Architectural Testing

AAMA/WDMA/CSA 101/I.S.2/A440-05
TEST REPORT

Rendered to:

GLASS CRAFT DOOR CORPORATION

SERIES/MODEL: Deco Window/Art Glass
PRODUCT TYPE: Wooden Fixed Window

Title	Summary of Results
Primary Product Designator	F-R65 1267 x 1267 (50 x 50)
Design Pressure	3840 Pa (80.20 psf)
Air Infiltration	<0.05 L/s/m^2 (<0.01 cfm/ft^2)
Water Penetration Resistance Test Pressure	470 Pa (9.82 psf)
Uniform Load Structural Test Pressure	±5760 Pa (±120.30 psf)
Forced Entry Resistance	D10

Test Completion Date: 10/15/07

This report contains in its entirety:
Cover Page: 1 page
Report Body: 5 pages
Alteration Addendum: 1 page
Drawings: 6 pages

Reference must be made to Report No. 77266.01-801-44, dated 11/6/07 for complete test specimen description and data.

2865 Market Loop
Southlake, Texas 76092
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www.archtest.com

AAMA/WDMA/CSA 101/I.S.2/A440-05 TEST REPORT

Rendered to:

GLASS CRAFT DOOR CORPORATION
2002 Brittmoore Street
Houston, Texas 77043

Report No.:	77266.01-801-44
Test Date:	10/15/07
Report Date:	11/6/07
Expiration Date:	10/15/11
Revision 1:	11/6/07

Project Summary: Architectural Testing, Inc. was contracted by Glass Craft Door Corporation to perform testing on a Series/Model Deco Window/Art Glass, wooden fixed window. The sample tested successfully met the performance requirements for an F-R65 1267 x 1267 (50 x 50) rating. Test specimen description and results are reported herein. The sample was provided by the client.

Test Specification: The test specimen was evaluated in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

Test Specimen Description:

Series/Model: Deco Window/Art Glass

Product Type: Wooden Fixed Window

Overall Size: 1267 mm (49-7/8") wide by 1267 mm (49-7/8") high

Daylight Opening Size: 1191 mm (46-7/8") wide by 1191 mm (46-7/8") high

Glass Size: 1216 mm (47-7/8") wide by 1216 mm (47-7/8") high

Overall Area: 1.60 m^2 (17.27 ft^2)

Finish: White paint/mill finish

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Test Specimen Description: (Continued)

Frame Construction: The frame was constructed of 3/4" x 4" finger-jointed Pine and 5/8" x 1-1/2" composite exterior stop. The composite frame component was fastened to the Pine using finish nails 2" long x 0.062" diameter (16ga) 2" from each corner and on 8" centers thereafter. The corners were secured with four 2"long x 0.062" diameter (16ga) 7/16" crown staples. Composite brick mould was attached to the exterior stop using finish nails 2-1/2" long x 0.068" diameter (15ga) 2" from each corner and on 6" centers thereafter. Top brick mould corners were mitered and joined using two #8 x 3" wood screw. The bottom ends of the brick mould were coped, butted and fastened to the sill using one #8 x 3" wood screw. A cap bead of sealant was applied to all exterior moulding joints.

Glazing Details: Sealed insulating glass with two pieces of 1/8" tempered and a 1/4" aluminum composite spacer, 1/2" overall thickness. The glazing was bedded in silicone and secured by a 3/4" x 1" finger-jointed Pine interior stop mould using brad nails 1-1/4" long x 0.048" diameter (18ga) 2" from each corner and on 6" centers thereafter.

Drainage: Sloped sill

Hardware: No hardware was utilized.

Installation: The frame was secured to a SPF test buck with #8 x 3" screws thru the head, jambs, and sill 4" from each corner on 16" centers thereafter.

Test Results: The temperature during testing was 25°C (77°F). The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
5.3.2.1	Air Leakage Resistance per ASTM E 283 75 Pa (1.57 psf)	<0.05 L/s/m^2 (<0.01 cfm/ft^2)	1.5 L/s/m^2 (0.3 cfm/ft^2) max.

