

**F**ENESTRATION  
**T**ESTING  
**L**ABORATORY

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**LETTER OF AUTHORIZATION**

<b>FROM:</b>	<b>Karl Hatrak (Hy-Lite Block Windows)</b>
<b>TO:</b>	<b>Fenestration Testing Laboratory</b>

I have reviewed the entire AAMA/NWWDA 101/I.S.2-97 test report, **V99C-143** prepared by **Fenestration Testing Laboratory** on September 28, 1999.

I am completely satisfied with the contents of the report and take the responsibility for the accuracy of all the information provided to the laboratory.

I approve and authorize **Fenestration Testing Laboratory** to issue this report to the Inspection Agency.

<b>Name of Inspection Agency:</b>	<b>Associated Laboratories, Inc.</b>
<b>Contact:</b>	

*Karl Hatrak*  
\_\_\_\_\_  
Signature

*Product Development*  
\_\_\_\_\_  
Title

*10-25-99*  
\_\_\_\_\_  
Date

\* Please fax this authorization letter to **Fenestration Testing Laboratory**. Our fax number is (909) 923-6262, in order for our laboratory to send your report to the Inspection Agency.

*Thank You*

**TESTED FOR**

**HY-LITE BLOCK WINDOWS**  
101 California Avenue  
Beaumont, CA 92223

Report No. : V99C-143  
Date : September 28, 1999  
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**1.0 PURPOSE**

The purpose of this report is to present the testing methods employed and the test results obtained during the performance testing of one (1) **PVC Casement Window** described in paragraph 4.0 of this report.

**2.0 TEST REFERENCES**

2.1 Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows & Glass Doors:  
AAMA/NWDA 101/I.S.2-97; C - C 40 31 x 55

2.2 CAWM 301 - 90 Forced Entry Resistance Tests for Windows.

**3.0 SUMMARY**

The test results in paragraphs 5.0 and 6.0 indicate that the test sample described in paragraph 4.0 of this report complied with the performance requirements of the above referenced specifications.

**4.0 SAMPLE SUBMITTED****SERIES:**

PRESTIGE K Casement

**CONFIGURATION:**

Single Vent Out

**FRAME SIZE:**

31.00" x 55.00"

**VENT SIZE:**

29.00" x 52.88" Four (4) blocks wide x eight (8) blocks high.

**GLAZING MATERIAL:**

6" x 6" x 2" thick translucent acrylic blocks with a sealed air space in an aluminum thermally broken frame.

The perimeter of the composite block lite was wet glazed to the frame from the interior and exterior with a thermal plastic sealant. In addition, the individual block lites were sealed to each other from the interior and exterior with a thermal plastic sealant.

**GLAZING:**

The unit was glazed from the interior to a PVC vent with 3/8" x 1/16" double-sided adhesive foam tape. PVC snap-in glazing bead was applied on the inside full perimeter.

**WEEPAGE:**

None.

**WEATHERING:**

The window contained foam-filled bulb vinyl full perimeter on the frame and full perimeter on the vent.

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**HARDWARE:**

The lock jamb contained a three-point lock actuated by a lever 6 inches from the bottom fastened with four (4) #8 x 3/8" machine screws. The rod containing the three-lock bolts was supported by three (3) plastic guides each fastened to the jamb with a pair of #6 x 1" PFH screws.

The lock bolts each engaged a plastic keeper fastened with a pair of #6 x 5/8" PFH screws to the vent lock stile at 9, 28 and 47 inches from the bottom.

The vent was supported by a three-bar concealed hinge in the head and sill.

The frame sill contained a roto operator fastened with six (6) screws. The operator arms engaged their corresponding hardware fastened to the vent bottom rail.

**CONSTRUCTION:**

The frame and vent corners were welded full profile.

Individual block lites were stacked together, vertically and horizontally, to form the overall composite size. When stacking, the blocks were mechanically fastened together, at each inside and outside corner, with an I-shaped plastic key that fit into built-in slots at each block corner.

The perimeter of the composite block lite fit into the aluminum frame such that the frame inner leg served as a stop for the composite block lite. In addition, the blocks along the jambs contained their respective I-shaped keys at the corners that protruded into the channels created by the most outer and inner legs of the aluminum frame.

The aluminum frame corners were sealed full profile and fastened with a pair of #6 x 1" square drive screws.

**CAULKING:**

The fixed lite in the aluminum frame was sealed full perimeter to the PVC vent from the outside.

