



**MIAMI-DADE COUNTY
PERFORMANCE TEST REPORT**

Rendered to:

EAGLE WINDOW & DOOR, INC.

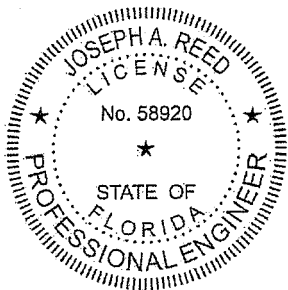
**SERIES/MODEL: 6080 Series 05 Clad Outswing French Door SP1
with Harbor Master Mono Muller to a 3080 Series 05 Clad Outswing
French Door Sidelite SL1 with Harbor Master Mono**

**PRODUCT TYPE: Aluminum Clad Outswing Hinged Glass Door
with Impact Glazing Muller to an Aluminum Clad Sidelite/Fixed Door**

This report contains in its entirety:

**Cover Page: 1 page
Report Body: 21 pages
Sketches: 2 pages
Drawings: 40 pages**

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Joseph A. Reed
Digitally Signed by: Joseph A. Reed

**Report No.: 95124.01-201-18
Test Dates: 10/23/09
Through: 01/19/10
Report Date: 01/27/10
Expiration Date: 01/19/20
Miami-Dade County Notification No.: ATIMN 09033**

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Architectural Testing

MIAMI-DADE COUNTY PERFORMANCE TEST REPORT

Rendered to:

EAGLE WINDOW & DOOR, INC.
2045 Kerper Blvd.
Dubuque, Iowa 52001

Report No.: 95124.01-201-18

Test Dates: 10/23/09

Through: 01/19/10

Report Date: 01/27/10

Expiration Date: 01/19/20

Miami-Dade County Notification No.: ATIMN 09033

Project Summary: Architectural Testing, Inc. was contracted by Eagle Window & Door, Inc. to perform testing per Florida Building Code, Test Protocols for High Velocity Hurricane Zone, Protocols TAS 201-94, TAS 202-94, and TAS 203-94 on three Series/Model 6080 Series 05 Clad Outswing French Door SP1 with Harbor Master Mono Muller to a 3080 Series 05 Clad Outswing French Door Sidelite SL1 with Harbor Master Mono, aluminum clad outswing hinged glass door with impact glazing muller to an aluminum clad sidelite/fixer door at the Architectural Testing, Inc. test facility in St. Paul, Minnesota. The samples tested met the performance requirements set forth in the protocols for a +60.0/-65.0 psf *Design Pressure* rating. Test specimen description and results are reported herein. The samples were provided by the client.

Test Procedures: The test specimens were evaluated in accordance with the following:

TAS 201-94, *Impact Test Procedures.*

TAS 202-94, *Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading.*

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.*

Drawing Reference: The test specimen drawings have been reviewed and verified by Architectural Testing and are representative of the samples tested.

Test Specimen Description:

Series/Model: 6080 Series 05 Clad Outswing French Door SP1 with Harbor Master Mono Muller to a 3080 Series 05 Clad Outswing French Door Sidelite SL1 with Harbor Master Mono

Product Type: Aluminum Clad Outswing Hinged Glass Door with Impact Glazing Muller to an Aluminum Clad Sidelite/Fixer Door

Test Specimen Description:

Overall Size: 110-1/2" wide by 95-5/16" high

Operable Door Size: 36-1/2" wide by 95-5/16" high

Operable Panel Size: 34-3/4" wide by 93-1/4" high

Daylight Opening Size: 25-1/4" wide by 80-1/2" high

Fixed Door/Sidelite Size (2): 36-1/2" wide by 95-5/16" high

Fixed Door/Sidelite Panel Size (2): 34-3/4" wide by 93-1/4" high

Fixed Daylight Opening Size (2): 25-1/4" wide by 80-1/2" high

Overall Area: 49.6 ft²

Finish: Interior wood was natural; exterior aluminum cladding was painted.

Glazing Details: All panels utilized a 10.1 mm (0.397") thick monolithic laminated glass fabricated from two nominal 3.9 mm (5/32") annealed sheets separated by a 2.3 mm (0.090") thick DuPont SentryGlas® Plus interlayer. The glass was set from the interior against an Instant Glaze II sealant and backfilled with silicone. Wood glazing stops with a single-sided adhesive foam tape were utilized on the interior and secured with 1-1/4" brad nails spaced 1" from each corner and 6" to 8" on center. Glass bite was 1/2".