***Note #1**: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-05 for air leakage resistance.*

5.3.3.2	Water Penetration Resistance per ASTM E 547	See Note #2
5.3.4.2	Uniform Load Deflection per ASTM E 330	See Note #2
5.3.4.3	Uniform Load Structural per ASTM E 330	See Note #2

***Note #2**: The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance".*

Test Results: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
5.3.5	Forced Entry Resistance per ASTM F 588		
	Type: D	Grade: 10	
	Disassembly Test	No entry	No entry
	Optional Performance		
4.4.2.6	Water Penetration Resistance per ASTM E 547 (without insect screen)		
	470 Pa (9.82 psf)	No leakage	No leakage
4.4.2.6	Uniform Load Deflection per ASTM E 330		
	(Deflections were taken on the jamb)		
	(Loads were held for 10 seconds)		
	3840 Pa (80.20 psf) (positive)	<1 mm (<0.01")	See Note #3
	3840 Pa (80.20 psf) (negative)	<1 mm (0.02")	

***Note #3**: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440-05 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

4.4.2.6	Uniform Load Structural per ASTM E 330		
	(Permanent sets were taken on the jamb)		
	(Loads were held for 10 seconds)		
	5760 Pa (120.30 psf) (positive)	<1 mm (0.01")	1 mm (0.05") max.
	5760 Pa (120.30 psf) (negative)	<1 mm (0.03")	1 mm (0.05") max.

Tape and film were not used to seal against air leakage during structural testing.

Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein.

List of Official Observers:

Name	Company
Gene Denley	Glass Craft Door Corporation
Jim Sturdevant	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing.

For ARCHITECTURAL TESTING, INC.

James Sturdevant
Technician

John H. Waskow, P.E.
Director of Regional Operations-Texas

Jeffrey T. Kaminski, P.E.
Senior Project Engineer

JS:aly/cmd

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (6)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	10/31/07	N/A	Original report issue
1	11/6/07	Appendix B	Replaced drawings to show wet glazed condition
		2	Glazed Details- Added "bedded in silicone"

Appendix A

Alteration Addendum

Alteration #1: Date-10/15/07
Cause for alteration- water leakage
Remedial action taken- applied cap bead of sealant to all exterior moulding joints

Appendix B

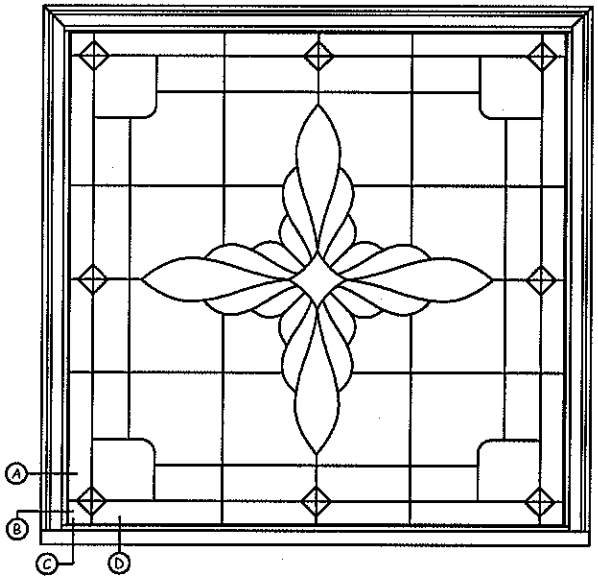
Drawings

Architectural Testing

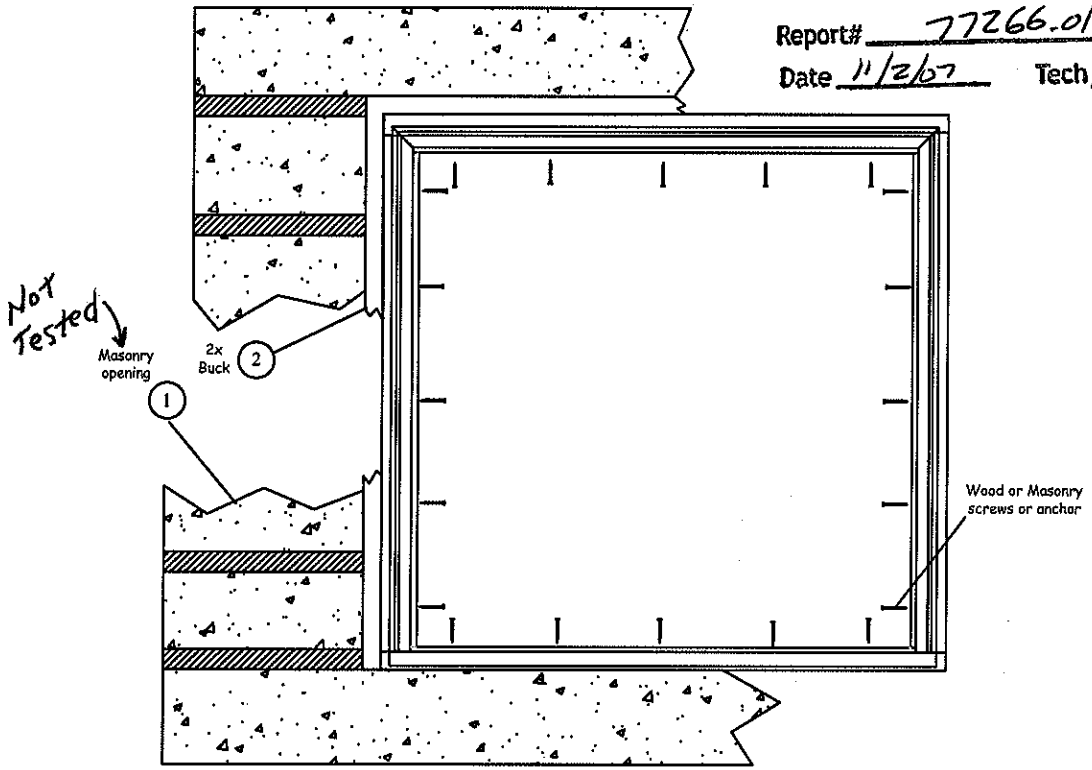
Test sample complies with these details.
Deviations are noted.

