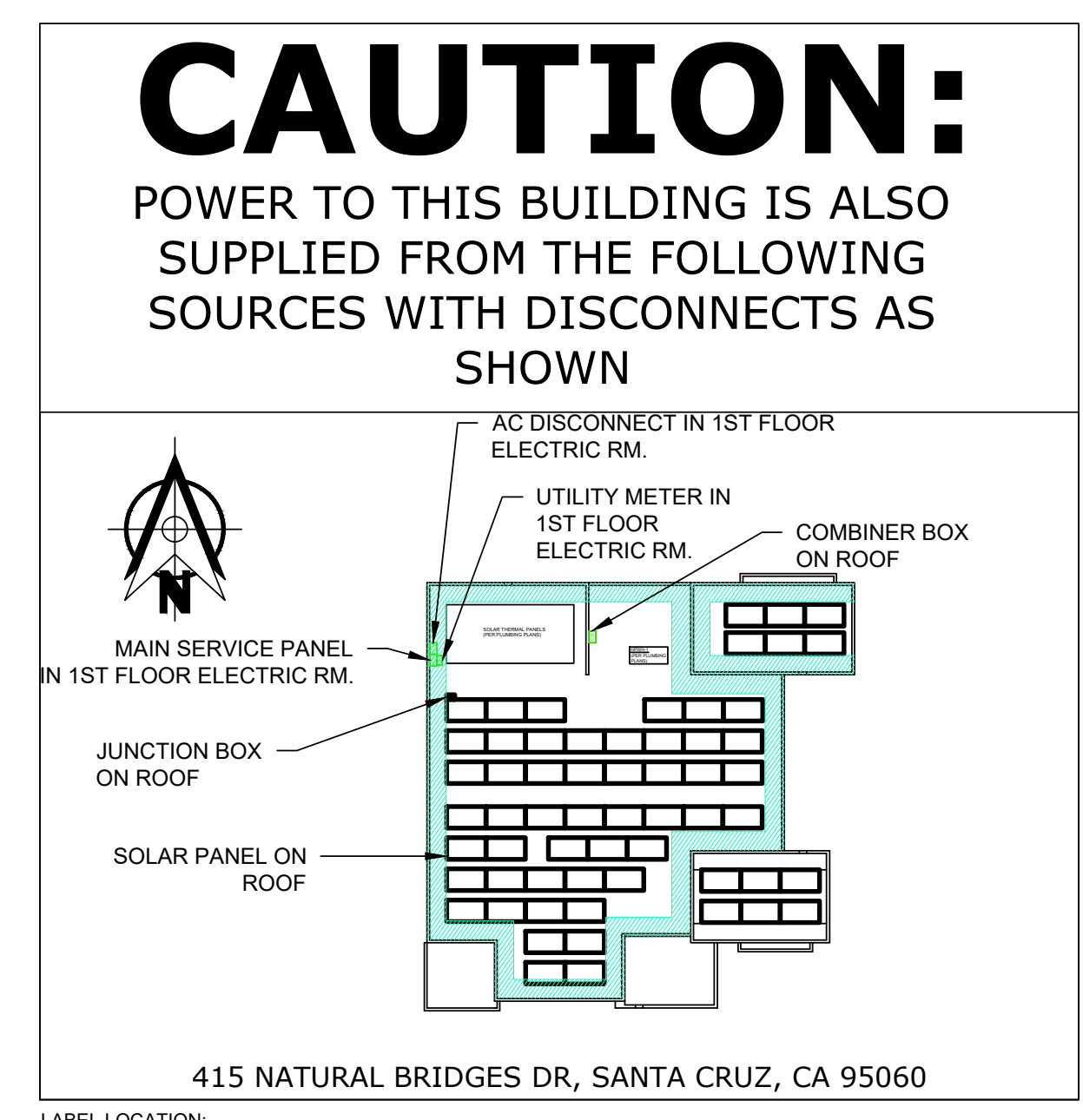
0.96 X 0.80 X 195 = 149.76A

ELECTRICAL NOTES

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

| PERCENT OF VALUES | NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT |
|-------------------|--|
| 0.80 | 4-6 |
| 0.70 | 7-9 |
| 0.50 | 10-20 |

- ADDITIONAL NOTE:
- SIGNAGE REQUIREMENTS:
- RED BACKGROUND
 - WHITE LETTERING
 - MINIMUM 3/8" LETTER HEIGHT
 - ALL CAPITAL LETTERS
 - AERIAL OR SIMILAR FONT, NON-BOLD
 - REFLECTIVE WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (DURABLE ADHESIVE MATERIALS MUST MEET THIS REQUIREMENT)
- ADHESIVE FASTENED SIGNS:
- THE LABEL SHALL BE SUITABLE FOR THE ENVIRONMENT WHERE IT IS INSTALLED.
 - WHERE REQUIRED ELSEWHERE IN THIS CODE, ALL FIELD APPLIED LABELS, WARNINGS, AND MARKINGS SHOULD COMPLY WITH ANSI Z39.4 (CEC 110.21(B) FIELD MARKING).
 - ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT



