NOTICE OF ACCEPTANCE (NOA)

Briscoe Shutters, Inc.
2841 Shoreview Drive
Naples, Florida 34112

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (in Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Aluminum Bahama Shutter

APPROVAL DOCUMENT: Drawing No. 26-0282, titled "Bahama Shutter System and Bahama over Colonial Shutter System", sheets 1 through 10 of 10, prepared by Michael Trapasso, P.E., dated January 18, 2016, signed and sealed by Michael Trapasso, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises & renews NOA # 12-0906.05 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.
The submitted documentation was reviewed by Helmy A. Makar, P.E., M.S.

NOA No. 16-0201.20
Expiration Date: 11/28/2022
Approval Date: 01/19/2017
Page 1
NOTICE OF ACCEPTANCE:  EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 02-0722.05
   A. DRAWINGS

   B. TESTS
      1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of Double Bahama shutters, prepared by Hurricane Test laboratory, Report No. 0288-1218.01, specimen #1, dated December 10-11, 2001, signed and sealed by Vinu J. Abraham, P.E.
      2. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of Double Bahama over Colonial Shutters w/ four leaf assembly, prepared by Hurricane Test laboratory, Report No. 0288-1218.01, specimen #2, dated December 13-14, 2001, signed and sealed by Vinu J. Abraham, P.E.

   C. CALCULATIONS
      1. Anchor analysis prepared by Briscoe shutter, Inc., signed and sealed by Arthur C. Quinnell, P.E.

   D. MATERIAL CERTIFICATIONS

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #07-0713.06
   A. DRAWINGS
      1. None.

   B. TEST
      1. None.

   C. CALCULATIONS
      1. None.

   D. QUALITY ASSURANCE
      1. By Miami-Dade County Building Code Compliance Office.

   E. MATERIAL CERTIFICATION
      1. None.

[Signature]
Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 16-0201.20
Expiration Date: 11/28/2022
Approval Date: 01/19/2017
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 09-0122.07

A. DRAWINGS
   1. Drawing No. 26-0282, titled “Bahama Shutter System and Bahama over Colonial Shutter System”, sheets 1 through 11 of 11, prepared by Michael Trapasso, P.E., dated August 17, 2009, signed and sealed by Michael Trapasso, P.E.

B. TESTS
   1. Test report on Uniform Static Air Pressure Test of Bahama shutter System and Bahama over Colonial Shutter System, prepared by Hurricane Test laboratory, LLC Report No. 0288-0611-07, specimen #1, dated May 05, 2008, signed and sealed by Vinu J. Abraham, P.E.
   2. Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of Bahama shutter System and Bahama over Colonial Shutter System, prepared by Hurricane Test laboratory, Report No. 0288-0611-07, specimen #1A, dated May 05, 2008, signed and sealed by Vinu J. Abraham, P.E.
   3. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of Bahama shutter System and Bahama over Colonial Shutter System, prepared by Hurricane Test laboratory, Report No. 0288-0314-08, specimen #2, dated May 05, 2008, signed and sealed by Vinu J. Abraham, P.E.
   4. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of Bahama shutter System and Bahama over Colonial Shutter System, prepared by Hurricane Test laboratory, Report No. 0288-0314-08, specimen #3, dated May 05, 2008, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS
   1. Anchor analysis prepared by Briscoe shutter, Inc., signed and sealed by Michael Trapasso, P.E.

D. QUALITY ASSURANCE
   1. By Miami-Dade County Building Code Compliance Office.

E. MATERIAL CERTIFICATION

[Signature]
Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 16-0201.20
Expiration Date: 11/28/2022
Approval Date: 01/19/2017
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 12-0906.05
   
   A. DRAWINGS
      1. Drawing No. 26-0282, titled "Bahama Shutter System and Bahama over Colonial Shutter System", sheets 1 through 10 of 10, prepared by Michael Trapasso, P.E., dated September 01, 2012, signed and sealed by Michael Trapasso, P.E.

   B. TESTS
      1. None.

   C. CALCULATIONS
      1. Revision analysis prepared by Briscoe shutter, Inc., dated September 05, 2012, signed and sealed by Michael Trapasso, P.E.