Report# 77266.01

Date 11/2/07 Tech AW



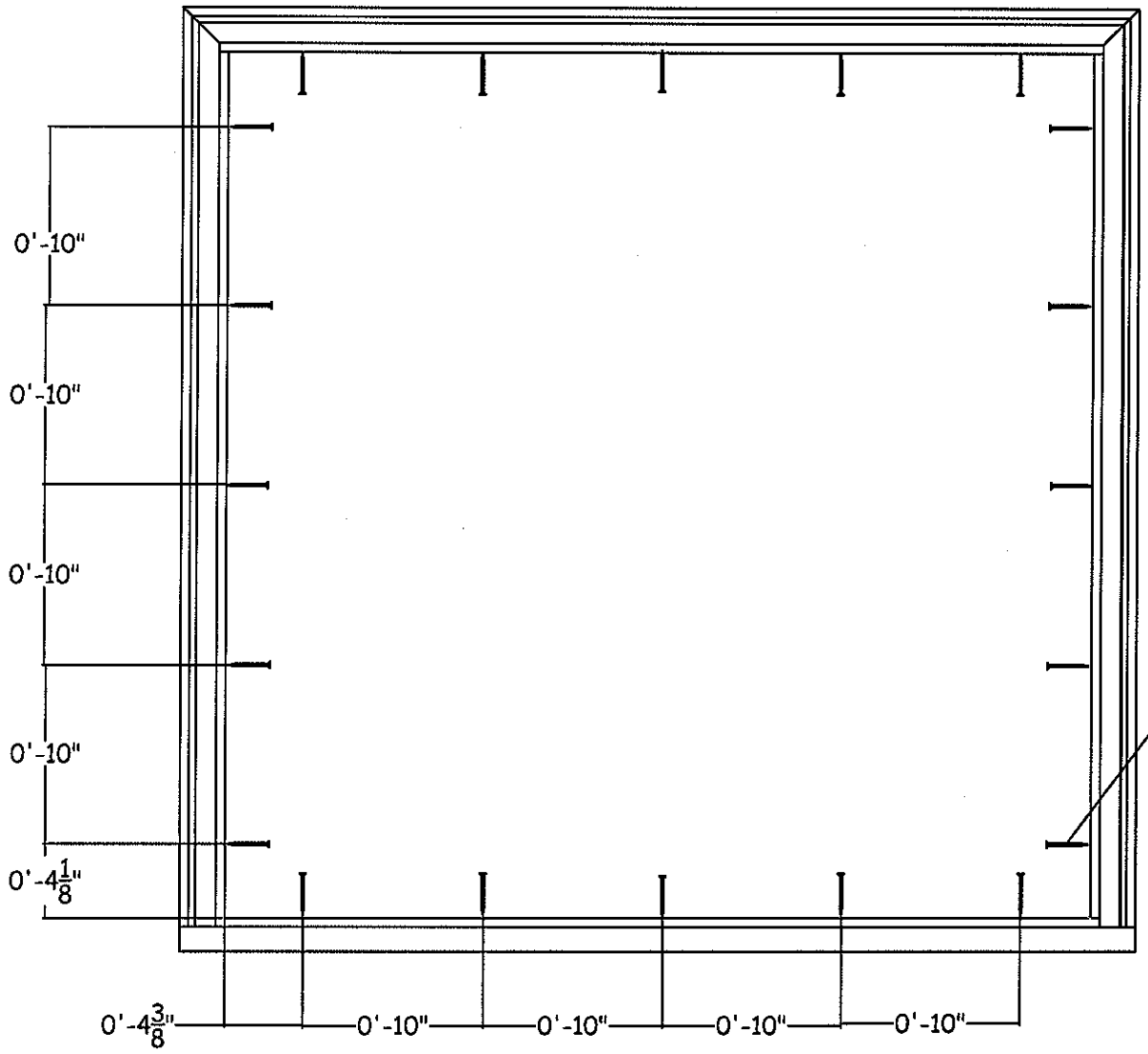
ELEVATION



ANCHORING LAYOUT

Deco Fixed Window

Glass*Craft



Architectural Testing

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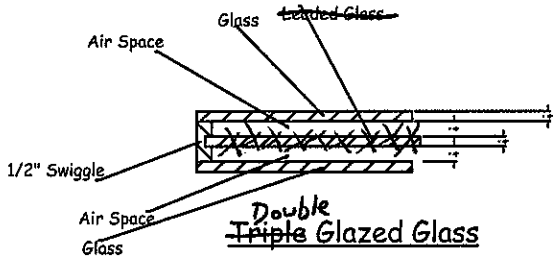
Date 11/2/07 Tech

ANCHORING DIMENSION

Glass*Craft

List of Material

Item #	Discription	Material
1	Masonry	CONC.
2	2x Buck	Wood
3	Glass	Glass
4	Bottom Frame(wood)	Wood
5	Sill (Composite)	Plastic
6	Glass Stop (Composite)	Plastic
7	Glass Bead (Wood)	Wood
7	Glass Bead (Wood)	



Double
~~Triple~~ Glazed Glass

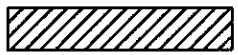
③

Sill (Composite)

⑤

Glass Stop (Composite)

⑥



Bottom Frame (Wood)

④

Glass Bead (Wood)

⑦

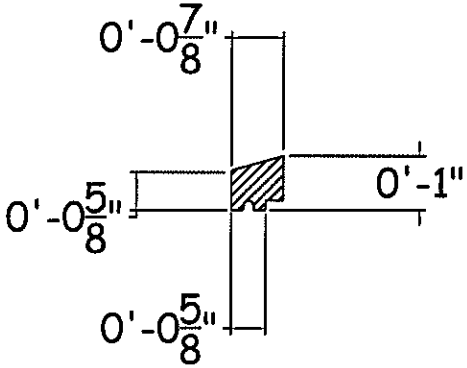
Architectural Testing

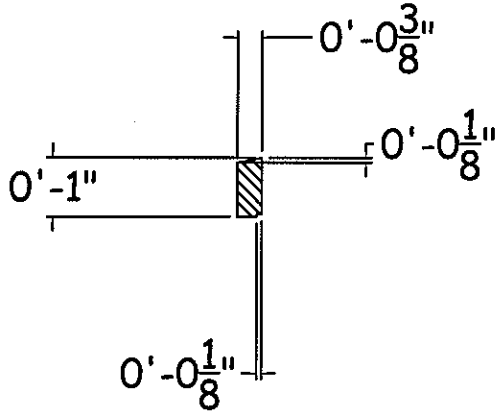
Test sample complies with these details.
Deviations are noted.

