

SNR SOLAR LLC. DBA SNAPNRACK MIAMI-DADE TEST REPORT

SCOPE OF WORK

TAS 100(A)-23 TESTING ON ULTRAFOOT, ANCHOR (SPECIMEN C AND D)

REPORT NUMBER

S1171.01-109-18 R1

TEST DATE

12/17/24

ISSUE DATE

01/21/25

REVISION DATE

02/04/25

MIAMI-DADE COUNTY NOTIFICATION NO.

ATI 24085

LABORATORY CERTIFICATION NO.

22-0428.14

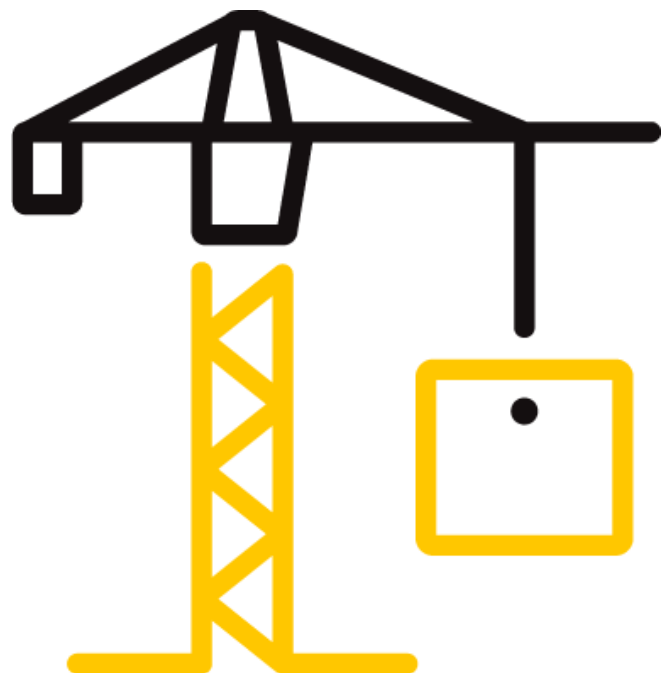
PAGES

18

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-7808 (06/05/24)

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TEST REPORT FOR SNR SOLAR LLC. DBA SNAPNRACK

Report No.: S1171.01-109-18 R1

Date: 01/21/25

Revision 1: 02/04/25

REPORT ISSUED TO

SNR SOLAR LLC. DBA SNAPNRACK

775 Fiero Lane, Suite 200

San Luis Obispo, California 93401

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by SNR Solar LLC. dba SnapNrack to perform TAS 100(A) testing in accordance with Miami-Dade County requirements on UltraFoot, Anchor in rafter and deck mounted configurations (Specimen C and D). Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

For INTERTEK B&C:

| | | | |
|----------------------|---------------------------------|---------------------|---|
| COMPLETED BY: | Christopher E. Sartalis | REVIEWED BY: | Tanya A. Dolby, P.E. |
| TITLE: | Technician – Product Testing | TITLE: | Engineering Manager – Engineering Services |
| SIGNATURE: | | SIGNATURE: | |
| DATE: | 02/04/25 | DATE: | 02/04/25 |

CES:mas

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SECTION 2

TEST METHOD

The specimen was evaluated in accordance with the following:

TAS 100 (A)-23, *Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area.*

SECTION 3

MATERIAL SOURCE

Test sample materials were provided by the client from SNR Solar LLC. dba SnapNrack located at San Luis Obispo, California. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of ten years from the test completion date.

SECTION 4

EQUIPMENT/CALIBRATION

Wind Generator - Vane Axial Fan Y00346

Scale – 65571

Stopwatch – INT00975

Weather Station – 63316

Windstream, water supply, and water distribution calibration were performed prior to testing. Reference Intertek B&C Calibration Report No. R5185.05-109-18, dated 11/04/24, for descriptions and results.

SECTION 5

LIST OF OFFICIAL OBSERVERS

| NAME | COMPANY |
|-------------------------|--------------|
| Tyler J. Holland | Intertek B&C |
| Timothy J. McGill | Intertek B&C |
| Tanya A. Dolby, P.E. | Intertek B&C |
| Christopher E. Sartalis | Intertek B&C |

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SECTION 6

TEST SPECIMEN DESCRIPTION

Manufacturer: SNR Solar LLC. dba SnapNrack

Series/Model: UltraFoot Anchor

Product Type: Deck and Rafter Mount, (Specimen C & D)

Roof Deck Description: An 8'0" wide by 6'0" long roof deck on a 2:12 slope was utilized. The roof deck consisted of #2 Spruce-Pine Fir normal 2x6 intermediate supports sheathed with APA 32/16 span rated 15/32" plywood sheathing. The intermediate supports were spaced 24" on center. The plywood was secured to the rafters with 8d common nails spaced 6" on center around the perimeter and 12" on center at the intermediate supports. The plywood sheathing was covered with 30# felt underlayment and three-tab shingles.

UltraFoot Anchor Installation/Description: The mounts were constructed of 3-3/4" wide by 2-3/16" long by 3" high, 3/16" thick extruded aluminum. Approximately 18" down from the ridge, two 3/16" pilot holes, one for each mount, were drilled down through the shingles and sheathing and into the rafter. The butyl pads on the bottom of the mounts were adhered to the shingle over the pilot holes. A total of four specimens were installed on the test deck. Two of the specimens were fastened using one 5/16" x 4-1/2" lag screw with EPDM backed washer, through the middle hole of the mount, through the sheathing, and into the rafter. Two specimens were fastened using two SnapNrack DeckAnchors (2.5) with EPDM backed washer, through the mount, and into the sheathing.

