

REPORT SUMMARY

REPORT SPECIFICATION

North American Fenestration Standard/Specification for windows, doors, and skylights
AAMA/WDMA/CSA 101/I.S.2/A440-08
North American Fenestration Standard/Specification for windows, doors, and skylights
AAMA/WDMA/CSA 101/I.S.2/A440-11
Canadian Supplement A440S1-09

REPORT #

T16-003

TESTED FOR

Fleetwood Windows and Doors

1 Fleetwood Way
Corona, CA 92879

PRODUCT TYPE

SP (Folding Door System)

SERIES

3600-T

CONFIGURATION

XXX

PERFORMANCE GRADE

PG 30

PRIMARY DESIGNATOR

PG30: Size tested 2940mm x 3048mm (~115 3/4 " x 120 ") - Type SP

Secondary Designator

Canadian Air Infiltration / Exfiltration = A2 Level

TEST COMPLETION DATE

1/21/2016

REPORT DATE

1/22/2016

Reference should be made to Report No. T16-003 for complete test specimen description and data.

Fenestration Testing Laboratory, Inc.

10235 8th. Street, Rancho Cucamonga, CA 91730

REPORT #T16-003

1.0 Tested For: Fleetwood Window and Door
1 Fleetwood Way
Corona, CA 92879

2.0 Purpose:
The purpose of this report is to present the testing methods employed and the test results obtained during the performance testing of one (1) Aluminum fixed window described in paragraph 5.0 of this report.

3.0 Test References:

3.1 NAFS – North American Fenestration Standard/specification for windows, doors, and skylights AAMA/WDMA/CSA 101/I.S.2/A440-08

NAFS – North American Fenestration Standard/specification for windows, doors, and skylights AAMA/WDMA/CSA 101/I.S.2/A440-11

3.2 Canadian Supplement A440S1-09

4.0 Compliance Statement: The test results in paragraph 6.0 indicate that the test sample described in paragraph 5.0 of this report met the performance requirements of the above specifications for the performance grade shown in 4.1 below.

4.1 Primary Designator:
PG30: Size tested 2940mm x 3048mm (~115 3/4 " x 120 ") - Type SP

5.0 Sample Submitted

5.1 Product Type: SP (Folding Door System)

5.2 Series/Model: 3600-T

5.3 Configuration XXX

5.4 Test Sample Provider: Fleetwood Windows and Doors

5.5 Product Size:

	Millimeters	Inches
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	Millimeters	Inches
Frame:	2940mm x 3048mm	(~115 3/4 " x 120 ")
Left Panel DLO	838.2mm x 2809.88mm	(33 " x 110 5/8 ")
Mid Panel DLO	787.4mm x 2809.88mm	(31 " x 110 5/8 ")
Right Panel DLO	736.6mm x 2809.88mm	(29 " x 110 5/8 ")

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5.0 Sample Submitted (Continued)

5.6 Glass and Glazing

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1.0 " Overall	1/2 " wide Aluminum Spacer	1/4 " Tempered	1/4 " Tempered	All panels were outside dry glazed pressure fit with glass stop with bulb vinyl #13 & #14

* See 3600-T AAMA CERTIFICATION drawing for detail and location

5.7 Weepage

Draining Method	Size	Quantity	Location
Weep slot	1/2 " X 3/16 "	2	4 " from each end
Weep hole	1/4 "	1	Each panel has one hole at center of glass stop channel drilled through full vertical height of extrusion
Weep hole	3/8 "	2	Each panel has 2 holes drilled vertically through the thermal break 3 1/2 " from each end through full height

5.8 Weatherstripping

Type:	Quantity	Location
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* See 3600-T AAMA CERTIFICATION drawing for detail

5.9 Hardware

Type:	Quantity	Location
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* See 3600-T AAMA CERTIFICATION drawing for detail

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5.10 Construction

Location	Joinery Type	Number of Fasteners
Frame	Aluminum extrusion with thermal break	N/A
Frame Corners	Butt Joint, mechanically fastened	*
All panels	Butt Joint, mechanically fastened	*
All panels	Corner key welded and mechanically fastened into horizontal rails.	*
All panels	Stiles are mechanically fastened to rails	*
Astragal	Mechanically fastened to the stile	*

* See 3600-T AAMA CERTIFICATION drawing for detail

5.11 Reinforcement

Location	Material
N/A	N/A

5.12 Sealant

Location
All frame corner joints.
Full perimeter of the sill pan vertical leg to the frame.

