



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.

Table of Contents

| | Page | Rev | | Page | Rev |
|----------------------------|------------------------|-----|-----------------------------|------------------------|-----|
| Sample A-1 | | | Sample C-1 continued | | |
| Description of Test Sample | 2 | | Concentrated Load Test | FBC section 1607.8.1.1 | 10 |
| Material Characteristics | 2 | | Concentrated Load Test | FBC section 1607.8.1.2 | 11 |
| Glazing | 2 | | Drop Test | ANSI Z97.1 | 11 |
| Additional Information | 3 | | Sample D-1 | | |
| Test Sample Installation | 3 | | Description of Test Sample | | 12 |
| Results Sample A-1 | | | Material Characteristics | | 12 |
| Concentrated Load Test | FBC section 1607.8.1 | 3 | Glazing | | 12 |
| Concentrated Load Test | FBC section 1607.8.1.1 | 4 | Additional Information | | 12 |
| Concentrated Load Test | FBC section 1607.8.1.2 | 4 | Test Sample Installation | | 12 |
| Drop Test | ANSI Z97.1 | 5 | Results Sample D-1 | | |
| Sample B-1 | | | Concentrated Load Test | FBC section 1607.8.1 | 13 |
| Description of Test Sample | 6 | | Concentrated Load Test | FBC section 1607.8.1.1 | 13 |
| Material Characteristics | 6 | | Concentrated Load Test | FBC section 1607.8.1.2 | 14 |
| Glazing | 6 | | Drop Test | ANSI Z97.1 | 14 |
| Additional Information | 6 | | Sample H-1 | | |
| Test Sample Installation | 7 | | Description of Test Sample | | 15 |
| Results Sample B-1 | | | Material Characteristics | | 15 |
| Concentrated Load Test | FBC section 1607.8.1 | 7 | Additional Information | | 15 |
| Concentrated Load Test | FBC section 1607.8.1.1 | 7 | Test Sample Installation | | 15 |
| Concentrated Load Test | FBC section 1607.8.1.2 | 8 | Results Sample H-1 | | |
| Drop Test | ANSI Z97.1 | 8 | Concentrated Load Test | FBC section 1607.8.1 | 16 |
| Sample C-1 | | | Concentrated Load Test | FBC section 1607.8.1.1 | 16 |
| Description of Test Sample | 9 | | Concentrated Load Test | FBC section 1607.8.1.2 | 17 |
| Material Characteristics | 9 | | Revision Table | | 17 |
| Glazing | 9 | | Notes Table | | 17 |
| Additional Information | 9 | | Remarks Table | | 18 |
| Test Sample Installation | 9 | | | | |
| Results Sample C-1 | | | | | |
| Concentrated Load Test | FBC section 1607.8.1 | 10 | | | |



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 Page No. Page 6 of 18
 Lab. Number: 8483
 Project Number: 15-5706

OFFICIAL TEST REPORT

| DESCRIPTION OF SAMPLE | |
|----------------------------|---|
| Model Designation: | Series: F50 Horizon Quattro Glass Railing |
| Overall Size: | 10'-6" (126") by 3'-6 1/2" (42 1/2") high |
| Size and Location of Post: | Four 40 1/4" high vertical post located 4", 43 3/8", 82 5/8" and 122" from left |
| Sample B-1 | |

| MATERIAL CHARACTERISTICS | | | |
|--------------------------|------------|---------------|------------|
| Members | Material** | Part Number** | Joint Type |
| Hand Rail | 6060-T6 | F50-201 | N/A |
| Vertical Post | 6060-T6 | F50-109 | N/A |
| Two Piece Saddle | 6060-T6 | 4328 | N/A |
| Two Piece Glass Clamps | 6060-T6 | 4193 | N/A |
| Cover | 6060-T6 | F50-122 | 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 | None | N/A |
| Interlaying Film: *0.090" **DuPont SentryGlas | | Laminator: **Tecnoglass | |
| Glazing Method: Interior glazed with a *1" glazing penetration using two two-piece aluminum glass clamps (part No. 4193) with a rubber gasket between glass and clamps. The glass clamps were at each side of each lite of glass located 5" and 36" from bottom of the vertical post (total of twelve glass clamps). The glass clamps were fastened to the vertical post using two No. 10 by 1 1/2" FH SDS. The glass clamps were fastened together using two 1/4-28 by 5/8" FH MS. | | | |
| Daylight Opening: | 36 1/4" by 33 1/2" high | | |

| Additional Information |
|--|
| <p>The sample was tested using one 126" long extruded aluminum hand rail (part No. F50-201). The hand rail was fastened to the vertical post using one two piece saddle (part No. 4328) per post. The saddle slides into the vertical post and is secured with epoxy, the saddle is fastened together using one 1/4-28 by 5/8" FH MS and the saddle is fastened to the hand rail using two 1/4-28 by 5/8" FH MS with nut.</p> <p>The sample was tested using a snap on extruded aluminum cover (part No. F50-122) at each vertical post.</p> |



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 Page No. Page 7 of 18
 Lab. Number: 8483
 Project Number: 15-5706

OFFICIAL TEST REPORT

| Sample Installation | |
|---|--|
| The sample was installed onto a 3,000 psi concrete test slab using one 4" by 4" by 1/4" thick aluminum installation plate at bottom of each post. The installation plate was fastened to concrete slab using four 1/2" by 4" HWH wedge bolts. And the installation plate was fastened to each vertical post using four 5/16-28 by 1 1/2" OH MS. | |

| Sample: B-1 | Temperature: 85°F | Barometric Reading: 30.12 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 | 2.875" | 0.215" | Passed | |

| Sample: B-1 | Temperature: 85°F | Barometric Reading: 30.12 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 | 2.375" | 0.146" | Passed | |



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 Page No. Page 8 of 18
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 Project Number: 15-5706

OFFICIAL TEST REPORT

| | | | | | |
|------------------------|-------------------|--------------------------|----------------|--|--|
| Sample: B-1 | | Temperature: 79°F | | Barometric Reading: 30.12 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 | | |

| | | | | | |
|----------------------|----------------|---|-------------------------------|--|--|
| Sample: B-1 | | Temperature: 89.3°F | | Barometric Reading: 30.05 inches Hg | |
| Title of Test | | | Notes | | |
| Drop Test | | | As per FBC section 1618.4.6.3 | | |
| | | | | | |
| 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 break but remained in the place and there wasn't any apparent tear in the inter layer film. | | | |



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Page No. Page 18 of 18
Lab. Number: 8483
Project Number: 15-5706

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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