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SECTION 7

TEST RESULTS

Protocol TAS 100(A)-23, Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area.

Test Date(s): 12/17/24

The temperature during testing was 12°C (54°F). The results are tabulated as follows:

Test Procedure: The wind speed intervals were conducted as follows:

| Interval No. | Wind Speed (mph) | Time (min) | Water Spray |
|--------------|------------------|------------|-------------|
| 1 | 35 | 15 | On |
| 2 | 0 | 5 | Off |
| 3 | 70 | 15 | On |
| 4 | 0 | 5 | Off |
| 5 | 90 | 15 | On |
| 6 | 0 | 5 | Off |
| 7 | 110 | 5 | On |
| 8 | 0 | 5 | Off |

Test Results: The TAS 100(A) test results are as follows:

| Wind Speed | Results |
|------------|---------|
| 35 mph | 0.0 oz. |
| 70 mph | 0.0 oz. |
| 90 mph | 0.0 oz. |
| 110 mph | 0.0 oz. |

Result(s): Pass

Note 1: Tested at a 2:12 roof pitch.

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SECTION 8

CONCLUSION

The specimen(s) tested met the performance requirements set forth in the protocols.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends ten years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

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SECTION 9 PHOTOGRAPHS



Photo No. 1
Top Side Before Testing



Photo No. 2
Underside Before Testing

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Photo No. 3
35 MPH Top Side



Photo No. 4
35 MPH Underside

TEST REPORT FOR SNR SOLAR LLC. DBA SNAPNRACK

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Photo No. 5
70 MPH Top Side



Photo No. 6
70 MPH Underside

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Photo No. 7
90 MPH Top side



Photo No. 8
90 MPH Underside

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Photo No. 9
110 MPH Top Side



Photo No. 10
110 MPH Underside

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Photo No. 11
Post Test Top Side



Photo No. 12
Post Test Underside



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SECTION 10

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

NOTES:

1. THIS SYSTEM COMPLIES WITH THE 8TH EDITION (2023) FLORIDA BUILDING CODE, INCLUDING HVHZ
2. THIS SYSTEM HAS BEEN TESTED TO THE TAS100(A) AND ASTM D7147 STANDARDS. IMPACT RESISTANCE IS NOT REQUIRED, AS IT IS NOT PART OF THE BUILDING ENVELOPE
3. INSTALLATIONS MUST FOLLOW THE SNAPRACK ULTRA RAIL SYSTEM INSTALLATION MANUAL
4. PV PANELS ARE NOT PART OF THIS APPROVAL
5. DESIGN OF THE ROOF SUBSTRATE AND STRUCTURE IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR) AND IS NOT PART OF THIS APPROVAL
6. ALL ANCHORS FASTENING ATTACHMENTS TO THE ROOF SUBSTRATE MUST BE CORROSION RESISTANT

