



TEST REPORT

Report No.: G8680.01-303-47

Rendered to:

C.R. LAURENCE CO., INC.
Vernon, California

PRODUCT TYPE: Double Side Hinged Door - Outswing
SERIES/MODEL: 925

Title	Summary of Results
Design Pressure	±1920 Pa (±40.10 psf)
Air Infiltration	0.2 L/s/m ² (0.03 cfm/ft ²)
Water Penetration Resistance Test Pressure	180 Pa (3.76 psf)

Reference must be made to Report No. G8680.01-303-47, dated 07/26/17 for complete test specimen description and detailed test results.

1.0 Report Issued To: CR Laurence Co., Inc.
2100 East 38th Street
Vernon, California 90058

2.0 Test Laboratory: Architectural Testing, Inc., an Intertek company ("Intertek-ATI")
25800 Commercentre Drive
Lake Forest, California 92630
949-460-9600

3.0 Project Summary:

3.1 Product Type: Double Side Hinged Door - Outswing

3.2 Series/Model: 925

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. Test specimen description and results are reported herein.

3.4 Test Date: 03/01/17

3.5 Test Record Retention End Date: All test records for this report will be retained until March 1, 2021.

3.6 Test Location: C.R. Laurence Co., Inc.'s test facility in Vernon, California.

3.7 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen will be retained by Intertek-ATI for a minimum of four years from the test completion date.

3.8 Drawing Reference: The test specimen drawings are located in Appendix B.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Garrett Osterode	CR Laurence Co., Inc.
Jarod S. Hardman	Intertek-ATI

4.0 Test Methods:

ASTM E283-04 (2012), *Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E331-00 (2009), *Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

AAMA 1304-02, *Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems*

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights (Section 6.4.5)*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 5.94 m ² (63.98 ft ²)	Width		Height	
	inches	millimeters	inches	millimeters
Overall size	96	2438	96	2438
Primary leaf	47-3/16	1199	95	2413
Secondary leaf	47-3/16	1199	95	2413

5.0 Test Specimen Description: (Continued)

5.2 Frame Construction:

Frame Member	Material	Description
Head	Aluminum	Thermally broken extrusion, Part No. HT450, see attached Drawing Page 2.
Jambs	Aluminum	Thermally broken extrusion, Part No. JI450, see attached Drawing Page 2.
Sill	Aluminum	Thermally broken low profile threshold, Part No. TH83011, see attached Drawing Page 2.

	Joinery Type	Detail
All corners	Coped	Secured through jamb at each corner into screw boss with two #12 x 1" Hex head screws. Corner condition is then capped with 2" x 2" x 4-1/2" corner cap that is 1/32" thick.

5.3 Leaf Construction:

Leaf Member	Material	Description
Top rail and stiles	Aluminum	Thermally broken extrusion, Part No. HT300, see attached Drawing Page 2.
Bottom rail	Aluminum	Thermally broken extrusion, Part No. HT300, see attached Drawing Page 2.
Astragal	Aluminum	Thermally broken extrusion attached to secondary leaf, Part No. AT350, see attached Drawing Page 2.

	Joinery Type	Detail
All Corners	Mitered	Secured at corner joints with aluminum corner key that is secured to rails/stiles with three dimples in the aluminum to retain key

5.4 Reinforcement: No reinforcement was utilized.

5.0 Test Specimen Description: (Continued)

5.5 Weatherstripping:

Description	Quantity	Location
Bulb Gasket, Part No. NP257	1 row	Inserted into exterior face of frame full perimeter of door, see attached Drawing Page 2.
Sweep Gasket, Part No. NP8100012	1 row	Inserted into exterior face of bottom rail of each leaf, see attached Drawing Page 2.
Blade Gasket, Part No. WH358	1 row	Inserted into the interior face of the stiles and at the top rail, see attached Drawing Page 2.
Bulb Gasket, Part No. NP257	2 rows	Inserted into the exterior face of the astragal at interior side of the secondary leaf, see attached Drawing Page 2.