PHOTOVOLTAIC SYSTEM AC DISCONNECT RATED AC OPERATING CURRENT 132.75 AMPS AC NOMINAL OPERATING VOLTAGE 240 VOLTS

WARNING INVERTER OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

WARNING: PHOTOVOLTAIC POWER SOURCE

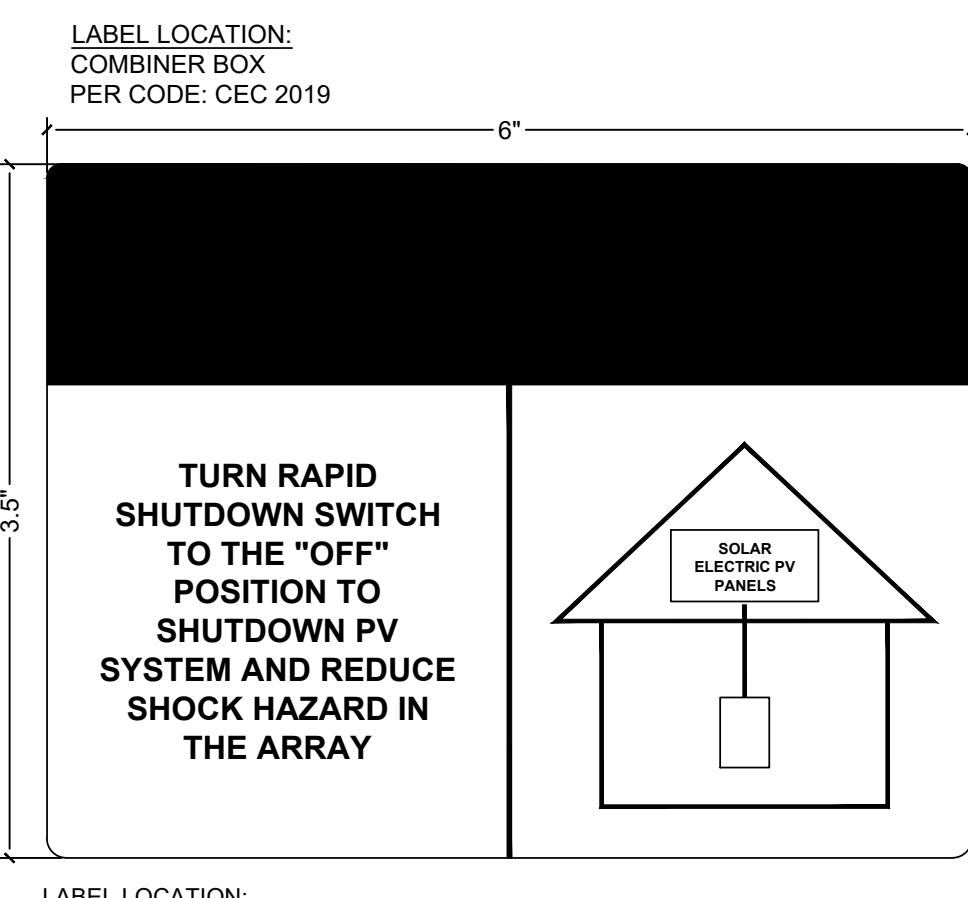
PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

WARNING DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

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

DATA PER PANEL

| | |
|--|-------|
| NOMINAL OPERATING AC VOLTAGE | 208V |
| NOMINAL OPERATING AC FREQUENCY | 60Hz |
| MAXIMUM AC POWER | 369VA |
| MAXIMUM AC CURRENT | 1.77A |
| MAXIMUM OVERCURRENT DEVICE RATING FOR AC MODULE PROTECTION PER CIRCUIT | 20A |



REVISIONS: BY:

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AFFORDABLE HOUSING
415 NATURAL BRIDGES DR,
SANTA CRUZ, CA 95060
APN:- 00301106

SOLAR PHOTOVOLTAIC ELECTRICAL DETAILS

DATE:
11/29/2022
SHEET SIZE
ARCH_D
24" X 36"
SHEET NUMBER
PV-2



SUNPOWER®

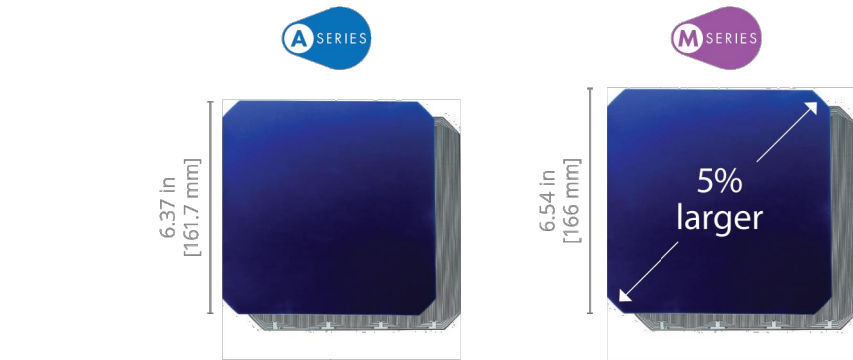
420-440W Residential AC Module

SunPower® Maxeon® Technology

Built specifically for use with the SunPower Equinox® system, the only fully integrated solar solution designed, engineered, and warranted by one company.

Highest Power AC Density Available.

