



ENGINEERING EXPRESS® PRODUCT EVALUATION REPORT

July 27, 2020

Application Number: FL 12163.1-R5

EX Project Number: 20-29440

Product Manufacturer: Four Seasons Solar Products LLC

Manufacturer Address: 5005 Veterans Memorial Highway
Holbrook, NY 11741

Product Name & Description: Series 230 Sun and Stars Roof System

Scope of Evaluation:

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Business and Professional Regulation (Florida Building Commission) Rule Chapter 61G20-3.005, F.A.C., for statewide acceptance per Method 1(d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with the Florida Building Code Seventh Edition (2020) and is, for the purpose intended, at least equivalent to that required by the Code. Re-evaluation of this product shall be required following pertinent Florida Building Code modifications or revisions.

Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

EX drawing #20-29440 titled "Series 230 Sun and Stars Roof System", sheets 1-21, prepared by Frank L. Bennardo, P.E., Inc., signed & sealed by Frank L. Bennardo, P.E. is an integral part of this Evaluation Report.

- **TEST REPORTS**

Uniform static structural performance has been tested in accordance with TAS 202 test standards per test report(s) #ETC-08-1014-21317.0 & # ETC-08-1014-21649.0 (signed and sealed by Joseph Labora Doldan, P.E.) by Effect Technologies Corporation (ETC).

Large missile impact resistance and cyclic loading performance have been tested in accordance with TAS 201 & 203 test standards per test report(s) #ETC-08-1014-21317.0 & # ETC-08-1014-21649.0 (signed and sealed by Joseph Labora Doldan, P.E.) by Effect Technologies Corporation (ETC).

- **STRUCTURAL ENGINEERING CALCULATIONS**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

1. Component Attachments

No 33% increase in allowable stress has been used in the design of this product.

Impact Resistance:

Large Missile Impact Resistance has been demonstrated as evidenced in previously listed test reports, and is accounted for in the engineering design of this product.

Four Seasons Solar Products LLC – Series 230 Sun and Stars Roof System

Wind Load Resistance

Each product has been designed to resist wind loads as indicated in the respective Product Evaluation Document (i.e. engineering drawing).

Installation

Each product listed above shall be installed in accordance with the Product Evaluation Document (i.e. engineering drawing). Any alterations to the engineering drawing shall be performed by others on a site-specific basis.

Each product component shall be of the material specified in that product's respective Product Evaluation Document (i.e. engineering drawing).

Limitations & Conditions of Use:

Use of each product shall be in strict accordance with its respective Product Evaluation Document (i.e. engineering drawing) as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in each product's respective anchor schedule. Host structure conditions which are not accounted for in each product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

Each product HAS been designed for use **inside and outside** of the High Velocity Hurricane Zone (HVHZ), under specific conditions as noted on the engineering drawing.

Respectfully,



Frank Bennardo, PE

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