

	Document Title:	Doc No:	<b>FRM B1-02</b>	
	<b>Structural Performance Certification Authorization Report</b>	Rev No: 7	Page: 1	Of: 1
Required By: PRO B1-03				

CAR & Product ID Number: 757 - 101.0  
 Issue Date: 3/3/2010  
 Revision Date: 5/27/2015  
 Expiration Date: 11/5/2019  
 Company Code: 757

This Certification Authorization Report (CAR) is issued by Keystone Certifications, Inc. (KCI) after full validation review, and is based on a standardized evaluation of the product conducted by an independent accredited laboratory in accordance with the specified referenced standard. Actual fenestration product performance may vary based on many factors, including installation, condition of the wall/roof substrate and the age of the product and installation components.

This report indicates the product is eligible for the application of Keystone Certification Program certification labels. Licensee stipulates in affixing certification labels to products, that those products are representative of the specimen evaluated and documented for certification authorization. Only products bearing such a certification label shall be considered certified. The information in this report can be verified at [www.keystonecerts.com](http://www.keystonecerts.com).

<b>Licensee Information:</b>	<b>Product Information:</b>
Pocahontas Aluminum Company, Inc. 2001 Industrial Drive PO Box 756 Pocahontas AR 72455	Model: DD 100 Insulated Side-Hinged Door Operator Type: SHD Config: AH/Lock Stile Max Width: 36 Max Height: 80

<b>Referenced Standard:</b>	<b>Product Rating:</b>
AAMA/WDMA/CSA 101/IS2/A440-05	LW-SHD-R25 914x2032 (36x80) WTP=2.9 psf

<b>Qualifying Test Information:</b>	
Test Report No:	ATI-95615.01-801-44-R2
Test Report Expiration:	11/5/2019

**Authorized Signature:**

**Keystone Certifications, Inc.**  
 564 Old York Road, Suite 5  
 Etners, Pennsylvania 17319  
 Phone: 717-932-8500  
 Fax: 717-932-8501



**AAMA/WDMA/CSA 101/LS.2/A440-05  
TEST REPORT**

**Rendered to:**

**POCAHONTAS ALUMINUM COMPANY, INC.**

**SERIES/MODEL: DD 100**

**PRODUCT TYPE: Insulated Side-Hinged Door**

<b>Title</b>	<b>Summary of Results</b>
Primary Product Designator	SHD-R15 914 x 2032 (36 x 80)
Design Pressure	$\pm 720$ Pa ( $\pm 15.04$ psf)
Air Infiltration	$0.7$ L/s/m <sup>2</sup> ( $0.13$ cfm/ft <sup>2</sup> )
Water Penetration Resistance Test Pressure	$140$ Pa ( $2.92$ psf)
Uniform Load Structural Test Pressure	$\pm 1080$ Pa ( $\pm 22.56$ psf)
Forced Entry Resistance	Pass

**Test Completion Date:** 11/05/09

Reference must be made to Report No. 95615.01-801-44, dated 11/05/09 for complete test specimen description and data.



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

Rendered to:

POCAHONTAS ALUMINUM COMPANY, INC.  
2001 Industrial Drive, PO Box 756  
Pocahontas, Arkansas 72455

Report No.: 95615.01-801-44  
Revision 2: 03/03/10  
Test Dates: 10/21/09  
Through: 11/05/09  
Report Date: 11/05/09  
Expiration Date: 11/05/13

**Project Summary:** Architectural Testing, Inc. was contracted by Pocahontas Aluminum Company, Inc. to perform testing on a Series/Model DD 100, insulated side-hinged door. The sample tested successfully met the performance requirements for a SHD-R15 914 x 2032 (36 x 80) 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:** DD 100

