Engineering Alliance, Inc

https://www.eng-alliance.com

01-October-2026

Unirac
1411 Broadway Blvd. NE
Albuquerque, NM 87101
Tel: 505 242 6411

Attn.: Engineering Department

Subject: Engineering Certification for the Unirac GridFlex 5D (GF5D) Roof-Mounted Ballasted System to Support Photovoltaic Panels.

The Unirac GF5D is a ballasted photovoltaic (PV) panel racking system consisted of rails, ballast rails, wind deflectors, roof pads, and clamps. The rail frames hold the PV panels and are ballasted with concrete blocks or secured by attachments. The PV panel racking system including ballast is the main dead weight to resist wind uplift. Lateral forces, both wind and seismic, are resisted by friction between the roof pad and the roof surface, mechanical attachments provided where required. The system is compatible with Unirac FlashLoc RM, U-Anchor 2400, and OMG PowerGrip Plus flat roof attachments and shall be installed in accordance with the U-Builder report and installation guides.

Unirac online design assistant tool U-Builder PRO is used to determine the required ballast quantity. The U-Builder PRO covers a wide range of system configurations and loading, which allows the user to customize the input to match the specific project conditions.

The Unirac GF5D ballasted PV panel racking system satisfies the RWDI wind tunnel test results and the ballasted system design methodology, which makes the U-Builder PRO a rational and easy method of designing the Unirac GF5D ballasted PV panel design tool in compliance with the structural requirements of the following reference documents:

Codes: ASCE/SEI 7-10, 7-16, and 7-22 Minimum Design Loads for Buildings and other Structures
International Building Code, 2015-2024 Editions

Other: Aluminum Design Manual, 2020 Edition
RWDI Wind Engineering Consultation Report, RWDI #2408249
SEAOC PV1-2012 Report – Structural Seismic Requirements and Commentary for Rooftop Solar PV Arrays
SEAOC PV2-2017 Report - Wind Design for Low-Profile Solar Photovoltaic Arrays on Flat Roofs

This letter certifies that the Unirac GF5D Roof Mounted Ballasted Photovoltaic Panel Racking System and online design tool “U-Builder PRO” are in compliance with the reference documents mentioned above.

Please feel free to call or email for any questions or clarifications.

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Prepared By:
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