

GPI Millwork - Aluminum T-Astragal (NATA).

Tested for structural, air, water gauge performance and forced entry resistance with Jeld Wen Steel one light and Fiberglass 6 panel doors

General Notes:

- 1. This product has been designed to achieve a high structural and water resistance (water gauge) performance.
- 2. All products tested in compliance with the following: AAMA/WDMA/CSA 101/1.S.2/A440-08 and 11 ASTM E283; ASTM E331; ASTM E330
- 3. Wood bucks by others, must be anchored properly to transfer Loads to the structure.
- 4. Product Anchors: Shall be as listed and spaced as shown on details.
- 5. Product test results, see Table 1, page 1

Test Door Specifications

Test Door # 2

Door panel - Jeld Wen Steel faced one light - In swing Jamb & Head - GPI, PVC - see construction notes below

- Aluminum T- Astragal (NATA) -with shoot bolts top & bottom Astragal

Sill - GPI in swing with Standard Cap 1.375"

Sill Pan - GPI PVC Sloped

Door Sweep - GPI adjustable sweep

Hardware - Simply Elegant Signature Line locksets

Glazing - 1" IG with tempered 1/8" glass panels and 3/4" airspace

Frame Construction - GPI PVC. The frame is constructed of solid PVC Jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt Joined to the side jambs and attached with (3) #8 x 2 ½" wood screws on each side. The GPI sill is attached to the side jambs with three (3) #8 x 2 1/2" wood screws with counter sunk heads. GPI gaskets or silicone Is placed between the joint faces.

A GPI PVC sloped sill pan is posited below the frame assembly.

Test Door #3

Door panel - Jeld Wen Fiberglass - 6 Panel - Out swing Jamb & Head - Wood - see construction notes below

- Aluminum T - Astragal (NPTA) - with shoot bolts top & bottom Astragal

- GPI Out swing High Dam Cap - 1.75"

Sill Pan - GPI PVC Level

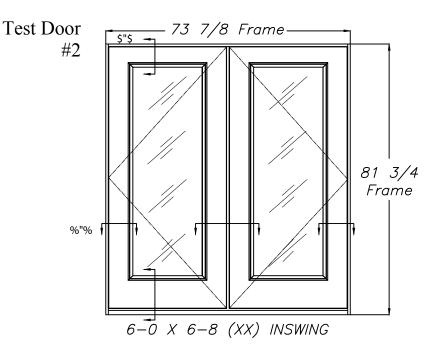
Door Sweep - N/A

Frame Construction - wood. The frame is constructed of finger jointed Pine jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt joined to the side jambs and attached with (3) 16GA 7/16" crown x 2" long staples on each side. The GPI sill is attached to the side jambs with three (3) 16GA 7/16" crown x 2" long staples on each side. A GPI PVC level sill pan is posited below the frame assembly.

Table 1: TEST RESULTS with GPI Millwork - Aluminum T - ASTRAGAL

Jeld-Wen Steel	DP Rating	Air	Water Gauge	Forced entry
Double Door	55	0.2	R Limited Water	Passed
In Swing				
Jeld-Wen Fiberglass				
Double Door	45	0.14	8.35	Passed
Out Swing	* T-Astragal only tested to DP45 due to door failure.			





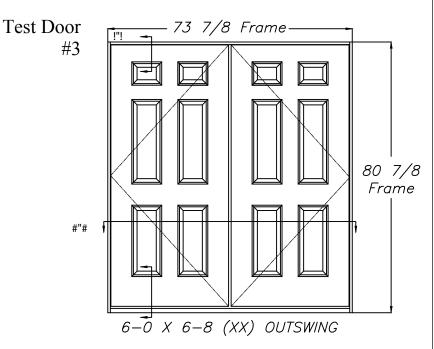
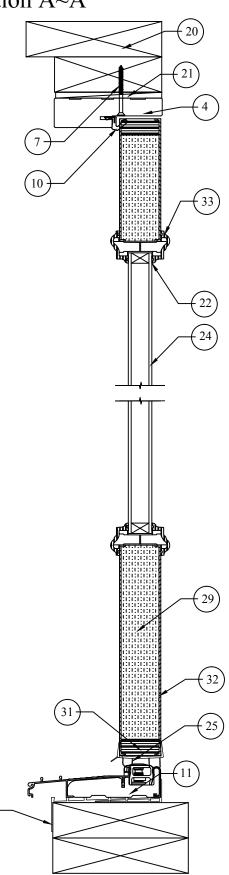


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4	Test Door 3 - Vertical Sections			
5	Test Door 3 - Horizontal Sections			
6	Astragal Details			
7	Buck and Frame Anchoring			
8	Bill of Materials and Components			

Pg 1

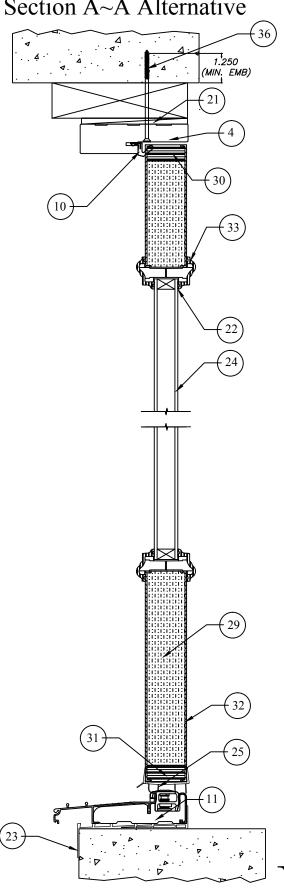
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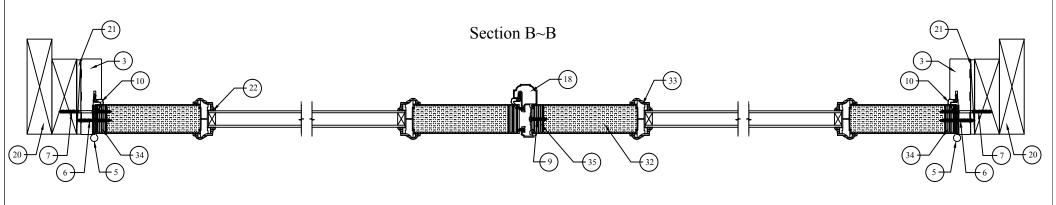
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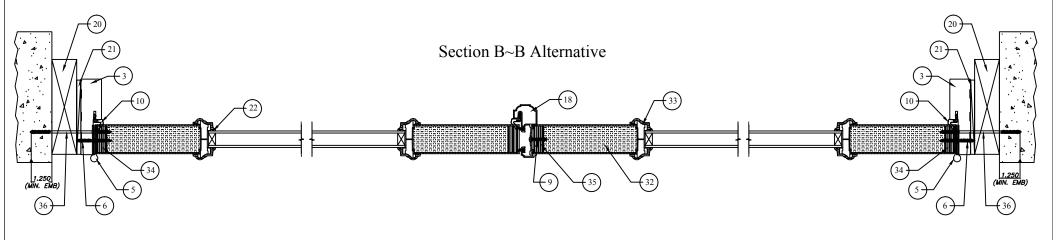




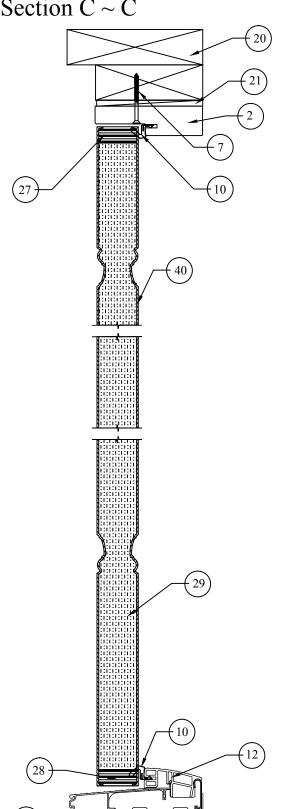
Section A~A Alternative







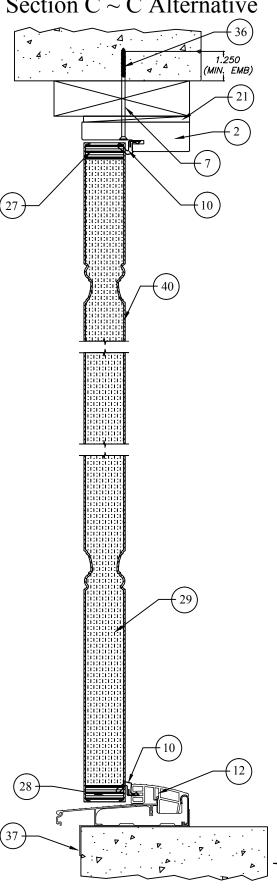
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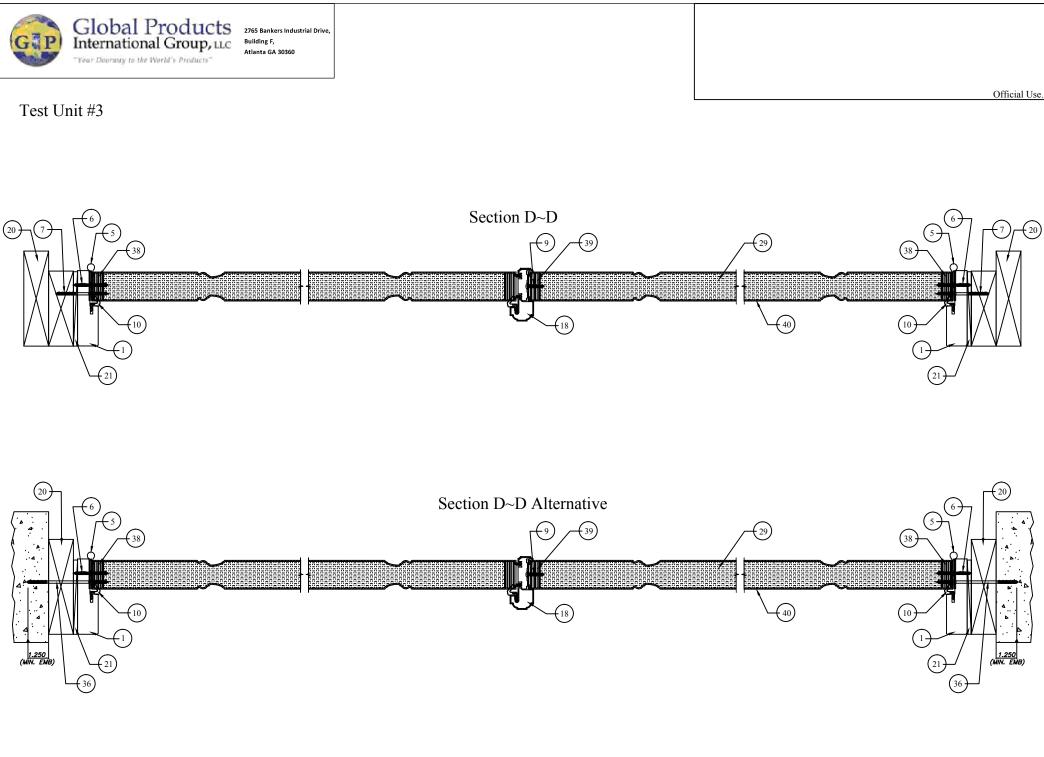


