



Architectural Testing

## ANSI/AAMA/WDMA STRUCTURAL TEST REPORT

Rendered to:

HURD MILLWORK COMPANY, INC.  
520 South Whelen Avenue  
Medford, Wisconsin 54451

Report No: 06-30323.01  
Test Dates: 01/16/02  
and: 01/22/02  
Report Date: 01/23/02  
Expiration Date: 01/16/06

**Series/Model:** 4-0 x 3-0 Clad Awning  
**Type:** Aluminum Clad Awning

### Test Procedure:

The test specimen was evaluated in accordance with ANSI/AAMA/WDMA 101/I.S. 2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors," for conformance to the **Class AP-C50 48 x 36** performance requirements, as well as water test 7.50 psf and optional structural test of 75.00 psf positive and negative. \*Uniform load structural testing was also performed per North Carolina Building Code 613.2-mullions.

### Test Specimen Description:

**Overall Size:** 48 -1/4" wide by 36 -1/4" high  
**Sash Size:** 46 -5/8" wide by 34 -5/8" high  
**Overall Area:** 12.15 ft<sup>2</sup>

**Finish:** Interior wood was natural and exterior was extruded aluminum cladding.

**Glazing:** The sash utilized nominal 1" thick sealed insulating glass composed from two sheets of double strength clear annealed glass separated by a nominal 3/4" Intercept metal spacer. The glass was set from the interior against a continuous closed cell foam glazing tape. The interior wood stops are part of the interior wood sash members and utilized a continuous closed cell foam glazing tape.

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**Test Specimen Description:(con't)**

**Frame Construction:** Wood framing verticals and head consisted of laminated strand lumber (LSL). The frame sill was finger jointed pine. The frame corners were dadoed, sealed with silicone and secured with three (3) 1/2" by 2" staples per corner. The exterior aluminum cladding was sealed and secured to the wood frame with 1/8" by 1/2" staples spaced approximately 16" on center. The cladding corners were miter-cut, sealed with a corner gasket and secured using nylon corner keys and two (2) #6 x 1/2" screws per corner.

**Sash Construction:** Sash was constructed of molded finger jointed pine. Wood sash corners were square cut, dadoed and secured with one (1) #7 by 7/8" screw per corner. Clad corner construction consisted of square cut, coped, mitered and secured with two (2) #6 by 5/8" metal screws per corner. The cladding was snap fit to the wood sash members and secured with #6 by 5/8" metal screws spaced approximately 16" on center at the outside perimeter of cladding.

**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.250" dia. foam bulb	1 row	Frame perimeter
0.250" by 0.375" PVC bulb	1 row	Sash perimeter

**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Truth awning operator	1	Center of sill
14" metal hinge w/track	2	Hinge side jamb/stile located near top
Truth tie bar, acuatling 1 point lock system	2	Locking jamb/stile, located at tip of sash to centerline at 9" from both ends
Lock keeper	2	Sash, adjacent to 1 point lock system from both ends

**Test Specimen Description:(con't)**

**Installation:** The window was installed into a nominal 2" by 6" wood buck/wall. The interior side of the integral nailing flange was sealed to the wood surround, as well as the nail head, and secured with 2" galvanized roofing nails spaced approximately 4" on center.

**Test Results:**

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.1.2	Air Infiltration ASTM E 283-91 @ 1.57 psf	0.05 cfm/ft <sup>2</sup>	0.3 cfm/ft <sup>2</sup>
	Air Infiltration @ 6.24 psf	0.14 cfm/ft <sup>2</sup>	-----
<i>The test specimen meets the performance levels specified in ANSI/AAMA/WDMA 101/I.S.2-97 for a AP-C50 window.</i>			
2.1.3	Water Resistance ASTM E 547-96 @ 4.50 psf	No entry	No entry @ 4.50 psf
2.1.4.2	Uniform Load Structural ASTM E 330-97 Sash top rail @ 45.00 psf (positive)	0.006"	0.4% of L = 0.186"
	@ 45.00 psf (negative)	0.012"	0.4% of L = 0.186"
2.2.4.5.2	Sash Torsion Test @ 30 lbf	0.75"	<1.57"
2.1.8	Forced Entry Resistance ASTM F 588-97 Grade 10	No entry	No entry @ Grade 10

**Optional Performance:**

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.3	Water Resistance ASTM E 547-96 @ 7.50 psf	No entry	No entry @ 7.50 psf



**Test Results:(con't)**

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.4.1	Uniform Load Deflection at Design Pressure* ASTM E 330-97 (60 seconds) Sash top rail		
	@50.00 psf (positive)	0.100"	No damage
	@50.00 psf (negative)	0.240"	No damage
4.4.2	Uniform Load Structural ASTM E 330-97 Sash top rail		
	@ 75.00 psf (positive)	0.010"	0.4% of L = 0.186"
	@ 75.00 psf (negative)	0.020"	0.4% of L = 0.186"

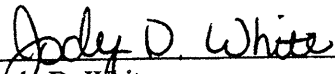
\*Not required for ANSI/AAMA/WDMA 101/I.S. 2-97

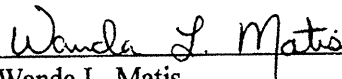
Design Pressure Rating: For use in locations adhering to the S.B.C.C.I., S.F.B.C., S.F.B.C. Broward Edition, and where the pressure requirements as determined by ASCE 7 minimum design loads for buildings and other structures does not exceed design pressure ratings listed above.

Testing was conducted at the Hurd Millwork testing facility located in Medford, Wisconsin, and witnessed by Architectural Testing, Inc. (ATI). A copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

ARCHITECTURAL TESTING, INC.

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