5.13 Installation

The test specimen was installed into a 2 " x 6 " wooden rough opening.

Location on frame	Anchor type	Spacing
* See 3600-T AAMA CERTIFICATION drawing for 'ANCHOR SCHEDULE' detail		

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REPORT #T16-003

6.0 Test Procedures and Results: All testing procedures were conducted in accordance with the performance requirements of the test specifications referenced in paragraph 3.0 of this report. (Laboratory conditions during test were 23.8 degrees Celsius (75 degrees Fahrenheit))

9.3.2 - Air Leakage (ASTM E 283-04)(2012) Infiltration

Test Pressure	Results	Allowed
75 Pa	1.30 L/s*sq.m	1.50 L/s*sq.m
1.57 psf	0.26 cfm/sq.ft.	0.30 cfm/sq.ft.

The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-11 and Canadian Supplement A440S1-09 for air leakage resistance.

Optional Performance Testing

Canadian (only) Air Infiltration/exfiltration levels

9.3.2 - Air Leakage (ASTM E 283-04)(2012) Infiltration - Canada

75 Pa	1.30 L/s*sq.m	1.50 L/s*sq.m
1.57 psf	0.26 cfm/sq.ft.	0.30 cfm/sq.ft.

9.3.2 - Air Leakage (ASTM E 283-04)(2012) Exfiltration - Canada

75 Pa	1.15 L/s*sq.m	1.50 L/s*sq.m
1.57 psf	0.23 cfm/sq.ft.	0.30 cfm/sq.ft.

Note: Canadian air Infiltration/exfiltration = A2 Level

9.3.3 Water Penetration (ASTM E 547-00) (2009)

Test Pressure	Results	Allowed	Comments
220 Pa (4.59 psf)	Pass	No Leakage	

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9.3.4.2 Uniform Load Deflection at Design Pressure (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
1400 Pa (30.08 psf) Pos	4.44mm (0.175 ")	Report Only	
-1400 Pa (-30.08 psf) Neg	2.66mm (0.105 ")	Report Only	

9.3.4.3 Uniform load Structural Performance (Overload/Proof Load) (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
2160 Pa (45.11 psf) Pos	1.27mm (0.050 ")	11.68mm (0.46 ")	0.4%
-2160 Pa (-45.11 psf) Neg	0.00mm (0.000 ")	11.68mm (0.46 ")	0.4%

ADDITIONAL TESTING

9.3.4.2 Uniform Load Deflection at Design Pressure (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
1920 Pa (40.10 psf) Pos	0.00mm (0.000 ")	Report Only	
-1920 Pa (-40.10 psf) Neg	0.00mm (0.000 ")	Report Only	

9.3.4.3 Uniform load Structural Performance (Overload/Proof Load) (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
2880 Pa (60.15 psf) Pos	0.38mm (0.015 ")	11.68mm (0.46 ")	0.4%
-2880 Pa (-60.15 psf) Neg	1.01mm (0.040 ")	11.68mm (0.46 ")	0.4%

9.3.4.2 Uniform Load Deflection at Design Pressure (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
2160 Pa (45.11 psf) Pos	1.27mm (0.050 ")	Report Only	
-2160 Pa (-45.11 psf) Neg	0.00mm (0.000 ")	Report Only	

9.3.4.3 Uniform load Structural Performance (Overload/Proof Load) (ASTM E 330-14)

Test Pressure & Direction	Results	Allowed	Comments
3240 Pa (67.67 psf) Pos	1.02mm (0.040 ")	11.68mm (0.46 ")	0.4%
-3240 Pa (-67.67 psf) Neg	0.64mm (0.025 ")	11.68mm (0.46 ")	0.4%

Fenestration Testing Laboratory, Inc.
10235 8th. Street, Rancho Cucamonga, CA 91730

REPORT #T16-003

For a complete description of the tested sample refer to the attached 6 pages consisting of the bill of materials, cross section drawings, and individual die drawings. This report is complete only when all of the above referenced drawings and bill of materials are attached.

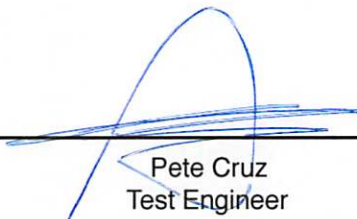
Cross section drawings and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings and a copy of this report will be retained at the test laboratory for four years.

This test report may not be modified in any way without the written consent of Fenestration Testing Laboratory.