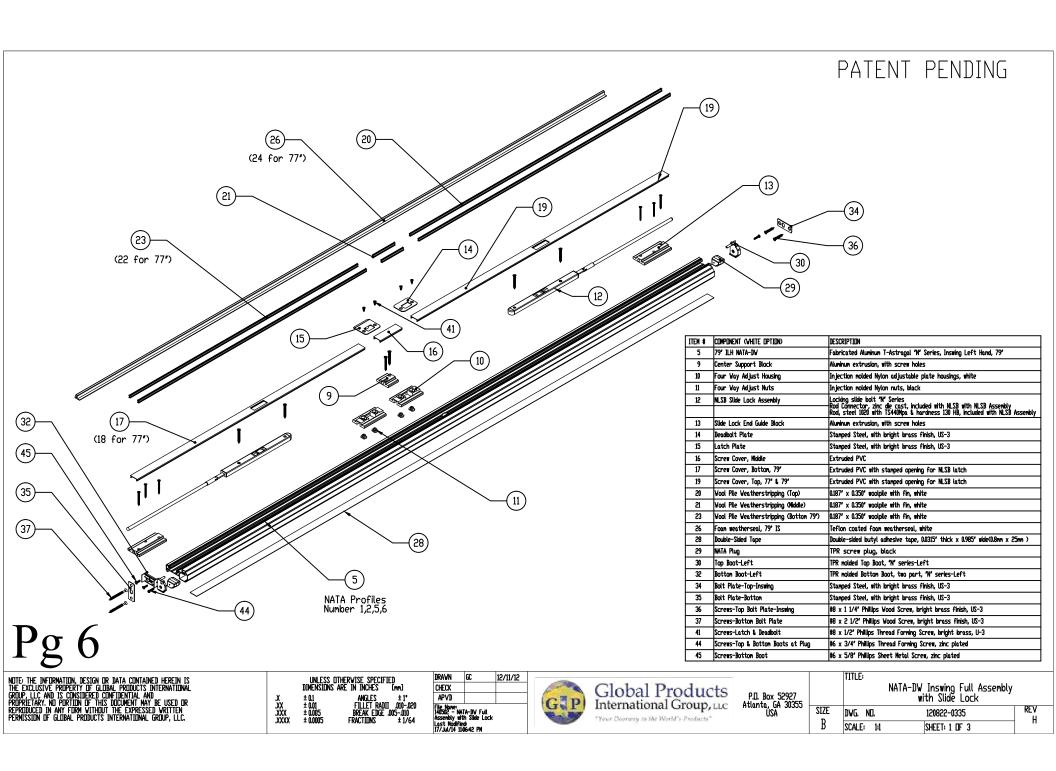
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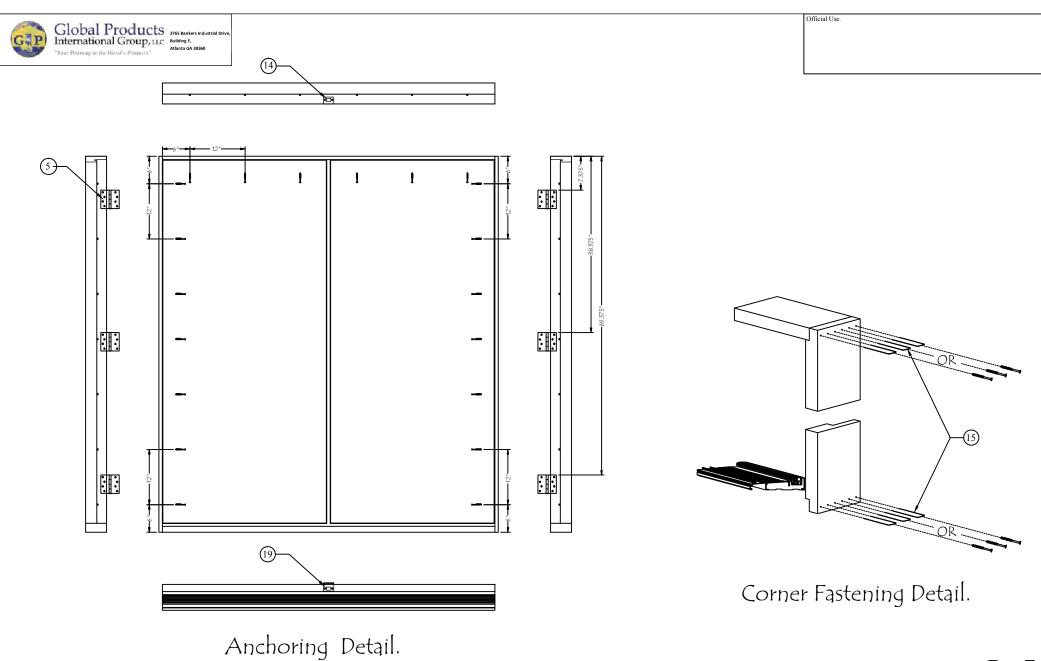


Section C ~ C Alternative





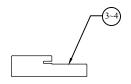




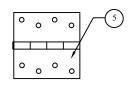


2765 Bankers Industrial Drive, Building F, Atlanta GA 30360

Assorted Parts and Pieces:







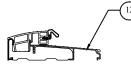
Frame / Head Pine

Frame / Head PVC

4" x 4" Butt Hinge



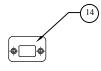


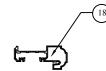


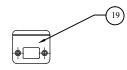
Compression Weatherstrip

GPI In swing Threshold

GPI Out swing Threshold





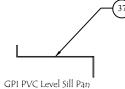


Head Bolt Strike Plate

GPI Aluminum Astragal (NATA)

Sill Bolt Strike Plate







Adjustable Weather Seal

GPI PVC Sloped Sill Pan

B.O.M.s for Test Doors # 2 and 3			
Item	Description		Material
1.	Side Jambs 1 $\%'' \times 49/16''$ Finger Jointed Pine	(Test 3)	Pine
2.	Head 1 ¼" x 4 9/16" Finger jointed Pine	(Test 3)	Pine
3. 4.	Side Jambs 1 ¼" x 4 9/16" GPI Millwork solid PVC Head 1 ¼" x 4 9/16" GPI Millwork solid PVC	(Test 2) (Test 2)	PVC PVC
5.	4" x 4" Butt Hinge 12GA	(Test 2)	Steel
6.	# 9 x 1" Phillips Flathead Wood screw		Steel
7.	# 10 Phillips HD screw with 1 ½" minimum embed		Steel
8.	#8 x3" Phillips Flathead Wood Screw		Steel
9.	#8 x 1" Phillips Panhead Wood screw		Steel
10.	Compression Weatherstrip (Q - Lon QDS-650 or similar)		Vinyl
11.	GPI Millwork In swing threshold sill with 1.375" cap	(Test 2)	Vinyl/Alum
12.	GPI Millwork outswing threshold sill w/ high dam 1.75"	(Test 3)	Vinyl/Alum
13.	Astragal Throw Bolt, steel rod 5/16 x 18"		Steel
14.	Astragal Bolt Strike Plate located on Head		Steel
15.	#8 x2 ½" Phillips CS Wood Screws,		Steel
	 Alternatively, 16 Ga 7/16" crown x 2" long staples 		Steel
16.	Simply Elegant Signature Line Lockset		Aluminum
17.	Simply Elegant Dead Bolt		Aluminum
18.	GPI Millwork Aluminum T-Astragal (NATA)		Aluminum
19.	Astragal Bolt Strike Plate on bottom sill		
20.	2 x wood buck		Wood
21.	Non compression shim		Wood
22.	Dow 995 silicone sealant (or similar)	(Test 3)	Silicone
23.	GPI Millwork PVC sloped sill pan	(Test 2)	PVC
24.	1/8" tempered glass	(Test 3)	Glass
25.	Adjustable Weather seal	(Test 3)	PVC
26.	Lock block (solid wood x 12' long)	1103134	Wood
27.	Top rail (wood composite)	(Test 2)	Wood
27.	• • •		Wood
29.	Bottom rail (wood composite)	(Test 2)	
	Expanded polystyrene (1.0 to 1.25lbs density by Jeld Wen)	(T 2)	Foam
30.	Top rail (LVL)	(Test 3)	LVL
31.	Bottom rail (25GA min galvanized steel)	(Test 3)	Steel
32.	Jeld Wen Steel door panel skin material (24 GA Galvanized)	(Test 2)	Steel
	A-525 commercial quality 0.021" min thick		Galvanized
33.	ODL lite Allen frame (alum 6063 T5)	(⊤est 2)	Aluminum
34.	Hinge side stile (finger jointed LVL)	(Test 3)	LAL
35.	Latch side stile (finger jointed LVL)	(Test 3)	LVL
36.	3/16" ITW Buildex Tapcon with 1.25" min embedment	(Test 3)	Steel
37.	GPI Millwork PVC level sill pan		PVC
38.	Hinge side stile (wood composite)	(Test 2)	Wood
39.	Latch side stile (wood composite)	(Test 2)	Wood
40.	Jeld Wen Fiberglass skinned door panel	(Test 3)	Fiberglass