**ANCHORING:**

The frame was sealed and anchored to a 2" x 8" wooden buck with #6 x 1" PPH screws every 16 inches and wood furring was applied over the nail-on fins and fastened to the wooden buck.

**5.0 TEST PROCEDURES AND RESULTS**

5.1 All testing procedures were performed in accordance with the performance requirements of the test specifications referenced in paragraph 2.0 of this report.

**5.2 TEST RESULTS**  
**PARAGRAPH**

<u>PARAGRAPH</u>	<u>TEST DESCRIPTION</u>	<u>MEASURED</u>	<u>ALLOWED</u>
2.1.2	Air Infiltration (ASTM E 283) 1.57 PSF The tested specimen exceeds the performance requirements specified in AAMA/NWDA 101/LS-2-97 for Air Infiltration.	0.0 CFM/Ft <sup>2</sup>	0.3 CFM/Ft <sup>2</sup>
2.1.3	Water Penetration (ASTM E 547) 4.50 PSF Internal screen	No Leakage	No Leakage
2.1.4	Uniform Load Structural (ASTM E 330) 45.0 PSF POS 45.0 PSF NEG	0.00" 0.00"	0.21" Set 0.21" Set

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5.2 TEST RESULTS (cont'd)

<u>PARAGRAPH</u>	<u>TEST DESCRIPTION</u>	<u>MEASURED</u>	<u>ALLOWED</u>
2.2.5.6.1	Vertical Deflection Test 60 lbf.	0.25" Defl.	0.60" Defl.
2.2.5.6.2	Hardware Load Test 66.58 lbf.	No Damage	No Damage
2.1.7	Welded Corner Test	Passed	Break Shall Not Extend Along Entire Weld Line

5.3 OPTIONAL PERFORMANCE GRADES

4.3	Water Penetration (ASTM E 547 & ASTM E 331) 6.00 PSF Internal screen	No Leakage	No Leakage
4.4.2	Uniform Load Structural (ASTM E 330) 60.0 PSF POS 60.0 PSF NEG	0.00" 0.00"	0.21" Set 0.21" Set

6.0 2.1.8 CAWM 301 - 90 FORCED ENTRY RESISTANCE TEST RESULTS

2.4.2 Type "II" Window

	<u>TEST</u>	<u>RESULTS</u>	<u>DESCRIPTION</u>
5.2.1		Passed	Disassembly
5.2.2	A	Passed	With swinging sash in normal position, 100# load within three (3) inches of each end of the member which is opposite the hinged side, in direction perpendicular to the plane of the glass that would tend to open the window.
5.2.3	B	Passed	Test A and simultaneous load of 100# on the outside within one (1) inch of each end of the member which is opposite the hinged side, in a direction parallel to the plane of the glass which would tend to disengage the lock.
5.2.4	C	Passed	With the swinging sash in normal position, 200# on the member containing the locking device, within six (6) inches of the locking device, in direction perpendicular to the plane of the glass which would tend to open the window, while simultaneous load of 100# on the outside within one (1) inch of each end of the member which is opposite the hinged side, in a direction parallel to the plane of the glass which would tend to disengage the lock.
5.2.5	E	Passed	Hand and Tool Manipulation.

For a complete description of the tested sample refer to the attached cross section drawings.

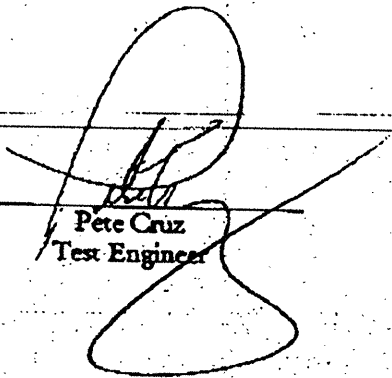
Assembly and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings and a copy of this report will be retained at the test laboratory for four years.

This test report may not be modified in any way without the written consent of Fenestration Testing Laboratory.

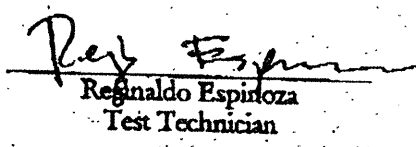
The above test results were obtained by using the applicable ASTM and CAWM Test Methods. This report does not constitute Certification of this product. Certification can only be granted by an approved Administrator and/or Validator.

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Testing Completed: September 24, 1999  
Report Completed: September 28, 1999



Pete Cruz  
Test Engineer



Reginaldo Espinoza  
Test Technician