

Product Evaluation Report

December 15, 2011

Application Number: _____
FLB Project Number: 09-TCM-0003

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

Product Name & Description: Fullview Bahama Shutter – HVHZ & Non-HVHZ

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 9N-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 2010 Florida Building Code 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 #09-TCM-0003 titled "Fullview Bahama Shutter", sheets 1-5, prepared 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 / TAS 202 test standards per test report(s) #0353-1002-09 by Hurricane Test Laboratory, LLC (HTL).

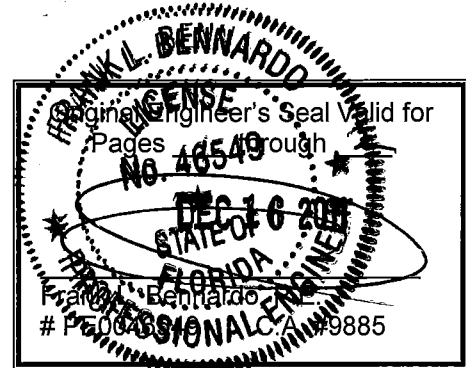
Large missile impact resistance and cyclic loading performance have been tested in accordance with ASTM E1886-05 & E1996-06 / TAS 201 & 203 test standards per test report(s) #0353-1002-09 by Hurricane Test Laboratory, LLC (HTL).

- **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. Minimum Glass Separation
2. Anchor Spacing
3. Maximum Allowable Size/Pressure Combinations
4. Anchor Capacity

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



When installed outside the HVHZ, this system has been designed as a non-porous assembly as defined in the ASTM E1996-06 standard. Therefore, a minimum separation between the shutter and any glazing behind it is NOT required outside the HVHZ except in Wind Zone 4.

Impact Resistance:

Large 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 the High Velocity Hurricane Zone (HVHZ).