TEST REPORT

Report No.: E1391.03-550-44

Rendered to:

GLOBAL PRODUCTS INTERNATIONAL GROUP, LLC Atlanta, Georgia

PRODUCT TYPE: In-Swing Doors (XX) **SERIES/MODEL**: with Aluminum Astragal (Test Door #2)

Title	Summary of Results	
	Class PG R-55	
AAMA/WDMA/CSA 101/I.S.2/A440 -11	1880 mm x 2083 mm	
	(74 x 82in) - LW SHD	
Design Pressure	±2640 Pa (±55.14 psf)	
Air Infiltration	1.0 L/s/m ² (0.2 cfm/ft ²)	
Water Penetration Resistance Test Pressure	Limited Water	
Uniform Load Structural Test Pressure	±3960 Pa (±82.71 psf)	

Test Dates: 10/08/14 **Through**: 12/31/14 **Report Date**: 05/15/15

Reference must be made to Report No. E1391.03-550-44, dated 05/15/15 for complete test specimen description and detailed test results.





Test Report No.: E1391.03-550-44 Report Date: 05/15/15

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1.0 Report Issued To: Global Products International Group, LLC

2765 Bankers Industrial Drive, Building F

Atlanta, Georgia 30360

2.0 Test Laboratory: Architectural Testing, Inc.

an Intertek Company ("Intertek-ATI")

1701 Westfork Drive, Suite 106 Lithia Springs, Georgia 30122

770-941-6916

3.0 Project Summary:

3.1 Product Type: In-Swing Door (XX)

3.2 Series/Model: with Aluminum Astragal (Test Door #2)

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimens tested successfully met the performance requirements for the following ratings:

Test Specimen(s)	Title	Summary of Results
1	101/I.S.2/A440-11	Class PG R-55 1880 mm x 2083 mm (74 x 82in) – LW SHD

3.4 Test Dates: 10/08/2014 - 12/31/2014

- **3.5 Test Record Retention End Date**: All test records for this report will be retained until December 31, 2018.
- **3.6 Test Location**: Intertek-ATI test facility in Lithia Springs, Georgia.
- **3.7 Test Sample Source**: The test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of four years from the test completion date.
- **3.8 Drawing Reference**: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in Appendix D. Any deviations are documented herein or on the drawings.





Report Date: 05/15/15 Page 2 of 7

3.0 Project Summary: (Continued)

3.1 List of Official Observers:

<u>Name</u>	<u>Company</u>
	• •

Terry Wiley Global Products International Ryan Chapman Global Products International

Joel Ivey Intertek-ATI
Jon Gardner Intertek-ATI
Ian McKenzie Intertek-ATI
Jacques Johnson Intertek-ATI

4.0 Test Method(s):

AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimen #1:

Overall Area:	Width		Height	
2.8 m ² (30.0 ft ²)	millimeters	inches	millimeters	inches
Overall size	1876	73-7/8	2076	81-3/4
Door Leaf	908	35-3/4	2007	79





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5.0 Test Specimen Description: (Continued)

5.2 Frame Construction:

Frame Member	Material	Description
Head/ jamb	PVC	Extruded
Sill	Al/PVC	GPI In-swing high dam Cap-1.75"
Sill pan	PVC	Positioned below the frame assembly

	Joinery Type	Detail
Head/jamb	Mortised and	Silicone is placed between the joint faces. The head and jamb are mortised and butt joined to
Troudy juints	Butted	the side jambs with three #8 x 2-1/2" wood screws on each side.
Sill	Mortised and Butted	Silicone is placed between the joint faces. The sill is secured to the side of the jambs with three #8 x 2-1/2" wood screws with counter sink heads.

5.3 Leaf Construction:

Leaf Member	Material	Description
Door	Steel	24 Ga Steel skin with expanded polystyrene
Top rail	Wood	Extruded
Bottom rail	Wood	Extruded
Hinge side stile	Wood	Extruded
Latch side stile	Wood	Extruded
T-Astragal	Aluminum	Aluminum T-Astragal (NATA - with shoot bolts top & bottom

		Joinery Type	Detail	
Δ	All corners	Fastened	Silicone is placed between the joint faces. The	
	All corners	corners are fastened.		
-	C Astropal	Mechanically	Astragal is fastened to the head and the sill	
T-Astragal	Fastened	using two #8 x 2-1/4" screws.		





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5.0 Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
Compression gasket	3 rows	Interior of vent head/sill/jamb. One row is placed on the Astragal on the meeting stile between the door leaves.

5.5 Drainage: No drainage was utilized.

5.6 Hardware:

Description	Quantity	Location
Butt Hinges	6	Three on each stile of the door leaf.
Strike Plate	4	One on the frame head one on the sill and two on the style of the door leaf.
Handle	1	On the primary door leaf.
Simple Elegant Signature Line	1	On the primary door leaf.
Locking Slide Bolt	2	One on the top of the Astragal and One on the bottom of the Astragal.

5.7 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a 2x8 Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the door was sealed with sealant.

Location	Anchor Description	Anchor Location	
Head, sill & jambs	#10 x 1-1/2" Phillips head	6" from each end, 12" on center	
neau, siii & jaiiios	screw	thereafter.	
	#0 y 2 1 /4" canous and #0 y 1	Two are secured into the sill of	
Astragal	#8 x 3-1/4" screw and #8 x 1-1/4" screws	the frame and two are secured	
	1/4 Sciews	into the head of the frame.	



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7.0 Test Results: The temperature during testing was 21°C (70°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Air Leakage,			
Infiltration per ASTM E 283	$<1.0 L/s/m^2$	1.5 L/s/m ²	
at 75 Pa (1.57 psf)	(0.2 cfm/ft^2)	$(0.3 \text{ cfm/ft}^2) \text{ max.}$	1
Water Penetration,			
per ASTM E 331			
Limited Water (No Pressure)	Pass	No leakage	2
Uniform Load Deflection,			
per ASTM E 330			
taken along astragal			
+2640 Pa (+55.14 psf)	2.5 mm (0.1")		
-2640 Pa (-55.14 psf)	7.6 mm (0.3")	Report Only	4, 5, 6
Uniform Load Deflection,			
per ASTM E 330			
taken along bottom of active door			
+2640 Pa (+55.14 psf)	2.5 mm (0.1")		
-2640 Pa (-55.14 psf)	2.5 mm (0.1")	Report Only	4, 5, 6
Uniform Load Structural,			
per ASTM E 330			
taken along astragal			
+3960 Pa (+82.71 psf)	0.8 mm (0.03")		
-3960 Pa (-82.71 psf)	0.3 mm (0.01")	8.1 mm (0.32") max	5, 6
Uniform Load Structural,			
per ASTM E 330			
taken along bottom of active door			
+3960 Pa (+82.71 psf)	0.3 mm (0.01")		
-3960 Pa (-82.71 psf)	2.3 mm (0.12")	3.6 mm (0.14 ") max	5, 6
Forced Entry Resistance,			
per AAMA 1304,			
Type: N/A - Grade: 10	Pass	No entry	





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7.0 Test Results: (Continued)

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: With and without insect screen.

Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

Note 6: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.





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Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI:

Ciglinity Signer by Jacquee Johnson

Jacques R. Johnson Project Technician Digitally Signed by: Ian J. McKenzie

Ian J. McKenzie Lab Manager – Regional Operations

JRJ:IJM/jab

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1) Appendix-B: Location of Air Seal (1) Appendix-C: Photographs (1) Appendix-D: Drawings (8)



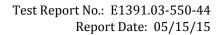


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Appendix A

Alteration Addendum

Note: No alterations were required.

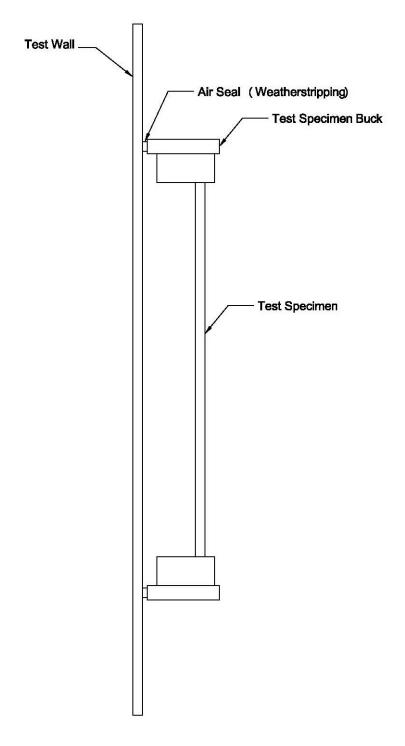


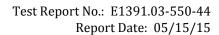




Appendix B

Location of Air Seal: The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.









Appendix C

Photographs



Photo No. 1 Specimen #1 Rear After Testing





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Appendix D

Drawings



GPI Millwork - Aluminum T-Astragal (NATA).