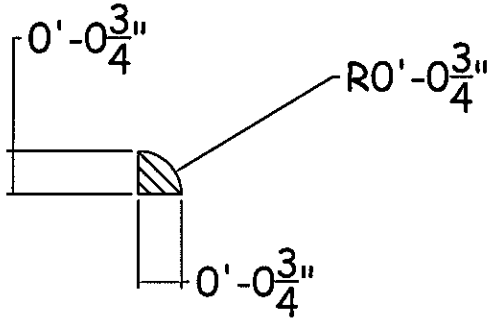
Report# 77266.02

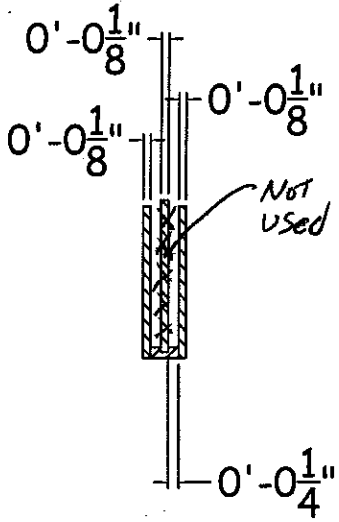
Date 11/2/07 Tech

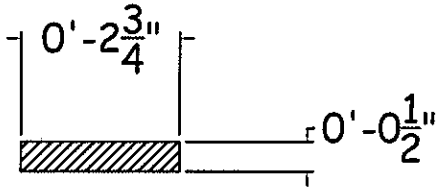
Glass*Craft











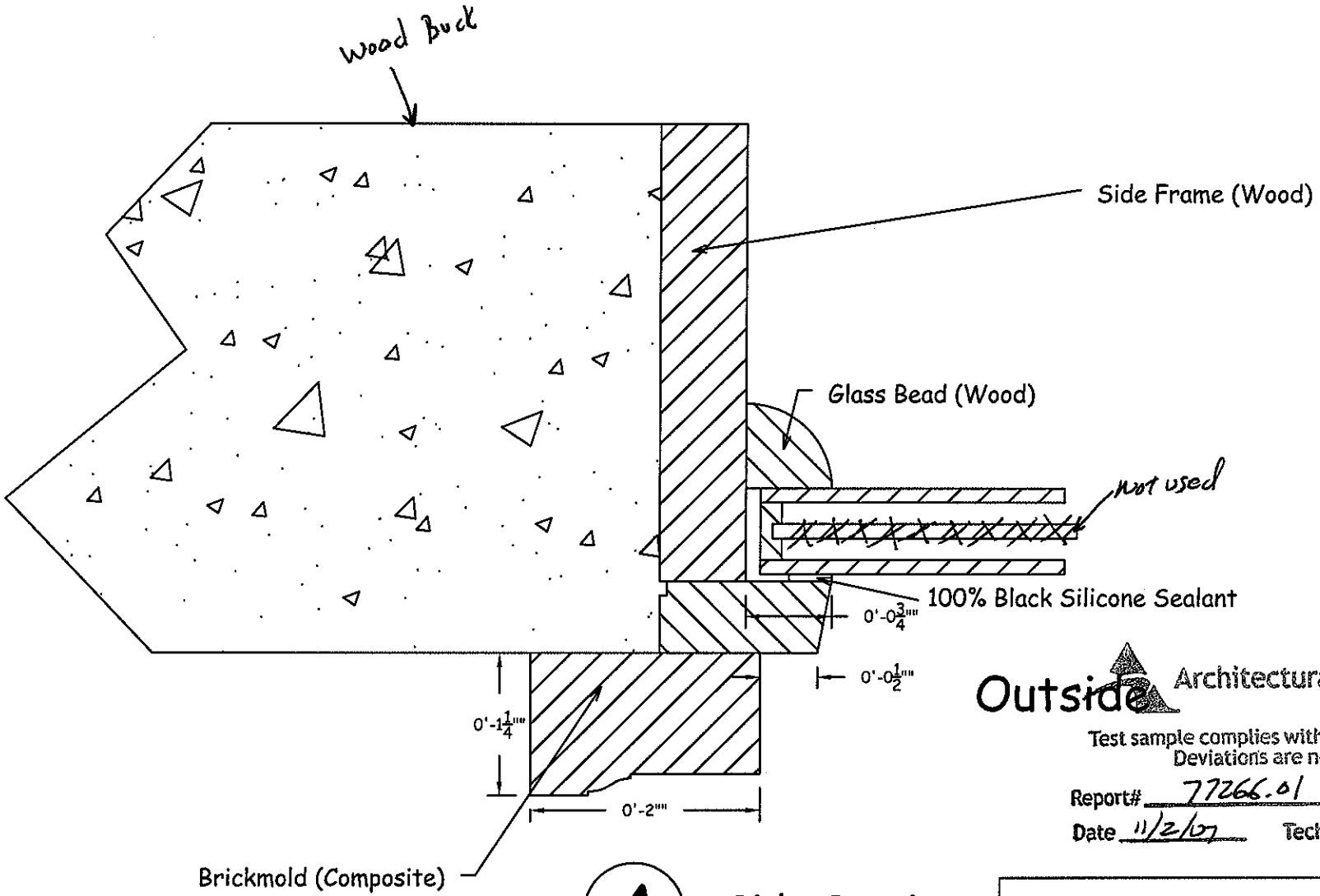
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 77266.02