The patented, solid-copper foundation Maxeon Gen 6 cell is over 5% larger than prior generations, delivering the highest efficiency AC solar panel available.¹



Part of the SunPower Equinox® Solar System

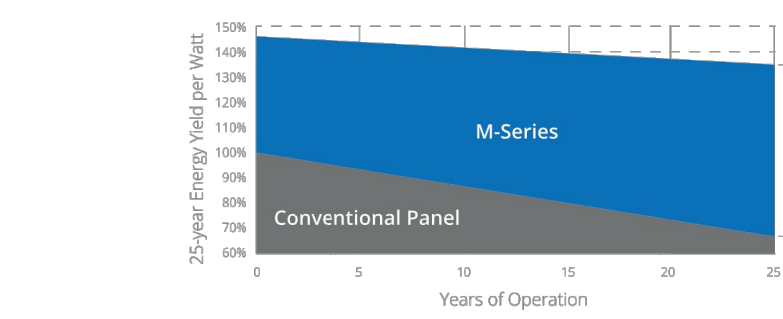
- Compatible with mySunPower™ monitoring
Seamless aesthetics



- Factory-integrated microinverter
Highest-power integrated AC module in solar
Engineered and calibrated by SunPower for SunPower AC modules

Highest Lifetime Energy and Savings

Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.²



Best Reliability, Best Warranty

With more than 42.6 million and 15 GW modules deployed around the world, SunPower technology is proven to last. That's why we stand behind our module and microinverter with the industry's best 25-year Combined Power and Product Warranty.

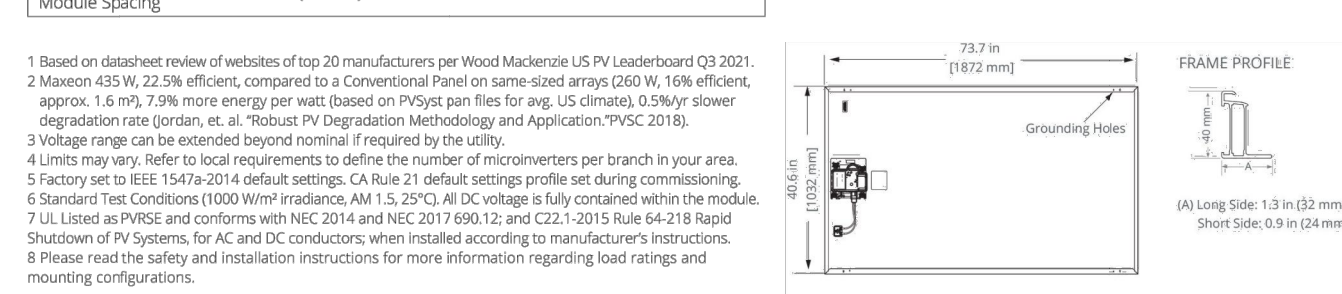
M-Series: M440 | M435 | M430 | M425 | M420 SunPower® Residential AC Module

AC Electrical Data table with columns for Inverter Model, Max. Continuous Output Power (VA), Nom. DC Voltage, etc.

DC Power Data table with columns for Model, Power (Pmax) W, Module Efficiency, Temp. Coef. (Power), Shade Tolerance.

Warranties, Certifications, and Compliance table with columns for Warranties, Certifications and Compliance, PID Test.

Mechanical Data and Packaging Configuration tables with columns for Solar Cells, Front Glass, Environmental Rating, etc.



See www.sunpower.com for more reference information. Specifications included in this datasheet are subject to change without notice.



SunPower® InvisiMount™ | Residential Mounting System

- Simple and Fast Installation
Integrated module-to-rail grounding
Pre-assembled mid and end clamps
Levitating mid clamp for easy placement
Mid clamp width facilitates even module spacing
Simple, pre-drilled rail splice
UL 2703 Listed integrated grounding

- Flexible Design
Addresses nearly all sloped residential roofs
Design in landscape and portrait
Rails enable easy obstacle management

- Customer-Preferred Aesthetics
#1 module and #1 mounting aesthetics
Best-in-class system aesthetics
Premium, low-profile design
Black-anodized components
Hidden mid clamps and end clamps hardware, and capped, flush rails