   D. QUALITY ASSURANCE
      1. By Miami-Dade County Department of Regulatory and Economic Resources.

   E. MATERIAL CERTIFICATION
      1. None.

5. NEW EVIDENCE SUBMITTED
   
   A. DRAWINGS
      1. Drawing No. 26-0282, titled "Bahama Shutter System and Bahama over Colonial Shutter System", sheets 1 through 10 of 10, prepared by Michael Trapasso, P.E., dated January 18, 2016, signed and sealed by Michael Trapasso, P.E.

   B. TESTS
      1. None.

   C. CALCULATIONS
      1. None.

   D. QUALITY ASSURANCE
      1. By Miami-Dade County Department of Regulatory and Economic Resources.

   E. MATERIAL CERTIFICATION
      1. None.

   F. STATEMENTS


Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 16-0201.20
Expiration Date: 11/28/2022
Approval Date: 01/19/2017
BAHAMA SHUTTER SYSTEM and
BAHAMA over COLONIAL SHUTTER SYSTEM

Maximum Design Pressures
Bahama & Colonial Shutters
+ 84.7 psf & -113.3 psf
Bahama Over Colonial Shutter
+ 77 psf & -77 psf

Glass Separation Sheet 6-9

US 7,151,480 B2

BISI
BRISCOE SHUTTERS INC.
2841 Shoreview Drive
Naples FL 34112
www.bsishutters.com
Office: 299-774-2075
Fax: 299-774-9455

MICHAEL TRAPASSO
PROFESSIONAL ENGINEER #62452

PRODUCT REVISED as complying with the Florida
Building Code Acceptance
Expiration Date: 11/28/2022
By Miami Dade Product Control

DRAWING NO. 26-0282 SHEET NO. 1 of 10
DATE: 01/18/16

TEST SHUTTER #1 - DESIGN PRESSURE + 79.2 psf & - 90.2 psf
BUILD OUT FRAME: 8' 6-1/2" (w) x 9' 0-3/4" (h)
ONE BAHAMA & ONE COLONIAL SHUTTER LEAVES
EACH LEAF @ 4'-0" (w) x 8'-9-3/4" (h)

TEST SHUTTER #2 - DESIGN PRESSURE + 84.7 psf & -113.3 psf
BUILD OUT FRAME: 2'-0" (w) x 2'-3-5/8" (h)
BAHAMA LEAF: 2'-0" (w) x 1'-11-5/8" (h)

TEST SHUTTER #3 - DESIGN PRESSURE + 62.5 psf & -108.9 psf
BUILD OUT FRAME: 2' 8-1/2" (w) x 3'-4-1/16" (h)
BAHAMA LEAF: 2'-6" (w) x 5'-0-11/16" (h)

GENERAL NOTES SHEET 10: TEST STANDARDS, WIND SPEED CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING,
ADJUSTMENT FACTOR FOR BUILDINGS HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER CALCULATIONS & LOCATIONS
BAHAMA SHUTTER SYSTEM and
BAHAMA over COLONIAL SHUTTER SYSTEM

Maximum Design Pressures
Bahama & Colonial Shutters
+ 84.7 psf & -113.3 psf
Bahama Over Colonial Shutters
+ 77 psf & -77 psf

Glass Separation Sheet 9

Patent No: US 6,996,934 B2
US 7,131,480 B2

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MICHAEL TRAPASSO
PROFESSIONAL ENGINEER #634B2

PRODUCT REVISION
as complying with the Florida
Building Code
Approval No: 16-0281.20
Expiration Date: 12/28/2022

By:
Miami Date: Product Control

DRAWING NO. 26-0282 SHEET NO. 2 of 10
DATE: 01/18/16

BUILD OUT FRAME (BOF)

7'-7 3/8" (2.35 m) MAXIMUM - BAHAMA over COLONIAL WIDTH
3'-7 1/8" MAX LEAF WIDTH / 1'-8 1/2" MAX LEAF WIDTH
5'-1 5/16" 1'-5 9/16" 5'-1 5/16" 1'-5 9/16" 10'-1/2"
1'-10 1/8" 1'-10 1/8" 1'-10 1/8" 1'-10 1/8"

