

# NATIONAL CERTIFIED TESTING LABORATORIES

1464 GEMINI BOULEVARD • ORLANDO, FLORIDA 32837  
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## STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-210-2317-1  
Test Date: 03-23-00  
Report Date: 03-27-00

**Client:** Florida Extruders International Incorporated  
2540 Jewett Lane  
Sanford, FL 32771-1600

**Test Specimen:** One (1) Florida Extruders International Inc.'s Model "Milestone 2000" Aluminum Sliding Glass Door (SGD-R60) (12'0" x 8'0").

**Test Specifications:** AAMA/NWWDA 101/I.S. 2-97 Voluntary Specifications for Aluminum Prime Windows and Sliding Glass Doors." ASTM E 283-01, Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen. ASTM E 330-90, Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference. ASTM E 331-93, Test Method for Water Penetration of exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference. ASTM E 547-93, Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential.

### TEST SPECIMEN DESCRIPTION

**General:** The sample tested was a three (3) panel type "XXO" aluminum sliding glass door measuring 143-1/2" wide by 96-1/2" high overall. The left active and center active panels measured 49" wide by 95-3/8" high; the right panel measured 48-7/8" wide by 95-3/8" high. Frame and panel members were not thermally broken. The fixed panel was secured to the jamb with two (2) 2" long aluminum retainers each fastened to the jamb stile with a single screw. One (1) plunger type security lock was fastened to the left active lock stile with the keepers fastened to the left jamb at lock position. One (1) adjustable metal single roller assembly was used at each end of the active bottom rails. The frame was of double screw coped corner construction. Panel top rail/stile corners were of double screw (# 6 by 5/8") overlapping coped corner construction. Panel bottom rail/stile corners were of single screw (1/4-20 by 1/2") overlapping coped corner construction. One (1) nylon panel guide was located at each end of each interlock stile.

**Glazing:** All panels were channel glazed using 3/16" thick tempered clear glass with a flexible vinyl glazing channel.

**Installation Fasteners:** The frame was mounted to the test buck using forty-four (44) (# 8 by 1") flat head screws.

PROFESSIONALS IN THE SCIENCE OF TESTING

*Barry Portney*  
2/27/02

**Weatherstrip:** Double strips of polypile weatherstrip (0.190" high) were located at each interlock stile and top rail. Double strips of polypile weatherstrip (0.260" high) was located at each jamb. Double strips of flexible vinyl weatherstrip were located at each bottom rail. A polypile dust plug measuring 1-1/2" x 1" x 0.270" high was located at the sill under each interlock stile.

**Weeps:** One (1) weep hole measuring 1-1/8" leg height was located at each end of each vertical sill leg.

**Interior & Exterior Surface Finish:** White painted aluminum.

**Sealant:** A small-joint sealant was applied to the jamb/sill corners and each sill's installation screw.

**Insect Screen:** Two (2) insect screens measuring 46-7/8" wide by 95" high were of coped overlapped type corner construction. Bottom rail/stile corners used a single screw. The left screen employed a plunger type lock with the keeper attached to the jamb. The center screen employed a plain pull handle. One (1) metal single roller was located at each end of each bottom rail.

### TEST RESULTS

<u>AAMA/NWWDA 101-97</u>	<u>Title of Test</u>	<u>Measured</u>	<u>Allowed</u>
2.2.9.5.1	Operating Force Active Panels To Open In Motion	8 lbs. max. 7 lbs. max.	30 lbs. max. 20 lbs. max.
2.1.2	Air Infiltration 1.57 psf (25 mph)	0.22 cfm/ft	0.30 cfm/ft
2.13	* Water Resistance - (5.0 gph/ft <sup>2</sup> ) WTP = 3.00 psf	No Entry	No Entry
2.1.4.2	Uniform Load Structural 30.0 psf exterior 30.0 psf interior	0.036" 0.029"	0.384" 0.384"
2.2.1.6.2	Deglazing Left Active Panel Top Rail (50#) Bottom Rail (50#) Jamb Stile (70#) Meeting Stile (70#)	4.0% (0.020") 0.8% (0.004") 6.2% (0.031") 3.8% (0.019")	< 100% < 100% < 100% < 100%

*Banyo Pereira*  
2/22/02

**OPTIONAL PERFORMANCE**

*Note: Three (3) additional sill heights were tested for water resistance. The following results were obtained.*

4.3	* <i>Water Resistance - (5.0 gph/ft<sup>2</sup>)</i>		
	<i>WTP = 6.25 psf (1-1/2" riser)</i>	<i>No Entry</i>	<i>No Entry</i>
	<i>WTP = 10.40 psf (2-5/8" riser)</i>	<i>No Entry</i>	<i>No Entry</i>
	<i>WTP = 12.40 psf (4-5/8" riser)</i>	<i>No Entry</i>	<i>No Entry</i>
4.4.2	<i>Uniform Load Structural</i>		
	<i>95.3 psf Exterior</i>	<i>0.184"</i>	<i>0.384"</i>
	<i>95.3 psf Interior</i>	<i>0.220"</i>	<i>0.384"</i>

