Engineering Express® (EX)
Product Evaluation Report

August 15, 2023

Application Number: FL13757.2-R10
EX Project Number: 23-61155

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

Product Name & Description: 6.8 Streamline Shutter
Large Missile Impact Resistant Accordion 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 standard ASCE 7-22 (ASD) and Florida Building Code Seventh Eighth (2023) and is, for the purpose intended, at least equivalent to that required by the Standard and Code. Re-evaluation of this product shall be required following pertinent Florida Building Code or ASCE Standard modifications or revisions.

Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

EX Performance Evaluation document # 23-61155 titled “6.8 Streamline Shutter”, prepared by Engineering Express, Inc., signed & sealed by Colby Bennardo, P.E. is an integral part of this Evaluation Report, pages 1 through 12.

- **TEST REPORTS** ***(IF APPLICABLE)***

The product has been tested per the following:

Test Lab	Test Report #	Test Standard	Test Description	Signed & Sealed By:
Hurricane Engineering & Testing inc. (HETI)	HETI-10-3024 & HETI-10-3026 & HETI-10-3033 & HETI-10-3034	ASTM E330-02 & TAS 202	Uniform static structural performance	Candido F. Font, PE
Hurricane Engineering & Testing inc. (HETI)	10-3035 & 10-3036 & 10-3037 & 10-3038 & 10-3039 & 10-3043 & 10-3042 & 10-3041 & 10-3040	ASTM E1886-05 & E1996-05 / TAS 201 & 203	Large missile impact resistance and cyclic loading performance	Candido F. Font, PE
Hurricane Testing Laboratory	0353-1102-07	ASTM E1886-05 & E1996-05 / TAS 201 & 203	Large missile impact resistance and cyclic loading performance	Vinu J. Abraham, PE

- **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. Maximum Allowable Design Pressures
3. Minimum Glass Separation
4. System Porosity
5. Anchor Spacing
6. Anchor Capacity

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

Separation from glazing is required for use within the HVHZ.

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 its respective Performance Evaluation document (i.e., engineering document).

Installation:

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

The product components shall be of the material specified in the Performance Evaluation document (i.e. engineering document).

Limitations & Conditions of Use:

The use of each product shall be in strict accordance with its respective Performance Evaluation document (i.e., engineering document) 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. Any alteration to the respective Performance Evaluation document will invalidate it. This product has been designed for use inside and outside of the High Velocity Hurricane Zone (HVHZ & NON-HVHZ).

Respectfully,

COLBY BENNARDO LICENSE No 95197 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Colby Bennardo
Date: 2023.08.15 16:16:26 -04'00'

Colby Bennardo, P.E.
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