BAHAMA over COLONIAL SHUTTER SYSTEM - DESIGN PRESSURE: + 77 psf & - 77 psf

GENERAL NOTES SHEET 10: TEST STANDARDS, WIND SPEED CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING, ADJUSTMENT FACTOR FOR BUILDING HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER CALCULATIONS & LOCATIONS
BAHAMA SHUTTER SYSTEM and
BAHAMA over COLONIAL SHUTTER SYSTEM

Maximum Design Pressures
Bahama & Colonial Shutters
+ 84.7 psf & -113.3 psf
Bahama Over Colonial Shutter
+ 77 psf & -77 psf

Glass Separation Sheet 9

Patent No 156,896,954.02
25,715,400.02

3609 COTTAGE CLUB LANE
NAPLES, FL 34109

MICHAEL TRAPASSO
PROFESSIONAL ENGINEER 10,62482

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OFFICE: 259-774-2025
FAX: 259-774-9483

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No
Expiration Date 11/12/2022

By
Marsil Pappas & Associates

DRAWING NO.
26-0282
SHEET NO.
4 of 10
DATE: 01/18/16

HINGE ASSEMBLY

1 BAHAMA SHUTTER, 4'-1" (49"") (w)
Hinges - 2 sets of 3 leaf hinges at the top per shutter, (3 leaves at the build out frame & 2 leaves at the shutter, with 3 screws per leaf)

2 BAHAMA SHUTTER, 5'-7" (53"") (w)
Hinges - 1 set, 7 leaf hinge at the top per shutter, (4 leaves at the build out frame & 3 leaves at the shutter, with 3 screws per leaf)

3 BAHAMA SHUTTER, 2'-6" (30"") (w)
Hinges - 1 set of 5 leaf hinges at the top per shutter, (3 leaves at the build out frame & 2 leaves at the shutter, with 3 screws per leaf)

HOLD CLOSE TABS

1 BAHAMA SHUTTER, 4'-1" (w) x 6'-8"-3/4" (h) - 4 tabs, 2 @ 9" in from outside edge jambs & 2 @ 3" each side of center line

2 BAHAMA SHUTTER, 5'-7" (w) x 6'-0" (h) - 2 tabs, 5" to 6" in from outside edge jambs

SHUTTER TOLERANCES: Any combination of width x height not to exceed 35.64 sq ft per leaf is allowed within the design pressure

BAHAMA SHUTTER SYSTEM ASSEMBLY:

BAHAMA LEAF: Width 4'-1" (49""). Height 8'-8"-3/4" (103-5/4""). GENERAL NOTE #7

BAHAMA over COLONIAL SHUTTER SYSTEM ASSEMBLY:

COMBINED BAHAMA & COLONIAL: BOP Width 7'-7-1/8" (91-5-8""). Height 11'-11" (143""). GENERAL NOTE #7

MAXIMUM BAHAMA LEAF: Width 5'-7-1/8" (53-1-8""). MAXIMUM COMBINED HEIGHT - BAHAMA HEIGHT

PLUS COLONIAL HEIGHT NOT TO EXCEED 10'-6" (126""). GENERAL NOTE #7

MAXIMUM COLONIAL LEAF: Width 9'-1/2" (28""). MAXIMUM COMBINED HEIGHT - BAHAMA HEIGHT

PLUS COLONIAL HEIGHT NOT TO EXCEED 10'-6" (126""). GENERAL NOTE #7

COLONIAL SHUTTER SYSTEM ASSEMBLY:

COLONIAL LEAF: Width 2'-2" (26""). Height 10'-8" (128""). GENERAL NOTE #7

COLONIAL LEAF: Width 4'-1" (49""). Height 8'-3-1/4" (103-3/4""). GENERAL NOTE #7

GENERAL NOTES SHEET IO: TEST STANDARDS, WIND SPEED CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING, ADJUSTMENT FACTOR FOR BUILDINGS HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER CALCULATIONS & LOCATIONS
NOTES:

