DOTEC CORP.

CUSTOMIZED ENGINEERING SOLUTIONS

August 31, 2016

To: Unirac, Inc.
1411 Broadway Blvd NE
Albuquerque, MN 87102-1545

Attn: Engineering Department,

Re: Engineering Certification for Unirac's RM5 and RMDT Roof Mounted Ballasted PV Panel Support System Design Methodology and U-Builder

DOTec Engineering has reviewed and certified Unirac's RM5 (5 degree tilt ballasted PV racking) and RMDT (Dual tilt ballated PV racking). Both racking options support the PV panels and are ballasted with concrete blocks, as required to resist wind loading. Wind uplift loads are resisted directly by the ballast weight and wind deflectors. Lateral forces, both wind and seismic, are resisted by friction between ballast bays and the roof surface. The ballast requirements are determined using the Unirac online U-builder design assistant tool. The U-Builder covers a wide range of system configurations and load combinations, which allows the user to customize the input to match the specific project conditions. The RWDI wind tunnel test results and the Unirac ballasted design methodology have been reviewed and have determined that it is rational and in compliance with the structural requirements of the following reference documents:

I. ASCE/SEI 7-05 & ASCE/SEI 7-10 – Minimum Design Loads for Buildings and other Structures
II. International Building Code, 2009 & 2012 Editions (IBC)
III. Steel Construction Manual, 13th Ed., American Institute of Steel Construction
IV. RWDI Wind Pressure Study Report #160097
V. Maffei Unirac Peer Review Letter & Report (Dated July 11, 2016)

The RWDI wind tunnel report has been reviewed by Maffei Structural Engineering (Oakland, CA) to satisfy SEAOC (Structural Engineers Association of California) peer review requirements.

This letter certifies that the structural calculations contained within Unirac's U-Builder, on-line design tool are in compliance with the above Codes. This certification excludes any connections to the building structures and/or the effects on the building structure components.

Please call if you have any questions or concerns.

Sincerely,

Dr Ildefonso Gonzalez PE, PhD

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