Date 11/2/07 Tech

Glass*Craft



Outside Architectural Testing

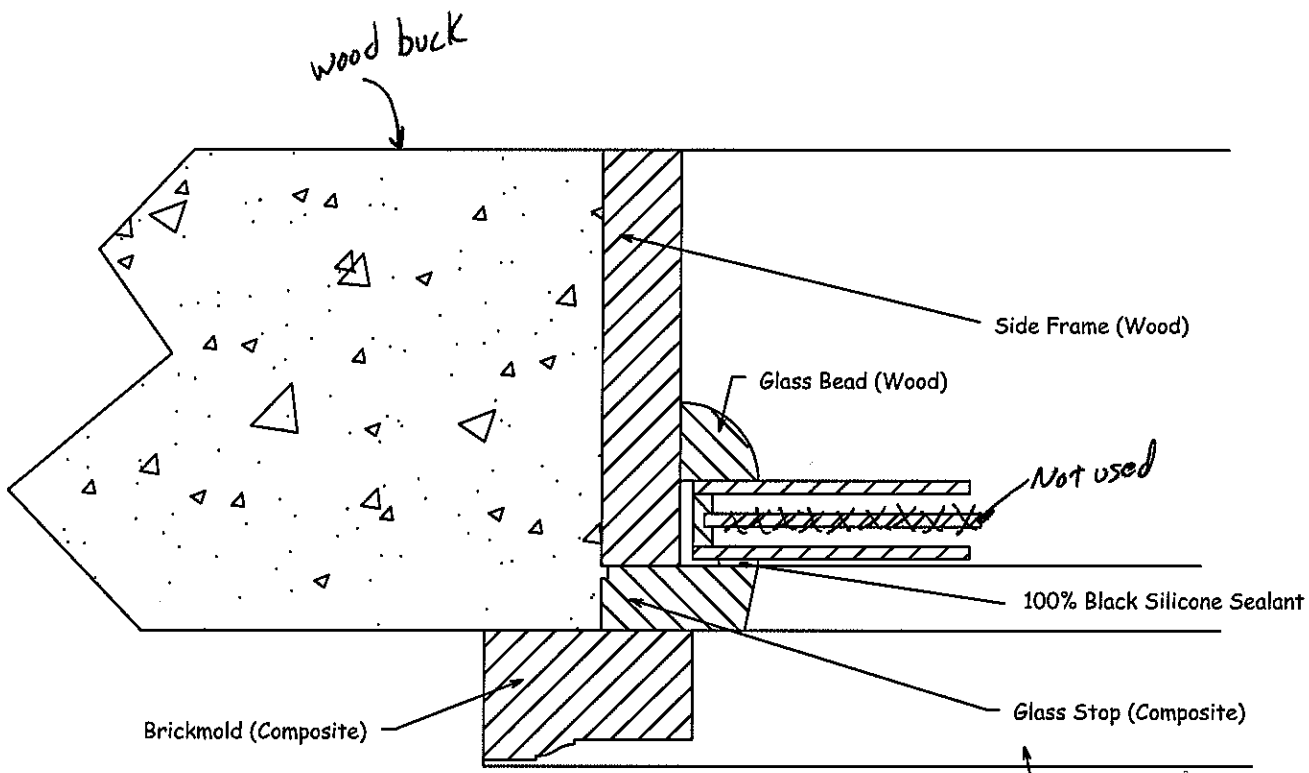
Test sample complies with these details.
Deviations are noted.

Report# 77266.01