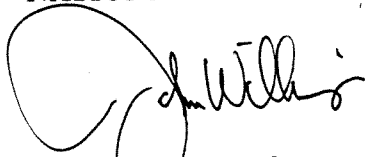
**Test Completed: 03-23-00**

*\*Test performed with and without insect screens.*

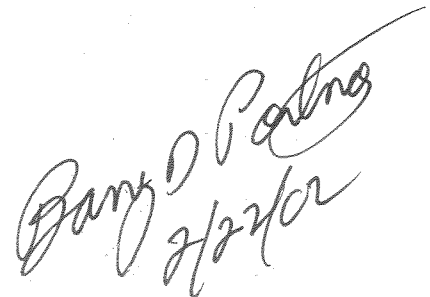
*This test specimen meets the performance criteria level of SGD-R60 (12'0" x 8'0") of the AAMA/NWWDA 101/I.S. 2-97 specification.*

*Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested.*

**NATIONAL CERTIFIED TESTING LABORATORIES, INC.**

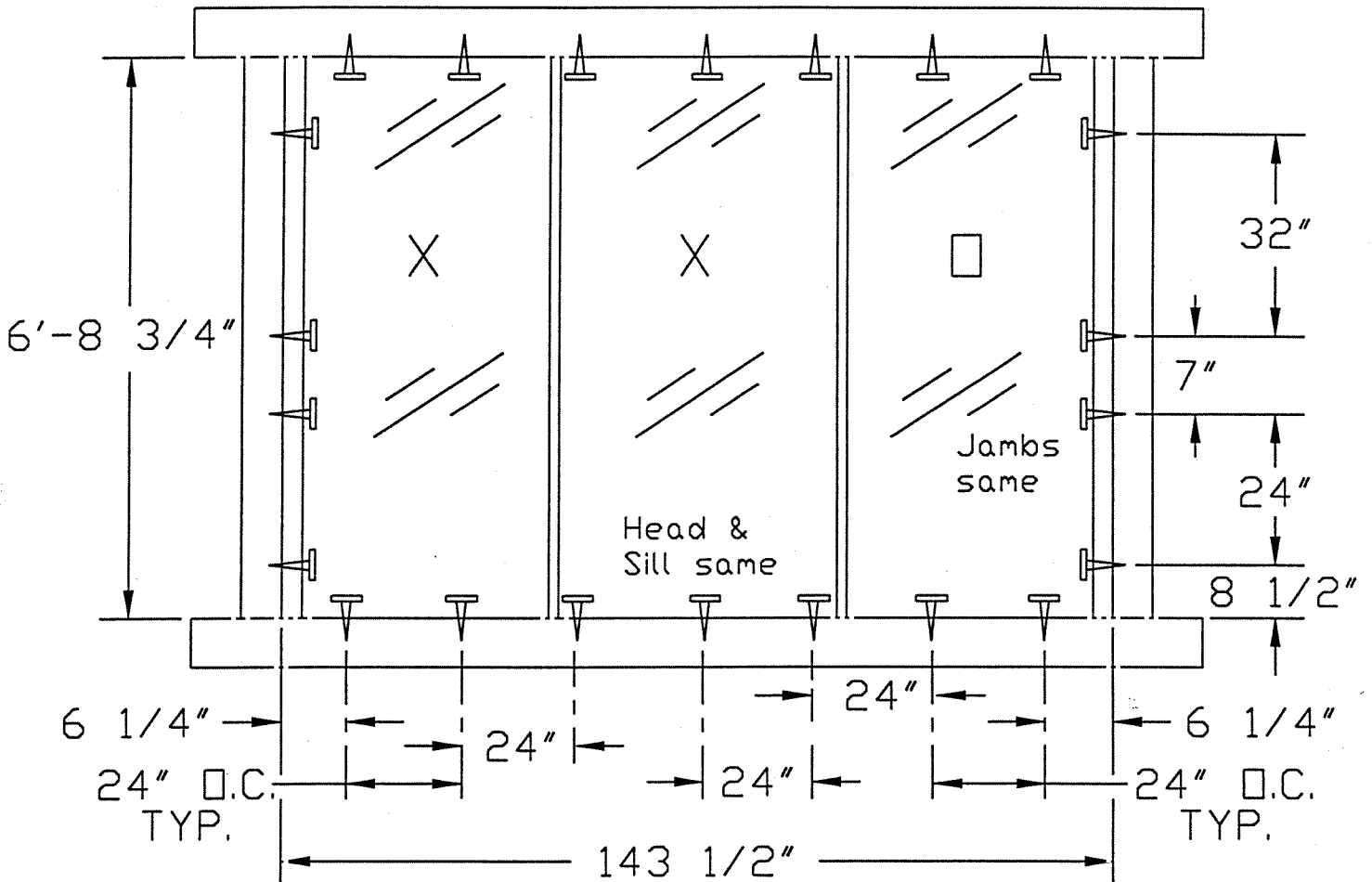


**JOHN WILLIAMS**  
*Laboratory Manager*



*Barry O. Patton*  
*2/22/02*

# FASTENER LOCATIONS



The test specimen was flange mounted to the test buck using forty-four (44) #8 X 1" FH screws at locations shown.