5.6 Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Aluminum Spacer – Dual Seal (A1-D)	1/4" clear tempered	1/4" clear tempered	Tape glazed with Part No. GT416 and wet sealed with Dow Corning 795 at interior edge. A glass stop, Part No. WN429, and wedge gasket, Part No. WH344, were utilized at the exterior face.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Leaf	2	991 x 2194	39-11/16 x 86-3/8	1/2"

5.7 Drainage:

Method	Size	Quantity	Location
Weep Notch	3/4" x 1/8"	2	4" from corner in bottom rail of panel notched out of top of rail beneath glass stop

5.0 Test Specimen Description: (Continued)

5.8 Hardware:

Description	Quantity	Location
Hinge assembly	8	4 hinges per leaf, spaced approximately 6" from top and bottom of jamb stile and 20" on center spacing, Part No. WH75111, see attached Drawing Page 1.
Heritage O-S handle assembly	2	1 handle assembly located on each leaf lock stile at astragal with shoot bolt locking assembly in primary leaf, Part No. TH97715, see attached Drawing Page 1.
Shoot bolt strike	2	Secured to head and sill of frame directly opposite lock stile, Part No. TH703.
Tongue strike	3	Secured to secondary leaf lock stile directly opposite primary leaf locking hardware and approximately 12" from head and sill, Part No. TH702.
Deadbolt strike	1	Secured to secondary leaf lock stile directly opposite primary leaf locking hardware, Part No. TH701.

5.9 Screen Construction: No screen was utilized.

6.0 Installation:

The specimen was installed into a steel buck. The rough opening allowed for a 1/4" shim space. The interior and exterior perimeter of the door were sealed with structural silicone sealant.

Location	Anchor Description	Anchor Location
Full perimeter	#12 x 2-1/2" wood screws	6" from corner and 18" on center

7.0 Test Results: The temperature during testing was 16°C (61°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Force to Latch Side-Hinged Door System, per AAMA 101 Sec 6.4.5	Force to Latch: 8.9 N (2.0 lbf) Deadbolt: 4.4 N (1.0 lbf)	Report only Report only	
Air Leakage, per ASTM E283 at 75 Pa (1.57 psf)	0.2 L/s/m ² (0.03 cfm/ft ²)	1.5 L/s/m ² (0.30 cfm/ft ²) max.	1
Water Penetration, per ASTM E331 at 180 Pa (3.76 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 Deflections taken at astragal +1920 Pa (+40.10 psf) -1920 Pa (-40.10 psf)	11.9 mm (0.47") 11.2 mm (0.44")	Report only	2, 3
Uniform Load Structural, per ASTM E330 Permanent sets taken at astragal +2880 Pa (+60.15 psf) -2880 Pa (-60.15 psf)	0.0 mm (0.00") 0.3 mm (0.01")	0.0 mm (0.19") max. 0.0 mm (0.19") max.	2, 3
Forced Entry Resistance, per AAMA 1304, 1330 N (300 lbf) point load	Pass	No entry	

General Note: All testing was performed in accordance with the referenced standard(s).

Note 1: Test Date 03/01/17 / Time: 8:00 AM

Note 2: Loads were held for 10 seconds.

Note 3: 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.

Intertek-ATI will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

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 Intertek-ATI.

For ARCHITECTURAL TESTING, INC.:

Jarod S. Hardman
Laboratory Manager

JSH:ss

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

Appendix A: Location of air seal (1)