The preceding test results relate only to the tested specimen and were obtained by using the applicable test methods listed in sections 3.0 and 6.0 above. This report does not constitute certification of this product or an endorsement by this laboratory. It is the property of the client named in section 1.0 above. Certification can only be granted by an approved administrator and/or validator.

Date Testing Completed: January 21, 2016

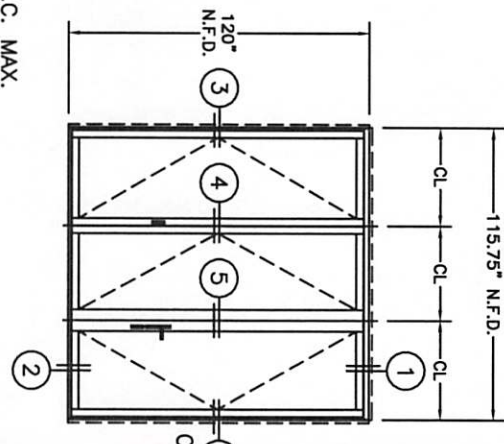
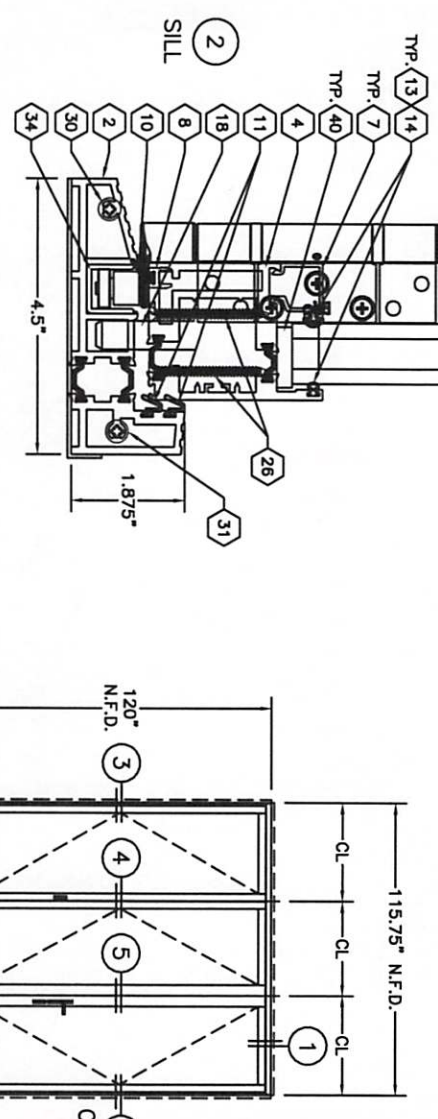
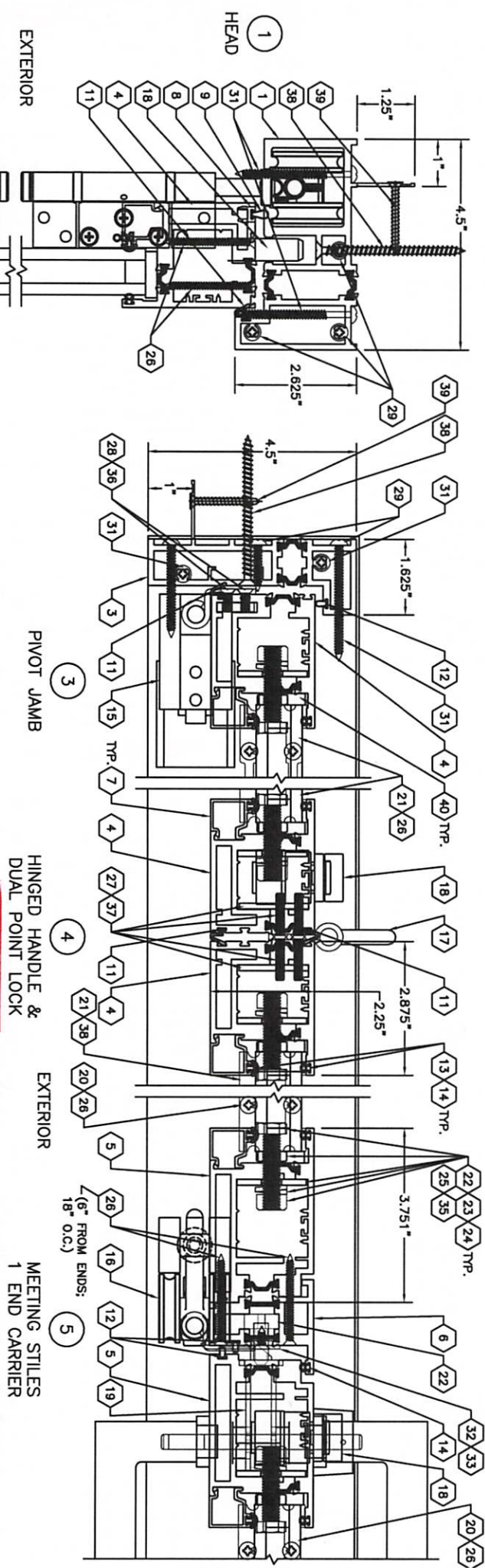
Date Report Completed: January 22, 2016