**Product Type:** Insulated Side-Hinged Door

**Overall Size:** 914 mm (36") wide by 2032 mm (80") high

**Rough Opening Size:** 921 mm (36-1/4") wide by 2038 mm (80-1/4") high

**Leaf Size:** 924 mm (36-3/8") wide by 2042 mm (80-3/8") high

**Overall Area:** 1.86 m<sup>2</sup> (20 ft<sup>2</sup>)

**Test Specimen Description:** (Continued)

**Finish:** Mill finish aluminum with white fiberglass skin

**Frame Construction:** The door frame was constructed of extruded aluminum with mitered and welded corners.

**Leaf Construction:** The 1-1/2" thick leaf was constructed of 1-3/8" thick foam with 1-3/8" wide by 3/4" high solid reinforcement along top and bottom rails and stiles. The reinforcement along the lock stile was made of wood, with the remaining reinforcements made of cellular pvc. A 1/16" thick embossed fiberglass skin was utilized on the exterior and interior and was secured to the foam with glue. Leaf frame was formed from extruded aluminum members. Frame corners were coped, butted, and mechanically fastened using two #6 x 1" pan head Phillips screws. The interior of the exterior leg of the frame had vinyl fin weatherstripping inserted into it. The exterior leg of the frame was secured to the fiberglass skin with a sealant compound. A cellular PVC lock block was 4-1/4" x 15" x 1-3/8" thick.

**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>	<u>Joinery</u>	<u>Method</u>
0.110" x 0.160" vinyl bulb	4 Rows	Interior of exterior leg of leaf frame	Kerf	Staked
0.187" x 0.250" vinyl bulb	4 Rows	Interior of exterior leg of frame	Kerf	Staked
0.187" x 0.250" vinyl bulb	4 Rows	Interior face of frame	Kerf	Staked

**Glazing Details:** No glazing was utilized.

**Drainage:** No drainage was utilized.

**Test Specimen Description:** (Continued)

**Hardware:** Hinges were secured to the leaf using three #8 x 3/4" Hex head screws, and to the jamb's continuous pin.

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Handle with lock	1	Midpoint of leaf locking stile
Strike plate	1	Midpoint of lock jamb
Single barrel hinge	6	On center from interior corner of sill at 4-1/2", 12", 36", 43-1/2", 67-1/2", and 75"

**Reinforcement:** Reinforcement listed in Leaf Construction.

**Installation:** The unit was installed into a 2 x 6 SPF test buck. Unit was secured through the nail fin with #6 x 1-5/8" flat head Phillips screws at 4" on center spacing from outside jamb corners with remaining at 8" spacing thereafter, and 3" on center spacing from outside head and sill corners with remaining at 8" spacing thereafter. Sealant was applied full perimeter under nail fin.

**Test Results:** The temperature during testing was 23.8°C (75°F). The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.1.2	Force to Latch Side-Hinged Door System per ANSI/BHMA A156.2 Force to latch Deadbolt	13 N (3 lbf) No Deadbolt Present	67 N (15 lbf) max.
5.3.2.1	Air Leakage Resistance per ASTM E 283 75 Pa (1.57 psf)	0.7 L/s/m <sup>2</sup> (0.13 cfm/ft <sup>2</sup> )	1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> ) max.
<i>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.</i>			
5.3.3.1	Water Penetration Resistance per ASTM E 547 140 Pa (2.92 psf)	No leakage	No leakage
5.3.4.2	Uniform Load Deflection per ASTM E 330 (Deflections were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds) 720 Pa (15.04 psf) (positive) 720 Pa (15.04 psf) (negative)	1 mm (0.02") 8 mm (0.33")	See Note #2 See Note #2.
5.3.4.3	Uniform Load Structural per ASTM E 330 (Permanent sets were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds) 1080 Pa (22.56 psf) (positive) 1080 Pa (22.56 psf) (negative)	1 mm (0.02") <1 mm (<0.01")	8 mm (0.31") max. 8 mm (0.31") max.