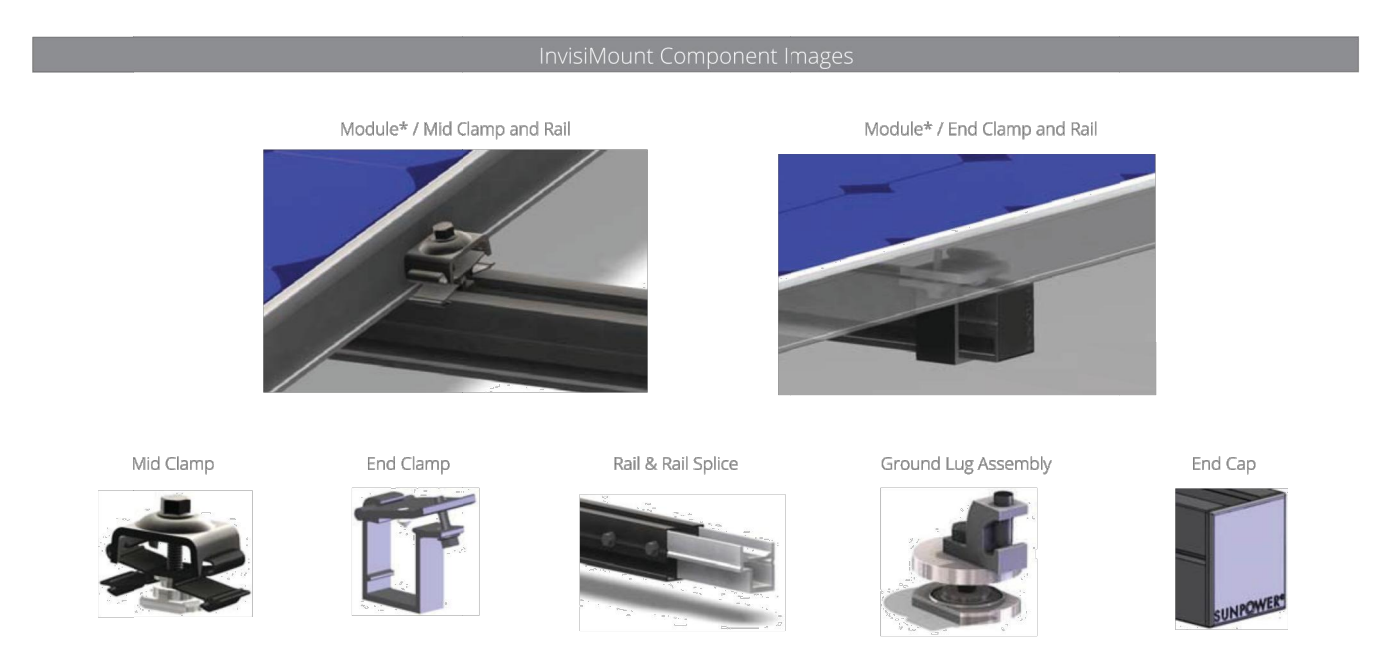
- Part of Superior System
Built for use with SunPower DC and AC modules
Best-in-class system reliability and aesthetics
Combine with SunPower modules and monitoring app



Elegant Simplicity
SunPower® InvisiMount™ is a SunPower-designed rail-based mounting system. The InvisiMount system addresses residential sloped roofs and combines faster installation time, design flexibility, and superior aesthetics.



SunPower® InvisiMount™ | Residential Mounting System



Tables for InvisiMount Component Details, InvisiMount Operating Conditions, InvisiMount Warranties And Certifications, Roof Attachment Hardware Supported by InvisiMount System Design Tool.

*Module frame that is compatible with the InvisiMount system required for hardware interoperability. © 2015 SunPower Corporation. All rights reserved.

Datasheet

1-800-SUNPOWER | sunpower.com

SUNPOWER

CERTIFICATE OF COMPLIANCE
Certificate Number: 20150223-E246423
Report Reference: E246423-20040917
Issue Date: 2015-FEBRUARY-23
Issued to: SUNPOWER CORP, 77 RIO ROBLES, SAN JOSE CA 95134
This is to certify that representative samples of PHOTOVOLTAIC MODULES AND PANELS (See addendum for additional information.)
Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety: UL 1703, 3rd Edition, revised May 20, 2014, "Standard for Safety for Flat-Plate Photovoltaic Modules and Panels."
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information.

CERTIFICATE OF COMPLIANCE
Certificate Number: 20150223-E246423
Report Reference: E246423-20040917
Issue Date: 2015-FEBRUARY-23
This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.
Photovoltaic Modules:
Models XXX-440 to -410, -408, -405, -402, -400, -398, -395, -392, -390, -388, -385, -382, -380, -375, -345 to -293, -290, -285, -280, -250 to -225, followed by E or NE, may be followed by -BLK or -WHT, followed by -D, -I, or -U, where XXX represents SPR or SPV.
Models XXX-EYY-### where XXX represents SPR or SPV, YY represents 18, 19, 20 or 21 and ### is any number from 440 to 375 or 345 to 285 or 250 to 225 and may be followed by -COM and/or -BLK
Models XXX-450 to -435, XXX-345 to -311, XXX-262 to -233 followed by J, N, NX or X, may be followed by -BLK or -WHT, followed by -D, -I, - or -U, where XXX represents SPR or SPV.
Models XXX-XYX-### where XXX represents SPR or SPV, YY represents 18, 19, 20 or 21 and ### is any number from 486 to 435 or 365 to 310 or 274 to 233 and may be followed by -COM and/or -BLK
Flat-Plate Photovoltaic Modules with construction compliant to Module Fire Performance Type 2.

CERTIFICATE OF COMPLIANCE
Certificate Number: 20150223-E466981
Report Reference: E466981-20140903
Issue Date: 2015-FEBRUARY-23
Issued to: SUNPOWER CORP, 77 RIO ROBLES, SAN JOSE CA 95134-1859
This is to certify that representative samples of MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS
USL - InvisiMount Mounting and Bonding Systems for use with Photovoltaic Modules, consisting of the following components: L-Foot, Rail, Rail Splice, Mid Clamp, Ground Lug Assembly.
These system components have also been evaluated for a Class A System Fire Classification for a steep-sloped roof with Type 2 modules.
(See addendum page for additional information.)
Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety: UL Subject 2703, The Outline of Investigation 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 for additional information.