Pete Cruz
Test Engineer



Sean Clevenger
Testing Manager



- ANCHOR SCHEDULE**
- 1. THROUGH THE BLOCK FRAME
 - d. HEAD: 6" 9" & 12" FROM ENDS: 18" O.C. MAX. CENTERLINES: 1 AT EACH CENTERLINE AND 1 AT 3" FROM CENTERLINE (BOTH SIDES).
 - b. JAMB: 6" FROM ENDS: 18" O.C. MAX.
 - 2. THROUGH THE NAIL FIN
 - HEAD AND JAMBS: 3" FROM ENDS: 12" O.C. MAX.

FENESTRATION TESTING LAB

REPORT NO: *T16-003*

DATE: **FEB 04 2016**

ITEM	DESCRIPTION	VENDOR	VENDOR PART NO.
1	HEAD	FRONTIER	12692-12693
2	SILL	FRONTIER	12694-12695
3	JAMB	FRONTIER	12696-12697
4	MEETING STILE	FRONTIER	11725-11726
5	MEETING STILE	FRONTIER	11725-11726
6	MEETING STILE	FRONTIER	11725-11726
7	MEETING STILE	FRONTIER	11725-11726
8	MEETING STILE	FRONTIER	11725-11726
9	MEETING STILE	FRONTIER	11725-11726
10	MEETING STILE	FRONTIER	11725-11726
11	MEETING STILE	FRONTIER	11725-11726
12	MEETING STILE	FRONTIER	11725-11726
13	MEETING STILE	FRONTIER	11725-11726
14	MEETING STILE	FRONTIER	11725-11726
15	MEETING STILE	FRONTIER	11725-11726
16	MEETING STILE	FRONTIER	11725-11726
17	MEETING STILE	FRONTIER	11725-11726
18	MEETING STILE	FRONTIER	11725-11726
19	MEETING STILE	FRONTIER	11725-11726
20	MEETING STILE	FRONTIER	11725-11726
21	MEETING STILE	FRONTIER	11725-11726
22	MEETING STILE	FRONTIER	11725-11726
23	MEETING STILE	FRONTIER	11725-11726
24	MEETING STILE	FRONTIER	11725-11726
25	MEETING STILE	FRONTIER	11725-11726
26	MEETING STILE	FRONTIER	11725-11726
27	MEETING STILE	FRONTIER	11725-11726
28	MEETING STILE	FRONTIER	11725-11726
29	MEETING STILE	FRONTIER	11725-11726
30	MEETING STILE	FRONTIER	11725-11726
31	MEETING STILE	FRONTIER	11725-11726
32	MEETING STILE	FRONTIER	11725-11726
33	MEETING STILE	FRONTIER	11725-11726
34	MEETING STILE	FRONTIER	11725-11726