A** DEPTH OF BUILD OUT FRAME 1 - REFER TO SHEET 9 "MINIMUM GLASS SEPARATION"
B*** DIMENSION VARIES, SLAT SPACING TO ACCOMMODATE FULL SLAT (1/4" x 1" FLAT BAR @ 45 DEGREE) IN SLAT WELD GUIDES 5 & 6
C**** WIDTH VARIES MINIMUM 3"

GENERAL NOTES SHEET 10: TEST STANDARDS, WIND LOADS CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING, ADJUSTMENT FACTOR FOR BUILDINGS HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER CALCULATIONS & LOCATIONS
BAHAMA SHUTTER SYSTEM and BAHAMA OVER COLONIAL SHUTTER SYSTEM

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MICHAEL TRAPASSO
PROFESSIONAL ENGINEER #62482

PRODUCT REVISION
as complying with the Florida Building Code
Acceptance No. I6-020120
Expiration Date 11/30/2024

DRAWING NO. 26-0282 | SHEET NO. 6 of 10
DATE: 01/18/16

NOTES:
A** DEPTH OF BUILD OUT FRAME (1) = REFER TO SHEET 9 "MINIMUM GLASS SEPARATION"
B** DIMENSION VARY: SLAT SPACING TO ACCOMODATE FULL SLAT (1/4 x 1 Flat Bar @ 45-Degree) IN SLAT WELD GUIDES (5) & (6)
C*** WIDTH VARY: MINIMUM 3"

GENERAL NOTES SHEET 10: TEST STANDARDS, WIND SPEED CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING, ADJUSTMENT FACTOR FOR BUILDINGS HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER SCHEDULES & LOCATIONS
**DESCRIPTION OF MATERIAL**

