



Quality Accuracy Assurance

Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, FL 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 (888) 819-7877

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Report Date: 9/25/2015
 Completion Date: 9/3/2015
 Expiration Date: 9/3/2019
 Page No. Page 1 of 18
 Lab. Number: 8483
 Project Number: 15-5706

OFFICIAL TEST REPORT

MANUFACTURER: Aluminco S.A.

SPECIFICATIONS: Florida Building Code
 Concentrated Load Test
 ANSI Z97.1

ADDRESS: Inofita, Viotia Greece, 32011

PROJECT: Aluminco S.A.

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DESCRIPTION OF SAMPLE	
Model Designation:	Series: F50 Horizon U-Rail Glass Railing
Overall Size:	10'-6 13/16" (126 13/16") by 3'-6 3/16" (42 3/16") high
Size and Location of Post:	Four 38 15/16" high vertical post located 4 1/2", 43 5/8", 83" and 122" from left
Sample A-1	

MATERIAL CHARACTERISTICS			
Members	Material**	Part Number**	Joint Type
Top Rail	6060-T6	F50-305	N/A
Bottom Rail	6060-T6	F50-305	N/A
Hand Rail	6060-T6	F50-200	N/A
Vertical Post	6060-T6	F50-107	N/A
Saddle	6063-T6	4314	N/A
Top and Bottom Rail Brackets	6063-T6	4225	N/A
Anchor Base Tube	6060-T6	4127-200	N/A
Anchor Base Plate	6060-T6	4127-200	N/A

Glazing			
Glazing Location	Glazing Material	Glazing Compound	Compound Color
All three lites of glass	*13/32" nominal laminated glass composed of (2) 5/32" heat strengthened glass	**GE Silicone II	White
Interlaying Film: *0.090" **DuPont SentryGlas		Laminator: **Tecnoglass	
Glazing Method: Pocket glazed with a *0.471" glazing penetration using a vinyl gasket on the interior and exterior and using silicone in the glazing pocket.			
Daylight Opening:	34 5/8" by 30 5/8" high		



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Additional Information

The sample was tested using one 126 13/16" long aluminum hand rail (part No. F50-200). The hand rail was fastened to the vertical post using one saddle (part No. 4314) per post. The saddle slides onto the vertical post and is secured with epoxy and the saddle is fastened to the hand rail using two No. 8 by 3/4" FH SDS.

The top and bottom rails were fastened using one extruded aluminum bracket (part No. 4225). The top and bottom rails slide into the bracket and were fastened to the bracket using one 12-24 by 3/16" socket set MS and the bracket was fastened to the vertical post using one No. 10 by 1 1/2" FH SDS.

The sample was tested using an extruded aluminum anchor base tube (part No. 4127-200). The vertical post slides into the anchor base tube and the anchor base tube is fastened to the vertical post using two 5/16-24 by 3/8" socket set MS.

The sample was tested using an aluminum anchor plate (part No. 4127-200) which was epoxied to the anchor base tube.

Sample Installation

The anchor plate was fastened to the 3,000 psi concrete test slab using six 1/2" by 4" HWH wedge bolts.

Sample: A-1		Temperature: 79°F		Barometric Reading: 29.99 inches Hg	
Title of Test		Load		Notes	
Concentrated Load Test		525.0 lbs		As per FBC section 1607.8.1. A horizontal load was applied at the center of the hand rail.	
Reading#	Deflection	Permanent Set	Results	Add. Info	
1	2.125"	0.248"	Passed		



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Sample: A-1		Temperature: 79°F		Barometric Reading: 29.99 inches Hg	
Title of Test			Load		Notes
Concentrated Load Test			200.0 lbs		As per FBC section 1607.8.1.1. A horizontal load was applied at the corner of the hand rail.
Reading#	Deflection	Permanent Set	Results	Add. Info	
2	1.710"	0.170"	Passed		

Sample: A-1		Temperature: 79°F		Barometric Reading: 29.99 inches Hg	
Title of Test			Load		Notes
Concentrated Load Test			50.0 lbs		As per FBC section 1607.8.1.2. A load was applied at the center of the left lite perpendicular to the glass.
Reading#	Deflection	Permanent Set	Results	Add. Info	
3	n/a	n/a	Passed		



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Sample: A-1	Temperature: 80°F	Barometric Reading: 29.99 inches Hg
Title of Test		Notes
Drop Test		As per FBC section 1618.4.6.3
Observations: after all three impacts one of the aluminum anchor plates became loose. However, the railing maintained in place.		
Drop #	Results	Add. Info
1	Passed	Impacted center of lite. After impact the glass did break but remained in the place and there wasn't any apparent tear in the inter layer film.
2	Passed	Impacted center of lite. After impact the glass did not break.
3	Passed	Impacted center of lite. After impact the glass did not break.



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Remarks
Detailed drawings and test report will be retained by Fenestration Testing Laboratory for a period of four years from the original test date. Due to the code cycle change of four years, it is recommended that this report be evaluated during the lifespan of this document.
This product was tested and meets the requirement set forth by the Florida Building Code (2014) concentrated load test sections 1607.8.1, 1607.8.1.1 and 1607.8.1.2.
This product was tested in accordance with ANSI Z-97.1-09 (FBC section 1618.4.6.3) with no deviations.
Testing was conducted as per instructions received from the manufacturers company representative.

Witnessed by:
Ms. Idalmis Ortega, P.E.

Technicians:
Mr. Harold Anacona

FENESTRATION TESTING LABORATORY, INC.

Mr. Manny Sanchez
Chief Executive Officer