ORIGINAL SET: BRIAN L 1/14/16

SCALE: NOT TO SCALE D

6068

SERIES 3600-T

2L1R FOLDING DOOR

1" INSULATED GLAZING

3600-T AAMA CERTIFICATION

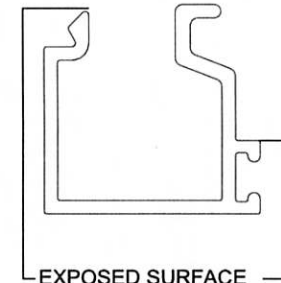
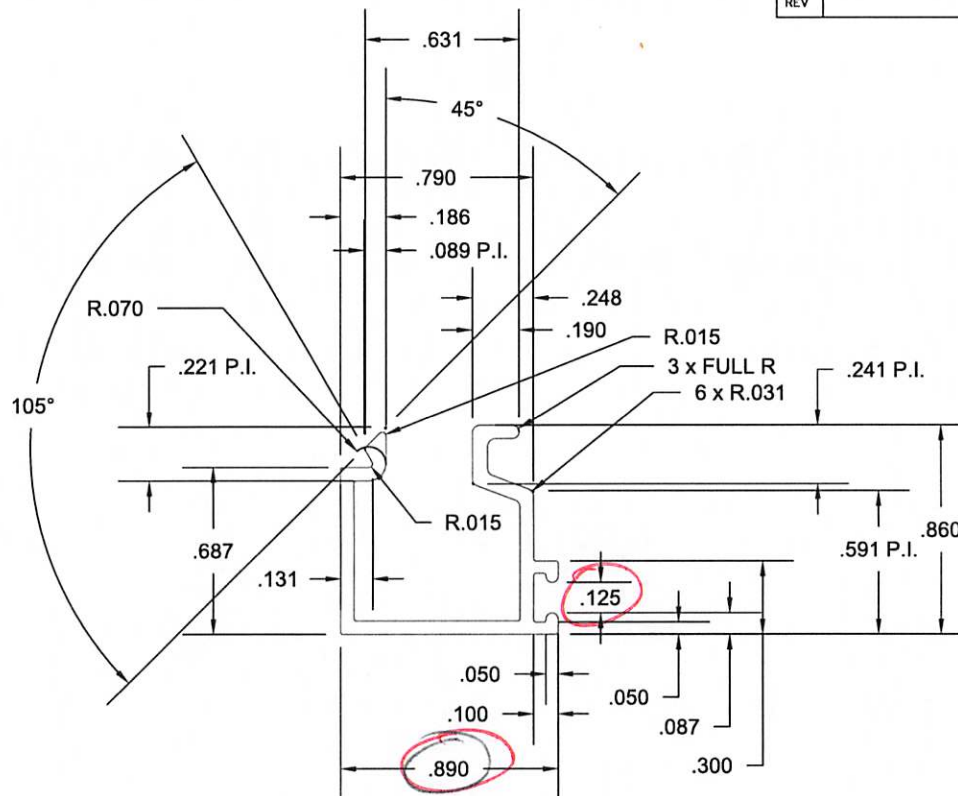
AREA (SQ. IN.) = .168
 WT/FT (LBS.) = .201
 PERI. (IN.) = 5.981

UNLESS OTHERWISE SHOWN

DIMENSION	TOLERANCE +/-
Up thru .124	.006
.125-.249	.007
.250-.499	.008
.500-.749	.009
.750-.999	.010
1.000-1.499	.012
1.500-1.999	.014
2.000-3.999	.024
4.000-5.999	.034
6.000-7.999	.044
8.000-9.999	.054

ANGLE ARE +/- 2 DEG.
 RADIUS UP TO .187 = +/- .016
 .188 AND UP = 10%

DIMENSIONS MARKED "REF" ARE NOT
 SUBJECT TO INSPECTION DURING THE
 EXTRUSION PROCESS



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1. MATERIAL: ALUMINUM 6063-T6
2. * DENOTES CRITICAL DIMENSION.
3. .055" WALL THICKNESS UNLESS OTHERWISE NOTED.
4. .010 R. X .010 DEEP I.D. MARK

FENESTRATION TESTING LAB

REPORT NO:

T16-003

DATE:

FEB 04 2016

FLEETWOOD
 Windows & Doors

1 Fleetwood Way
 Corona, CA 92879
 (800) 736-7363
 www.fleetwoodusa.com

1" GLASS STOP
 ATLANTIC 3900 SERIES

SIZE B	DWG NO. 3907	REV -
DRAWN BY KN	DATE 5/10/11	SCALE FULL
SHEET 1 of 1		

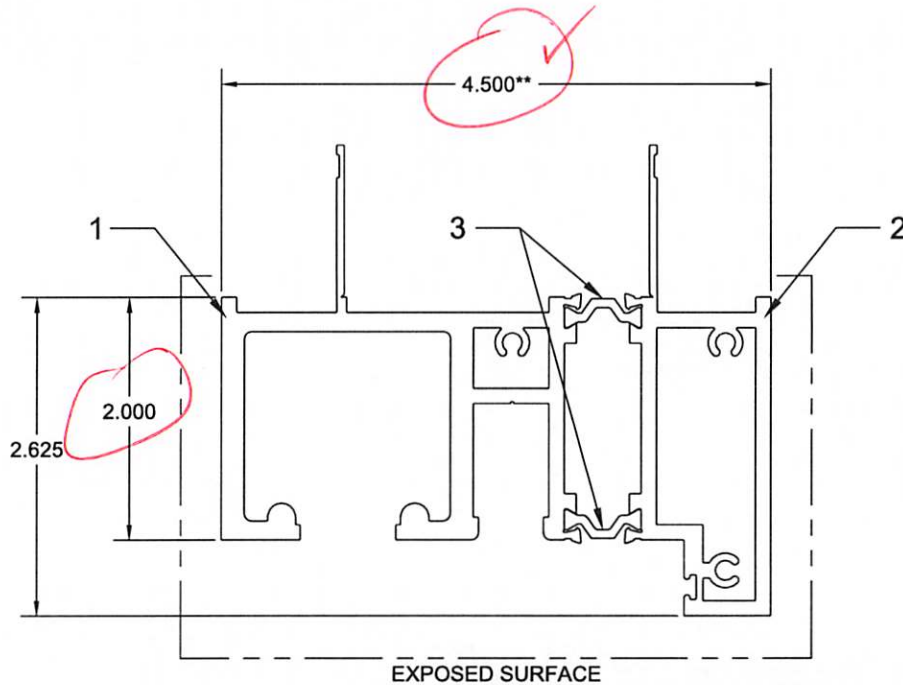
Handwritten initials

BILL OF MATERIALS

ITEM NO.	FW. ID. NO.	VENDOR/VENDOR NO.	DESCRIPTION	QTY.
1	3601-1		HEAD COMPONENT 1	1
2	3601-2		HEAD COMPONENT 2	1
3	25589	TECHNOFORM / 270000	16 MM X 6.0 MM STD. I-STRUT	2

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED SHEAR VALUE	1/15/16	KN

UNLESS OTHERWISE SHOWN	
DIMENSION	TOLERANCE +/-
Up thru .124	.006
.125-.249	.007
.250-.499	.008
.500-.749	.009
.750-.999	.010
1.000-1.499	.012
1.500-1.999	.014
2.000-3.999	.024
4.000-5.999	.034
6.000-7.999	.044
8.000-9.999	.054
ANGLE ARE +/- 2 DEG. RADIUS UP TO .187 = +/- .016 .188 AND UP = 10%	
DIMENSIONS MARKED "REF" ARE NOT SUBJECT TO INSPECTION DURING THE EXTRUSION PROCESS	



NOTES:

1. MATERIAL: ALUMINUM 6063-T6
I-STRUT: AS LISTED IN B.O.M. OR EQUIVALENT
2. STRUT GAP: MAY VARY WITH CRIMPING PRESSURE.
3. ** CHECK DIMENSIONS. ✓
4. SHEAR VALUE: MIN 800 LBF / 4" SAMPLE

FENESTRATION TESTING LAB

REPORT NO:

T16-006-003

DATE:

FEB 04 2016

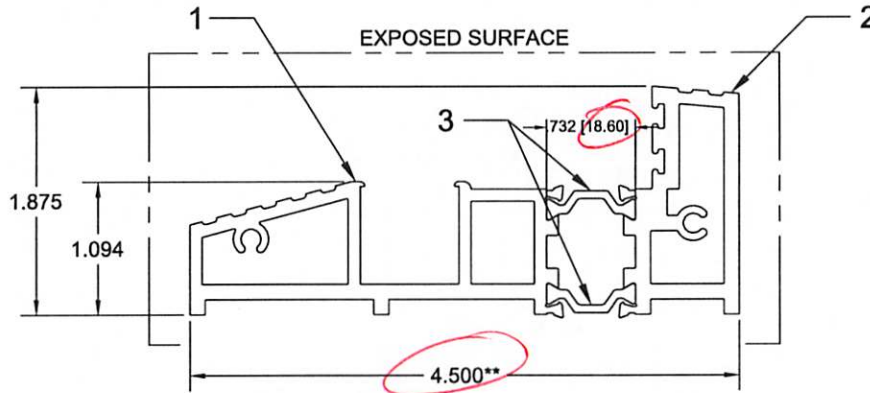
F FLEETWOOD WINDOWS & DOORS	1 FLEETWOOD WAY CORONA, CA 92879 (800) 736-7363 www.fleetwoodusa.com		
	HEAD SERIES 3600-T		
SIZE B	DWG NO. 3601	DATE 6/23/15	REV A
DRAWN BY BL	SCALE 1:1	SHEET 1 OF 1	