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1/4" foam-filled vinyl bulb	1 Row	Top rail of panels
Q-lon leaf seal	1 Row	Perimeter of frame and astragal

French Door Frame Construction: The frame was comprised of aluminum extrusions slip-fit over wood side and head jambs. At the head, the aluminum frame joints were mitered, sealed with silicone and secured with a corner key. The wood jambs were sealed with silicone and fastened with three #8 x 1-3/4" screws per corner. The sill was comprised of an aluminum extrusion slip-fit over a polyethylene / wood fiber composite material with an oak threshold. The sill was butted to the side jamb, sealed with silicone and fastened with three #8 x 1-3/4" screws per corner.

Test Specimen Description: (Continued)

Fixed Door/Sidelite Frame Construction: The frame was comprised of aluminum extrusions slip-fit over wood side and head jambs. At the head, the aluminum frame joints were mitered, sealed with silicone and secured with a corner key. The wood jambs were sealed with silicone and fastened with three #8 x 1-3/4" screws per corner. The sill was comprised of an aluminum extrusion slip-fit over a polyethylene / wood fiber composite material with an oak threshold. The sill was butted to the side jamb, sealed with silicone and fastened with three #8 x 1-3/4" screws per corner.

French Door Panel Construction: The wood stiles and rails were joined by two 3/4" x 4" hardwood dowels secured with glue and one 2-1/2" brad. Extruded aluminum cladding was square-cut and butted at the corners, sealed with silicone and secured with a corner key and one #7 x 7/8" screw.

Fixed Door/Sidelite Panel Construction: The wood stiles and rails were joined by two 3/4" x 4" hardwood dowels secured with glue and one 2-1/2" brad. Extruded aluminum cladding was square-cut and butted at the corners, sealed with silicone and secured with a corner key and one #7 x 7/8" screw. The panel was secured to the frame with rigid PVC dual-durometer continuous spacer bracket that was secured to the frame with #8 x 3/4" screws 3" to 6" from corners and spaced 14" to 16" on center. The panel was set in a bed of perimeter sealant and secured through the spacer bracket with #8 x 1" screws to 3" to 6" from corners and spaced 14" to 16" on center. The panel bottom rail was secured with three anchor clips secured to the sill and the panel with #8 x 3/4" screws. The clips were spaced 6" from each corner and midspan. The inactive panel astragal was made up of a wood member with an extruded aluminum cover on the exterior surface. The astragal assembly was sealed with silicone and fastened to the inactive panel with six #7 x 1-1/4" screws and six #8 x 2" screws.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Butt hinges	8	11" and 36" from top and bottom of each panel
Three point locking mechanism	1	Active panel
Shoot bolts with locking handle	1	Passive panel
Latch and deadbolt strike	1	Lock jamb
Manual surface bolts	2	Top and bottom of passive panel.

Test Specimen Description: (Continued)

Drainage: No drainage was utilized.

Reinforcement: No reinforcement was utilized.

Mullion: The door and fixed door/sidelite were mulled together with a 2" by 5" LVL mullion. Each unit was secured to the LVL mullion with 1/2" x 1" - GC20 corrugated fasteners 2" to 3" from head and sill, spaced 8" on center. The door jamb was additionally secured to the mullion with two #10 x 2-1/2" screws through each hinge. The exterior was sealed with silicone and secured with an aluminum mullion cap that was snap-fit into the frame accessory kerfs. The ends of the mullions were sealed with silicone.

Installation: The unit was installed within a Spruce-Pine-Fir test frame and secured with steel installation straps at the head located 6" from each corner and mullion and at the jambs located 6" from each corner and spaced 21" on center. Each installation strap was secured to the frames with four #8 x 5/8" screws and to the bucks, on the exterior and interior, with two #8 x 1-1/2" screws. The sill was set onto three beads of silicone sealant and each unit was secured a #8 x 2-1/2" screw through the sill, spaced 6" from each corner. The door head jamb was secured with two #8 x 2-1/2" screws through the strike plate at midspan. The door sill was secured with two #8 x 2-1/8" screws through the strike plate at midspan. The door jamb was additionally secured with two #10 x 2-1/2" screws through each hinge. The unit was sealed to the buck with silicone.

