



ENGINEERING EXPRESS®

PRODUCT EVALUATION REPORT

June 16, 2020

Application Number: FL17859.1-R2
EX Project Number: 20-26201

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

Product Name & Description: Maestrosshield Aluminum Roll-Up Shutter
With End Retention and Non-End Retention Slats and Rails

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**

FLB drawing #20-26201a titled "Maestrosshield Aluminum Roll-Up Shutter", sheets 1-17, and #20-26201b titled "Aluminum Storm Bars, Headers and Mullions", sheets 1-15 prepared by Engineering Express, signed & sealed by Frank L. Bennardo, P.E. are 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) #CTLA-1609W (signed and sealed by Ramesh Patel, PE), 0432-0804-06 (signed and sealed by Vinu J. Abraham, PE), and 07-550 (signed and sealed by Carlos S. Rionda, PE) by Certified Testing Laboratories (CTL), Hurricane Test Laboratory, LLC (HTL), and Fenestration Testing Laboratory, Inc. (FTL), respectively.

Large missile impact resistance and cyclic loading performance have been tested in accordance with TAS 201 & 203 test standards per test report(s) #CTLA-1609W (signed and sealed by Ramesh Patel, PE), 0432-0804-06 (signed and sealed by Vinu J. Abraham, PE), and 07-550 (signed and sealed by Carlos S. Rionda, PE) by Certified Testing Laboratories (CTL), Hurricane Test Laboratory, LLC (HTL), and Fenestration Testing Laboratory, Inc. (FTL), respectively.

- **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. Mullion Spans
4. Anchor Spacing

Town and Country Industries — Maestrosshield Aluminum Roll-up Shutter

5. Combinations
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 essential facilities per ASTM E1996-09. An equivalency letter is provided with this report for equivalency to ASTM E1996-09. Separation from glazing is required for ALL installations within the High Velocity Hurricane Zone (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 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 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 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 of the High Velocity Hurricane Zone (HVHZ).

Respectfully,



Frank Bennardo, PE
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