<table>
<thead>
<tr>
<th>Item#</th>
<th>DESCRIPTION OF MATERIAL</th>
<th>SIZE</th>
<th>TYPE</th>
<th>MATERIAL GRADE</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>BUILD OUT FRAME</td>
<td>A x C x 1/8 x 1/8&quot;</td>
<td>TUBE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>2</td>
<td>SHUTTER FRAME</td>
<td>1 1/2 x 2&quot; x 1/8&quot;</td>
<td>TUBE</td>
<td>ALUMINUM 6063-T52</td>
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<td>3</td>
<td>SPACER</td>
<td>1 x 1&quot; x 1/8&quot;</td>
<td>TUBE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>4</td>
<td>HORIZONTAL MULLION</td>
<td>1 1/2 x 2&quot; x 1/8&quot;</td>
<td>TUBE</td>
<td>ALUMINUM 6063-T52</td>
</tr>
<tr>
<td>5</td>
<td>SLAT WELD GUIDE RIGHT</td>
<td>1 x 1&quot; x 1/8&quot;</td>
<td>ANGLE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>6</td>
<td>SLAT WELD GUIDE LEFT</td>
<td>1 x 1&quot; x 1/8&quot;</td>
<td>ANGLE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>7</td>
<td>VERTICAL MULLION RIGHT</td>
<td>1 x 1&quot; x 1/8&quot;</td>
<td>ANGLE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>8</td>
<td>VERTICAL MULLION LEFT</td>
<td>1 x 1&quot; x 1/8&quot;</td>
<td>ANGLE</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>9</td>
<td>SLATS</td>
<td>1/4&quot; x 1&quot;</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>10</td>
<td>JAMB WELD GUIDE COVER</td>
<td>1 x 1/8&quot;</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6063-T52</td>
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<td>11</td>
<td>VERTICAL MULLION BACK COVER</td>
<td>1/8&quot; x 2&quot;</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>13</td>
<td>HOLD CLOSE TAB</td>
<td>1/4&quot; x 1&quot; x Varies</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>14</td>
<td>HOLD OPEN TAB</td>
<td>1/4&quot; x 1&quot; x Varies</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>15-15&quot;</td>
<td>SHUTTER CLOSURE THUMBSCREW</td>
<td>1/4&quot; x 1&quot; or *1/12&quot;</td>
<td>THUMBSCREW</td>
<td>STAINLESS STEEL</td>
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<td>16</td>
<td>INSIDE CLOSURE ROD</td>
<td>3/8&quot; x Varies PER SHUTTER</td>
<td>ROD</td>
<td>ALUMINUM 6063-T52</td>
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<tr>
<td>17</td>
<td></td>
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<tr>
<td>18</td>
<td>HINGE ASSEMBLY</td>
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<tr>
<td>19</td>
<td>SINGLE HINGE</td>
<td>3/16&quot; x 2-7/8&quot; x 1-5/8&quot;</td>
<td>ALUMINUM 6061-T6</td>
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<tr>
<td>20</td>
<td>FLAT HINGE</td>
<td>3/16&quot; x 2-7/8&quot; x 1-5/8&quot;</td>
<td>ALUMINUM 6061-T6</td>
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<tr>
<td>21</td>
<td>HINGE SCREWS</td>
<td>#10 x 1&quot; or 3 AT EACH HINGE LEAF</td>
<td>HEX SELF-DRILLING</td>
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<tr>
<td>22</td>
<td>HINGE PIN</td>
<td>3/8&quot; DIAMETER</td>
<td>ROD</td>
<td>ALUMINUM 6063-T52</td>
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<td>23</td>
<td></td>
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<td>24</td>
<td>BUILD OUT FRAME FASTENERS</td>
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<tr>
<td>25</td>
<td>CONCRETE BLOCK HOLLOW</td>
<td>1/4&quot; x MIN EMBED 1 1/4&quot;</td>
<td>S.S. CONC. SCREW</td>
<td>ELCO IND. or EQUAL</td>
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<tr>
<td>26</td>
<td>CONCRETE BLOCK, Conc. Fill</td>
<td>1/4&quot; x MIN EMBED 1 1/4&quot;</td>
<td>S.S. CONC. SCREW</td>
<td>ELCO IND. or EQUAL</td>
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<tr>
<td>27</td>
<td>WOOD FRAMING</td>
<td>1/4&quot; x MIN. EMBED 1 1/4&quot;</td>
<td>LAG BOLT or SS CONC. SCREW</td>
<td>ELCO IND. or EQUAL</td>
</tr>
<tr>
<td>28</td>
<td>WOOD FRAMING</td>
<td>5/16&quot; x MIN. EMBED 1 1/4&quot;</td>
<td>LAG BOLT or SS CONC. SCREW</td>
<td>ZINC, SS or EQUAL</td>
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<td>29</td>
<td>METAL FRAMING</td>
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<td>TEK SCREW</td>
<td>TEK SELF-DRILLING</td>
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<td>30</td>
<td>HORIZONTAL MULLION</td>
<td>2&quot; x 2&quot; x 1/4&quot;</td>
<td>TUBE</td>
<td>ALUMINUM 6061-T6</td>
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<tr>
<td>31</td>
<td>HORIZONTAL MULLION STIFFENER</td>
<td>1/2&quot; x 1-1/2&quot;</td>
<td>FLAT BAR</td>
<td>ALUMINUM 6061-T6</td>
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<tr>
<td>32</td>
<td>HOLD OUT ROD</td>
<td>1/4 x 24&quot; MAXIMUM, 3/8&quot; x 48&quot; MAXIMUM</td>
<td>ROD</td>
<td>ALUMINUM 6063-T52</td>
</tr>
</tbody>
</table>

**ASSEMBLY METHOD:**

**SHUTTER FRAME**

1. SHUTTER FRAME CORNER CONSTRUCTION, AT EACH PANEL CORNER, THE ADJOINING STILE / RAIL ENDS ARE MITER CUT, BUTTED AND WELDED TOGETHER USING TWO (2) 1/4" x 2-13/16" FILET WELDS - ONE PER FACE, EACH FACE WELD IS GROUND DOWN SMOOTH.