BILL OF MATERIALS

ITEM NO.	FW. ID. NO.	VENDOR/VENDOR NO.	DESCRIPTION	QTY.
1	3602-1		SILL COMPONENT 1	1
2	3602-2		SILL COMPONENT 2	1
3	25198	TECHNOFORM / 279300	18.6 MM X 6.0 MM STD. I-STRUT	2

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CHANGED SCREW RACER LOCATION ON 3602-2	7/2/15	KN
B	CHANGED SCREW RACER LOCATION ON 3602-2	7/22/15	KN
C	ADDED SHEAR VALUE	1/15/16	KN

UNLESS OTHERWISE SHOWN	
DIMENSION	TOLERANCE +/-
Up thru .124	.006
.125-.249	.007
.250-.499	.008
.500-.749	.009
.750-.999	.010
1.000-1.499	.012
1.500-1.999	.014
2.000-3.999	.024
4.000-5.999	.034
6.000-7.999	.044
8.000-9.999	.054
ANGLE ARE +/- 2 DEG. RADIUS UP TO .187 = +/- .016 .188 AND UP = 10%	
DIMENSIONS MARKED "REF" ARE NOT SUBJECT TO INSPECTION DURING THE EXTRUSION PROCESS	



NOTES:

1. MATERIAL: ALUMINUM 6063-T6
I-STRUT: AS LISTED IN B.O.M. OR EQUIVALENT
2. STRUT GAP: MAY VARY WITH CRIMPING PRESSURE.
3. ** CHECK DIMENSIONS.
4. SHEAR VALUE: MIN 800 LBF / 4" SAMPLE

FENESTRATION TESTING LAB

REPORT NO: T16-003

DATE: FEB 04 2016

F FLEETWOOD

WINDOWS & DOORS

1 FLEETWOOD WAY
CORONA, CA 92879
(800) 736-7363
www.fleetwoodusa.com

SILL
SERIES 3600-T

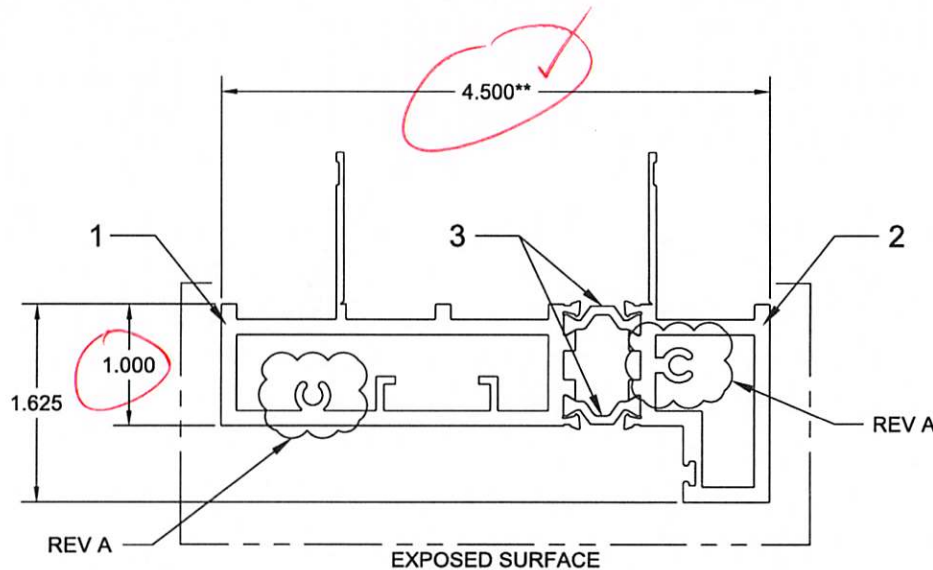
SIZE B	DWG NO. 3602	SCALE 1:1	DATE 6/24/15	SHEET 1 OF 1	REV C
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BILL OF MATERIALS

ITEM NO.	FW. ID. NO.	VENDOR/VENDOR NO.	DESCRIPTION	QTY.
1	3603-1		JAMB COMPONENT 1	1
2	3603-2		JAMB COMPONENT 2	1
3	25589	TECHNOFORM / 270000	16 MM X 6.0 MM STD. I-STRUT	2

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED SCREW RAGERS	7/22/15	KN
B	1.285" WAS 1.300"	7/31/15	KN
C	ADDED SHEAR VALUE	1/15/16	KN