BOM: ULTRAFooter PRODUCTS

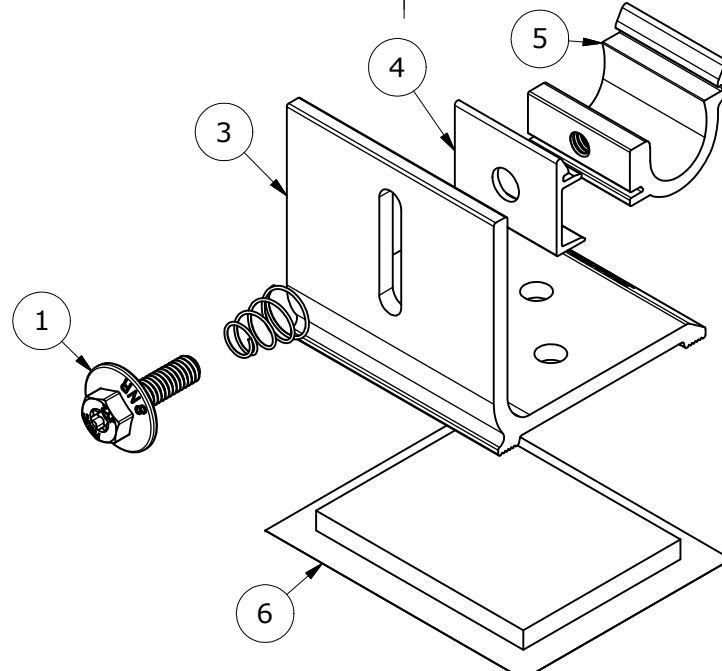
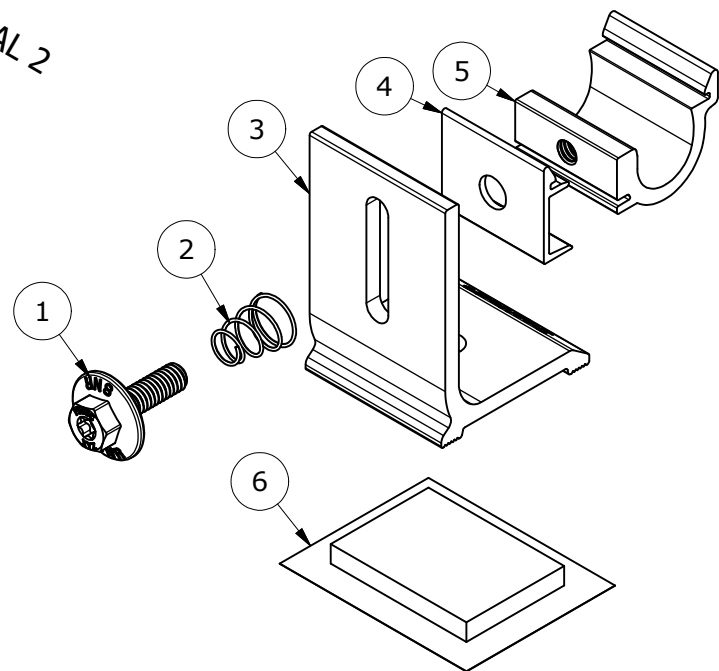
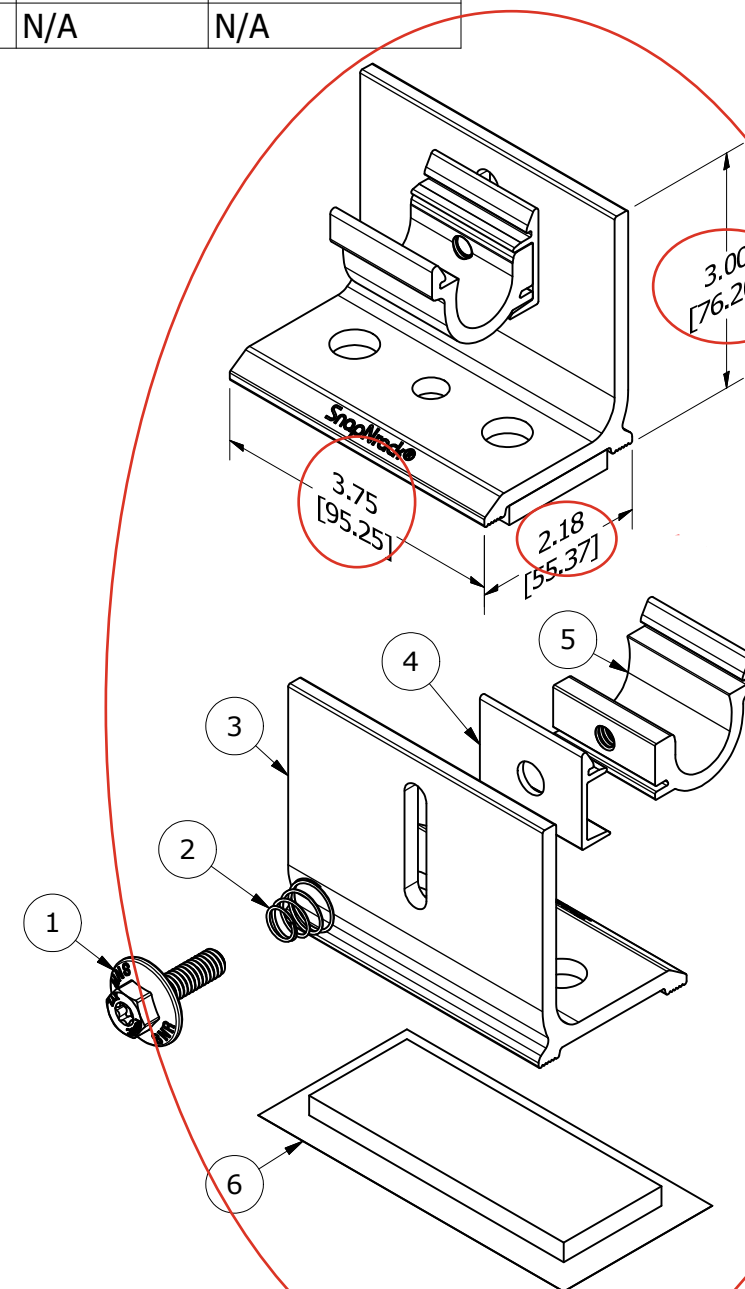
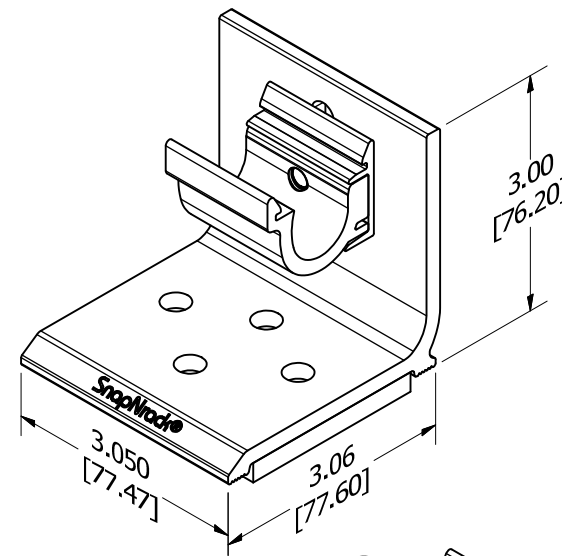
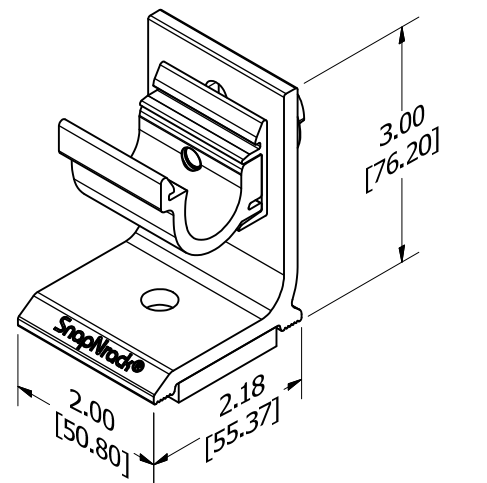
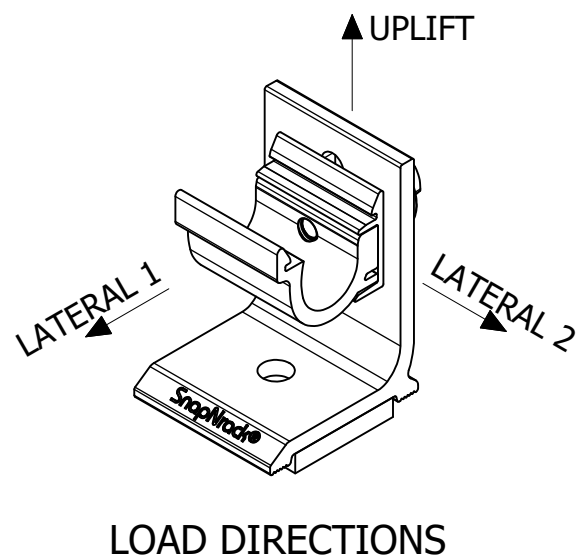
| ITEM | DESCRIPTION | MATERIAL | MIN YIELD (KSI) | MINIMUM ULTIMATE (KSI) |
|------|--|-----------------------------|-----------------|------------------------|
| 1 | BOLT, WIDE FLANGE, 5/16"-18 | STAINLESS STEEL, 300 SERIES | 60 | 95 |
| 2 | SPRING | STAINLESS STEEL, 300 SERIES | N/A | N/A |
| 3 | ULTRAFooter BASE (RAFTER, DECK, OR ANCHOR) | ALUMINUM, 6000 SERIES | 34 | 38 |
| 4 | UR FLIP CLAMP, THRU | ALUMINUM, 6000 SERIES | 34 | 38 |
| 5 | UF FLIP CLAMP, TAP | ALUMINUM, 6000 SERIES | 34 | 38 |
| 6 | SPEEDSEAL+ FLASHING SYSTEM | BUTYL RUBBER | N/A | N/A |