2. INTERMEDIATE RAIL END CONSTRUCTION, AT EACH INTERMEDIATE RAIL END, THE RAIL IS SQUARE CUT, BUTTED AND WELDED TO THE ADJACENT PANEL FRAME MEMBER USING TWO (2) 1/4" x 2" FILET WELDS - ONE PER FACE, EACH FACE WELD IS GROUND SMOOTH.

3. SLAT WELD GUIDES WELDED TO THE SHUTTER FRAME JAMBS ON THE INSIDE AT 6° O/C, TOP AND BOTTOM.

4. VERTICAL MULLION WELD GUIDE; ONE RIGHT WELD GUIDE AND ONE LEFT WELD GUIDE WELDED TOGETHER ON THE INSIDE AT 6° O/C, THIS MEMBER IS WELDED TO THE HEAD, MULLIONS, AND SILL.

5. SLANTED SLAT CONSTRUCTION, ALL SLATS ARE SQUARE CUT AND WELDED AT EACH END TO THE ADJACENT PANEL STILE MEMBER USING ONE (1) 1/4" x 1" FILET WELD.

**BUILD OUT FRAME**

2. BUILD OUT FRAME CONSTRUCTION, AT EACH CORNER THE ADJOINING STILE / RAIL ENDS ARE MITER CUT, BUTTED AND WELDED TOGETHER USING TWO (2) 1/4" x 4-1/4" (1 x 3) OR TWO (2) 1/4" x 5 11/16" (1 x 4) FILET WELDS - ONE PER FACE, EACH FACE WELD IS GROUND DOWN SMOOTH.
BAHAMA SHUTTER SYSTEM and
BAHAMA over COLONIAL SHUTTER SYSTEM

Maximum Design Pressures
Bahama & Colonial Shutters
+ 64.7 psf & -113.3 psf
Bahama Over Colonial Shutter
+ 77 psf & -77 psf

Glass Separation Sheet 9
Patent No US 6,996,994 B2
US 7,154,480 B2

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EXAMPLE
A 41.6 sq ft, shutter has a
positive 64.7 psf
design pressure.
41.6 sq ft. x 64.7 psf
= 2692.28 lb design load.

PSI HURRICANE SHUTTER SYSTEMS HAS A BUILD OUT FRAME (BOF) THAT ATTACH TO THE BUILDING INSIDE CLEAR OPENING IS 1 1/4" LARGER THAN BUILDING OPENING. DEPTH OF BOF IS GOVERNED BY THE GLASS SEPARATION, SHUTTERS ARE FACTORY ASSEMBLED TO THE BOF THEN DISASSEMBLED FOR SHIPPING & INSTALLATION.

BUILD OUT FRAME DEPTH IS GOVERNED BY THE GLASS SEPARATION FURTHEST OUTWARD GLASS SURFACE TO BACK OF SLITTER SLATS.

DISTANCE FROM FACE OF BUILDING TO FURTHEST OUTWARD GLASS SURFACE, MINUS (-) MINIMUM GLASS SEPARATION = DEPTH OF BUILD OUT FRAME (MINIMUM DEPTH 1")

MINIMUM GLASS SEPARATION BACK OF SLATS TO GLASS

<table>
<thead>
<tr>
<th>SHUTTER SIZE</th>
<th>MAX. SQ. FT.</th>
<th>TYPE OF SHUTTER</th>
<th>SEPARATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>24&quot; x 25.625&quot;</td>
<td>3.94 sq ft. to 12.64 sq ft</td>
<td>BAHAMA or COLONIAL</td>
<td>2-1/4&quot;</td>
</tr>
<tr>
<td>30&quot; x 60.625&quot;</td>
<td>3.94 sq ft. to 12.64 sq ft</td>
<td>BAHAMA or COLONIAL</td>
<td>2-3/4&quot;</td>
</tr>
<tr>
<td>49&quot; x 104.75&quot; &amp; 26&quot; x 128&quot;</td>
<td>12.65 sq ft &amp; 25.64 sq ft</td>
<td>BAHAMA or COLONIAL</td>
<td>2-3/4&quot;</td>
</tr>
<tr>
<td>ALL SIZES</td>
<td>64.4 sq ft</td>
<td>BAHAMA over COLONIAL</td>
<td>3-1/4&quot;</td>
</tr>
</tbody>
</table>