⏏ - DENOTES SCREW

*Randy P. ...*

fastloc5

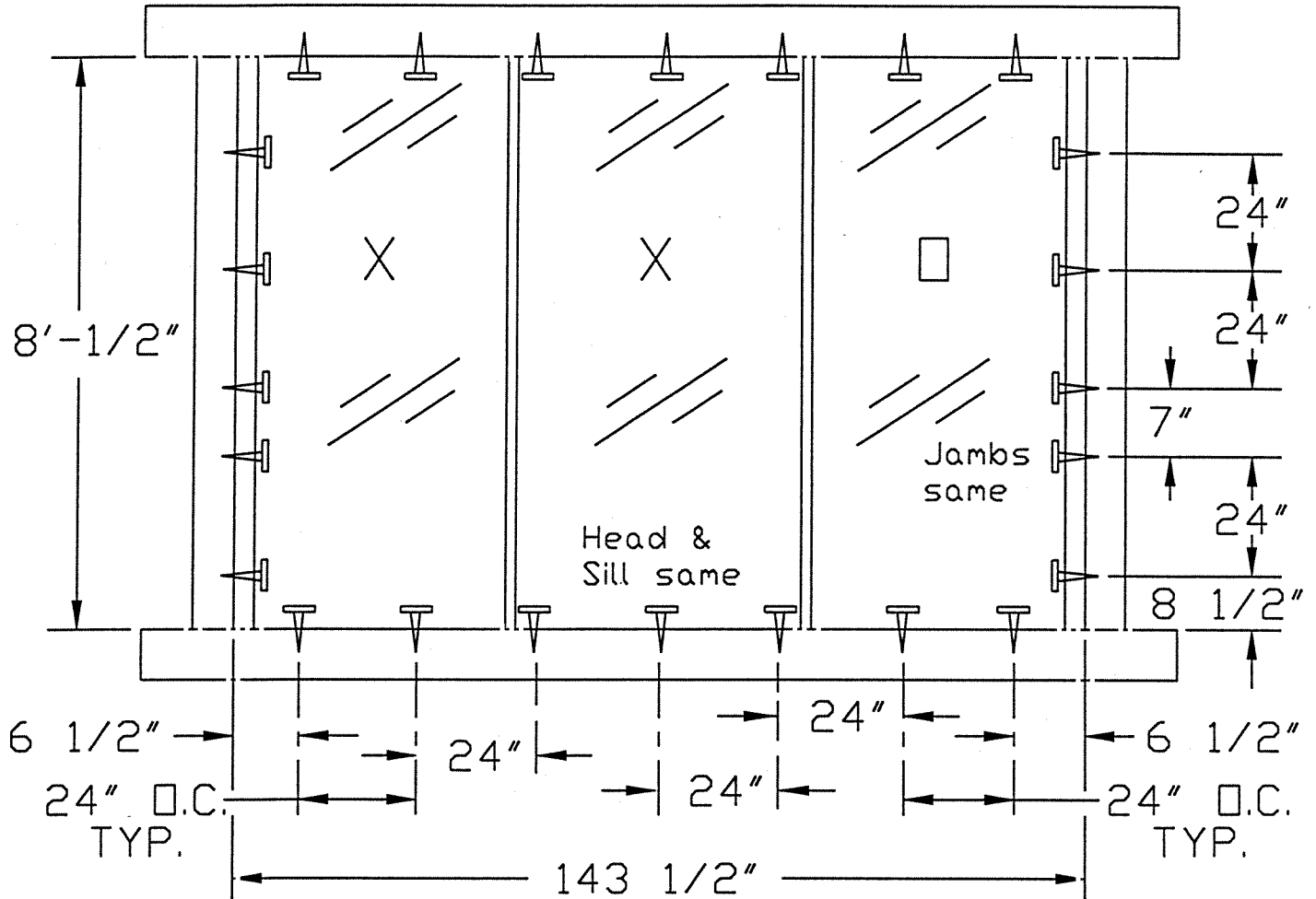
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# FASTENER LOCATIONS



The test specimen was flange mounted to the test buck using forty-eight (48) #8 X 1" FH screws at locations shown.

▮ - DENOTES SCREW

fastloc9

*Ray Patton*  
2/2/00

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