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## PRODUCT EVALUATION REPORT

**REPORT NO.:** 11-1207.05  
**DATE:** December 7, 2011  
**PRODUCT CATEGORY:** Hurricane Shutters  
**PRODUCT SUB-CATEGORY:** Storm Panels  
**PRODUCT NAME:** 0.040" Bertha Aluminum Storm Panel (2.25" Deep)  
**MANUFACTURER:** Eastern Metal Supply, 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 **Eastern Metal Supply, Inc.**, manufacturer, 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 2010 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.

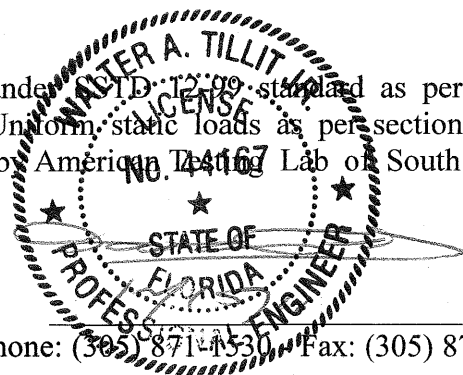
### 2. EVIDENCE SUBMITTED:

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

Drawing No. 11-224 titled "0.040" BERTHA ALUMINUM STORM PANEL (2.25" DEEP)", sheets 1, 1A thru 15 of 15 prepared by Tilteco, Inc.; signed and sealed by Walter A. Tillit, Jr., P.E.; dated 12/06/11. This drawing is an integral part of this Evaluation Report.

#### 2.2. TEST REPORTS:

Large missile impact load tests were performed under I.D. 12-99 standard as per section 1609.1.2 of the Florida Building Code. Uniform static loads as per section 1715.5.3, per ASTM E-330. Test reports prepared by American Test Lab of South



Florida, Report No. 1128.01-00, dated March 9, 2001, signed by Keith Harker, and signed and sealed by William R. Mehner, P.E. and Henry Hattem, P.E., and Report No. 0610,02-05, dated September 13, 2005, and signed and sealed by William R. Hehner, P.E. and Henry Hattem, P.E.

Tensile test report prepared by QC Metallurgical, Inc., Report No. QCM # 51M-925, dated September 20, 2005, and signed and sealed by Frank Grate, P.E., as per ASTM E 8.

Mill certificates from Easco Aluminum (extruders) certify aluminum alloys & temper for components.

**2.3. STRUCTURAL ENGINEERING CALCULATIONS:**

On 0.040" Bertha Aluminum Storm Panel (2.25" Deep) for maximum panel length vs. design wind load, as well as maximum anchor spacing vs. design wind load and panel length based on rational and comparative analysis, and in accordance with section 1604 of the Florida Building Code. Calculations prepared by Tilteco, Inc., dated 9/7/05, 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 SSTD 12-99 Standard.

**4. WIND LOADS RESISTANCE:**

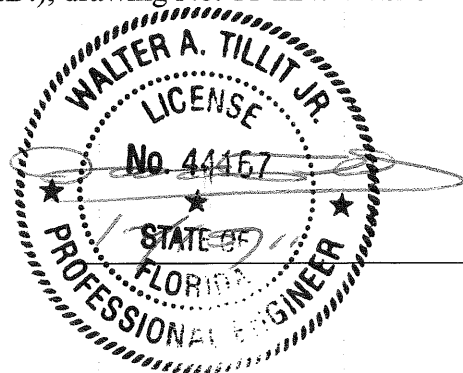
0.040" Bertha Aluminum Storm Panel (2.25" Deep) has been verified to sustain wind pressures. Maximum panel length shall be as indicated on sheet 10 of 15 of Product Evaluation Document (P.E.D.), drawing No. 11-224. Maximum Anchor Spacing shall be as indicated on sheet 10 of 15 of Product Evaluation Document (P.E.D.), drawing No. 11-224. 0.040" Bertha Aluminum Storm Panel (2.25" Deep) has been verified for code compliance to work as a non-porous storm shutter assembly, as per SSTD 12-99 Standard.

**5. INSTALLATION:**

Installation shall be performed strictly in accordance with the details indicated on sheets 3 thru 15 of 15, of Product Evaluation Document (P.E.D.), drawing No. 11-224. Minimum separation to glass shall be as indicated on sheets 3 thru 7 and 11 thru 15 of 15, of Product Evaluation Document (P.E.D.), drawing No. 11-224

**6. MATERIAL CHARACTERISTICS AND SPECIFICATIONS:**

Shall be strictly in accordance with General Notes and Components indicated on sheets 1 and 1A of 15, of Product Evaluation Document (P.E.D.), drawing No. 11-224. Anchor



specifications shall be as indicated on sheets 1, and 11 thru 15 of 15, of Product Evaluation Document (P.E.D.), drawing No. 11-224.

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

7.1. Shall be strictly in compliance with General Notes No. 1, 6, 7, 8, 9, 10 and 11, indicated on sheet 1 of 15, of Product Evaluation Document (P.E.D.), drawing No. 11-224 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).

