



TTG PROJECT NO.: KK5578.00

DATE: December 30, 2005

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**FBC EVALUATION REPORT NO.:** FL2249-R3

**CODE:** Florida Building Code 2004

**PRODUCT CATEGORY:** Shutters

**PRODUCT SUB-CATEGORY:** Accordion

**PRODUCT NAME:** 6.8 & HR Accordion Shutter  
Town and Country Industries, Inc.  
A Division of ABC Supply, Co., Inc.

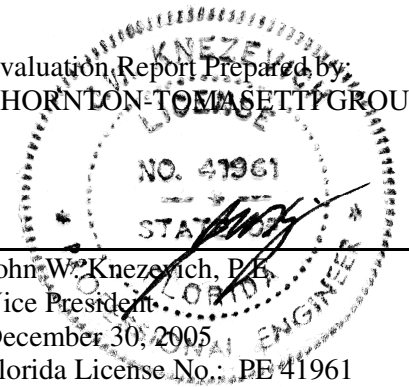
**MANUFACTURER:** 400 West McNab Road  
Fort Lauderdale, FL 33309

**1. PURPOSE OF EVALUATION REPORT**

This is an Evaluation Report issued by John W. Knezevich, P.E. (System ID No. 1754), to Town and Country Industries, Inc., based on Rule Chapter No. 9B-72.070, Method 1(d) product Approval, Florida Building Commission, Department of Community Affairs. These Accordion Shutters have been evaluated and found to be in compliance with the Code and that the products are, for the purpose intended, at least equivalent to that required by the Code.

Re-evaluation of this Evaluation Report is required, following any code changes, to maintain its validity.

Evaluation Report Prepared by  
THORNTON-TOMASETTI GROUP, INC



John W. Knezevich, P.E.  
Vice President  
December 30, 2005  
Florida License No.: PE 41961  
Florida COA No.: 7519

The seal appearing on this document was authorized by John W. Knezevich, PE 41961 on 11/18/2005. This does not constitute an electronic signature; original, signed & sealed hard copies to the appropriate agency will follow.



## 2. SUBSTANTIATING DATA

### 2.1 PRODUCT EVALUATION DOCUMENT

Town and Country Industries, Inc. 6.8 & HR Accordion Shutter, Drawing No. 05-578, with a revision one, dated December 19, 2005, Sheets 1 through 13, prepared by Thornton-Tomasetti Group Inc. (TTG, Inc.), signed, dated and sealed by John W. Knezevich, P.E. is an integral part of this Evaluation Report.

### 2.2 TEST REPORTS

- Test report for Uniform Static Air Pressure in accordance with ASTM E330-02 and successful testing of impact resistance in conformance with SSTD 12-99. Reports were prepared by Construction Testing Corporation (CTC) and Hurricane Test Laboratory, LLC (HTL), and are listed in the referenced drawings.
- Tensile Capacity of aluminum alloy extrusions was determined in accordance with ASTM E8-03/A370-03.

### 2.3 STRUCTURAL ENGINEERING CALCULATIONS

Prepared Rational and Comparative Analyses of Accordion Shutter performance, as well as anchor calculations. From these analyses, a Maximum Shutter Span vs. Design Load (PSF) Schedule was prepared for both the 6.8 Accordion and HR Accordion. An anchor spacing vs. design load (PSF) schedule was also prepared, indicating maximum anchor spacing for given span conditions at specific design loads (PSF) for each type of anchor used during testing, for both accordions.

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

## 3. IMPACT RESISTANCE

The Accordion Shutters satisfactorily passed the large missile impact testing, in accordance with SSTD 12-99. These Accordion Shutters may be used to protect glazed openings from windborne debris, when installed in accordance with the limitations indicated in their respective drawings, prepared by TTG, Inc.

## 4. WIND LOAD RESISTANCE

These Accordion Shutters have been designed to resist wind pressures as indicated by the Span Schedules of their respective referenced drawings.



### 5. ANCHORS

The maximum anchor spacing for each type of anchor, shutter span and design wind load is found in the Anchor Schedule of their respective referenced drawing.

### 6. INSTALLATION

These Accordion Shutters are to be installed in accordance with the typical details, general notes, schedules and material specifications found in their respective referenced drawing.

### 7. MATERIAL SPECIFICATIONS

See General Notes of the referenced drawings, unless otherwise noted, for material specifications. All dimensions of components are indicated in their respective referenced drawings. Anchor specifications including acceptable substrate, minimum embedment, edge distance and manufacturer are indicated in the referenced drawings.

### 8. LIMITATIONS AND CONDITIONS OF USE

- Use of these product shall be in strict conformance with the requirements of the reference drawing prepared by TTG, Inc.
- These products are NOT suitable for installation in the High Velocity Hurricane Zone.
- These products may only be installed on concrete, hollow concrete block or wood substrates. For all other conditions site specific design shall be by this office or our delegated engineer.
- Shutter spans less than 32" are not acceptable per the provisions of SSTD 12-99.

### 9. CERTIFICATE OF INDEPENDENCE

- This Florida Professional Engineer does not have, nor does he intend to acquire or will he acquire, a financial interest in any company manufacturing or distributing products tested or labeled by the agency.
- This Florida Professional Engineer is not owned, operated or controlled by any company manufacturing or distributing products he tests or labels.
- This Florida Professional Engineer performing an evaluation does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.
- This Florida Professional Engineer performing an evaluation does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.