Date 11/2/07 Tech

A Side Section

Glass*Craft



Architectural Testing

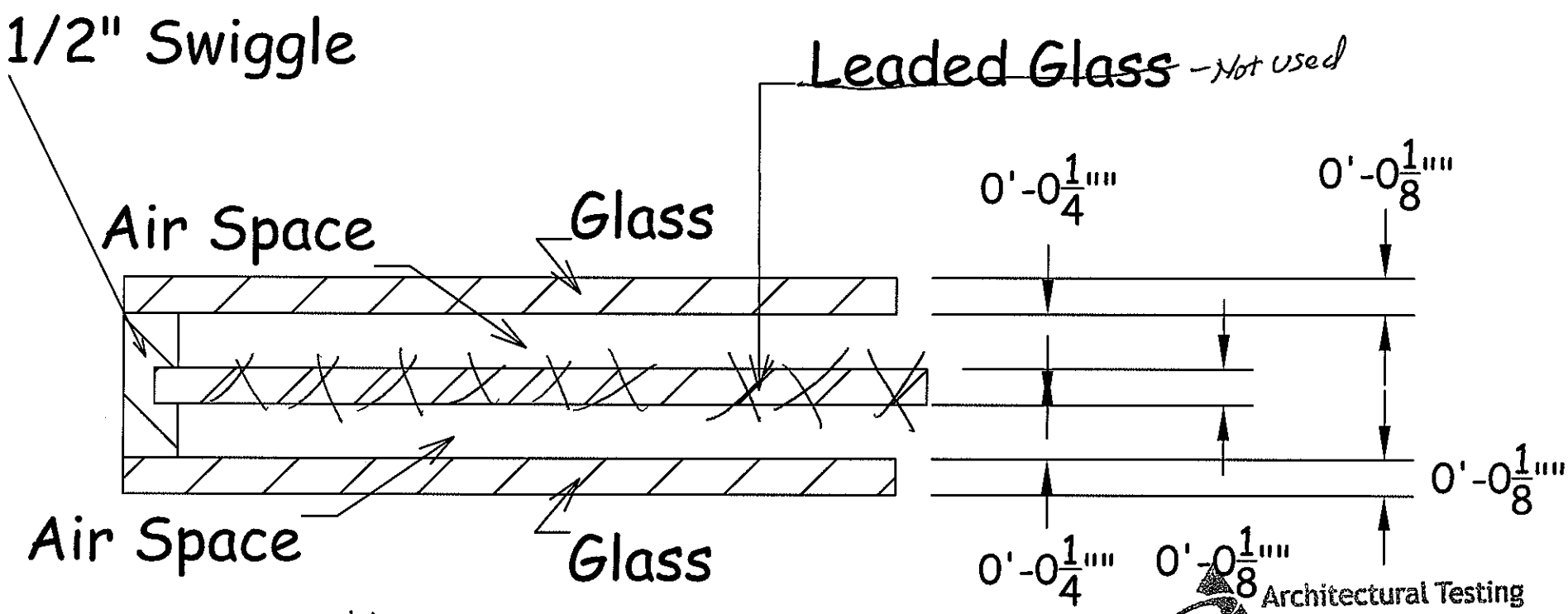
Test sample complies with these details.
Deviations are noted.

