

**ENGINEERING EXPRESS® EXPERT
PRODUCT EVALUATION REPORT**

April 10, 2020

Application Number: FL32029.1-R0
EX Project Number: 19-7536Product Manufacturer: American Shutter Systems Association, Inc.
Manufacturer Address: 4268 West Roads Dr.
West Palm Beach, FL 33407

Product Name & Description: 40mm Slat Bertha Roll-Up Hurricane 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 Florida Building Code Sixth Edition (2017) 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**

Engineering Express drawing #19-7536 titled "40mm Slat Bertha Roll-Up Hurricane Shutter", sheets 1-28, prepared by Engineering Express, signed & sealed by Frank Bennardo, P.E. are an integral part of this Evaluation Report.

• TEST REPORTS

Uniform static structural and large missile impact/cyclic performance has been tested in accordance with TAS 201, 202 & 203 and ASTM E330, E1996 & E1886 test standards per test report(s) #0730.01-13, 0612.01-14, 0530.01-14, 0917.01-14, 1211.01-14 (signed and sealed by Stephen Watter, P.E.), by American Test Lab of South Florida (ATL). Mullion Impact test per TAS 201 per report # 0404.01-08 (signed and sealed by Henry Hattem, P.E.)

• 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
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 as prescribed in the installation instructions.

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 the High Velocity Hurricane Zone (HVHZ),