ANY COMBINATION OF WIDTH x HEIGHT NOT TO EXCEED 35.64 sq ft. PER LEAF IS ALLOWABLE WITHIN THE DESIGN PRESSURE. GENERAL NOTE #7 SHEET 10

EXAMPLE
A 45.4 sq ft, shutter has a
negative 85.2 psf
design pressure.
45.4 sq ft. x 85.2 psf
= 3868.08 lb design load.

GENERAL NOTES SHEET 10: TEST STANDARDS, WIND SPEED CONVERSIONS, WIND LOADS - COMPONENTS & CLADDING, ADJUSTMENT FACTOR FOR BUILDINGS HEIGHT & EXPOSURE, SHUTTER LEAF SIZES, FASTENER CALCULATIONS & LOCATIONS
GENERAL NOTES:
1. This product is designed & tested in accordance with the Florida Building Code 5th Edition (2014). Building & Residential; for use within and outside the high velocity hurricane zone, first standards: T.S. 2011, 202, 203.

2. This product is designed & tested in accordance with the Florida Building Code 5th Edition (2014). Building Chapter 16 - Structural Design & Chapter 24 - Glass & Glazing.

3. This product is designed & tested in accordance with the Florida Building Code 5th Edition (2014). Residential Chapter 44 High-Velocity Hurricane Zones.

4. ASCE 7-10, Chapter 30 (p. 346) Wind Loads - Components and Cladding - Method 1, Net Design Wind Pressures, Part 30 (psf) (Exposure B at h = 30 ft.) Note: For effective areas between the those given above the load may be interpolated, otherwise use the load associated with the lowest effective area.

5. ASCE 7-10, Chapter 30 (p. 347), Minimum Design Loads - Components in Cladding Method 1, Adjustment Factor for Building Height and Exposure B, C, & D.

6. FASTENER CALCULATIONS & LOCATIONS:
   Width x Height x Design Pressure (6a) / Fastener Strength (6b) = Total Number of Fasteners Required per Opening (6c)
   Design Pressure Required Building Data: Wind Velocity (mph), Importance Factor, Exposure Category, Internal Pressure Coefficient +/-, Mean Roof Height, Building Width, Building Length, & Roof Slope (6/12)
   Fastener Strength, Allowable Loads Equal to 25% of the Average Ultimate Laboratory Test Values, Elco Construction Products, AGGREGATOR FASTENERS 500 SERIES STAINLESS STEEL (HEX HEAD - 1/4 x 4 MAX), ANCHOR-FLEX 554 Masonry Screws (HEX HEAD - 1/4 x 4 MAX), ELCO ULTRA-CONE Concrete Masonry Anchors, HEX HEAD - 1/4 x 6 MAX or HEX HEAD - 9/16 x 6 MAX), OR Florida Fasteners Direct, LLC BLUE TAPE Screw ANCHORS - 1/4 DIAMETER HES HEAD x 1-1/4" TO 6" LONG OR EQUAL.

6c. Fastener spacing and locations; majority of fasteners at pressure points (hinges, hold close tabs or brackets). Balance on sides (Brama) or top & bottom (Colonial) of the build out frame, in accordance with manufacturer's hurricane shutter shop drawings for each size and/or opening.

   Anchor installation shall be made in accordance with anchor manufacturer's published installation instructions and their approved NOA.

7. Any combination of width x height not to exceed 55.64 square feet per shutter leaf is allowable within the design pressure.

8. BSI Hurricane Shutter Systems has a build out frame (BOF) that attaches to the building (inside clear opening is 1/4" larger than building opening). Depth of the BOF is governed by the glass separation. Shutters are factory assembled to the BOF then disassembled for shipping & installation.

9. For the purpose of the testing required in T.A.S 202 Section 5.2, Design Pressure Calculated in accordance with ASCE 7-10 are permitted to be multiplied by 0.6.