CERTIFICATE OF COMPLIANCE
Certificate Number: 20150223-E466981
Report Reference: E466981-20140903
Issue Date: 2015-FEBRUARY-23
This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.
Additional Information:
InvisiMount achieved a system fire classification 'A' for a steep-sloped roof when tested in combination with Sunpower Corp. Models SPR-XYX-###, where YY represents numbers 18, 19, 20 or 21, and ### represents any number from 365 to 310 and 274 to 233; SPR-EYY-###, where YY represents numbers 18, 19, 20 or 21, and ### represents any number from 345 to 285 and 250 to 225. All models identified must have the Gen-5 frame and have a Type 2 module characterization. The system fire test method was in accordance to Standard for Safety for Flat-Plate Photovoltaic Modules and Panels, UL 1703, 3rd Edition, dated May 20, 2014.
Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

REVISIONS: BY:

MONTEREY ENERGY GROUP
Consulting Mechanical Engineering
26465 Carmel Rancho Blvd., Suite 8, Carmel, CA 93923
831-372-8328 VOICE www.montereyenergygroup.com

AFFORDABLE HOUSING
415 NATURAL BRIDGES DR.,
SANTA CRUZ, CA 95060
APN:- 00301106

SOLAR PHOTOVOLTAIC SPECIFICATION SHEET
DATE: 11/29/2022
SHEET SIZE ARCH_D 24" X 36"
SHEET NUMBER PV-3.0

Type 1, 3, & 3R Enclosures

Junction Boxes
Type 3R Screw Cover - Painted & Galvanized
Data and Illustration Sheet



Accessories

- Touch-up paint
- See Accessories section

Construction

- Enclosure and cover are fabricated from code gauge galvanneal steel for painted or galvanized steel, (see table, page 57)
- Enclosure body has embossed mounting holes on the back
- Available with or without knockouts on the bottom end of enclosures less than 30 inches wide
- Cover is held secure by sliding it under the top end flange and fastening it with plated screws on the bottom end flange, (larger sizes use two studs and wing nuts)

Discount Schedule: A2

Subclass: AS0 & Z60

Application

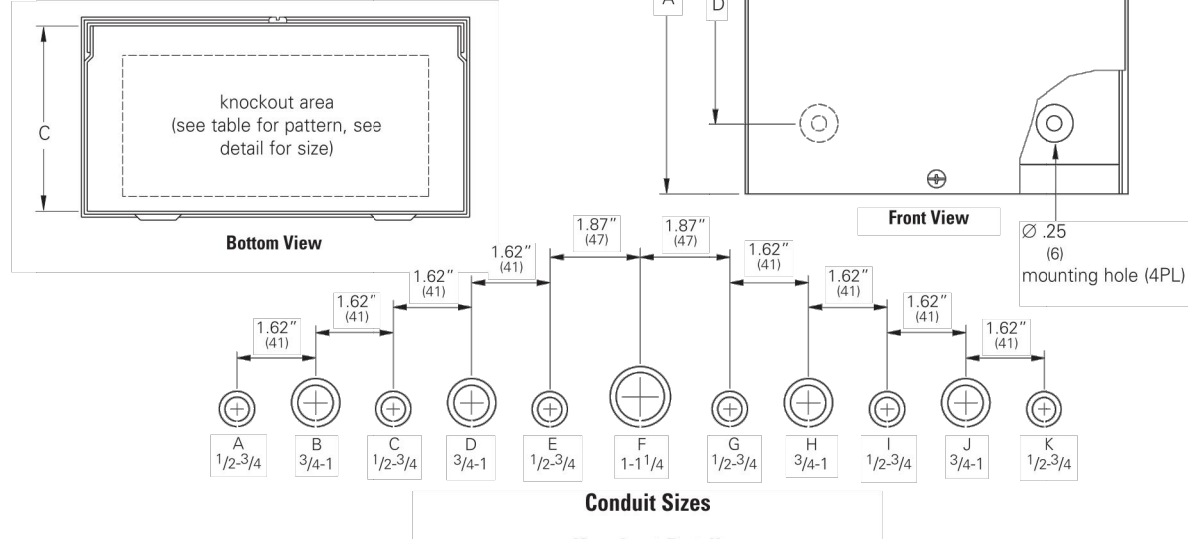
- Used as wiring boxes, junction and pull boxes
- Protects against falling rain, sleet and external ice formation

Standards

- UL 50 listed, Type 3R
- CSA C22.2 No. 40 certified, Type 3R
- Conforms to NEMA standard for Type 3R

Finish

- Wash and phosphate undercoat
- ANSI 61 gray acrylic electrocoat finish



Notes: We can provide special sizes, finishes and other modifications. Consult the factory for your special requirements. Dimensions are in inches. Millimeters shown are for reference only. Data subject to change without notice.

