



# Testing Evaluation Laboratories, Inc.

2002 Wood Court Suite 1 – Plant City, FL 33563  
 Phone: 813-754-9887

ASTM E 1886-05 / ASTM E 1996-06  
 Missile Level “D” (Includes Wind Zone 4)

## TEST REPORT SUMMARY

Test Report Issued To:

Fleetwood Windows and Doors  
 1 Fleetwood Way  
 Corona, CA 92879

Kona 3800 Casement and Awning Windows

Title of Test	Results			
	Specimen 1A 42.00 x 84.00	Specimen 1B 42.00 x 84.00	Specimen 1C 42.0 x 84.00	Specimen 2A 42.0 x 84.00
Impact	Pass	Pass	Pass	Pass
Fatigue Load Cycling	+65.0/- 65.0 psf	+65.0/- 65.0 psf	+65.0/- 65.0 psf	+65.0/- 70.0 psf

Title of Test	Results			
	Specimen 3A 42.00 x 65.00	Specimen 5A 42.00 x 84.00	Specimen 6A 42.00 x 84.00	Specimen 8A 42.0 x 180.00
Impact	Pass	Pass	Pass	Pass
Fatigue Load Cycling	+65.0/- 65.0 psf	+65.0/- 65.0 psf	+65.0/- 65.0 psf	+65.0/- 65.0 psf

Title of Test	Results
	Specimen 12A 42.00 x 72.00
Impact	Pass
Fatigue Load Cycling	+65.0/- 65.0 psf

Reference should be made to Report No. TEL 01990818 for complete test specimen description and data. For corresponding data regarding AAMA/WDMA/CSA 101/I.S./2/A440-08 reference should be made to Report No. TEL 01990817.

For Testing Evaluation Laboratories, Inc.

*Vivian K. Wright*  
 Vivian K. Wright,  
 President



# Testing Evaluation Laboratories, Inc.

2002 Wood Court Suite 1 – Plant City, FL 33563  
Phone: 813-754-9887

## TEST RESULTS

IAS Laboratory Certification No: TL-299

Report No: TEL 01990818  
Test Dates: September 23-27, 2013  
Report Date: October 31, 2013

### Issued to:

Fleetwood Windows and Doors  
1 Fleetwood Way  
Corona, CA 92879

**Project Summary:** Testing Evaluation Laboratories, Inc. (TEL) was contracted by Fleetwood Windows and Doors to perform tests on the Kona 3800 Casement and Awning Windows at TEL's Plant City, FL test facility.

Test specimen descriptions and results are reported herein.

**Test Specifications:** The test specimens were evaluated in accordance with the following:

ASTM E 1886-05 / ASTM E 1996-06  
Missile Level "D" (Includes Wind Zone 4)

### Test Specimen Description:

<b>Series / Model:</b>	Kona 3800 Casement and Awning Windows
<b>Type:</b>	Aluminum Casement and Awning Windows
<b>Overall Size:</b>	42.00" x 84.00 – Specimens 1a, 1b, 1c, 2a, 5a and 6a – (X) 42.00" x 65.00" – Specimens 3a – (X) 42.00" x 180.00" – Specimen 8a - (O/X/O) 42.00" x 72.00" – Specimen 12a – (X)
<b>Daylight Opening:</b>	33.063" x 75.13" – Specimens 1a, 1b, 1c, 2a, 5a and 6a – (X) 33.625" x 56.50" – Specimen 3a – (X) 39.062" x 9.312" – Specimen 8a - Top Fixed Panel (O) 33.13" x 76.062" – Specimen 8a - Center Active Panel (X) 39.062" x 81.625" – Specimen 8a - Bottom Fixed Panel (O) 32.88" x 56.06" – Specimen 12a – (X)
<b>Glazing Detail:</b>	See attached drawings for glazing details.
<b>Frame Material:</b>	Aluminum
<b>Finish:</b>	Mill Finish

For Tested Elevation, Vertical Cross Sections, Horizontal Cross Sections, Components, Frame Anchoring, Glazing Detail and Bill of Materials See Attached Drawing numbers L-7031, L-7032, L-7032A and L-7033.

## IMPACT AND CYCLING TESTS

### Specimen 1A – 42.0" x 84.0" Aluminum Casement Window – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
77°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.0"	42.0"	49.9 fps
2	Pass	31.0"	11.0"	49.7 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.54
0% to 60%	0.0 to 39.0	300	2.49
50% to 80%	32.5 to 52.0	600	1.69
30% to 100%*	19.5 to 65.0	100	2.98

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.87
50% to 80%	32.5 to 52.0	1050	1.54
0% to 60%	0.0 to 39.0	50	2.51
20% to 50%	13.0 to 32.5	3350	2.62
*Panel deflected 2.50" from original plane at 100% Positive load and 2.38" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.			