UNLESS OTHERWISE SHOWN	
DIMENSION	TOLERANCE +/-
Up thru .124	.006
.125-.249	.007
.250-.499	.008
.500-.749	.009
.750-.999	.010
1.000-1.499	.012
1.500-1.999	.014
2.000-3.999	.024
4.000-5.999	.034
6.000-7.999	.044
8.000-9.999	.054
ANGLE ARE +/- 2 DEG. RADIUS UP TO .187 = +/- .016 .188 AND UP = 10%	
DIMENSIONS MARKED "REF" ARE NOT SUBJECT TO INSPECTION DURING THE EXTRUSION PROCESS	



NOTES:

1. MATERIAL: ALUMINUM 6063-T6
I-STRUT: AS LISTED IN B.O.M. OR EQUIVALENT
2. STRUT GAP: MAY VARY WITH CRIMPING PRESSURE.
3. ** CHECK DIMENSIONS. ✓
4. SHEAR VALUE: MIN 800 LBF / 4" SAMPLE

FENESTRATION TESTING LAB

REPORT NO:

T16-002

DATE:

FEB 04 2016

	1 FLEETWOOD WAY CORONA, CA 92879 (800) 736-7363 www.fleetwoodusa.com	
JAMB SERIES 3600-T		
SIZE B	DWG NO. 3603	REV D
DRAWN BY BL	DATE 6/24/15	SCALE 1:1
SHEET 1 OF 1		

BILL OF MATERIALS

ITEM NO.	FW. ID. NO.	VENDOR/VENDOR NO.	DESCRIPTION	QTY.
1	3604-1		PANEL COMPONENT 1	1
2	3604-2		PANEL COMPONENT 2	1
3	25198	TECHNOFORM / 279300	18.6 MM X 6.0MM STD. I-STRUT	1
4	25589	TECHNOFORM / 270000	16 MM X 6.0MM STD. I-STRUT	1

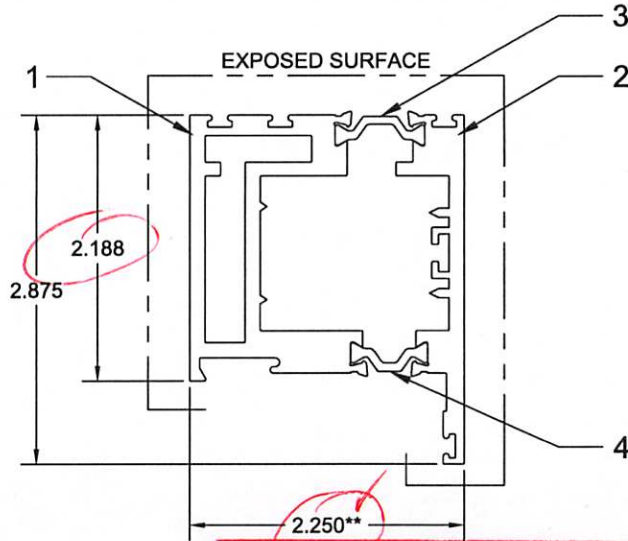
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED SHEAR VALUE	1/15/16	KN

UNLESS OTHERWISE SHOWN

DIMENSION	TOLERANCE +/-
Up thru .124	.006
.125-.249	.007
.250-.499	.008
.500-.749	.009
.750-.999	.010
1.000-1.499	.012
1.500-1.999	.014
2.000-3.999	.024
4.000-5.999	.034
6.000-7.999	.044
8.000-9.999	.054

ANGLE ARE +/- 2 DEG.
RADIUS UP TO .187 = +/- .016
.188 AND UP = 10%

DIMENSIONS MARKED "REF" ARE NOT
SUBJECT TO INSPECTION DURING THE
EXTRUSION PROCESS



NOTES:

1. MATERIAL: ALUMINUM 6063-T6
I-STRUT: AS LISTED IN B.O.M. OR EQUIVALENT
2. STRUT GAP: MAY VARY WITH CRIMPING PRESSURE.
3. ** CHECK DIMENSIONS.
4. SHEAR VALUE: 25 LBF - 75 LBF / 4" SAMPLE

FENESTRATION TESTING LAB

REPORT NO:

T16-003

DATE:

FEB 04 2016

F FLEETWOOD WINDOWS & DOORS	1 FLEETWOOD WAY CORONA, CA 92879 (800) 736-7363 www.fleetwoodusa.com	
	PANEL SERIES 3600-T	
SIZE B	DWG NO. 3604	REV A
DRAWN BY BL	DATE 9/24/15	SCALE 1:1
SHEET 1 OF 1		