REVISION:

| REVISION | DATE | DESCRIPTION | INITIALS |
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| A | 2/3/2025 | RELEASED | MJA |
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ULTRAFooter, RAFTER

ULTRAFooter, DECK

ULTRAFooter, ANCHOR

| | | | | |
|----------------------|--|--|---------------------------------|------------------------------|
| PE SIGNATURE: | PE DATE: | DESCRIPTION: ULTRA RAIL PV MOUNTING SYSTEM WITH ULTRAFooter ROOF ATTACHMENTS FAMILY | DRAWING NUMBER: SNR-DC-00485 | REV: A |
| SNR SOLAR LLC | 775 FIERO LANE, SUITE 200 SAN LUIS OBISPO, CA 93401 CONTACT@SNAPRACK.COM | UNITS: IN, LB, DEG [MM, KG, DEG] | DATE: 2/3/2025 | SHEET SIZE: 11 IN X 17 IN |
| | | | SCALE: NTS | SHEET NUMBER: 1 OF 5 |

DESCRIPTION:
SNAPNRACK, TDS, ULTRAFOOT ANCHOR

DOC NUMBER:
SNR-DC-01438

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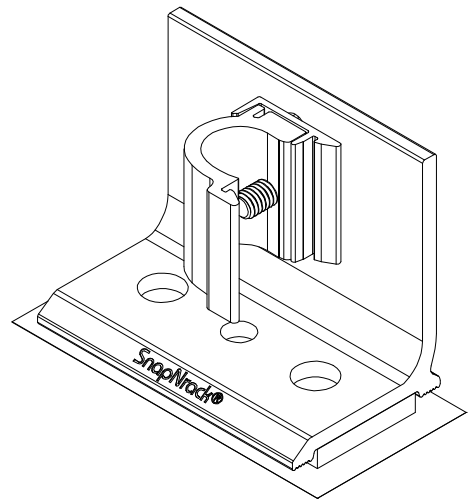
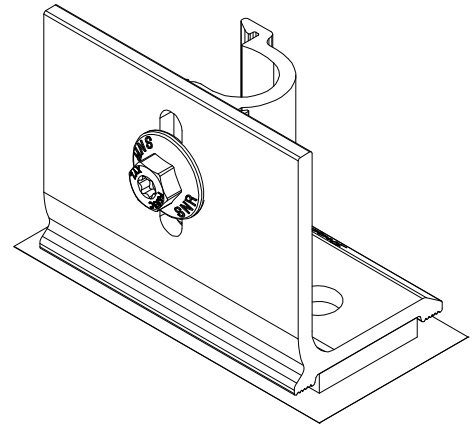
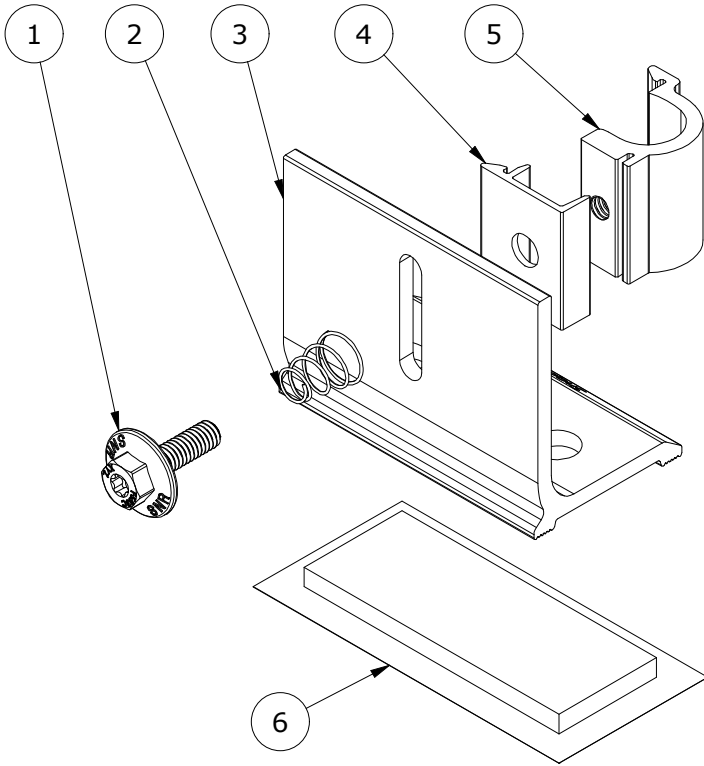
PART NUMBER(S):
242-10058