*Note #2: 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.*

**Test Results:** (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.5	Forced Entry Resistance per AAMA 1304 1334 N (300 lbf) point load		
	Top lock stile corner	No entry	No entry
	Bottom lock stile corner	No entry	No entry
	Above lock	No entry	No entry
5.3.6.10	Operation/Cycling Performance per AAMA 920 25,000 CYCLES	Meets as stated	Meets as stated
5.3.6.11	Vertical Loading Resistance per AAMA 925		
	Pre-load - 200 N (45 lbf)		
	Maximum vertical deflec.	1 mm (0.04")	N/A
	Residual vertical deflec.	<1 mm (<0.01")	N/A
	Test load - 667 N (150 lbf)		
	Maximum vertical deflec.	4 mm (0.14")	N/A
	Residual vertical deflec.	<1 mm (0.01")	N/A
	Diagonal deformation	2242 mm (88-1/4")	N/A
	Force to latch	13 N (3 lbf)	65 N (15 lbf) max.

Optional Performance

4.4.2.6	Uniform Load Deflection per ASTM E 330 (Deflections were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds)		
	1819 Pa (38.0 psf) (positive)	2 mm (0.08")	See Note #2
	1819 Pa (38.0 psf) (negative)	21 mm (0.81")	See Note #2
4.4.2.6	Uniform Load Structural per ASTM E 330 (Permanent sets were taken on the corners and midpoint on lock stile) (Loads were held for 10 seconds)		
	1819 Pa (38.0 psf) (positive)	<1 mm (<0.01")	8 mm (0.31") max.
	1819 Pa (38.0 psf) (negative)	1 mm (0.04")	8 mm (0.31") max.



Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

**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:**

<u>Name</u>	<u>Company</u>
Larry Rose	Pocahontas Aluminum Company, Inc.
Tom Klein	Architectural Testing, Inc.
Evan McCoppin	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, Inc. 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. If test specimen contains glazing, 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(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

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Tom Klein  
Technician

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Andy Cost  
Laboratory Manager

TK:ac

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Test Equipment (1)

Appendix-C: Drawings (7)

### Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	11/05/09	N/A	Original report issue
1	11/24/09	1, 2, and 6	Changed series DD to DD 100 and added Optional Performance
2	03/03/10	2	Added lock block detail

