

ICC-ES Evaluation Report

ESR-4152

Reissued December 2023

This report also contains:

Revised February 2024

- CBC Supplement

Subject to renewal December 2025

- FBC Supplement

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DIVISION: 05 00 00—METALS Section: 05 05 23—Metal Fastenings	REPORT HOLDER: ANCHOR PRODUCTS, LLC	EVALUATION SUBJECT: U-ANCHOR 2400 AND U-ANCHOR 2600 SERIES U-ANCHOR PLATE CONNECTOR	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018, 2015 and 2012 [International Building Code® \(IBC\)](#)

Property evaluated:

- Structural

2.0 USES

The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connector is used to attach nonstructural components to the roof deck, and are designed to transfer tension and shear loads.

3.0 DESCRIPTION

3.1 General:

The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connector consists of a U-Anchor Plate (shown in [Figure 1](#)) with roof covers supplied by Anchor Products, LLC. The U-Anchor 2400 and U-Anchor 2600 series roof covers are intended to be used with different types of roof covering systems, such as single-ply, liquid coatings and asphalt.

3.2 U-Anchor Plate:

The U-Anchor Plate is made from 0.045-inch-thick aluminum-zinc alloy coated steel complying with ASTM A792. The plate has an outside diameter of 5.5 inches and includes eight (8) 0.275-inch-diameter predrilled holes. The center of the plate comes with a factory-welded $\frac{3}{8}$ -16 by 1.375-inch long stainless steel stud having a minimum tensile strength of 81,000 psi.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The allowable strength values shown in [Table 1](#) of this report represent the tension and shear capacity of the U-Anchor plate. The connection of the U-Anchor plate to the roof deck must be designed by a registered design professional, and must not exceed the published allowable load values shown in [Table 1](#).

4.2 Installation:

Installation of the U-Anchor 2400 and U-Anchor 2600 series connectors must comply with this report and the manufacturer's published installation instructions. If there is a conflict between this report and the manufacturer's published installation instructions, this report governs.

The U-Anchor Plate is attached by fastening through the roofing assembly into the structural decking with two, four or eight ¼-inch diameter fasteners as indicated in [Table 1](#). The fasteners must be corrosion resistant. The fastener must be determined by the registered design professional. Flashing of the penetrated roof assembly must be done in accordance with Anchor Products, LLC published installation instructions.

5.0 CONDITIONS OF USE:

The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connectors described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.2 The U-Anchor 2400 and U-Anchor 2600 series connectors must be flashed in accordance with accepted recommended practices by the roof covering manufacturer.
- 5.3 The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connector are manufactured in Halton City, Texas, under inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Load test data in accordance with Section 3.2 of the [ICC-ES Acceptance Criteria for Proprietary Attachment Systems of Photovoltaic \(PV\) Arrays to Roof Assemblies \(AC467\)](#), approved June 2016 (editorially revised February 2024).
- 6.2 Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10).
- 6.3 Published installation instructions.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4152) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, the U-Anchor Plate connectors are identified with the product name or designation.
- 7.3 The report holder's contact information is the following:

ANCHOR PRODUCTS, LLC
6316 SUITE D, AIRPORT FREEWAY
HALTON CITY, TEXAS 76117
(888) 575-2131
www.anchorp.com

TABLE 1—U-ANCHOR PLATE ALLOWABLE TENSION AND SHEAR LOAD

LOAD CONDITION	NUMBER OF FASTENERS ³	ALLOWABLE LOAD ⁴ (lbf)
Tension ¹	2	559
	4	813
	8	904
Shear ²	2	980
	4	1446
	8	1431

For SI: 1 lbf = 4.45 N.

¹Tension loads are applied perpendicular to the U-Anchor plate on the centerline of the 3/8-16 diameter stud.

²Shear loads are applied parallel to the U-Anchor plate at the base of the 3/8-16 diameter stud.

³The fasteners must comply with Section 4.2 of this report. When two or four fasteners are used, the location of the fasteners must be symmetrical.

⁴Allowable load based on an average ultimate test load divided by a safety factor of three.