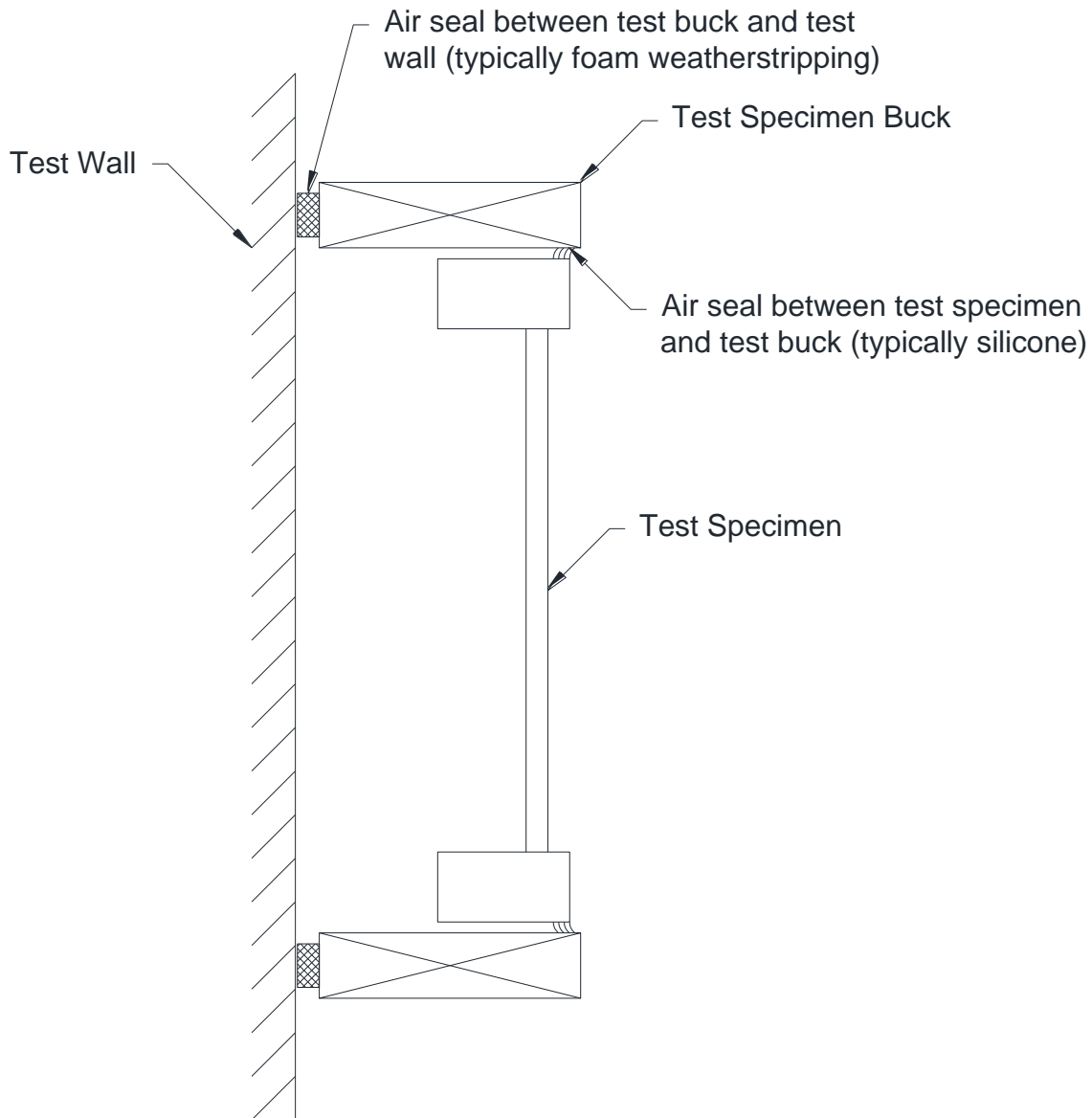
Appendix B: Drawings (2)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	03/08/17	N/A	Original report issue
1	03/08/17	Appendix B	Inclusion of drawings with report
2	05/04/17	5, Appendix B	Correction of gasket part number from WH356 to NP257.
3	07/26/17	3	Correct headers on size table