**Appendix A**

**Alteration Addendum**

*Note: No alterations were required.*

**Appendix B****Test Equipment**

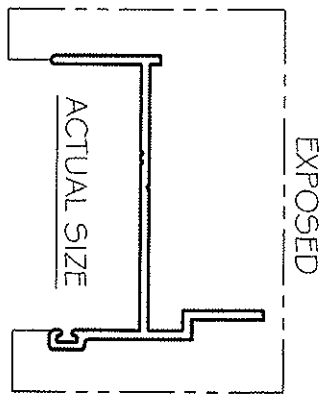
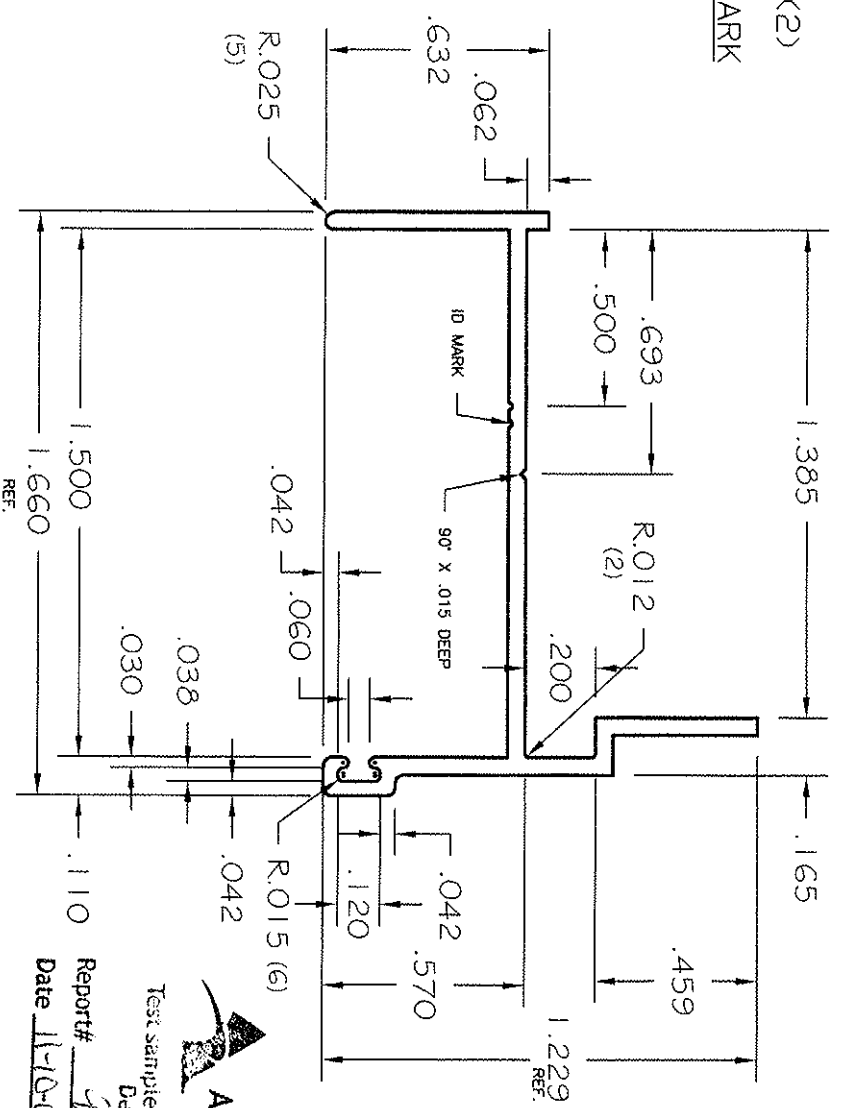
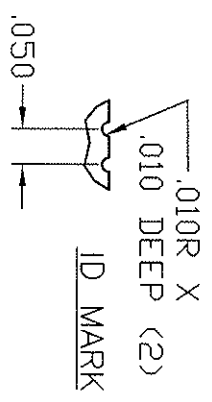
<b>Instrument</b>	<b>Manufacturer</b>	<b>Asset #</b>
Control Panel	Architectural Testing, Inc.	4168
Spray Rack	Architectural Testing, Inc.	3233
Linear Transducer	Celesco	3269
Linear Transducer	Celesco	3755
Linear Transducer	Celesco	62194
Load cell 250	Transcell	3558
Micro Mule	Architectural Testing, Inc.	5302
Spring scale 220#	Taylor	62104

## **Appendix C**

### **Drawings**

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED  
 .050 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS .015R