Report# 7766.01

Date 11/2/07 Tech

B Side @ Corner

Glass*Craft



Double

~~Triple~~ Glazed Glass

Architectural Testing

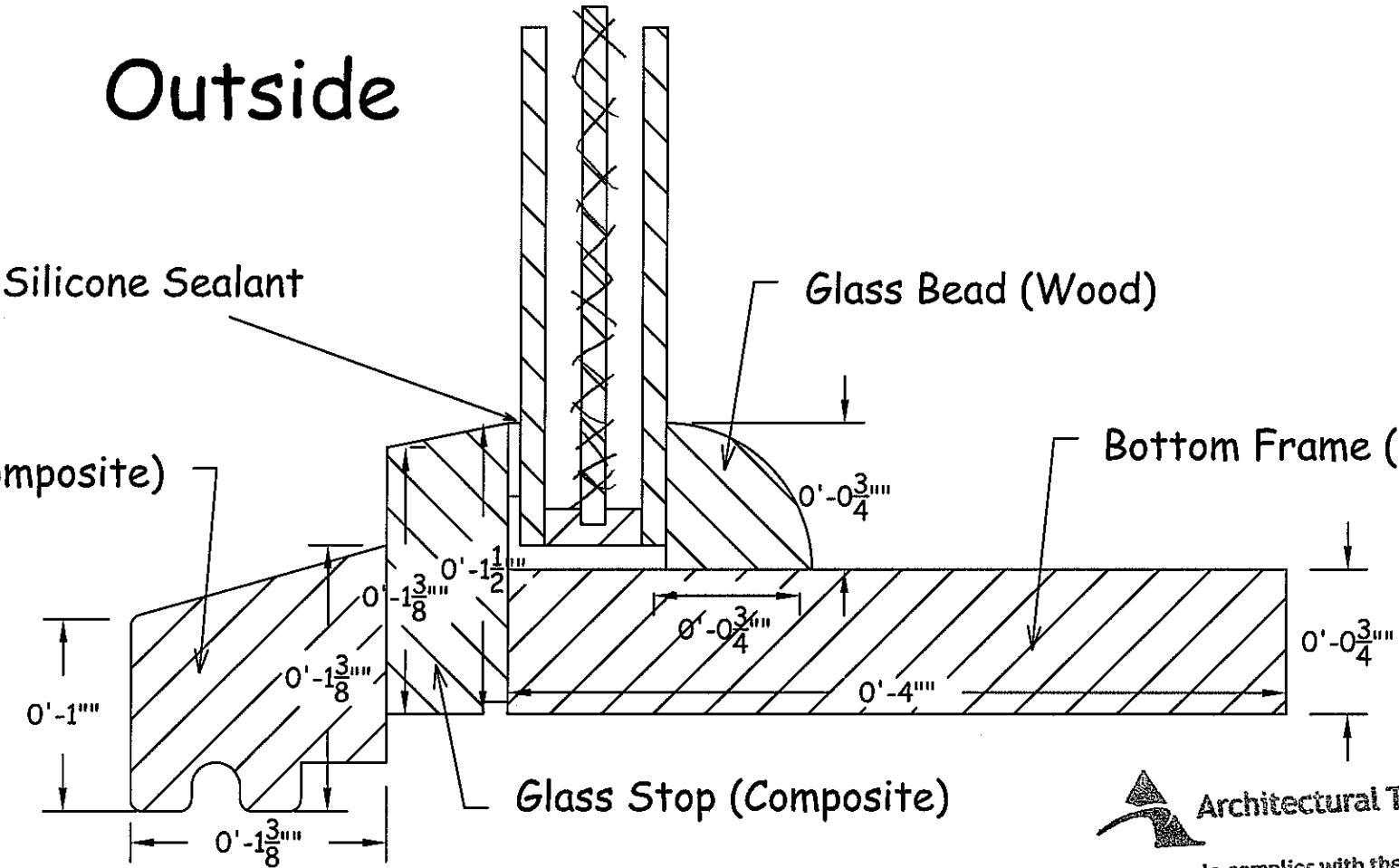
Test sample complies with these details.
Deviations are noted.