Eaton

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B-Line series electrical enclosures

Type 1, 3, & 3R Enclosures

Junction Boxes - Type 3R Screw Cover - Painted & Galvanized
Catalog Number

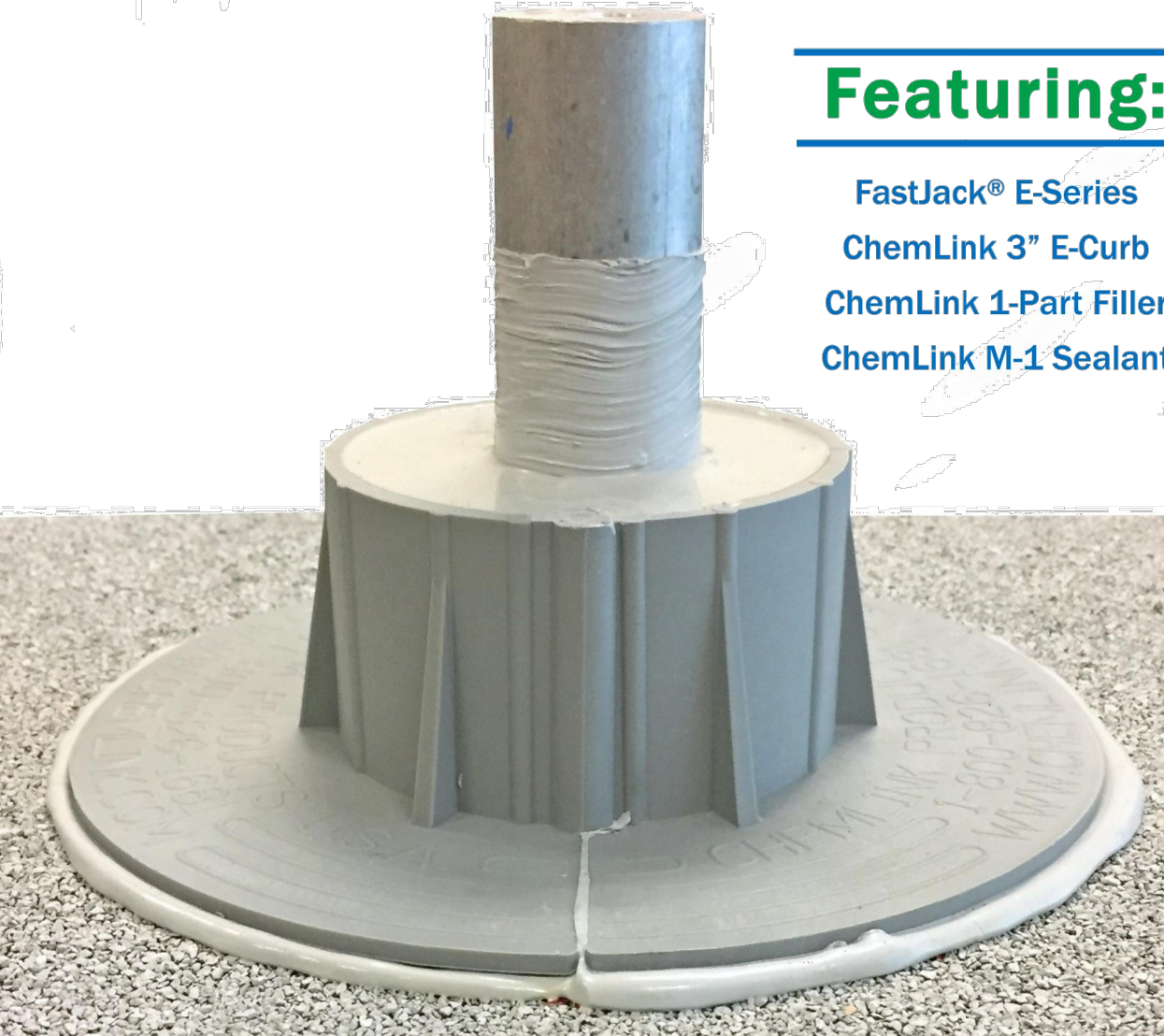
| Enclosure Catalog Number | | Enclosure Size Height x Width x Depth A x B x C | | D | E | Knockout Pattern |
|--------------------------|-------------|---|--------------------|-------|------|---------------------|
| Painted | Galvanized | in. | mm | in. | mm | |
| 444 RTSC | 444 RTSCV | 4.00 x 4.00 x 4.00 | 102 x 102 x 102 | 1.50 | 38 | 1 81 46 16 |
| 664 RTSC | 664 RTSCV | 6.00 x 6.00 x 6.00 | 152 x 152 x 152 | 3.00 | 76 | 3 81 97 16 |
| 884 RTSC | 884 RTSCV | 8.00 x 8.00 x 8.00 | 203 x 203 x 203 | 5.00 | 127 | 5 81 148 16 |
| 1094 RTSC | 1094 RTSCV | 10.00 x 10.00 x 10.00 | 254 x 254 x 254 | 7.50 | 191 | 7 81 198 16 |
| 1294 RTSC | 1294 RTSCV | 12.00 x 12.00 x 12.00 | 305 x 305 x 305 | 9.50 | 241 | 9 81 249 16 |
| 1494 RTSC | 1494 RTSCV | 14.00 x 14.00 x 14.00 | 356 x 356 x 356 | 11.50 | 291 | 11 81 299 16 |
| 1694 RTSC | 1694 RTSCV | 16.00 x 16.00 x 16.00 | 407 x 407 x 407 | 13.50 | 341 | 13 81 349 16 |
| 1894 RTSC | 1894 RTSCV | 18.00 x 18.00 x 18.00 | 458 x 458 x 458 | 15.50 | 391 | 15 81 399 16 |
| 2094 RTSC | 2094 RTSCV | 20.00 x 20.00 x 20.00 | 509 x 509 x 509 | 17.50 | 441 | 17 81 449 16 |
| 2294 RTSC | 2294 RTSCV | 22.00 x 22.00 x 22.00 | 560 x 560 x 560 | 19.50 | 491 | 19 81 499 16 |
| 2494 RTSC | 2494 RTSCV | 24.00 x 24.00 x 24.00 | 611 x 611 x 611 | 21.50 | 541 | 21 81 549 16 |
| 2694 RTSC | 2694 RTSCV | 26.00 x 26.00 x 26.00 | 662 x 662 x 662 | 23.50 | 591 | 23 81 599 16 |
| 2894 RTSC | 2894 RTSCV | 28.00 x 28.00 x 28.00 | 713 x 713 x 713 | 25.50 | 641 | 25 81 649 16 |
| 3094 RTSC | 3094 RTSCV | 30.00 x 30.00 x 30.00 | 764 x 764 x 764 | 27.50 | 691 | 27 81 699 16 |
| 3294 RTSC | 3294 RTSCV | 32.00 x 32.00 x 32.00 | 815 x 815 x 815 | 29.50 | 741 | 29 81 749 16 |
| 3494 RTSC | 3494 RTSCV | 34.00 x 34.00 x 34.00 | 866 x 866 x 866 | 31.50 | 791 | 31 81 799 16 |
| 3694 RTSC | 3694 RTSCV | 36.00 x 36.00 x 36.00 | 917 x 917 x 917 | 33.50 | 841 | 33 81 849 16 |
| 3894 RTSC | 3894 RTSCV | 38.00 x 38.00 x 38.00 | 968 x 968 x 968 | 35.50 | 891 | 35 81 899 16 |
| 4094 RTSC | 4094 RTSCV | 40.00 x 40.00 x 40.00 | 1019 x 1019 x 1019 | 37.50 | 941 | 37 81 949 16 |
| 4294 RTSC | 4294 RTSCV | 42.00 x 42.00 x 42.00 | 1070 x 1070 x 1070 | 39.50 | 991 | 39 81 999 16 |
| 4494 RTSC | 4494 RTSCV | 44.00 x 44.00 x 44.00 | 1121 x 1121 x 1121 | 41.50 | 1041 | 41 81 1049 16 |
| 4694 RTSC | 4694 RTSCV | 46.00 x 46.00 x 46.00 | 1172 x 1172 x 1172 | 43.50 | 1091 | 43 81 1099 16 |
| 4894 RTSC | 4894 RTSCV | 48.00 x 48.00 x 48.00 | 1223 x 1223 x 1223 | 45.50 | 1141 | 45 81 1149 16 |