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

# IMPACT AND CYCLING TESTS

## Specimen 1B – 42.0” x 84.0” Aluminum Casement Window – (X)

### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
77°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	20.75"	42.25"	49.9 fps
2	Pass	30.75"	10.75"	49.9 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.13
0% to 60%	0.0 to 39.0	300	2.83
50% to 80%	32.5 to 52.0	600	1.58
30% to 100%*	19.5 to 65.0	100	2.00

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.29
50% to 80%	32.5 to 52.0	1050	1.58
0% to 60%	0.0 to 39.0	50	1.79
20% to 50%	13.0 to 32.5	3350	1.73

\*Panel deflected 2.38" from original plane at 100% Positive load and 2.75" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

### Specimen 1C – 42.0” x 84.0” Aluminum Casement Window – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
77°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.25"	41.75"	49.9 fps
2	Pass	10.50"	75.00"	50.0 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.79
0% to 60%	0.0 to 39.0	300	2.62
50% to 80%	32.5 to 52.0	600	1.70
30% to 100%*	19.5 to 65.0	100	2.95

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.94
50% to 80%	32.5 to 52.0	1050	1.60
0% to 60%	0.0 to 39.0	50	2.71
20% to 50%	13.0 to 32.5	3350	1.82

\*Panel deflected 2.25" from original plane at 100% Positive load and 2.00" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

### Specimen 2A – 42.0” x 84.0” Aluminum Casement Window with Nail Fin – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
77°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.00"	43.00"	50.1 fps
2	Pass	32.50"	11.25"	50.0 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -70.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.31
0% to 60%	0.0 to 39.0	300	2.51
50% to 80%	32.5 to 52.0	600	1.98
30% to 100%*	19.5 to 65.0	100	2.88

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	21.0 to 70.0	50	2.91
50% to 80%	35.0 to 55.0	1050	2.03
0% to 60%	0.0 to 42.0	50	2.32
20% to 50%	14.0 to 35.0	3350	1.82

\*Panel deflected 1.75" from original plane at 100% Positive load and 1.88" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

### Specimen 3A – 42.0" x 65.0" Aluminum Casement Window – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
76°F	D	9.0 lbs, 3 oz	8'-0"	17'0"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.00"	33.00"	49.8 fps
2	Pass	11.00"	11.00"	49.9 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	1.50
0% to 60%	0.0 to 39.0	300	2.25
50% to 80%	32.5 to 52.0	600	1.25
30% to 100%*	19.5 to 65.0	100	2.07

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.27
50% to 80%	32.5 to 52.0	1050	1.63
0% to 60%	0.0 to 39.0	50	1.70
20% to 50%	13.0 to 32.5	3350	1.36

\*Panel deflected 1.75" from original plane at 100% Positive load and 2.00" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

### Specimen 5A – 42.0" x 84.0" Aluminum Casement Window with Nail Fin – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
76°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.00"	42.00"	49.7 fps
2	Pass	11.00"	75.00"	50.0 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.08
0% to 60%	0.0 to 39.0	300	1.83
50% to 80%	32.5 to 52.0	600	1.72
30% to 100%*	19.5 to 65.0	100	2.31

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.89
50% to 80%	32.5 to 52.0	1050	2.27
0% to 60%	0.0 to 39.0	50	2.68
20% to 50%	13.0 to 32.5	3350	2.00

\*Panel deflected 1.50" from original plane at 100% Positive load and 1.50" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit



## IMPACT AND CYCLING TESTS

### Specimen 6A – 42.0" x 84.0" Aluminum Casement Window –Direct Mount – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
76°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	20.75"	42.00"	49.9 fps
2	Pass	11.25"	74.75"	50.0 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.41
0% to 60%	0.0 to 39.0	300	2.79
50% to 80%	32.5 to 52.0	600	2.05
30% to 100%*	19.5 to 65.0	100	2.26

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.95
50% to 80%	32.5 to 52.0	1050	1.55
0% to 60%	0.0 to 39.0	50	2.09
20% to 50%	13.0 to 32.5	3350	1.68

\*Panel deflected 2.50" from original plane at 100% Positive load and 2.88" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