Report# 77266.01

Date 11/2/07 Tech

Glass*Craft

Outside



Architectural Testing

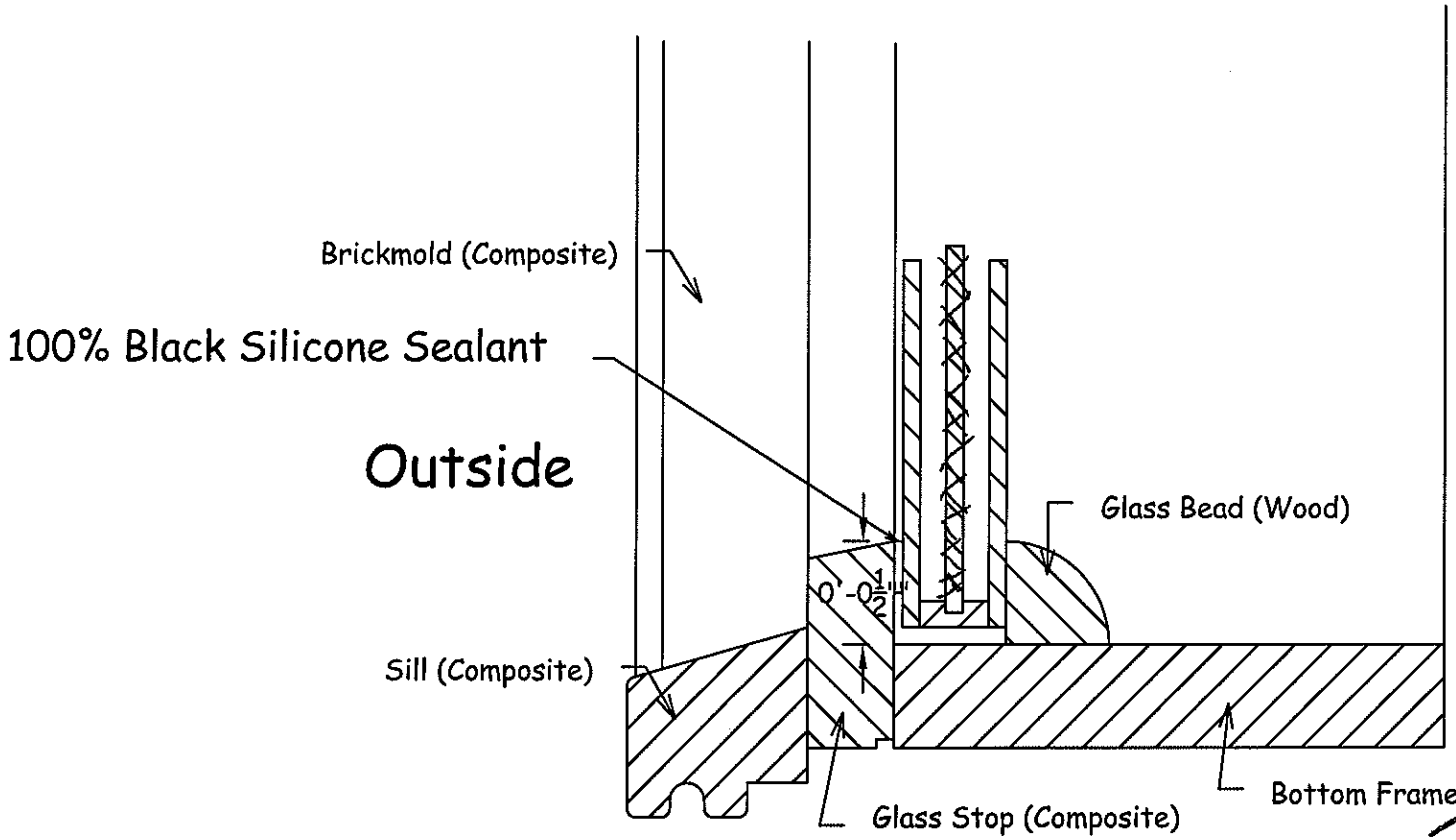
Test sample complies with these details.
Deviations are noted.

Report# 77266.01

Date 11/26/07 Tech AW

D Bottom Section

Glass*Craft



C Bottom @ Corner

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 77266.01

Date 11/2/07 Tech

Glass*Craft