Tested for structural, air, water gauge performance and forced entry resistance with Jeld Wen Steel one light and Fiberglass 6 panel doors

General Notes:

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- 2. All products tested in compliance with the following: AAMA/WDMA/CSA 101/1.S.2/A440-08 and 11 ASTM E283; ASTM E331; ASTM E330
- 3. Wood bucks by others, must be anchored properly to transfer Loads to the structure.
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Test Door Specifications

Test Door # 2

Door panel - Jeld Wen Steel faced one light - In swing Jamb & Head - GPI, PVC - see construction notes below

- Aluminum T- Astragal (NATA) -with shoot bolts top & bottom Astragal

- GPI in swing with Standard Cap 1.375" Sill

Sill Pan - GPI PVC Sloped

Door Sweep - GPI adjustable sweep

Hardware - Simply Elegant Signature Line locksets

- 1" IG with tempered 1/8" glass panels and 3/4" airspace Glazing

Frame Construction - GPI PVC. The frame is constructed of solid PVC Jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt Joined to the side jambs and attached with (3) #8 x 2 ½" wood screws on each side. The GPI sill is attached to the side jambs with three (3)

#8 x 2 1/2" wood screws with counter sunk heads. GPI gaskets or silicone Is placed between the joint faces.

A GPI PVC sloped sill pan is posited below the frame assembly.

Test Door #3

Door panel - Jeld Wen Fiberglass - 6 Panel - Out swing

Jamb & Head - Wood - see construction notes below - Aluminum T - Astragal (NPTA) - with shoot bolts top & bottom Astragal

- GPI Out swing High Dam Cap - 1.75"

Sill Pan - GPI PVC Level

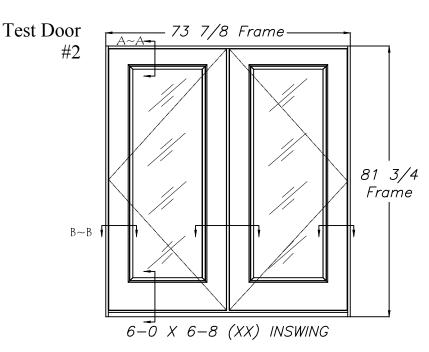
Door Sweep - N/A

Frame Construction - wood. The frame is constructed of finger jointed Pine jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt joined to the side jambs and attached with (3) 16GA 7/16" crown x 2" long staples on each side. The GPI sill is attached to the side jambs with three (3) 16GA 7/16" crown x 2" long staples on each side. A GPI PVC level sill pan is posited below the frame assembly.

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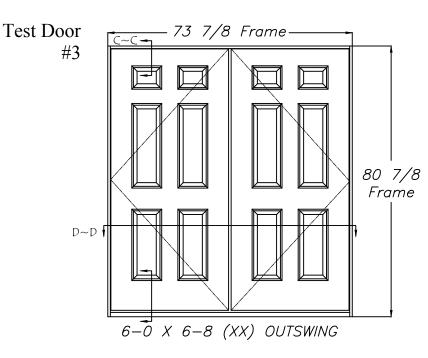
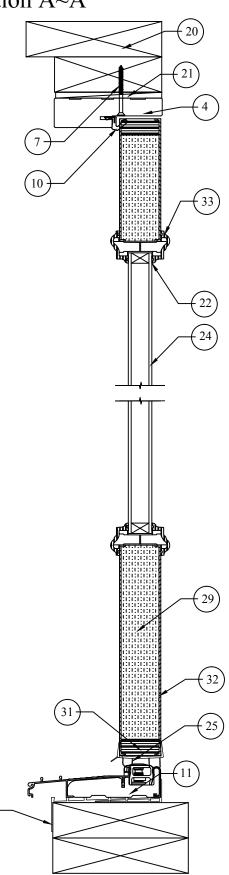


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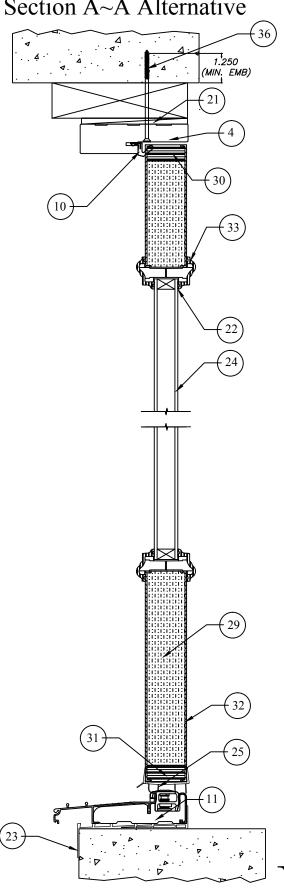
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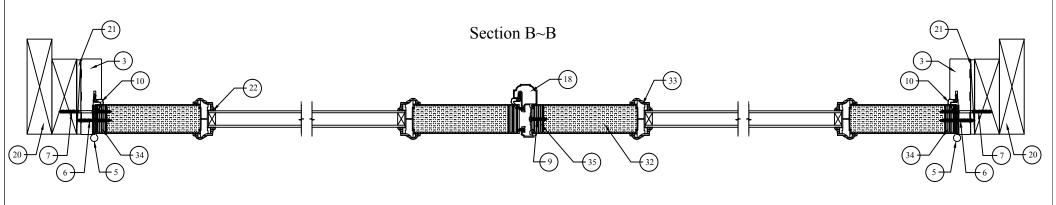
Section A~A

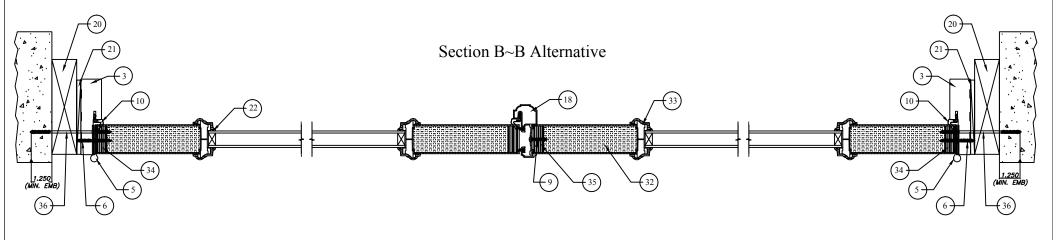




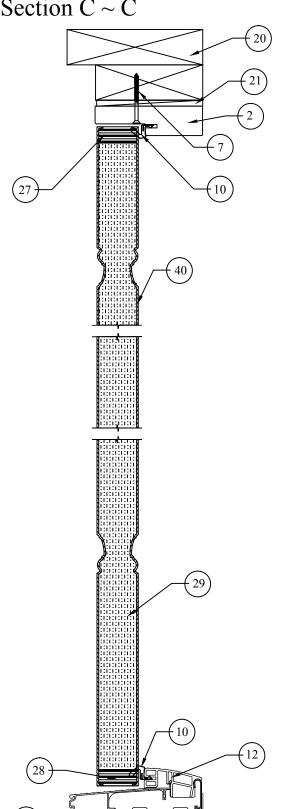
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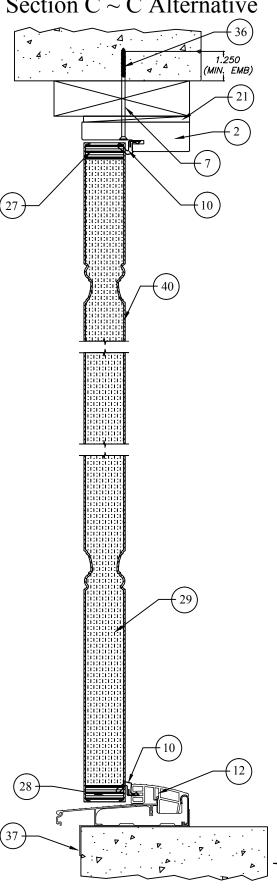
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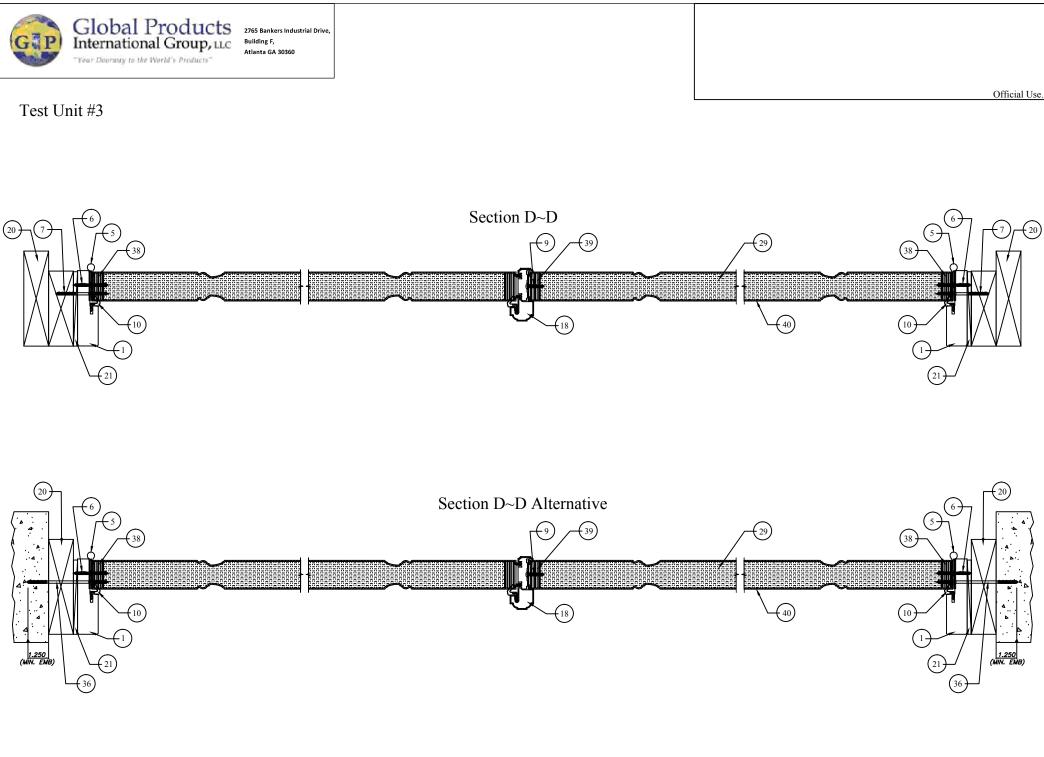