Specimen 8A – 42.0" x 180.0" Aluminum Stacked Fixed/Awning/Fixed Window – (O/X/O)

### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
76°F	D	9.0 lbs, 3 oz	8'-0"	17'0"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	32.00"	11.00"	49.9 fps
2	Pass	21.00"	43.00"	49.7 fps
3	Pass	21.00"	84.00"	49.9 fps
4	Pass	32.00"	94.00"	50.0 fps
5	Pass	21.00"	126.00"	49.8 fps
<p>Orientation of Missile at Impact was within +/-5° of horizontal.                      None of the impacts penetrated the specimens.                      "X" measurement is from the left edge of test specimen.                      "Y" measurement is from the bottom edge of test specimen.</p>				

### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.93
0% to 60%	0.0 to 39.0	300	2.81
50% to 80%	32.5 to 52.0	600	1.75
30% to 100%*	19.5 to 65.0	100	2.65

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.81
50% to 80%	32.5 to 52.0	1050	1.65
0% to 60%	0.0 to 39.0	50	2.10
20% to 50%	13.0 to 32.5	3350	2.28
<p>*Panel deflected 2.25" from original plane at 100% Positive load and 2.75" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.</p>			

Jarrett Wright and James Hayhurst, Test Technicians

Mfg Observers – Joe Zammit

## IMPACT AND CYCLING TESTS

### Specimen 12A – 42.0" x 72.0" Aluminum Casement Window – (X)

#### ASTM E1886-05/ASTM E1996-06 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
76°F	D	9.0 lbs, 2 oz	8'-1/4"	17'1"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.00"	36.00"	49.8 fps
2	Pass	9.00"	9.50"	50.1 fps
Orientation of Missile at Impact was within +/-5° of horizontal. None of the impacts penetrated the specimens. "X" measurement is from the left edge of test specimen. "Y" measurement is from the bottom edge of test specimen.				

#### ASTM E1886-05/ASTM E1996-06– Fatigue Load Cycling Design Pressure +65.0 psf / -65.0 psf

Positive % of Test Load	Positive Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
20% to 50%	13.0 to 32.5	3500	2.12
0% to 60%	0.0 to 39.0	300	1.71
50% to 80%	32.5 to 52.0	600	1.65
30% to 100%*	19.5 to 65.0	100	2.26

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.17
50% to 80%	32.5 to 52.0	1050	1.37
0% to 60%	0.0 to 39.0	50	1.93
20% to 50%	13.0 to 32.5	3350	2.69

\*Panel deflected 1.75" from original plane at 100% Positive load and 1.75" from original plane at 100% Negative load. At the completion of cycles the door panel was operable. There were no tears in the film. In our opinion, the tape and film used to seal for air leakage did not influence the results of the test.

## Conditions, Terms, and General Notes Regarding These Tests

The product tested Has Been compared to the detailed drawing, bill of materials and fabrication information supplied by the client so named herein. Our analysis, which includes dimensional and component description comparisons, indicate the tested product and engineering information supplied by the client "Are Equivalent". The report and representative samples will be retained for four years from the date of initial test.

These test results were obtained by employing all requirements of the designated test methods with no Deviations unless explicitly noted in test report. The test results and specimen supplied for testing are in compliance with the reference.

The test results are specific to the product tested by this laboratory and of the sample supplied by the client named herein, and they relate to no other product either manufactured by the client, a fabricator of the client or of the client or of installed field performance.

This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

Testing Evaluation Laboratories, Inc. makes no opinions or endorsements regarding this product and its performance. This report may not be reproduced or quoted in partial form without the expressed written approval of Testing Evaluation Laboratories, Inc.

Testing Evaluation Laboratories, Inc.'s letter, reports, its name or insignia or mark are for the exclusive use of the client so named herein and any other use is strictly prohibited. The report, letters and the name of Testing Evaluation Laboratories, Inc., its seal or mark shall not be used in any circumstance to the general public or in any advertising.

Limitation of liability: Due diligence was used in performing the tests and reporting the results. By acceptance of this report, this client agrees to hold harmless and indemnify Testing Evaluation Laboratories, Inc., its employees, sub-contractors, officers and owners against all claims and demands of any kind whatsoever, which arise out of or in any manner connected with the performance of work referred to herein.

Testing Evaluation Laboratories, Inc.



