

Evaluation Report

Porcelain Paver & Paver Grate System

plus Insulation Board to Roofing-waterproofing on Concrete Deck

Manufacturer:

Greenrise Technologies

1500 Medical Center Pkwy, Suite 2A
Murfreesboro, TN 37129
615-907-7460 - info@greenrisetech.com

for

Florida Product Approval

FL 41859.1 R2

Florida Building Code 8th Edition (2023)

Per Rule 61G20-3

Method: 2 - B

Category: Roofing

**Sub - Category: Roofing Accessories that are an Integral
Part of the Roof System**

Product: GRO Porcelain Paver & Paver Grate

Description: Insulated Paver system elevated above roof system

Support: Concrete Deck

Prepared by:

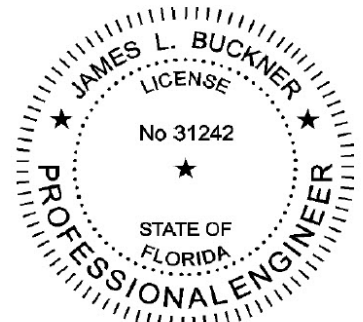
James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Report No. 01_25-722-Por-ER8
(Revises Report No. 01_23-574-Por-ER8)
Date: 03/23/2025

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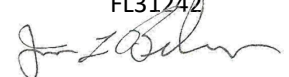
Evaluation Report

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This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



James L. Buckner, P.E.
FL31242



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Manufacturer:	Greenrise Technologies
Product Name:	Porcelain Paver & Paver Grate System
Product Category:	Roofing
Product Sub-Category:	Roofing Accessories that are an Integral part of the Roofing System
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Spray Foam Description:	GRO Porcelain Pavers can be used to create patio, terrace, and gathering spaces or to add walking paths to rooftop areas. Made for outdoor use, these pavers are slip, chemical, and fade resistant, and a no maintenance product. When installed on GRO Pedestals they offer a practical way to hide and protect roof penetrations, pipes, and uneven surfaces. GRO Porcelain Pavers are available in a variety of aesthetic colors, textures, and sizes, and are a MADE IN THE USA product.
Evaluated Models:	Porcelain Tile Paver – nominal 2' x 2' x 3/4 "
Evaluated Use:	Insulated Pedestal paver system elevated above rood membrane & concrete deck
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: Layers from Top to Bottom - Porcelain Pavers & Paver Grates - mechanical connection to Pedestal - Pedestals - adhered - Owen Corning Foamular 600 insulation board - Adhered - Henry Company Waterproofing/Roofing Membrane -adhered to deck - Structural concrete deck - support for paver assembly
Support:	Type: Concrete Deck plus Henry Company Roofing (NOA 19-0828.03) Description: <u>Deck Material:</u> Structural Concrete Compressive Strength: 2,500 psi. Minimum <u>Henry Company</u> , Henry 790-11Rubberized asphalt waterproofing/roofing membrane per Miami-Dade NOA 19-0828.03 (Design of support is outside the scope of this evaluation.)
System Slope:	Slope shall be in compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer's recommendations.

Performance:**Wind Uplift Resistance:**

Allowable Design Resistance

Full assembly load path Uplift Resistance,Load Path = Top of Paver down to attachment
to concrete deck

* Design Uplift Pressure:

- 105 PSF LB/Sq FT Pressure**Supplemental Uplift Data:**Capacity of one corner of paver/grate
to top of pedestal connection**- 210 LB Force**Capacity bottom of pedestal load path
thru Insulation & Henry system
to the concrete deck**- 475 LB Force**** Allowable design pressure(s) for allowable stress design (ASD) with a margin of safety of 2 to 1.***Performance Standards:** The following test protocol was performed to demonstrate compliance with the intent of the code.

- Miami-Dade TAS 114-11 Appendix D – Test Procedure for Simulated Uplift Pressure Resistance of Adhered Roofing

Code Compliance:

The product described herein has demonstrated compliance with Florida Building Code 8th Edition (2023), per Section 1708.2

Evaluation Report Scope:

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Scope of “Limitations and Conditions of Use” for this evaluation:
This evaluation report for “Optional Statewide Approval” contains technical documentation, specifications and installation method(s) which include “Limitations and Conditions of Use” throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”.
- Option for application outside “Limitations and Conditions of Use”
Rule 61G20-3.005(1)(e) allows engineering analysis for “project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code”. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- The Scope of this evaluation is limited to structural uplift properties.
- Design of support system is outside the scope of this report. Deck shall be in compliance with applicable building code.

- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

Quality Assurance:

The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Nemo Cert, LLC (INSPECT)** (FBC Organization ID# QUA12361).

**Components/Materials
(As Evaluated):****Porcelain Paver**

Size: 24 in x 24 in x 0.75 in (nominal)
Material: Porcelain
Weight: 25 LB
Breaking Strength: => 250 lbf (per ASTM C648)

GRO Pedestal & Kit

Material: Pedestal - ID = GRO Fixed Head, Adjustable Height
polypropylene blend, Compressive Strength=> 3,000 PSF
other pieces -various materials

Paver Grate

Material A blend of nylon, glass and stabilizer
Dimensions 23.5" x 23.5" x 1.1"
Weight 5.2 lbs per grate

Adhesive -Pedestal Base

Mfg: Henry Adhesive per NOA19-0828.83

Owen Corning Foamular 600 insulation board

Material: Extruded Polystyrene (XPS)
Thickness = 2 inch max.

Adhesive Board to membrane:

Product: 3M 550 adhesive

Installation:**Installation Method:**▪ **Surface Preparation:**

The surface intended to be adhered to must be clean, dry and free of all dirt and contaminants.

Refer to Refer to additional details with in this report

Installation shall comply with this report, applicable code sections of FBC 8th Edition (2023) subject to the Limitations and Conditions of Use listed in this Evaluation Report and manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

1. TAS 114-11 Appendix D, Uplift Resistance Test
By Atlantic Caribbean Roof Consulting, LLC.
(FBC Organization #TST ID: 4671)
Report #: ACRC 22-003, Date: 02 / 23 /22
pav – conc
2. TAS 114-11 Appendix D, Modified Force Uplift Resistance Test
By Atlantic Caribbean Roof Consulting, LLC.
(FBC Organization #TST ID: 4671)
Report #: ACRC 21-020, Date: 01 / 05 /23
ped-conc
3. Quality Assurance
Nemo Cert, LLC (INSPECT) (FBC Organization ID# QUA12361)
4. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

Installation Method

A 23.5" x 23.5" x 3/4" thick Porcelain Tile adhered to a 23.5" x 23.5" GT Structural Grate with Henry BES Adhesive applied at a rate of 26.4 Fl. Oz. per grate and set over GT Pedestals at every corner and fastened with GT Fastening Kit (two 1-1/2" x 3/16" washer and a screw) to the head of the GRO pedestals. GT Pedestals base is fully adhered to the Owen Corning Foamular 600 with Henry BES Adhesive applied at rate of 5.0 fl. Oz. per pedestal. 2" thick Owens Corning Foamular 600 Extruded Polystyrene Insulation is adhered to HENRY Protection Course using 3M 550 Adhesive applied in 1/4" wide beads spaced 6" apart.

HENRY G100s/s Protection course set in hot 790-11 Rubberized asphalt applied at a rate of 125 mil thick over a reinforcing polyester fabric set in 790-11 hot Rubberized asphalt applied at a rate of 90 mil thick over the primed concrete deck.

Structural concrete deck primed with HENRY 910-01 Asphalt Primer.