| 5094 RTSC | 5094 RTSCV | 50.00 x 50.00 x 50.00 | 1274 x 1274 x 1274 | 47.50 | 1191 | 47 81 1199 16 |
| 5294 RTSC | 5294 RTSCV | 52.00 x 52.00 x 52.00 | 1325 x 1325 x 1325 | 49.50 | 1241 | 49 81 1249 16 |
| 5494 RTSC | 5494 RTSCV | 54.00 x 54.00 x 54.00 | 1376 x 1376 x 1376 | 51.50 | 1291 | 51 81 1299 16 |
| 5694 RTSC | 5694 RTSCV | 56.00 x 56.00 x 56.00 | 1427 x 1427 x 1427 | 53.50 | 1341 | 53 81 1349 16 |
| 5894 RTSC | 5894 RTSCV | 58.00 x 58.00 x 58.00 | 1478 x 1478 x 1478 | 55.50 | 1391 | 55 81 1399 16 |
| 6094 RTSC | 6094 RTSCV | 60.00 x 60.00 x 60.00 | 1529 x 1529 x 1529 | 57.50 | 1441 | 57 81 1449 16 |
| 6294 RTSC | 6294 RTSCV | 62.00 x 62.00 x 62.00 | 1580 x 1580 x 1580 | 59.50 | 1491 | 59 81 1499 16 |
| 6494 RTSC | 6494 RTSCV | 64.00 x 64.00 x 64.00 | 1631 x 1631 x 1631 | 61.50 | 1541 | 61 81 1549 16 |
| 6694 RTSC | 6694 RTSCV | 66.00 x 66.00 x 66.00 | 1682 x 1682 x 1682 | 63.50 | 1591 | 63 81 1599 16 |
| 6894 RTSC | 6894 RTSCV | 68.00 x 68.00 x 68.00 | 1733 x 1733 x 1733 | 65.50 | 1641 | 65 81 1649 16 |
| 7094 RTSC | 7094 RTSCV | 70.00 x 70.00 x 70.00 | 1784 x 1784 x 1784 | 67.50 | 1691 | 67 81 1699 16 |
| 7294 RTSC | 7294 RTSCV | 72.00 x 72.00 x 72.00 | 1835 x 1835 x 1835 | 69.50 | 1741 | 69 81 1749 16 |
| 7494 RTSC | 7494 RTSCV | 74.00 x 74.00 x 74.00 | 1886 x 1886 x 1886 | 71.50 | 1791 | 71 81 1799 16 |
| 7694 RTSC | 7694 RTSCV | 76.00 x 76.00 x 76.00 | 1937 x 1937 x 1937 | 73.50 | 1841 | 73 81 1849 16 |
| 7894 RTSC | 7894 RTSCV | 78.00 x 78.00 x 78.00 | 1988 x 1988 x 1988 | 75.50 | 1891 | 75 81 1899 16 |
| 8094 RTSC | 8094 RTSCV | 80.00 x 80.00 x 80.00 | 2039 x 2039 x 2039 | 77.50 | 1941 | 77 81 1949 16 |
| 8294 RTSC | 8294 RTSCV | 82.00 x 82.00 x 82.00 | 2090 x 2090 x 2090 | 79.50 | 1991 | 79 81 1999 16 |
| 8494 RTSC | 8494 RTSCV | 84.00 x 84.00 x 84.00 | 2141 x 2141 x 2141 | 81.50 | 2041 | 81 81 2049 16 |
| 8694 RTSC | 8694 RTSCV | 86.00 x 86.00 x 86.00 | 2192 x 2192 x 2192 | 83.50 | 2091 | 83 81 2099 16 |
| 8894 RTSC | 8894 RTSCV | 88.00 x 88.00 x 88.00 | 2243 x 2243 x 2243 | 85.50 | 2141 | 85 81 2149 16 |
| 9094 RTSC | 9094 RTSCV | 90.00 x 90.00 x 90.00 | 2294 x 2294 x 2294 | 87.50 | 2191 | 87 81 2199 16 |
| 9294 RTSC | 9294 RTSCV | 92.00 x 92.00 x 92.00 | 2345 x 2345 x 2345 | 89.50 | 2241 | 89 81 2249 16 |
| 9494 RTSC | 9494 RTSCV | 94.00 x 94.00 x 94.00 | 2396 x 2396 x 2396 | 91.50 | 2291 | 91 81 2299 16 |
| 9694 RTSC | 9694 RTSCV | 96.00 x 96.00 x 96.00 | 2447 x 2447 x 2447 | 93.50 | 2341 | 93 81 2349 16 |
| 9894 RTSC | 9894 RTSCV | 98.00 x 98.00 x 98.00 | 2498 x 2498 x 2498 | 95.50 | 2391 | 95 81 2399 16 |
| 10094 RTSC | 10094 RTSCV | 100.00 x 100.00 x 100.00 | 2549 x 2549 x 2549 | 97.50 | 2441 | 97 81 2449 16 |