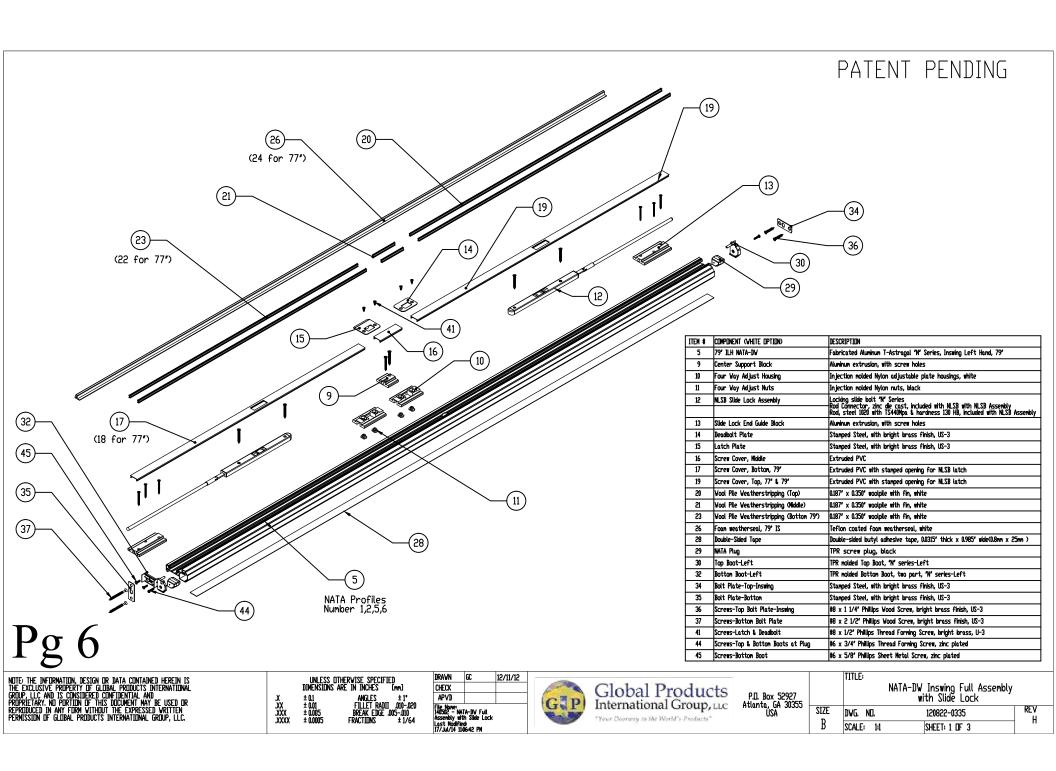
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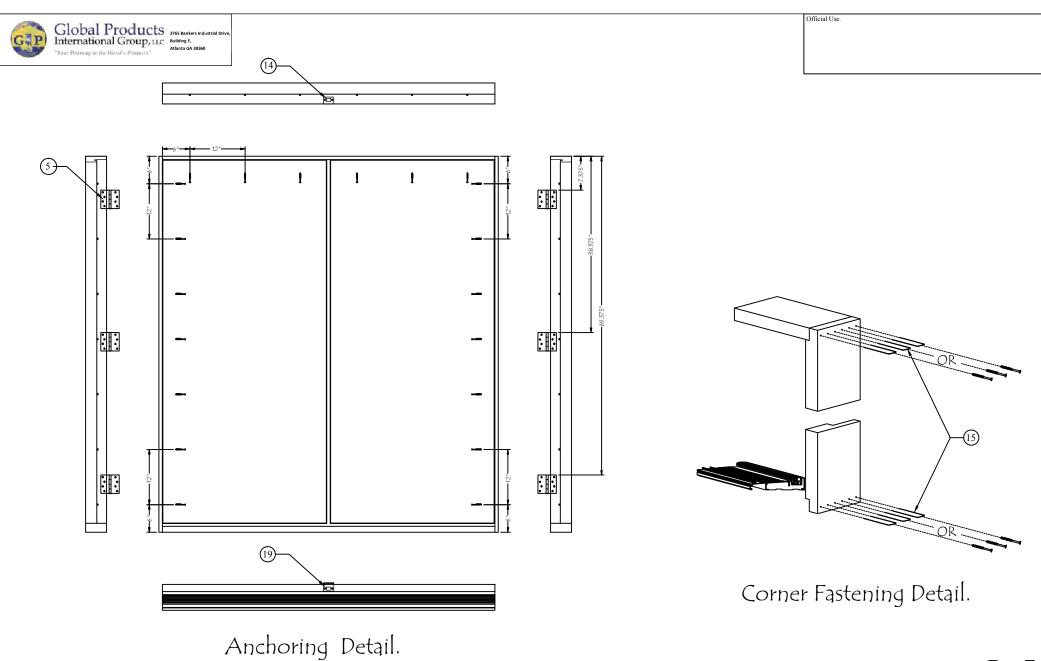


Section C ~ C Alternative





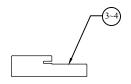




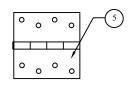


2765 Bankers Industrial Drive, Building F, Atlanta GA 30360

Assorted Parts and Pieces:







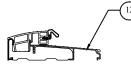
Frame / Head Pine

Frame / Head PVC

4" x 4" Butt Hinge



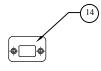


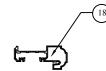


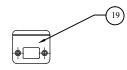
Compression Weatherstrip

GPI In swing Threshold

GPI Out swing Threshold





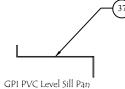


Head Bolt Strike Plate

GPI Aluminum Astragal (NATA)

Sill Bolt Strike Plate







Adjustable Weather Seal

GPI PVC Sloped Sill Pan

B.O.M.s for Test Doors # 2 and 3			
Item	Description		Material
1.	Side Jambs 1 $\%'' \times 49/16''$ Finger Jointed Pine	(Test 3)	Pine
2.	Head 1 ¼" x 4 9/16" Finger jointed Pine	(Test 3)	Pine
3. 4.	Side Jambs 1 ¼" x 4 9/16" GPI Millwork solid PVC Head 1 ¼" x 4 9/16" GPI Millwork solid PVC	(Test 2) (Test 2)	PVC PVC
5.	4" x 4" Butt Hinge 12GA	(Test 2)	Steel
6.	# 9 x 1" Phillips Flathead Wood screw		Steel
7.	# 10 Phillips HD screw with 1 ½" minimum embed		Steel
8.	#8 x3" Phillips Flathead Wood Screw		Steel
9.	#8 x 1" Phillips Panhead Wood screw		Steel
10.	Compression Weatherstrip (Q - Lon QDS-650 or similar)		Vinyl
11.	GPI Millwork In swing threshold sill with 1.375" cap	(Test 2)	Vinyl/Alum
12.	GPI Millwork outswing threshold sill w/ high dam 1.75"	(Test 3)	Vinyl/Alum
13.	Astragal Throw Bolt, steel rod 5/16 x 18"		Steel
14.	Astragal Bolt Strike Plate located on Head		Steel
15.	#8 x2 ½" Phillips CS Wood Screws,		Steel
	 Alternatively, 16 Ga 7/16" crown x 2" long staples 		Steel
16.	Simply Elegant Signature Line Lockset		Aluminum
17.	Simply Elegant Dead Bolt		Aluminum
18.	GPI Millwork Aluminum T-Astragal (NATA)		Aluminum
19.	Astragal Bolt Strike Plate on bottom sill		
20.	2 x wood buck		Wood
21.	Non compression shim		Wood
22.	Dow 995 silicone sealant (or similar)	(Test 3)	Silicone
23.	GPI Millwork PVC sloped sill pan	(Test 2)	PVC
24.	1/8" tempered glass	(Test 3)	Glass
25.	Adjustable Weather seal	(Test 3)	PVC
26.	Lock block (solid wood x 12' long)	1103134	Wood
27.	Top rail (wood composite)	(Test 2)	Wood
27.	• • •		Wood
29.	Bottom rail (wood composite)	(Test 2)	
	Expanded polystyrene (1.0 to 1.25lbs density by Jeld Wen)	(T 2)	Foam
30.	Top rail (LVL)	(Test 3)	LVL
31.	Bottom rail (25GA min galvanized steel)	(Test 3)	Steel
32.	Jeld Wen Steel door panel skin material (24 GA Galvanized)	(Test 2)	Steel
	A-525 commercial quality 0.021" min thick		Galvanized
33.	ODL lite Allen frame (alum 6063 T5)	(⊤est 2)	Aluminum
34.	Hinge side stile (finger jointed LVL)	(Test 3)	LAL
35.	Latch side stile (finger jointed LVL)	(Test 3)	LVL
36.	3/16" ITW Buildex Tapcon with 1.25" min embedment	(Test 3)	Steel
37.	GPI Millwork PVC level sill pan		PVC
38.	Hinge side stile (wood composite)	(Test 2)	Wood
39.	Latch side stile (wood composite)	(Test 2)	Wood
40.	Jeld Wen Fiberglass skinned door panel	(Test 3)	Fiberglass





TEST REPORT

Report No.: E1391.04-550-44

Rendered to:

GLOBAL PRODUCTS INTERNATIONAL GROUP, LLC Atlanta, Georgia

PRODUCT TYPE: Out-Swing Doors (XX) **SERIES/MODEL**: with Aluminum T-Astragal (Test Door #3)

Title	Summary of Results
	Class PG R-45
AAMA/WDMA/CSA 101/I.S.2/A440-11	1880 mm x 2057 mm
	(74 x 81in) - SHD
Design Pressure	±2160 Pa (±45.11 psf)
Air Infiltration	0.7 L/s/m ² (0.14 cfm/ft ²)
Water Penetration Resistance Test Pressure	400 Pa (8.35 psf)
Uniform Load Structural Test Pressure	± 3240 Pa (±67.67 psf)

Test Dates: 11/24/14 **Through**: 12/18/14 **Report Date**: 05/15/15

Reference must be made to Report No. E1391.04-550-44, dated 05/15/15 for complete test specimen description and detailed test results.