Test Results: The following results have been recorded:

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #1

Design Pressure: +60.0/-65.0 psf

Title of Test	Results				
Air Infiltration					
1.57 psf (25 mph)	0.01 cfm/ft ²				
6.24 psf (50 mph)	0.03 cfm/ft ²				
	Indicator Readings (inch)				
Structural Loads					
50% of Test Pressure (+45.0 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.22	0.82	0.16	0.10	0.20
Permanent Set	0.05	0.06	0.02	0.05	0.04
50% of Test Pressure (+45.0 psf)	#6	#7	#8	#9	
Maximum Deflection	0.01	0.02	0.01	0.01	
Permanent Set	0.01	0.01	<0.01	<0.01	
Design Pressure (+60.0 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.30	1.09	0.19	0.15	0.29
Permanent Set	0.07	0.08	0.02	0.09	0.06
Design Pressure (+60.0 psf)	#6	#7	#8	#9	
Maximum Deflection	0.01	0.03	0.02	0.01	
Permanent Set	0.01	0.01	0.01	<0.01	
50% of Test Pressure (-56.25 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.29	1.17	0.18	0.10	0.26
Permanent Set	0.06	0.08	0.02	0.03	0.03
50% of Test Pressure (-56.25 psf)	#6	#7	#8	#9	
Maximum Deflection	0.03	0.04	0.02	0.01	
Permanent Set	0.01	0.01	0.01	0.01	
Design Pressure (-65.0 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.45	1.66	0.26	0.20	0.40
Permanent Set	0.09	0.11	0.04	0.04	0.04

Test Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #1 (Continued)

Design Pressure: +60.0/-65.0 psf

Title of Test	Results				
Structural Loads					
Design Pressure (-75.0 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.45	1.66	0.26	0.20	0.40
Permanent Set	0.09	0.11	0.04	0.04	0.04
Design Pressure (-75.0 psf)	#6	#7	#8	#9	
Maximum Deflection	0.07	0.08	0.06	0.05	
Permanent Set	0.02	0.02	0.02	0.03	
Water Infiltration					
15% Positive Design Pressure (+9.0 psf)	No Penetration				
Test Pressure (+90.0 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.32	1.56	0.24	0.24	0.46
Permanent Set	0.06	0.10	0.03	0.08	0.07
Test Pressure (+90.0 psf)	#6	#7	#8	#9	
Maximum Deflection	0.07	0.06	0.04	0.02	
Permanent Set	0.02	0.01	0.02	0.01	
Test Pressure (-97.5 psf)	#1	#2	#3	#4	#5
Maximum Deflection	0.42	2.52	0.47	0.23	0.48
Permanent Set	0.11	0.16	0.07	0.08	0.04
Test Pressure (-97.5 psf)	#6	#7	#8	#9	
Maximum Deflection	0.05	0.06	0.03	0.01	
Permanent Set	0.02	0.01	0.01	0.01	

Forced Entry - ASTM F 588-97 and AAMA 1304-02

Pass

Note: See Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Conditioning Temperature: 70°F
Missile Weight: 9.1 lbs
Missile Length: 94-7/8"
Muzzle Distance from Test Specimen: 16' 0"

Test Unit #1

Impact #1: Missile Velocity: 50.4 fps

Impact Area: Center of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #2: Missile Velocity: 50.4 fps

Impact Area: Lower right corner of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #3: Missile Velocity: 49.4 fps

Impact Area: Center of astragal
Observations: No structural damage

Results: Pass

Impact #4: Missile Velocity: 50.4 fps

Impact Area: Center of bottom rail of passive panel
Observations: No structural damage

Results: Pass

Impact #5: Missile Velocity: 50.2 fps

Impact Area: Midspan of mullion
Observations: No structural damage

Results: Pass

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Test Unit #1 (Continued)

Impact #6: Missile Velocity: 49.5 fps

Impact Area: Center of glazing of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #7: Missile Velocity: 50.4 fps

Impact Area: Lower right corner of glazing of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #8: Missile Velocity: 49.3 fps

Impact Area: Center of bottom rail of sidelite

Observations: No structural damage

Results: Pass

Note: Refer to Architectural Testing Sketch #2 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #1

Design Pressure: +60.0/-75.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
12.0 to 30.0	3500	1.90	0.12	0.59	0.10	0.09	0.16
0 to 36.0	300	2.45	0.14	0.72	0.11	0.09	0.18
30.0 to 48.0	600	1.74	0.16	0.91	0.12	0.12	0.24
18.0 to 60.0	100	2.47	0.22	1.13	0.14	0.16	0.30
			Permanent Set (inch)				
			0.08	0.14	0.08	0.06	0.05