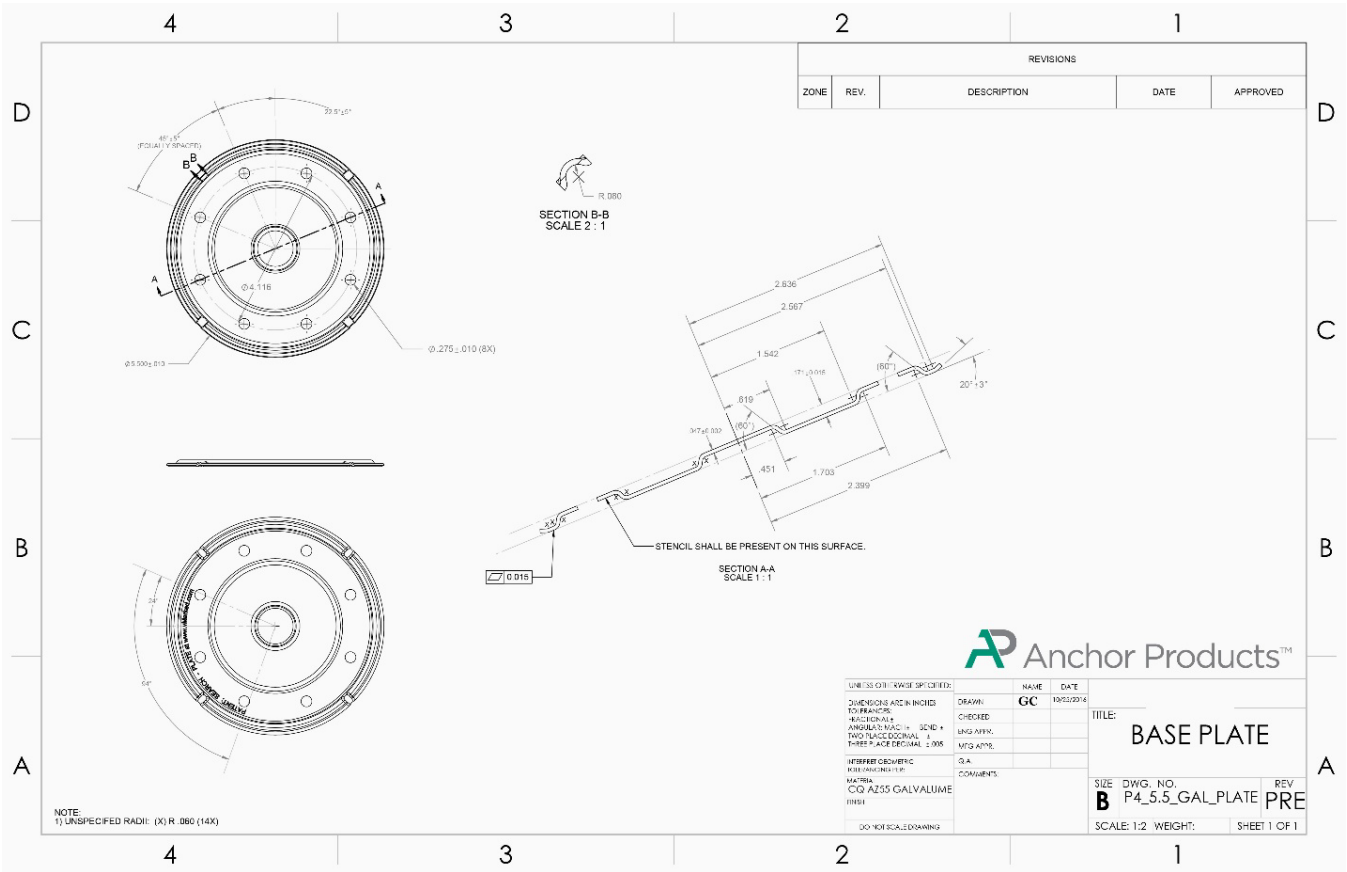


FIGURE 1—U ANCHOR 2400 AND 2600 BASE PLATE

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A Subsidiary of the International Code Council®

DIVISION: 05 00 00—METALS

Section: 05 05 23—Metal Fastenings

REPORT HOLDER:

ANCHOR PRODUCTS, LLC

EVALUATION SUBJECT:

U-ANCHOR 2400 AND U-ANCHOR 2600 SERIES U-ANCHOR PLATE CONNECTOR

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate Connector, described in ICC-ES evaluation report ESR-4152, have also been evaluated for compliance with the code noted below.

Applicable code edition:

2022 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2.0 CONCLUSIONS

2.1 CBC:

The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate Connector, described in Sections 2.0 through 7.0 of the evaluation report ESR-4152, comply with CBC Chapter 22, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16 and 22, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued December 2023 and revised February 2024.

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Applicable code edition:

2023 *Florida Building Code—Building*

2.0 CONCLUSIONS

The U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connector, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-4152, complies with the *Florida Building Code—Building*. The design requirements must be determined in accordance with the *Florida Building Code—Building*. The installation requirements noted in ICC-ES evaluation report ESR-4152 for the 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building*, as applicable.

Use of the U-Anchor 2400 and U-Anchor 2600 series U-Anchor Plate connector for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* have not been evaluated and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

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