DIE NO. S-3212



**Architectural Testing**

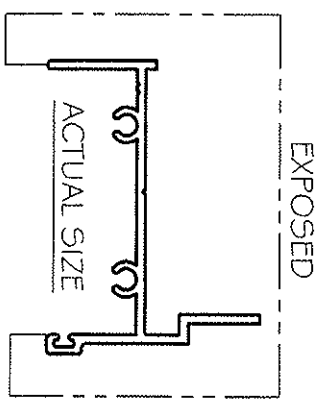
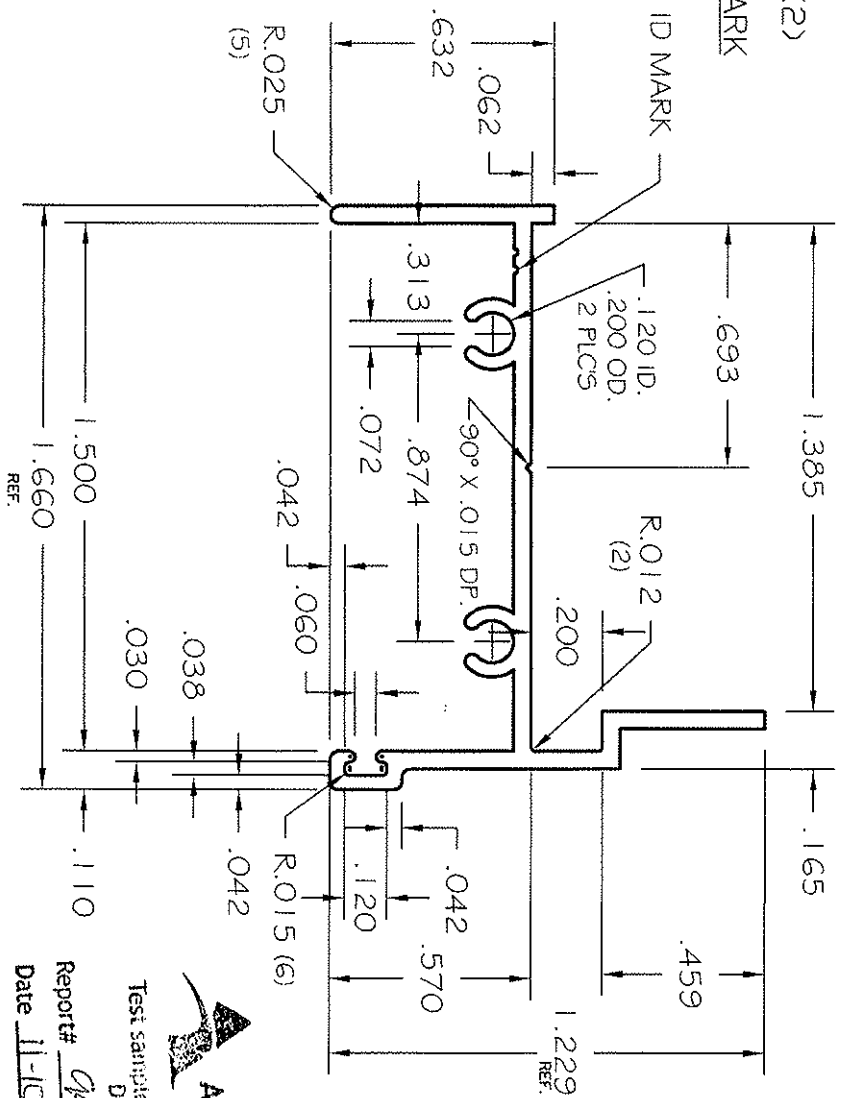
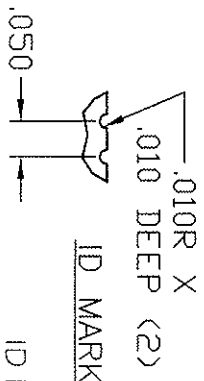
Test sample complies with these details.  
 Deviations are noted.

Report# 35015.01-801.44  
 Date 11-10-09 Tech AK

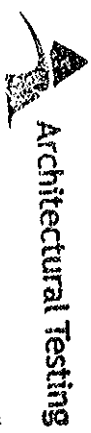
<p><b>JORDAN</b></p>		<p>Customer: POCAHONTAS ALUMINUM</p>	
<p>AREA: .179 SQ. IN.</p>		<p>Part No.:</p>	
<p>WT/FT: .215 LBS.</p>		<p>END USE: DOOR INNER FRAME</p>	
<p>FORM: 7.337 IN. CAVITY SIZE</p>		<p>SCALE: 2:1</p>	
<p>FINISH: ANODIZE</p>		<p>DWG. NO. 07062201 POC</p>	
<p>DATE: 6/22/07</p>		<p>DIE NO. S-3212</p>	

ALUMINUM ASSOCIATION STD TOLERANCES APPLY UNLESS NOTED  
 .050 TYP. WALL EXCEPT AS SHOWN. BREAK SHARP CORNERS .015R

DIE NO. S-3213



Test sample complies with these details.  
 Deviations are noted.  
 Report# 05215-01-861-44  
 Date 11-10-05 Tech [Signature]