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
12.0 to 30.0	3500	--	0.04	0.04	0.04	0.02
0 to 36.0	300	--	0.05	0.06	0.04	0.02
30.0 to 48.0	600	--	0.06	0.06	0.05	0.02
18.0 to 60.0	100	--	0.06	0.06	0.06	0.03
			Permanent Set (inch)			
			0.02	0.02	0.02	0.01

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #1 (Continued)

Design Pressure: +60.0/-75.0 psf

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
22.5 to 75.0	50	2.83	0.27	1.48	0.13	0.17	0.32
37.5 to 60.0	1050	2.16	0.24	1.29	0.12	0.15	0.29
0 to 45.0	50	2.70	0.20	0.97	0.09	0.12	0.22
15.0 to 37.5	3350	1.91	0.18	0.85	0.09	0.13	0.19
			Permanent Set (inch)				
			0.07	0.14	0.02	0.05	0.02

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
22.5 to 75.0	50	--	0.04	0.05	0.04	0.02
37.5 to 60.0	1050	--	0.04	0.04	0.03	0.02
0 to 45.0	50	--	0.03	0.02	0.03	0.01
15.0 to 37.5	3350	--	0.04	0.03	0.02	0.02
			Permanent Set (inch)			
			0.01	0.01	0.01	0.01

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Conditioning Temperature: 70°F
Missile Weight: 9.1 lbs
Missile Length: 94-7/8"
Muzzle Distance from Test Specimen: 16' 0"

Test Unit #2

Impact #1: Missile Velocity: 49.9 fps

Impact Area: Center of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #2: Missile Velocity: 50.0 fps

Impact Area: Upper left corner of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #3: Missile Velocity: 49.8 fps

Impact Area: Center of astragal
Observations: No structural damage

Results: Pass

Impact #4: Missile Velocity: 49.1 fps

Impact Area: Center of bottom rail of passive panel
Observations: No structural damage

Results: Pass

Impact #5: Missile Velocity: 49.8 fps

Impact Area: Midspan of mullion
Observations: No structural damage

Results: Pass

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Test Unit #2 (Continued)

Impact #6: Missile Velocity: 49.1 fps

Impact Area: Center of glazing of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #7: Missile Velocity: 49.1 fps

Impact Area: Upper left corner of glazing of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #8: Missile Velocity: 49.9 fps

Impact Area: Center of bottom rail of sidelite

Observations: No structural damage

Results: Pass

Note: Refer to Architectural Testing Sketch #2 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #2

Design Pressure: +60.0/-75.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
12.0 to 30.0	3500	1.84	0.14	0.66	0.11	0.07	0.17
0 to 36.0	300	2.80	0.16	0.79	0.11	0.11	0.22
30.0 to 48.0	600	1.92	0.19	1.04	0.13	0.22	0.31
18.0 to 60.0	100	2.18	0.23	1.21	0.15	0.19	0.37
			Permanent Set (inch)				
			0.08	0.13	0.03	0.09	0.09

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
12.0 to 30.0	3500	--	0.03	0.05	0.02	0.01
0 to 36.0	300	--	0.04	0.05	0.18	0.01
30.0 to 48.0	600	--	0.06	0.05	0.19	0.01
18.0 to 60.0	100	--	0.06	0.05	0.20	0.01
			Permanent Set (inch)			
			0.01	<0.01	0.16	<0.01

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #2 (Continued)

Design Pressure: +60.0/-75.0 psf

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
22.5 to 75.0	50	2.98	0.34	1.60	0.16	0.15	0.38
37.5 to 60.0	1050	1.50	0.25	1.34	0.14	0.13	0.31
0 to 45.0	50	3.00	0.17	1.00	0.11	0.09	0.23
15.0 to 37.5	3350	2.32	0.15	0.83	0.09	0.07	0.19
			Permanent Set (inch)				
			0.01	0.03	0.02	0.01	0.02

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
22.5 to 75.0	50	--	0.06	0.04	0.05	0.01
37.5 to 60.0	1050	--	0.05	0.04	0.04	0.01
0 to 45.0	50	--	0.03	0.03	0.02	0.01
15.0 to 37.5	3350	--	0.03	0.02	0.02	0.01
			Permanent Set (inch)			
			0.01	0.02	0.01	0.01

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Conditioning Temperature: 70°F
Missile Weight: 9.1 lbs
Missile Length: 94-7/8"
Muzzle Distance from Test Specimen: 16' 0"

Test Unit #3

Impact #1: Missile Velocity: 49.2 fps

Impact Area: Center of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #2: Missile Velocity: 50.5 fps

Impact Area: Lower left corner of glazing of active panel
Observations: No, rips, tears or penetrations

