



ENGINEERING EXPRESS® PRODUCT EVALUATION REPORT

June 9th, 2020

Application Number: FL17003.1-R8
EX Project Number: 20-26197

Product Manufacturer: Town and Country Industries
Manufacturer Address: 400 West McNab Road
Ft. Lauderdale, FL 33309

Product Name & Description: Eyewall Armor Fabric Shutter

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 #20-26197 titled "Eyewall Armor Fabric Shutter", sheets 1-6, by Engineering Express, 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 ASTM E330-02 & E330-14 test standards per test report(s) #C9417.01-450-44 (signed and sealed by Vinu J. Abraham, PE), #C9417.02-450-44 (signed and sealed by Shawn G. Collins) and #G0563.01-450-44 (signed and sealed by Joseph A. Reed) by Architectural Testing, Inc. (ATI). Additional static structural load testing has been tested in accordance with ASTM E330 per test report #NCTL-210-4131-01 (signed by Mark Bennet) by National Certified Testing Laboratories.

Large missile impact resistance and cyclic loading performance have been tested in accordance with ASTM E1886-05 & E1886-13a, E1996-12 & E1996-14a and TAS 201, 202 and 203 test standards per test report(s) #C9417.01-450-44 (signed and sealed by Vinu J. Abraham, PE), #C9417.02-450-44 (signed and sealed by Shawn G. Collins) and #G0563.01-450-44 (signed and sealed by Joseph A. Reed) by Architectural Testing, Inc. (ATI). Additional large missile impact resistance and cyclic loading performance has been tested in accordance with ASTM E1886-05 & ASTM E1996-14 per test report #NCTL-210-4131-01 (signed by Mark Bennet) by National Certified Testing Laboratories.

- **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. Maximum Allowable Spans
2. Minimum Glass Separation
3. Anchor Spacing

TOWN & COUNTRY INDUSTRIES — EYEWALL ARMOR FABRIC SHUTTER**4. Anchor Capacity**

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

For installations outside the HVHZ, separation from glazing is required for use within essential facilities per ASTM E 1996-09.

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.

Wind Load Resistance

This product has been designed to resist wind loads as indicated in the span schedule(s) on the Product Evaluation Document (i.e. engineering drawing).

Installation

The product listed above shall be installed in strict compliance with the Product Evaluation Document (i.e. engineering drawing), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation Document (i.e. engineering drawing).

Limitations & Conditions of Use:

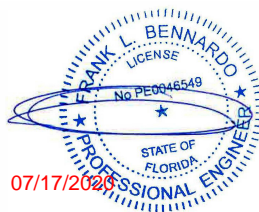
Use of this product shall be in strict accordance with the Product Evaluation Documents (the engineering drawing) as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in this product's respective anchor schedule. Host structure conditions which are not accounted for in this 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.

This product has been designed for use within and outside the High Velocity Hurricane Zone (HVHZ).

Respectfully,



Frank Bennardo, PE
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