KEY-SIONS		<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SMALL HOLLOW <input type="checkbox"/> HOLLOW CLASS		<b>JORDAN</b> P.O. BOX 18377 MEMPHIS, TN, 38118 PHONE (901) 363-2121		CUSTOMER POCAHONTAS ALUMINIUM PART NO.	
AREA		SO. IN.		ALLOT		HOLLOW CLASS	
203		.244		1.9		6063T5	
WT/FT		LBS.		C.C.D.		SCALE	
.244		.244		1.9		2:1	
PERM		IN.		CARTY		DATE	
8.412		8.412		SIZE		6/26/07	
REF: S-2720		IN.		SCAL		DIE NO.	
		PART		NO.		S-3213	
		REF.		NO.		S-3213	







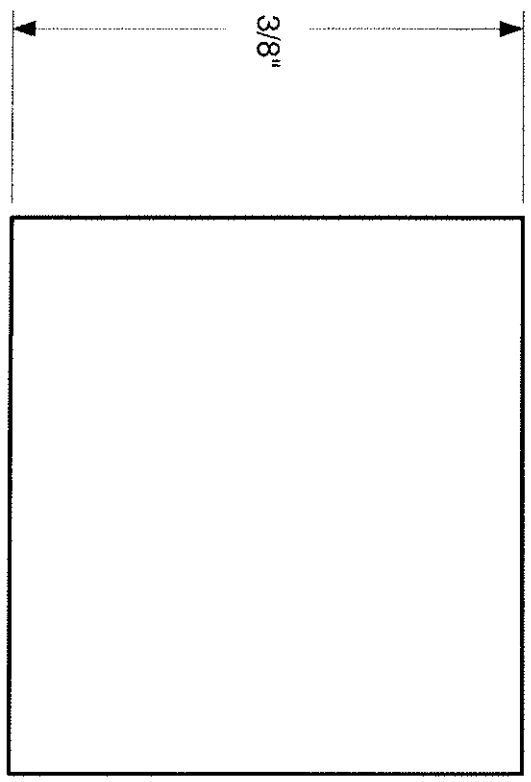


REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
	WOOD LOCK STYLE		

1 1/2"

1 3/8"



Test sample completed with 100% success.  
 Deviations are noted.  
 Report# 05615  
 Date 3/3/10 Tech [Signature]

Note.  
 1. Use spruce or equivalent.

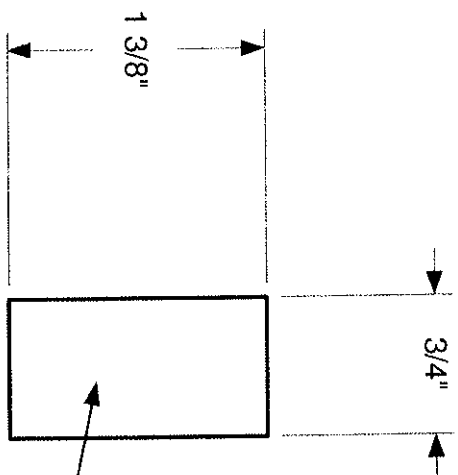
SIZE	CAGE CODE	DWG NO	REV
A			
SCALE	SHEET		



REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
	PVC		

**Architectural Testing**  
 Test sample complies with these details.  
 Deviations are noted.

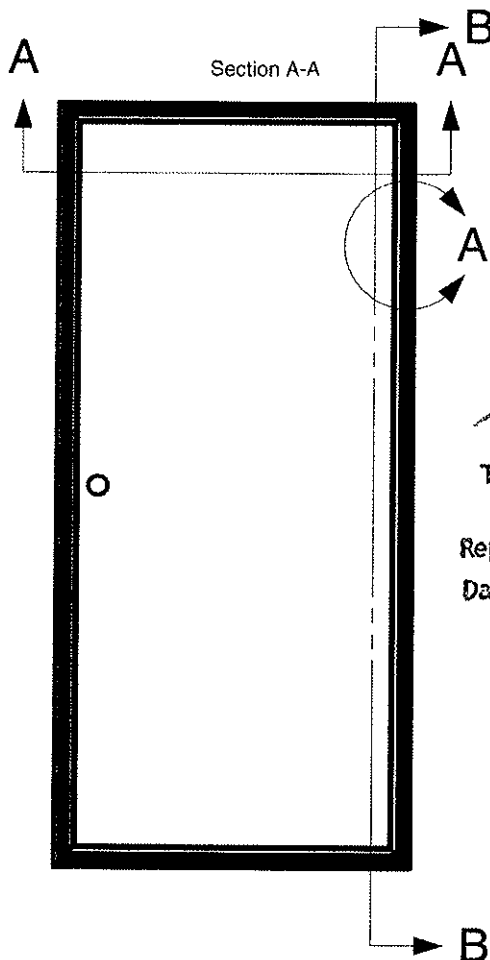
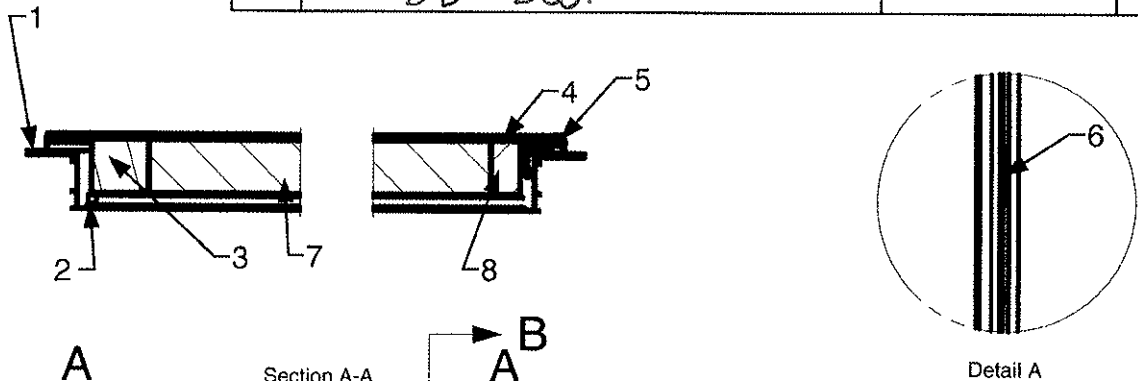
Report# 98015.01-801-44  
 Date 3/3/0 Tech [Signature]



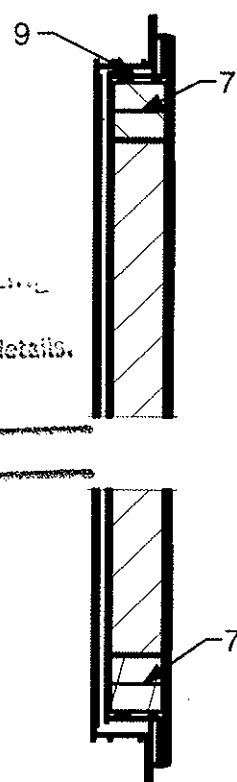
CELLULAR PVC

SIZE	CAGE CODE	DWG NO	REV
A			
SCALE	SHEET		

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
	DD Door		



Test sample complies with these details.  
 Deviations are noted.  
 Report# 93615.01-801-44  
 Date 3/3/10 <sup>102</sup> Tech [Signature]



ITEM #	Part #	QTY	Description	Supplier
1	DIE 3212	2	INSIDE FRAME SIDES	JORDAN ALUMINUM
2	1-1/2"X1-3/8"	1	SPRUCE	RIDOUT LUMBER
3	0051286	40.7'	1/4" VINYL BULB	WALTECH
4	0342785	20'	VINYL	WALTECH
5	006080	1	GALV. HINGE ROD	WIRE PRODUCTS
6	0062913	6	HINGE ASSEMBLY	ASIA SOURCING
7	001507012	2	PVC TOPS AND BOTTOMS	GOOSEN CORP
8	0015077	1	PVC SIDE	GOOSEN CORP
9	DIE 3213	2	INSIDE FRAME T&B	JORDAN ALUMINUM

SIZE A	CAGE CODE	DWG NO PAC	REV
SCALE	SHEET		