Results: Pass

Impact #3: Missile Velocity: 49.1 fps

Impact Area: Center of astragal
Observations: No structural damage

Results: Pass

Impact #4: Missile Velocity: 50.5 fps

Impact Area: Center of bottom rail of passive panel
Observations: No structural damage

Results: Pass

Impact #5: Missile Velocity: 49.7 fps

Impact Area: Midspan of mullion
Observations: No structural damage

Results: Pass

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Test Unit #3 (Continued)

Impact #6: Missile Velocity: 49.1 fps

Impact Area: Center of glazing of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #7: Missile Velocity: 49.9 fps

Impact Area: Lower left glazing corner of sidelite

Observations: No, rips, tears or penetrations

Results: Pass

Impact #8: Missile Velocity: 49.6 fps

Impact Area: Vertical and horizontal center of bottom rail of sidelite

Observations: No structural damage

Results: Pass

Note: Refer to Architectural Testing Sketch #2 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #3

Design Pressure: +60.0/-75.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
12.0 to 30.0	3500	2.03	0.12	0.63	0.11	0.08	0.17
0 to 36.0	300	2.25	0.15	0.82	0.12	0.11	0.22
30.0 to 48.0	600	1.89	0.18	0.95	0.13	0.14	0.26
18.0 to 60.0	100	2.54	0.22	1.17	0.14	0.18	0.33
			Permanent Set (inch)				
			0.07	0.13	0.09	0.09	0.07

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
12.0 to 30.0	3500	--	0.04	0.07	0.07	0.04
0 to 36.0	300	--	0.04	0.08	0.07	0.05
30.0 to 48.0	600	--	0.06	0.10	0.09	0.06
18.0 to 60.0	100	--	0.07	0.12	0.10	0.07
			Permanent Set (inch)			
			0.03	0.05	0.05	0.04

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #3 (Continued)

Design Pressure: +60.0/-75.0 psf

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)				
			#1	#2	#3	#4	#5
22.5 to 75.0	50	2.63	0.31	1.60	0.17	0.21	0.41
37.5 to 60.0	1050	2.27	0.28	1.36	0.15	0.19	0.36
0 to 45.0	50	2.32	0.24	1.16	0.13	0.17	0.30
15.0 to 37.5	3350	1.94	0.22	0.98	0.11	0.16	0.26
			Permanent Set (inch)				
			0.08	0.13	0.04	0.08	0.06

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)			
			#6	#7	#8	#9
22.5 to 75.0	50	--	0.06	0.08	0.06	0.02
37.5 to 60.0	1050	--	0.05	0.07	0.05	0.02
0 to 45.0	50	--	0.04	0.05	0.04	0.01
15.0 to 37.5	3350	--	0.04	0.04	0.03	0.01
			Permanent Set (inch)			
			0.02	0.01	0.01	0.01

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Equipment:

Cannon: Steel pipe barrel utilizing compressed air to propel the missile

Missile: 2x4 Southern Pine

Timing Device: Electronic Beam Type

Cycling Mechanism: Computer controlled centrifugal blower with electronic pressure measuring device

Deflection Measuring Device: Linear transducers

Laboratory Compliance Statements: The following are provided as required by the protocols for the testing reported herein.

Upon completion of testing, specimens tested for TAS 201-94 met the requirements of Section 1626 of the Florida Building Code, Building.

Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code, Building.

Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1626 of the Florida Building Code, Building.

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.

Testing was conducted at the Architectural Testing, Inc. laboratory located in St. Paul, Minnesota.

List of Official Observers:

<u>Name</u>	<u>Company</u>
Chad Cornell	Eagle Window & Door, Inc.
Jim Welter	Eagle Window & Door, Inc.
Mark D. Lewke	Architectural Testing, Inc.
Dax R. Stoehr	Architectural Testing, Inc.
Karl A. Lips-Eakins	Architectural Testing, Inc.
Joseph A. Reed, P.E.	Architectural Testing, Inc.
Eric J. Schoenthaler	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of ten years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

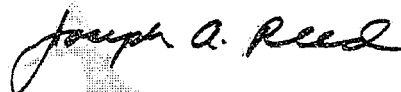
Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.



Digitally Signed by: Eric Schoenthaler

Eric J. Schoenthaler
Project Manager



Digitally Signed by: Joseph A. Reed

Joseph A. Reed, P.E.
Director - Engineering and Product Testing

EJS:es/cmd

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

- Appendix-A: Sketches (2)
- Appendix-B: Drawings (40)