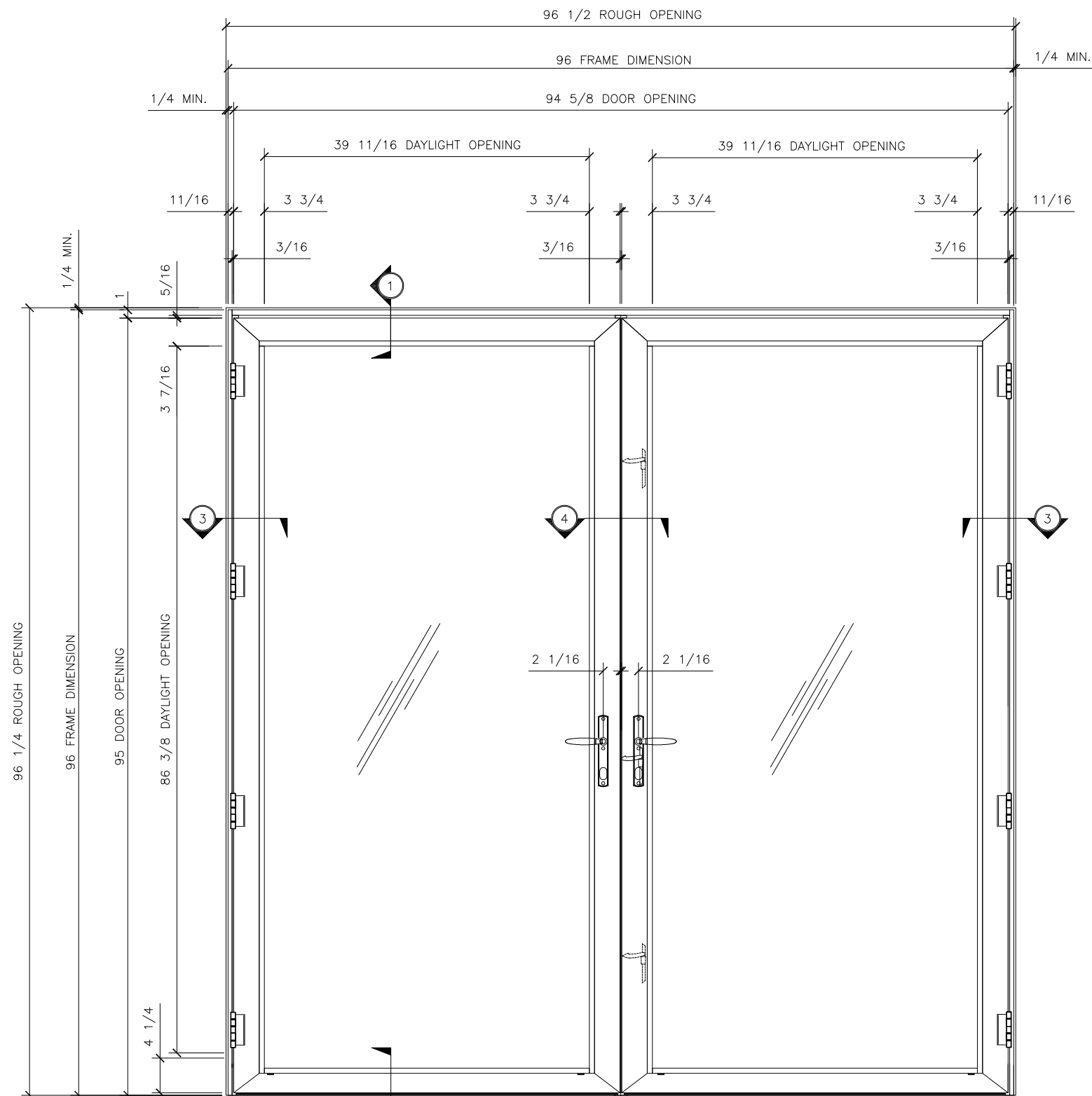
Appendix A

Location of Air Seal: The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



Appendix B

Drawings



⊖ SERIES 925 - OUT-SWING WITH 1/2" LOW PROFILE THRESHOLD
 1 1/2"=1'-0"