DRAWN BY:
H.WULFEKOETTER

REV: **A** DATE:
8/28/2024

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PARTS LIST

| ITEM | QTY | DESCRIPTION |
|------|-----|--|
| 1 | 1 | BOLT, WIDE FLANGE, RECESSED, 5-16IN-18 X 1IN, SS |
| 2 | 1 | SNAPNRACK, ULTRA RAIL MOUNT SPRING, SS |
| 3 | 1 | SNAPNRACK, ULTRAFOOT BASE, ANCHOR, BLACK |
| 4 | 1 | SNAPNRACK, UR FLIP CLAMP, THRU, SILVER |
| 5 | 1 | SNAPNRACK, FLIP CLAMP, TAP, BLACK |
| 6 | 1 | SNAPNRACK, BUTYL PAD, 2IN X 1.5IN X .25IN |

| | | |
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| | Verified by: | <i>Charles E. Jace</i> |

MATERIALS: 6000 SERIES ALUMINUM & 300 SERIES STAINLESS STEEL

DESIGN LOAD (LBS): VARIES, REFER TO SNAPNRACK ENGINEERING

ULTIMATE LOAD (LBS): VARIES, REFER TO SNAPNRACK ENGINEERING

TORQUE SPECIFICATION: 16 FT-LBS FT-LBS

CERTIFICATION: UL 2703, FILE E359313

WEIGHT (LBS): 0.550

DESCRIPTION:
SNAPNRACK, TDS, ULTRAFooter ANCHOR

DOC NUMBER:
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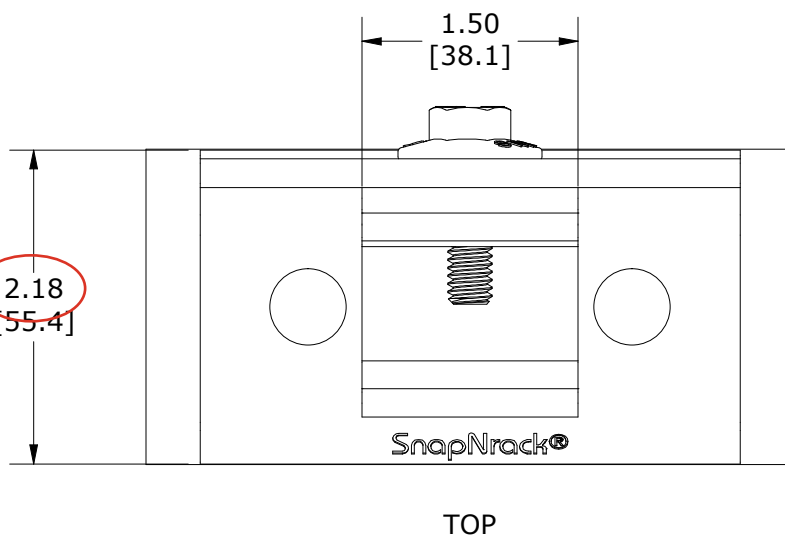
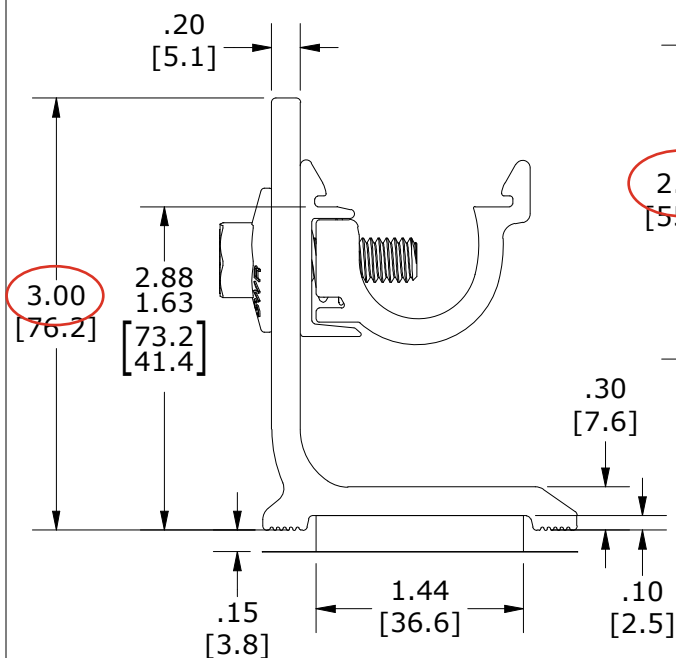
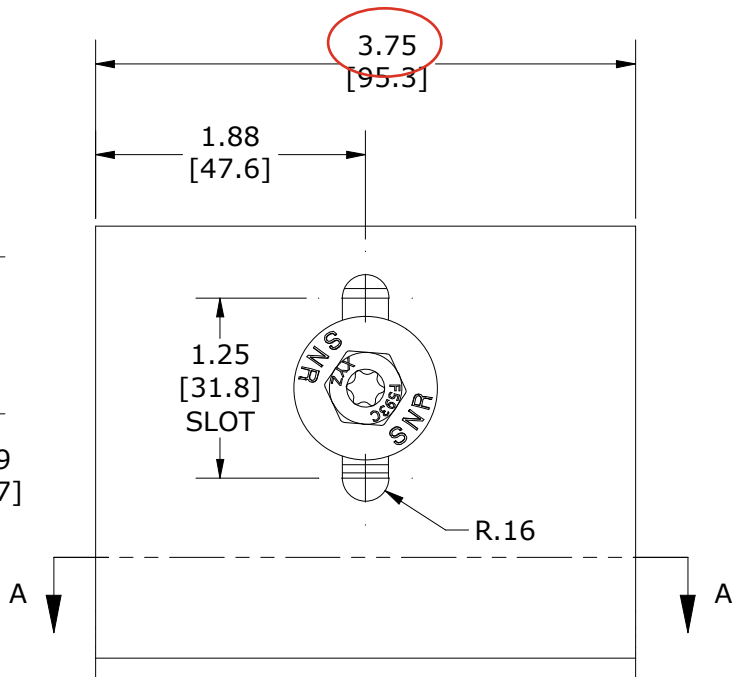
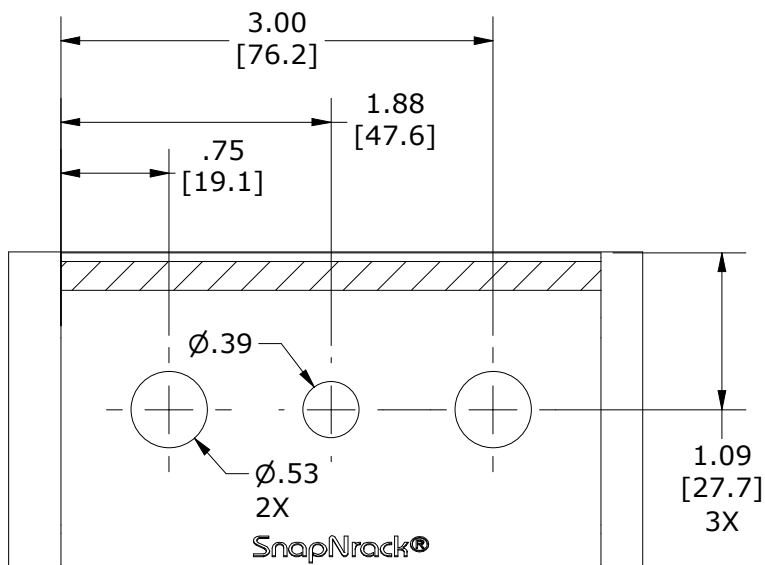
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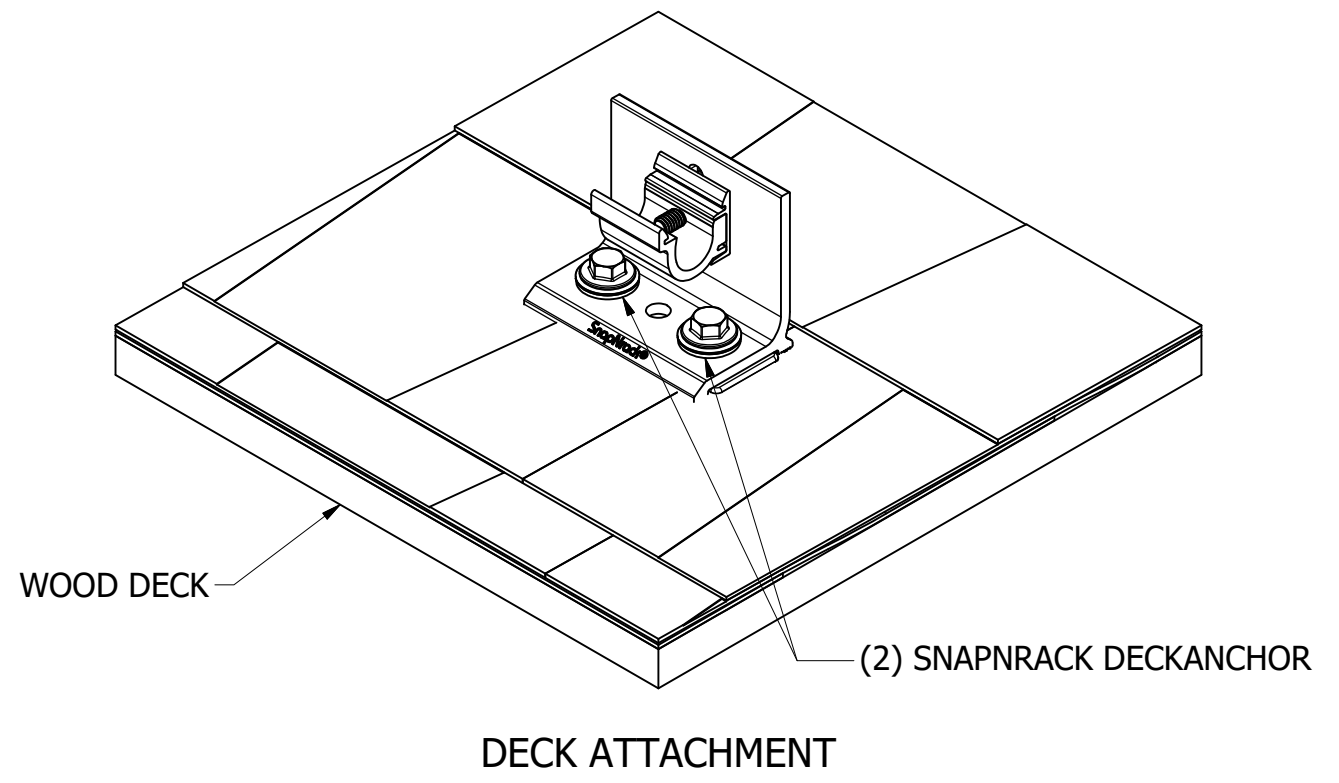
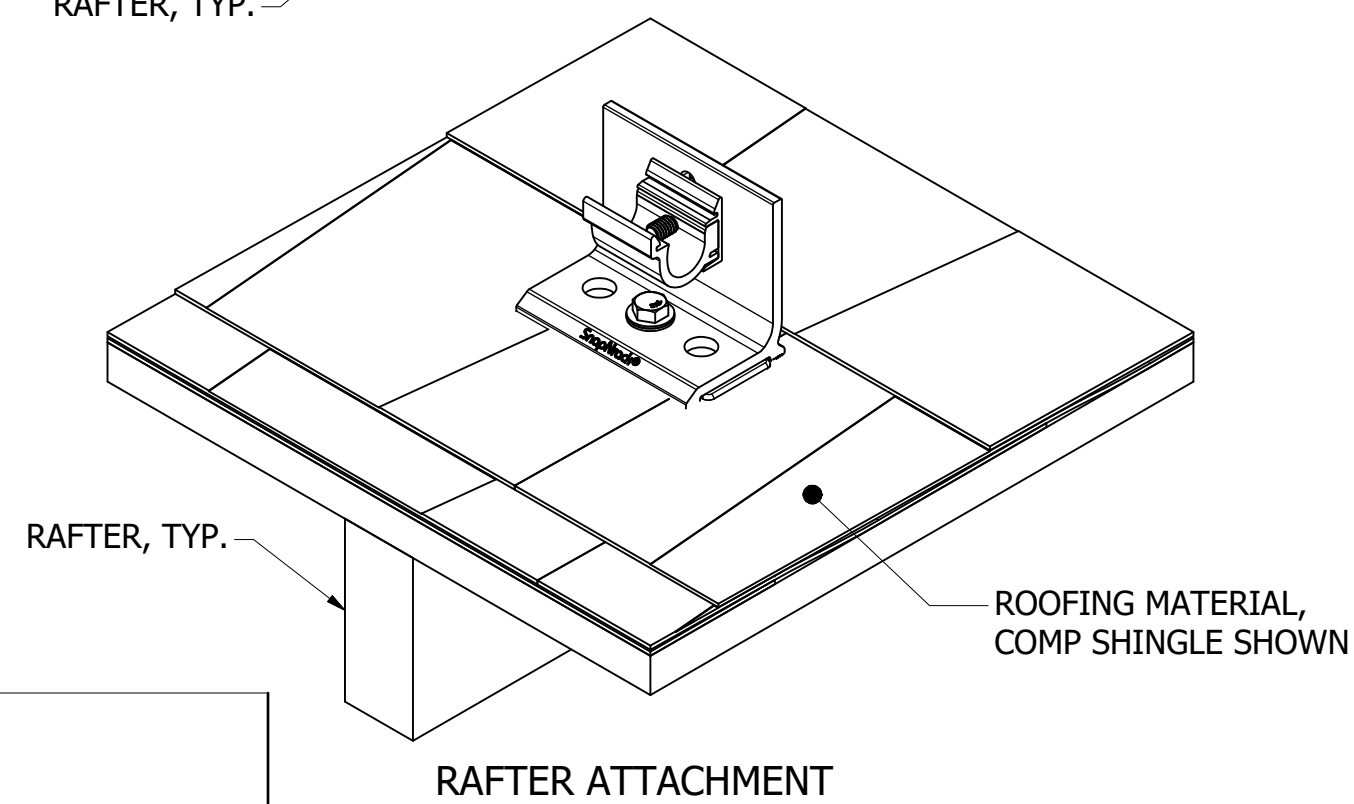
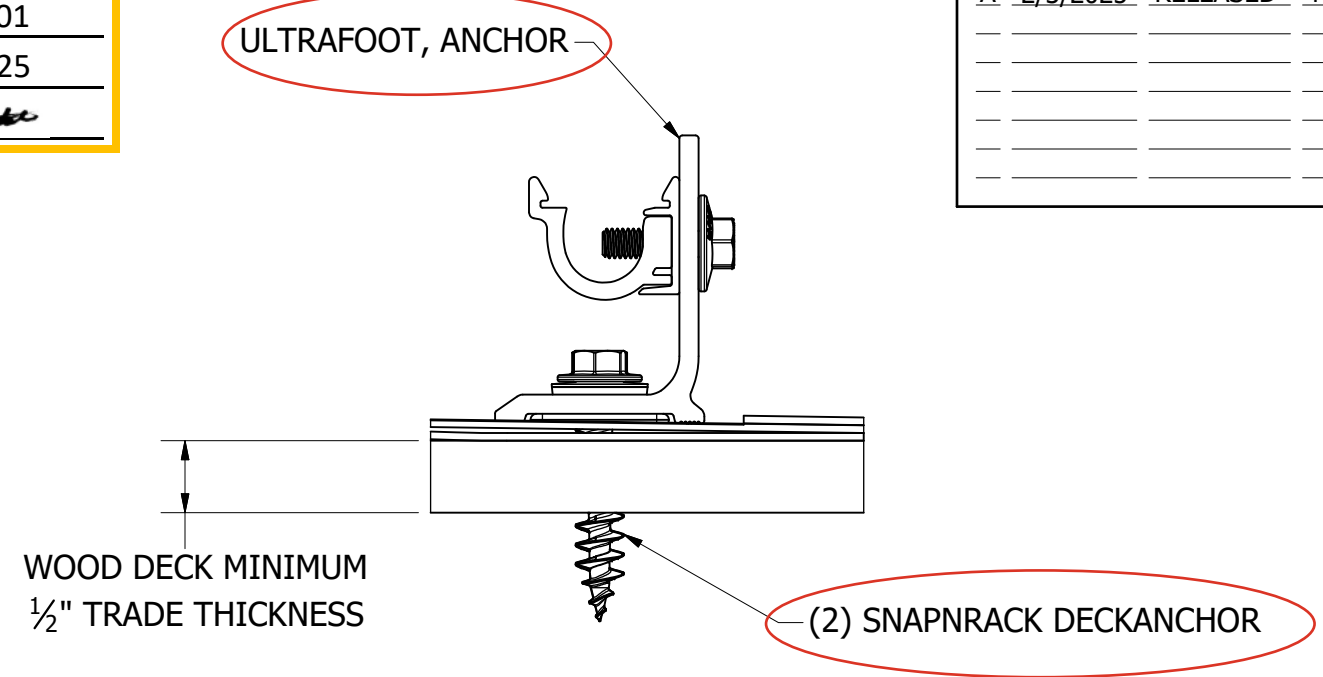
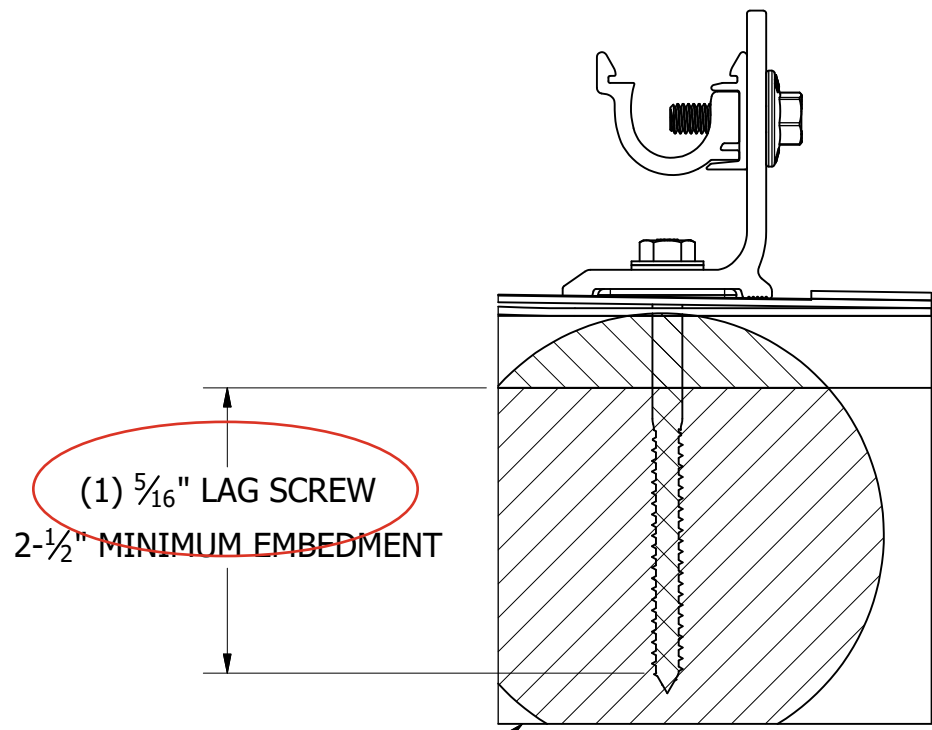


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| PE SIGNATURE: | PE DATE: | DESCRIPTION: | DRAWING NUMBER: | | REV: |
| | | ULTRA RAIL PV MOUNTING SYSTEM WITH ULTRAFOOT ROOF ATTACHMENTS FAMILY | SNR-DC-00485 | | A |
| SNR SOLAR LLC | 775 FIERO LANE, SUITE 200 SAN LUIS OBISPO, CA 93401 CONTACT@SNAPRACK.COM | UNITS: IN, LB, DEG [MM, KG, DEG] | DATE: 2/3/2025 | SHEET SIZE: 11 IN X 17 IN | SCALE: NTS |
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TEST REPORT FOR SNR SOLAR LLC. DBA SNAPNRACK

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SECTION 11

REVISION LOG

| REVISION # | DATE | PAGES | REVISION |
|------------|----------|-------|-----------------------|
| 0 | 01/21/25 | N/A | Original Report Issue |
| 1 | 02/04/25 | 14-17 | Revised Drawings |