Test Report No.: E1391.04-550-44 Report Date: 05/15/15

Page 1 of 7

1.0 Report Issued To: Global Products International Group, LLC

2765 Bankers Industrial Drive, Building F

Atlanta, Georgia 30360

2.0 Test Laboratory: Architectural Testing, Inc.

an Intertek Company ("Intertek-ATI")

1701 Westfork Drive, Suite 106 Lithia Springs, Georgia 30122

770-941-6916

3.0 Project Summary:

3.1 Product Type: Out-Swing Door (XX)

3.2 Series/Model: with Aluminum T-Astragal (Test Door #3)

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimens tested successfully met the performance requirements for the following ratings:

Test Specimen(s)	Title	Summary of Results
1	101/I.S.2/A440-11	Class PG R-45 1880 mm x 2057 mm (74 x 81in) – SHD

- **3.4 Test Dates**: 11/24/2014 12/18/2014
- **3.5 Test Record Retention End Date**: All test records for this report will be retained until December 18, 2018.
- **3.6 Test Location**: Intertek-ATI test facility in Lithia Springs, Georgia.
- **3.7 Test Sample Source**: The test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of four years from the test completion date.
- **3.8 Drawing Reference**: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in Appendix D. Any deviations are documented herein or on the drawings.





Report Date: 05/15/15 Page 2 of 7

3.0 Project Summary: (Continued)

Name

3.1 List of Official Observers:

Terry Wiley	Global Products International
Ryan Chapman	Global Products International
Joel Ivey	Intertek-ATI
Ion Gardner	Intertek-ATI

Company

Jon Gardner Intertek-ATI
Ian McKenzie Intertek-ATI
Jacques Johnson Intertek-ATI

4.0 Test Method(s):

AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimen #1:

Overall Area:	Width		Hei	ght
3.9 m ² (41.5 ft ²)	millimeters	inches	millimeters	inches
Overall size	1876	73-7/8	2054	80-7/8
Door Leaf	908	35-3/4	2007	79





Report Date: 05/15/15 Page 3 of 7

5.0 Test Specimen Description: (Continued)

5.2 Frame Construction:

Frame Member	Material	Description
Head/ jamb	Wood	Extruded
Sill	Al/PVC	GPI Out-swing high dam Cap-1.75"
Sill pan	PVC	Positioned below the frame assembly

_	Joinery Type	Detail
Head/jamb	Mortised and Butted	Silicone is placed between the joint faces. The head and jamb are mortised and butt joined to the side jambs with three 16ga 7/16" x 2" long staples on each side.
Sill	Mortised and Butted	Silicone is placed between the joint faces. The sill is secured to the side of the jambs with three 16ga 7/16" x 2" long staples on each side. A sill pan is positioned below the frame assembly.

5.3 Leaf Construction:

Leaf Member	Material	Description
Door	Fiberglass	Fiberglass skin with expanded polystyrene
Top rail	LVL	Extruded
Bottom rail	Steel	Extruded 24ga Steel
Hinge side stile	LVL	Extruded
Latch side stile	LVL	Extruded
T-Astragal	Aluminum	Aluminum T-Astragal (NATA - with shoot bolts top & bottom)

	Joinery Type	Detail
All corners	Mortised and	Silicone is used between the joint faces. The
All corners	Butted	corners are secured with Finger jointed LVL.
T-Astragal	Mechanically Fastened	Astragal is fastened to the head using two #8 x 1-1/4" and the sill using two #8 x 2-1/2" screws.





Test Report No.: E1391.04-550-44 Report Date: 05/15/15

Page 4 of 7

5.0 Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
Compression gasket	3 rows	Interior of vent head/sill/jamb. Two rows are placed on the Astragal on the meeting stile between the door leaves.

5.5 Drainage: No drainage was utilized.

5.6 Hardware:

Description	Quantity	Location
Butt Hinges	6	Three on each stile of the door leaf.
Strike Plate	4	One on the frame head, one on the sill, and two on the style of the door leaf.
Handle	1	On the primary door leaf.
Simple Elegant Signature Line	1	On the primary door leaf.
Locking Slide Bolt	2	One on the top of the Astragal and one on the bottom of the Astragal.

5.7 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a 2x10 Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the door was sealed with sealant.

Location	Anchor Description	Anchor Location	
Head, sill & jambs	#10 x 1-1/2" Phillips head	6" from each end, 12" on center	
	screw	thereafter.	
	#8 x 3-1/4" screw and #8 x 1-	Two are secured to the sill of	
Astragal	,	the frame and two are secured	
	1/4" screws	into the head of the frame.	





Report Date: 05/15/15 Page 5 of 7

7.0 Test Results: The temperature during testing was 21°C (70°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Air Leakage,			
Infiltration per ASTM E 283	$< 0.7 L/s/m^2$	1.5 L/s/m ²	
at 75 Pa (1.57 psf)	(0.14 cfm/ft^2)	$(0.3 \text{ cfm/ft}^2) \text{ max.}$	1
Water Penetration,			
ASTM E 547			
400 Pa (8.35 psf)	Pass	No leakage	2
Uniform Load Deflection,			
per ASTM E 330			
taken along astragal			
+2160 Pa (+45.11 psf)	33.0 mm (1.3")		
-2160 Pa (-45.11 psf)	25.4 mm (1.0")	Report Only	4, 5, 6
Uniform Load Deflection,			
per ASTM E 330			
taken along bottom of active door			
+2160 Pa (+45.11 psf)	5.1 mm (0.2")		
-2160 Pa (-45.11 psf)	10.2 mm (0.4")	Report Only	4, 5, 6
Uniform Load Structural,			
per ASTM E 330			
taken along astragal	0.6 (0.4.41)		
+3232 Pa (+67.67 psf)	3.6 mm (0.14")		
-3232 Pa (-67.67 psf)	3.6 mm (0.14")	8.4 mm (0.33") max	5, 6
Uniform Load Structural,			
per ASTM E 330			
taken along bottom of active door	4.0 (0.05%)		
+3232 Pa (+67.67 psf)	1.3 mm (0.05")	0.6 (0.4.41)	- .
-3232 Pa (-67.67 psf)	0.8 mm (0.03")	3.6 mm (0.14") max	5, 6
Forced Entry Resistance,			
per AAMA 1304,	D	.,	
Type: N/A - Grade: 10	Pass	No entry	





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7.0 Test Results: (Continued)

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: With and without insect screen.

Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

Note 6: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.





Test Report No.: E1391.04-550-44 Report Date: 05/15/15

Page 7 of 7

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intetek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI:

Digitally Signed by: Jacques Johnson

Jacques R. Johnson Project Technician

Deptetry Signatification Affections to

Ian J. McKenzie Lab Manager – Regional Operations

JRJ:IJM/jab

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1) Appendix-B: Location of Air Seal (1) Appendix-C: Photographs (1) Appendix-D: Drawings (8)





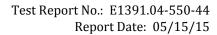
Test Report No.: E1391.04-550-44

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Appendix A

Alteration Addendum

Note: No alterations were required.

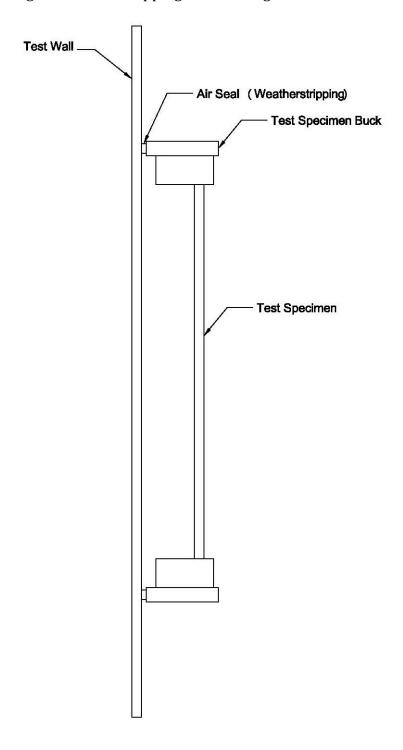


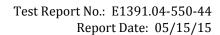




Appendix B

Location of Air Seal: The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.









Appendix C

Photographs



Photo No. 1 Specimen #1 Front View





Test Report No.: E1391.04-550-44

Report Date: 05/15/15

Appendix D

Drawings



GPI Millwork - Aluminum T-Astragal (NATA).

Tested for structural, air, water gauge performance and forced entry resistance with Jeld Wen Steel one light and Fiberglass 6 panel doors

General Notes:

- 1. This product has been designed to achieve a high structural and water resistance (water gauge) performance.
- 2. All products tested in compliance with the following: AAMA/WDMA/CSA 101/1.S.2/A440-08 and 11 ASTM E283; ASTM E331; ASTM E330
- 3. Wood bucks by others, must be anchored properly to transfer Loads to the structure.
- 4. Product Anchors: Shall be as listed and spaced as shown on details.
- 5. Product test results, see Table 1, page 1

Test Door Specifications

Test Door # 2

Door panel - Jeld Wen Steel faced one light - In swing Jamb & Head - GPI, PVC - see construction notes below

- Aluminum T- Astragal (NATA) -with shoot bolts top & bottom Astragal

- GPI in swing with Standard Cap 1.375" Sill

Sill Pan - GPI PVC Sloped

Door Sweep - GPI adjustable sweep

Hardware - Simply Elegant Signature Line locksets

- 1" IG with tempered 1/8" glass panels and 3/4" airspace Glazing

Frame Construction - GPI PVC. The frame is constructed of solid PVC

Jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt Joined to the side jambs and attached with (3) #8 x 2 ½" wood screws on each side. The GPI sill is attached to the side jambs with three (3) #8 x 2 1/2" wood screws with counter sunk heads. GPI gaskets or silicone Is placed between the joint faces.