Notes: Dimensions are in inches. Millimeters shown are for reference only. Data subject to change without notice.
B-Line series electrical enclosures

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FastJack + CHEMLINK
POLYMER INNOVATION

The FastJack® / ChemLink™ combination is waterproof and compatible with most roof types, making it the go-to flat roof solar and other rooftop equipment mounting solution for today's contractors.



Featuring:

- FastJack® E-Series
- ChemLink 3" E-Curb
- ChemLink 1-Part Filler
- ChemLink M-1 Sealant

Waterproof | Low Cost | High Quality | Easy-to-Install
ProSolar®

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LOW COST + EASY TO INSTALL

FastJack
Commercial E-Series



- 1 4-1/2" Commercial FastJack E-Series (P/N: CFJE-450-18)
- 2 6" Commercial FastJack E-Series (P/N: CFJE-900-18)
- 3 8" Commercial FastJack E-Series (P/N: CFJE-1000-18)
- 4 10" Commercial FastJack E-Series (P/N: CFJE-1200-18)
- 5 12" Commercial FastJack E-Series (P/N: CFJE-1200-18)

Includes: 1-1/4" OD Solid Aluminum post with 3/8" Top Threaded, 2" E-base. Hardware sold separately.
Packaged 18 per box

1-Part and M1 Ratios

- CFJE:
- (1) Tube 1-Part for (2) E-Curbs
 - (1) Pouch 1-Part for (12) E-Curbs
 - (1) Tube M-1 for (3) E-Curbs
- FJE:
- (2) Tubes 1-Part for (3) E-Curbs
 - (1) Pouch 1-Part for (10) E-Curbs
 - (1) Tube M-1 for (3) E-Curbs

ProSolar®

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FastJack
Residential E-Series



- 1 3" FastJack E-Series (P/N: FJE-300-18)
- 2 4-1/2" FastJack E-Series (P/N: FJE-450-18)
- 3 6" FastJack E-Series (P/N: FJE-600-18)

Includes: 1" OD Solid Aluminum Post and 1.5" OD E-base, 5/16" x 3-1/2" Lag screw, 3/8" SS Washer, and 3/8" x 3/4" SS Hex Bolt
Packaged 18 per box

CHEMLINK
POLYMER INNOVATION



- 1 ChemLink 1-Part Pouch (P/N: A-ChemLink 1-Part Pouch)
 - 2 ChemLink 1-Part 10.1oz Tube (P/N: A-ChemLink 1-Part)
 - 3 ChemLink M-1 10.1oz Tube (P/N: A-ChemLink M-1)
 - 4 ChemLink E-Curb (P/N: A-ChemLink 3" E-Curb)
- Round, 3" diameter, does not include M-1 adhesive/sealant or 1-Part sealant

REVISIONS: BY:

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APN:- 00301106

SOLAR PHOTOVOLTAIC
SPECIFICATION SHEET

DATE:
11/29/2022
SHEET SIZE
ARCH_D
24" X 36"
SHEET NUMBER
PV-4.0