ITEM	PT. NO.	PART DESCRIPTION
C1	HT300	BOTTOM RAIL
C2	WN429	GLASS STOP
C3	J1450	FRAME-JAMB
C4	HT450	FRAME-HEAD
C5	HT300	SASH MEMBER
C6	WH75111	HINGE ASSEMBLY
C7	WH7633	WEEP HOLE COVERS
FRAME & SASH COMPONENTS		
W1	WH358	BLADE GASKET
W2	GT416	GLAZING TAPE
W3	WH344	WEDGE GASKET
W4	NP257	BULB GASKET INTERIOR
W5	NP810	WEDGE GASKET LOWER SASH
WTHR STRIP		
G1		.025 X .050 X .025 INSULATED GLASS (TEMPERED) ALUMINUM SPACER DUAL GLAZED
G2	WB410	WEDGE BLOCK
G3	SB222	SETTING BLOCK
G4	SB450	SPACER GASKET
G5	NP267	HOLLOW FORM GASKET
G6	TH701	DEADBOLT STRIKE
G7	TH702	TONGUE STRIKE
G8	TH703	SHOOT BOLT STRIKE
G9	TH83011	LOW PROFILE THREASHOLD
GLAZING		
H2	NP8100012	GSKT. VENT-PERIM-WIPER 12"
H3	CB291	CORNER BLOCK
H4	----	#12 X 2 1/2" WOOD SCREWS
H5	TH97715	HERITAGE 0-S ACT45.5/31.5 CYL
H6	----	#12-24 PH UNDER CUT FLAT HEAD MACHINE SCREWS
H7	AT350	R-HAND ASTRAGAL
H8		
H9		
HARDWARE		
S1	EF38C	3/8" CLOSED CELL BACKER ROD
S2	EF14C	1/4" CLOSED CELL BACKER ROD
S3	DC795BL	DOW CORNING 795

TEST REQUIREMENTS	
<u>AIR INFILTRATION:</u>	<0.10 CFM/SQ.FT. @6.27 CFM
<u>STATIC WATER:</u>	3.96 PSF
<u>DESIGN PRESSURE:</u>	40PSF
<u>STRUCTURAL OVERLOAD:</u>	60 (0.2% permanent set)
<u>Forced Entry:</u>	AAMA 1304-02
<u>OPERATING FORCE:</u>	

REVISIONS



Job Name:
 925 SERIES PATIO DOOR
 96" X 96" LOW PROFILE
 OUTSWING-DBL

Glazing Contractor:

DATE: 12.8.2016
 DRAWN BY: GDO
 CHECKED BY:
 SCALE: AS SHOWN
 JOB #: PTC618290



CRL
C.R. LAURENCE CO.
ARCHITECTURAL PRODUCTS

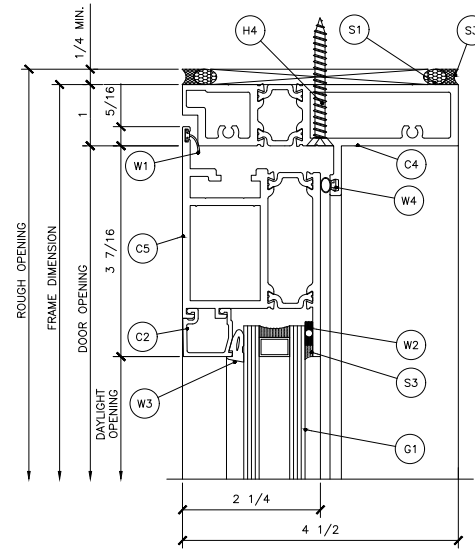
2100 E. 38TH Street, Los Angeles, CA 90058
www.crlaurence.com

Job Name:

925 SERIES PATIO DOOR
96" X 96" LOW PROFILE
OUTSWING - DBL

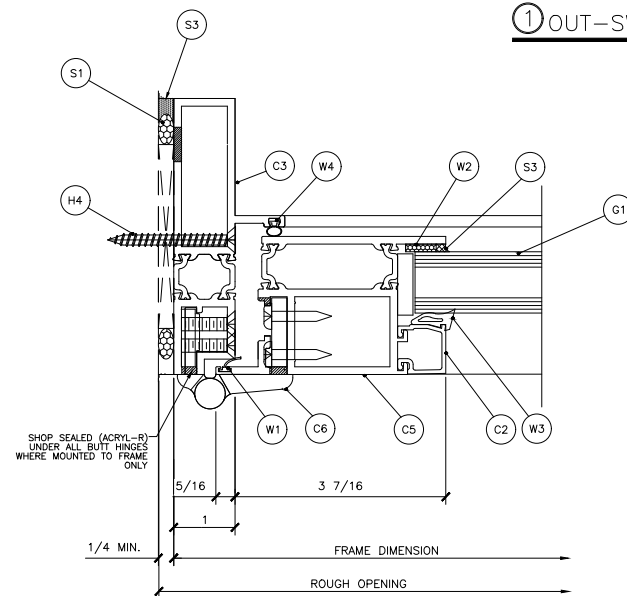
Glazing Contractor:

DATE: 12.8.2016
DRAWN BY: GDO
CHECKED BY:
SCALE: AS SHOWN
JOB #: PTC618290



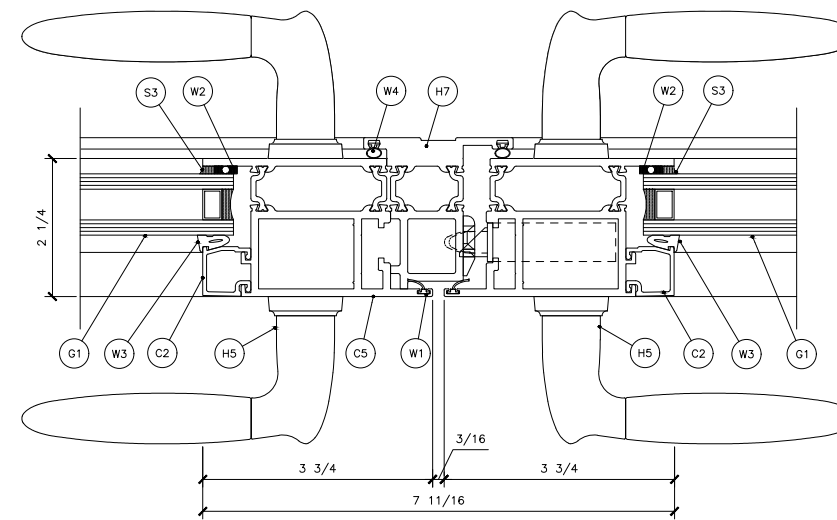
① OUT-SWING DOOR - @ HEAD

1-0"=1'-0"



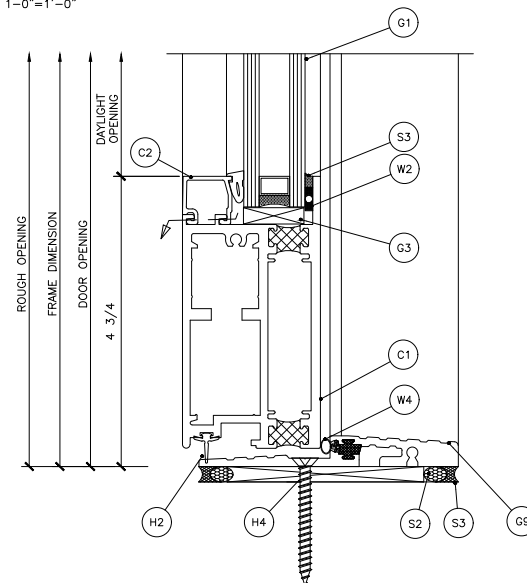
③ OUT-SWING DOOR @ JAMB (TYP.)

1-0"=1'-0"



④ OUT-SWING DOOR @ STILE

1-0"=1'-0"



② OUT-SWING DOOR - LOW PROFILE THRESHOLD @ SILL

1-0"=1'-0"