A GPI PVC sloped sill pan is posited below the frame assembly.

Test Door #3

Door panel - Jeld Wen Fiberglass - 6 Panel - Out swing Jamb & Head - Wood - see construction notes below

- Aluminum T - Astragal (NPTA) - with shoot bolts top & bottom Astragal

- GPI Out swing High Dam Cap - 1.75"

Sill Pan - GPI PVC Level

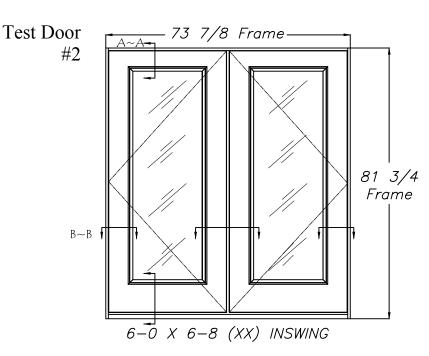
Door Sweep - N/A

Frame Construction - wood. The frame is constructed of finger jointed Pine jambs 4-9/16" x 1 1/4". The head and jambs are mortised and butt joined to the side jambs and attached with (3) 16GA 7/16" crown x 2" long staples on each side. The GPI sill is attached to the side jambs with three (3) 16GA 7/16" crown x 2" long staples on each side. A GPI PVC level sill pan is posited below the frame assembly.

Table 1: TEST RESULTS with GPI Millwork - Aluminum T - ASTRAGAL

Jeld-Wen Steel	DP Rating	Air	Water Gauge	Forced entry
Double Door	55	0.2	R Limited Water	Passed
In Swing				
Jeld-Wen Fiberglass				
Double Door	45	0.14	8.35	Passed
Out Swing				





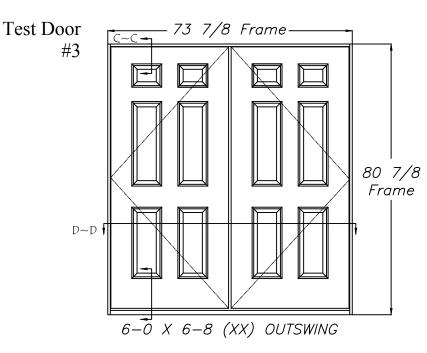
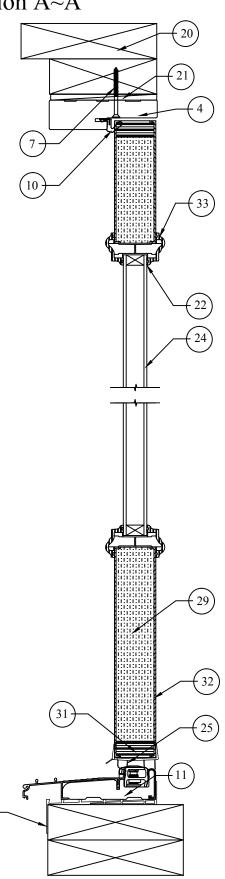


Table of Contents				
Sheet #	Description			
1	Elevations, General Notes, Results			
2	Test Door 2 - Vertical Sections			
3	Test Door 2 - Horizontal Sections			
4	Test Door 3 - Vertical Sections			
5	Test Door 3 - Horizontal Sections			
6	Astragal Details			
7	Buck and Frame Anchoring			
8	Bill of Materials and Components			

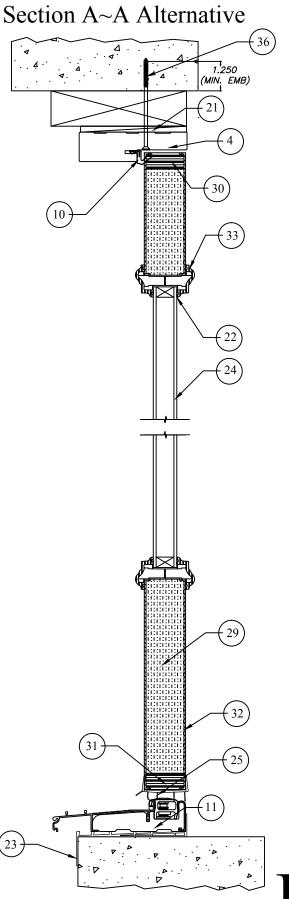
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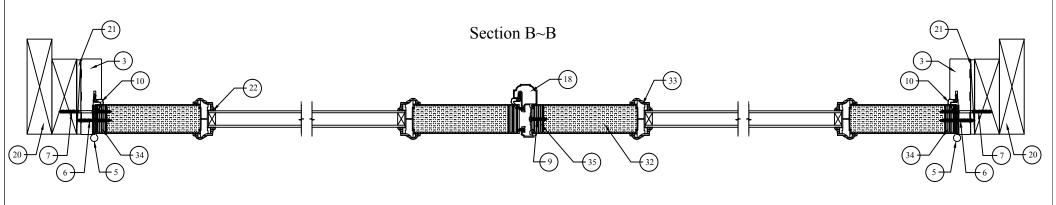
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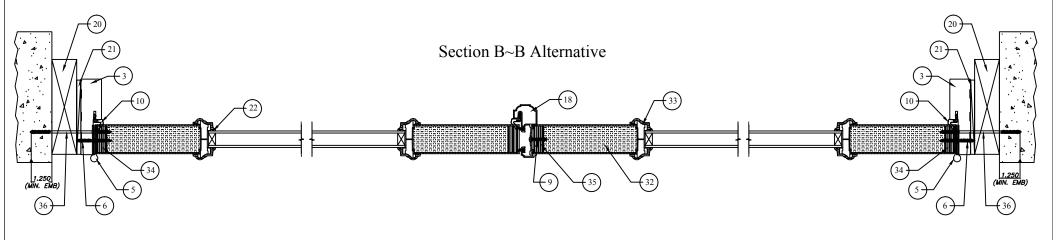






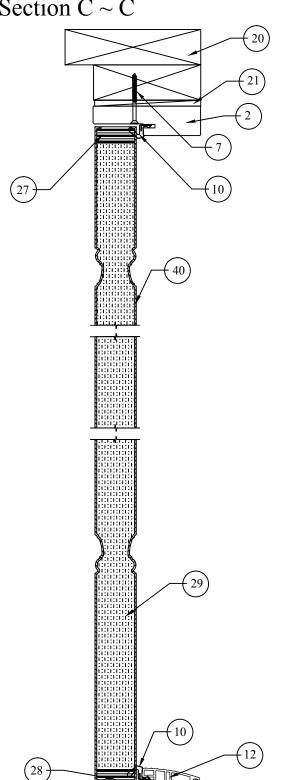
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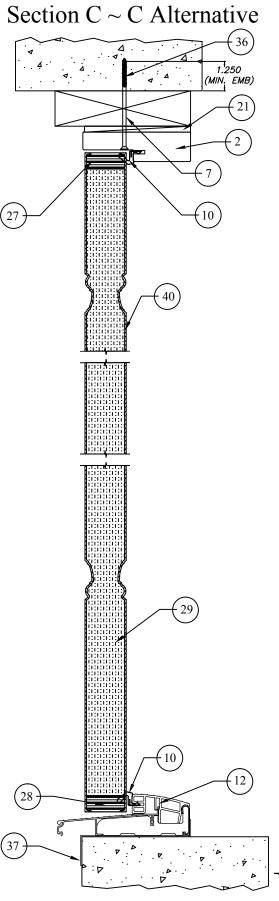


