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## PRODUCT EVALUATION REPORT

**REPORT NO.:** 08-0522.05  
**DATE:** May 22, 2008  
**PRODUCT CATEGORY:** Hurricane Shutters  
**PRODUCT SUB-CATEGORY:** Bahama Shutters  
**PRODUCT NAME:** ASSA/Bertha HV Bahama Shutter  
**SUBMITTED BY:** A.S.S.A./American Shutter Systems Association, Inc.  
4268 Westroads Drive  
West Palm Beach, Florida 33407

### 1. PURPOSE OF EVALUATION:

This is a Product Evaluation Report issued by **Walter A. Tillit, Jr., P.E.** (System ID # 1906) to the **American Shutter Systems Association, Inc. (A.S.S.A.)**, based on Rule Chapter No. 9B-72.070, Method 1d of the State of Florida Product Approval, Department of Community Affairs-Florida Building Commission.

This product is being issued an Evaluation Report as described herein, and has been verified for compliance in accordance with the 2007 edition of the Florida Building Code, and to verify that the product is for the purpose intended at least equivalent to that required by the Code.

This Product Evaluation Report shall be subject to review and revision in case of a Building Code Change that may affect its limitations and conditions.

### 2. EVIDENCE SUBMITTED:

#### 2.1. PRODUCT EVALUATION DOCUMENT (P.E.D.):

Drawing No. 08-155, titled "ASSA/BERTHA HV BAHAMA SHUTTER", sheets 1 thru 7 of 7, including sheets 3A, 4A, 5A and 6A, prepared by Tilteco, Inc.; signed and sealed by Walter A. Tillit, Jr., P.E.; dated 05/19/08. This drawing is an integral part of this Evaluation Report.

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**2.2. TEST REPORTS:**

Large missile impact and cyclic loadings in accordance with ASTM E-1886-05 and E 1996-05 Standards as per section 1609.1.2 of the Florida Building Code. Uniform Static loads in accordance with Section 1714.5.3 per ASTM E-330 Standard.

Test reports prepared by American Testing Lab of South Florida, Reports No. 0510.01-06, dated 03/01/07, signed and sealed by William Mehner, P.E. and 0621.01-07, dated 05/13/08, signed and sealed by William Mehner, P.E. and Henry Hatten, P.E.

**2.3. STRUCTURAL ENGINEERING CALCULATIONS:**

On ASSA/Bertha HV Bahama Shutter for maximum anchor spacing vs. design wind load and shutter span based on rational and comparative analysis, and in accordance with sections 1612 and 2002 of the Florida Building Code. Calculations prepared by Tilteco, Inc., dated 05/21/08, signed and sealed by Walter A. Tillit, Jr., P.E.

**3. MISSILE IMPACT RESISTANCE:**

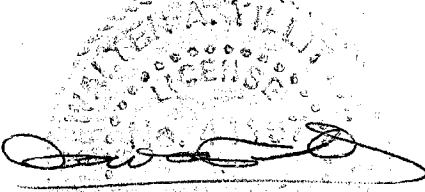
Large missile impact under section 1609.1.2 of the Florida Building Code, as per ASTM E 1886-05 and E 1996-05 Standards, qualifying missile Type "D" (basic protection).

**4. WIND LOADS RESISTANCE:**

ASSA/Bertha HV Bahama Shutter has been verified to sustain wind pressures corresponding to wind zones 1, 2 and 3 per ASTM E-1996 Standard. Maximum Shutter Span shall be as indicated on sheet 7 of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155. Maximum Anchor Spacing shall be as indicated on sheet 7 of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155. ASSA/Bertha HV Bahama Shutter has been verified for code compliance to work as a porous wind load resistant storm shutter assembly, as per ASTM E 1996-05 Standard, Section 3.2.8.

**5. INSTALLATION:**

Shall be performed strictly in accordance with the details indicated on sheets 3 thru 6A of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155. Minimum separation to glass shall be as indicated on sheet 7 of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155.

  
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**6. MATERIAL CHARACTERISTICS AND SPECIFICATIONS:**

Shall be strictly in accordance with General Notes and Components indicated on sheets 1 and 2 of 7 of Product Evaluation Document (P.E.D.), drawing No. 08-155. Anchor specifications shall be as indicated on sheets 1, 4, 4A, 5, 5A, 6 and 6A of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155.

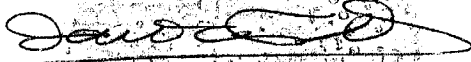
**7. LIMITATIONS AND CONDITIONS OF USE:**

7.1. Shall be strictly in compliance with General Notes No. 1, 2, 8, 9, 10, 11 and 12, indicated on sheet 1 of 7, of Product Evaluation Document (P.E.D.), drawing No. 08-155 prepared by Tilteco, Inc. and signed and sealed by Walter A. Tillit, Jr., P.E.

7.2. Product **shall not** be installed within HIGH VELOCITY HURRICANE ZONES as defined on section 1620.2 of the Florida Building Code.

7.3. Product shall only be installed into poured concrete, concrete block, and wood frame structures.

Product Evaluation Report prepared by Walter A. Tillit, Jr., P.E. (Florida License No. 44167), President of Tilteco, Inc. (Florida EB-0006719).

  
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