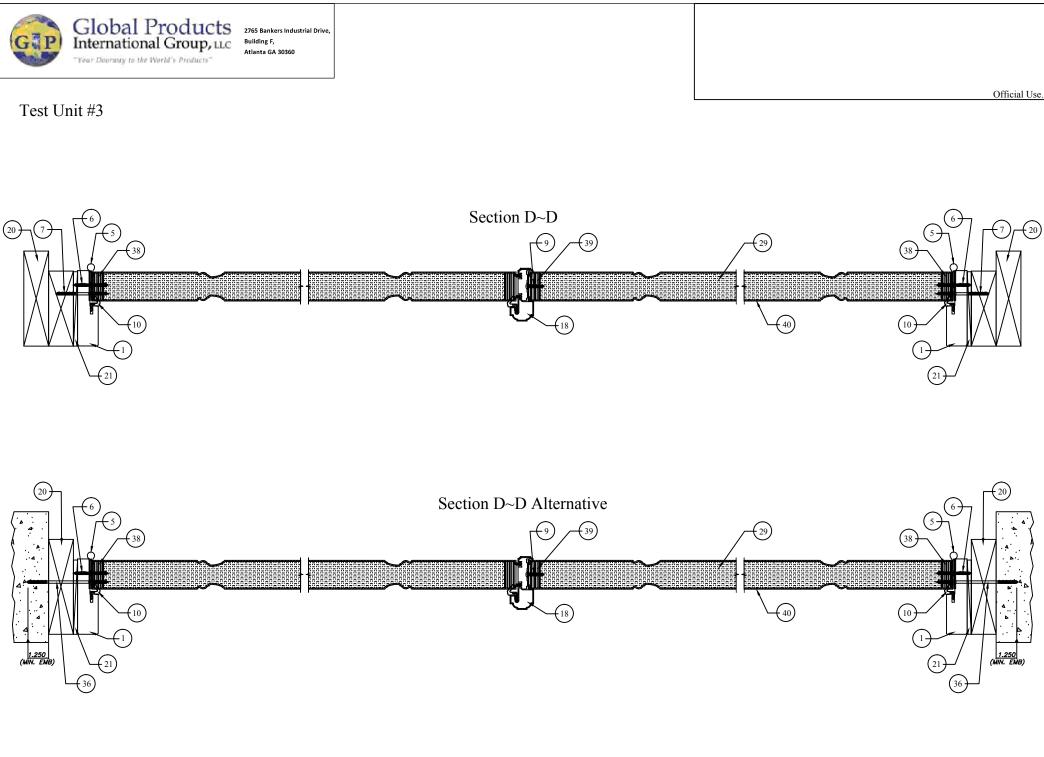
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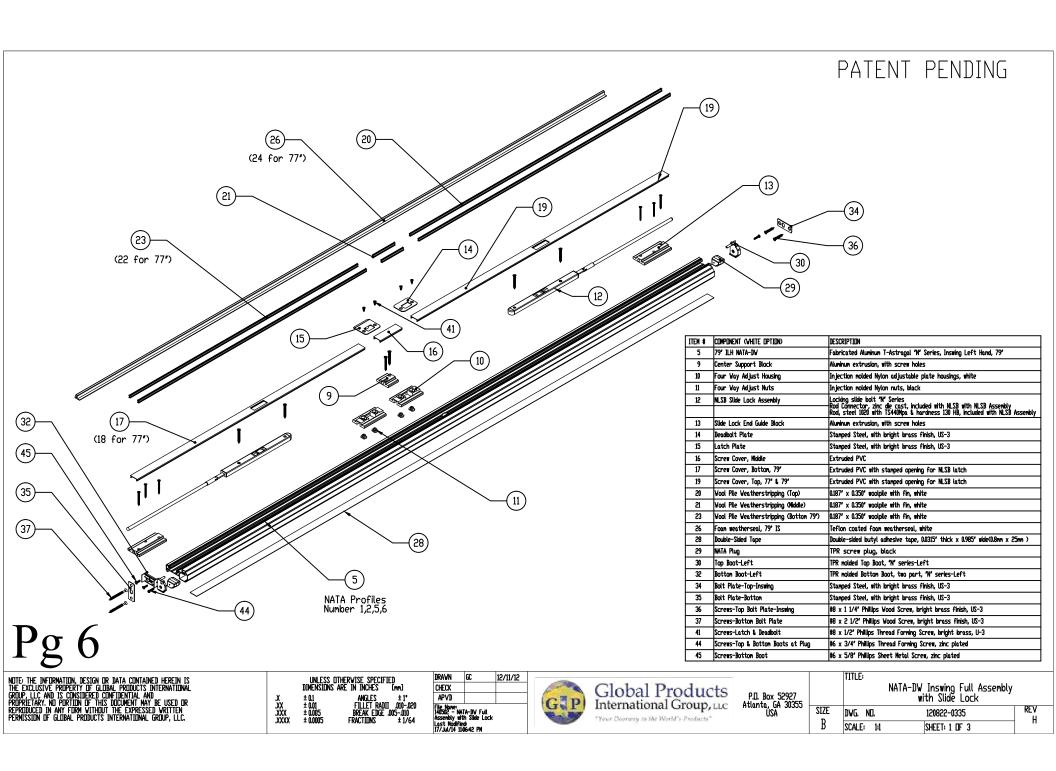
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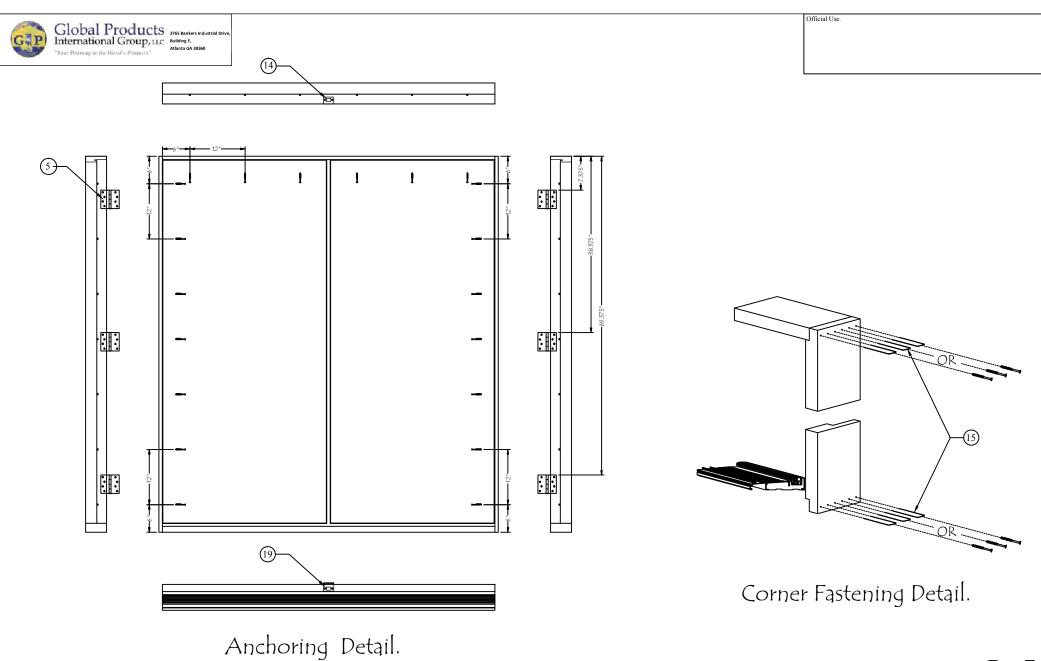


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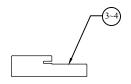




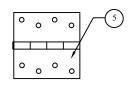


2765 Bankers Industrial Drive, Building F, Atlanta GA 30360

Assorted Parts and Pieces:







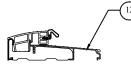
Frame / Head Pine

Frame / Head PVC

4" x 4" Butt Hinge



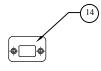


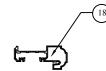


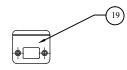
Compression Weatherstrip

GPI In swing Threshold

GPI Out swing Threshold





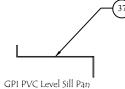


Head Bolt Strike Plate

GPI Aluminum Astragal (NATA)

Sill Bolt Strike Plate







Adjustable Weather Seal

GPI PVC Sloped Sill Pan

B.O.M.s for Test Doors # 2 and 3					
Item	Description		Material		
1.	Side Jambs 1 $\%'' \times 49/16''$ Finger Jointed Pine	(Test 3)	Pine		
2.	Head 1 ¼" x 4 9/16" Finger jointed Pine	(Test 3)	Pine		
3. 4.	Side Jambs 1 ¼" x 4 9/16" GPI Millwork solid PVC Head 1 ¼" x 4 9/16" GPI Millwork solid PVC	(Test 2)	PVC PVC		
4. 5.	Head 1 ¼" x 4 9/16" GPI Millwork solid PVC 4" x 4" Butt Hinge 12GA	(Test 2)	Steel		
5. 6.	# 9 x 1" Phillips Flathead Wood screw		Steel		
7.	# 10 Phillips HD screw with 1 ½" minimum embed		Steel		
8.	#8 x3" Phillips Flathead Wood Screw		Steel		
9.	#8 x 1" Phillips Panhead Wood screw		Steel		
10.	Compression Weatherstrip (Q - Lon QDS-650 or similar)		Vinyl		
11.	GPI Millwork In swing threshold sill with 1.375" cap	(Test 2)	Vinyl/Alum		
12.	GPI Millwork outswing threshold sill w/ high dam 1.75"	(Test 3)	Vinyl/Alum		
13.	Astragal Throw Bolt, steel rod 5/16 x 18"		Steel		
14.	Astragal Bolt Strike Plate located on Head		Steel		
15.	#8 x2 ½" Phillips CS Wood Screws,		Steel		
	 Alternatively, 16 Ga 7/16" crown x 2" long staples 		Steel		
16.	Simply Elegant Signature Line Lockset		Aluminum		
17.	Simply Elegant Dead Bolt		Aluminum		
18.	GPI Millwork Aluminum T-Astragal (NATA)		Aluminum		
19.	Astragal Bolt Strike Plate on bottom sill				
20.	2 x wood buck		Wood		
21.	Non compression shim		Wood		
22.	Dow 995 silicone sealant (or similar)	(Test 3)	Silicone		
23.	GPI Millwork PVC sloped sill pan	(Test 2)	PVC		
24.	1/8" tempered glass	(Test 3)	Glass		
25.	Adjustable Weather seal	(Test 3)	PVC		
26.	Lock block (solid wood x 12' long)	116313)	Wood		
27.	Top rail (wood composite)	(Test 2)	Wood		
27.	• • •		Wood		
	Bottom rail (wood composite)	(Test 2)			
29.	Expanded polystyrene (1.0 to 1.25lbs density by Jeld Wen)	(T 2)	Foam		
30.	Top rail (LVL)	(Test 3)	LVL		
31.	Bottom rail (25GA min galvanized steel)	(Test 3)	Steel		
32.	Jeld Wen Steel door panel skin material (24 GA Galvanized)	(Test 2)	Steel		
	 A-525 commercial quality 0.021" min thick 		Galvanized		
33.	ODL lite Allen frame (alum 6063 T5)	(Test 2)	Aluminum		
34.	Hinge side stile (finger jointed LVL)	(Test 3)	LVL		
35.	Latch side stile (finger jointed LVL)	(Test 3)	LVL		
36.	3/16" ITW Buildex Tapcon with 1.25" min embedment	(Test 3)	Steel		
37.	GPI Millwork PVC level sill pan		PVC		
38.	Hinge side stile (wood composite)	(Test 2)	Wood		
39.	Latch side stile (wood composite)	(Test 2)	Wood		
40.	Jeld Wen Fiberglass skinned door panel	(Test 3)	Fiberglass		