Vivian K. Wright,  
President

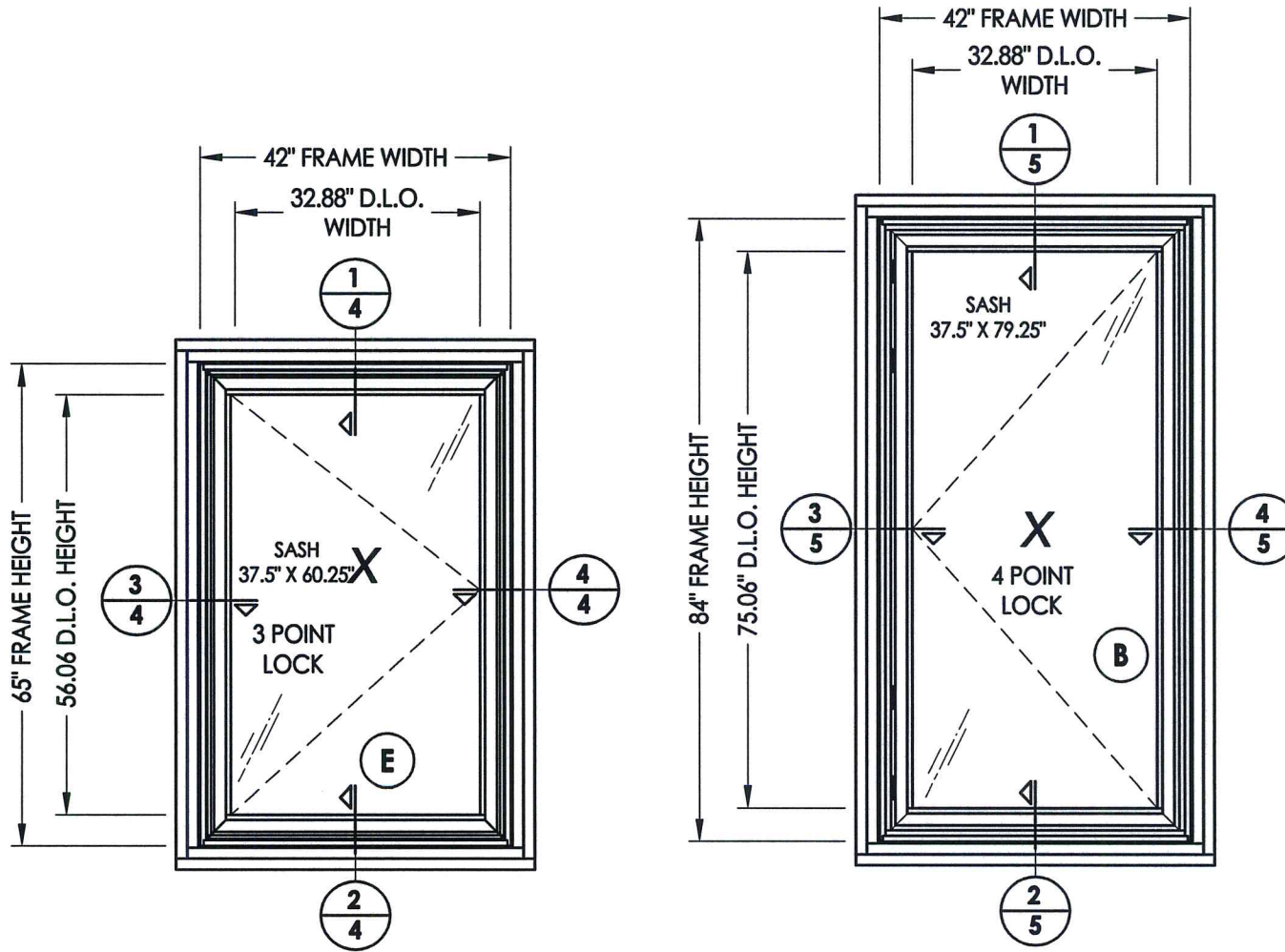
**Revision Log**

Rev No.	Date	Page(s)	Revision(s)
0	10/21/2013	NA	Original Report Issue

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of contents
2	Test elevation
3	Test elevation
4	Horizontal and vertical cross sections
5	Horizontal and vertical cross sections
6	Horizontal cross sections
7	Horizontal and vertical cross sections
8	Frame anchoring
9	Frame anchoring
10	Frame anchoring
11	Components
12	Glazing details
13	Bill of materials

Testing Evaluation Laboratories Inc.  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW

PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY: TABLE OF CONTENTS	
NO. DATE BY	
	REVISIONS
	
DATE: 9/25/13	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: L-7031	
SHEET <u>1</u> OF <u>13</u>	

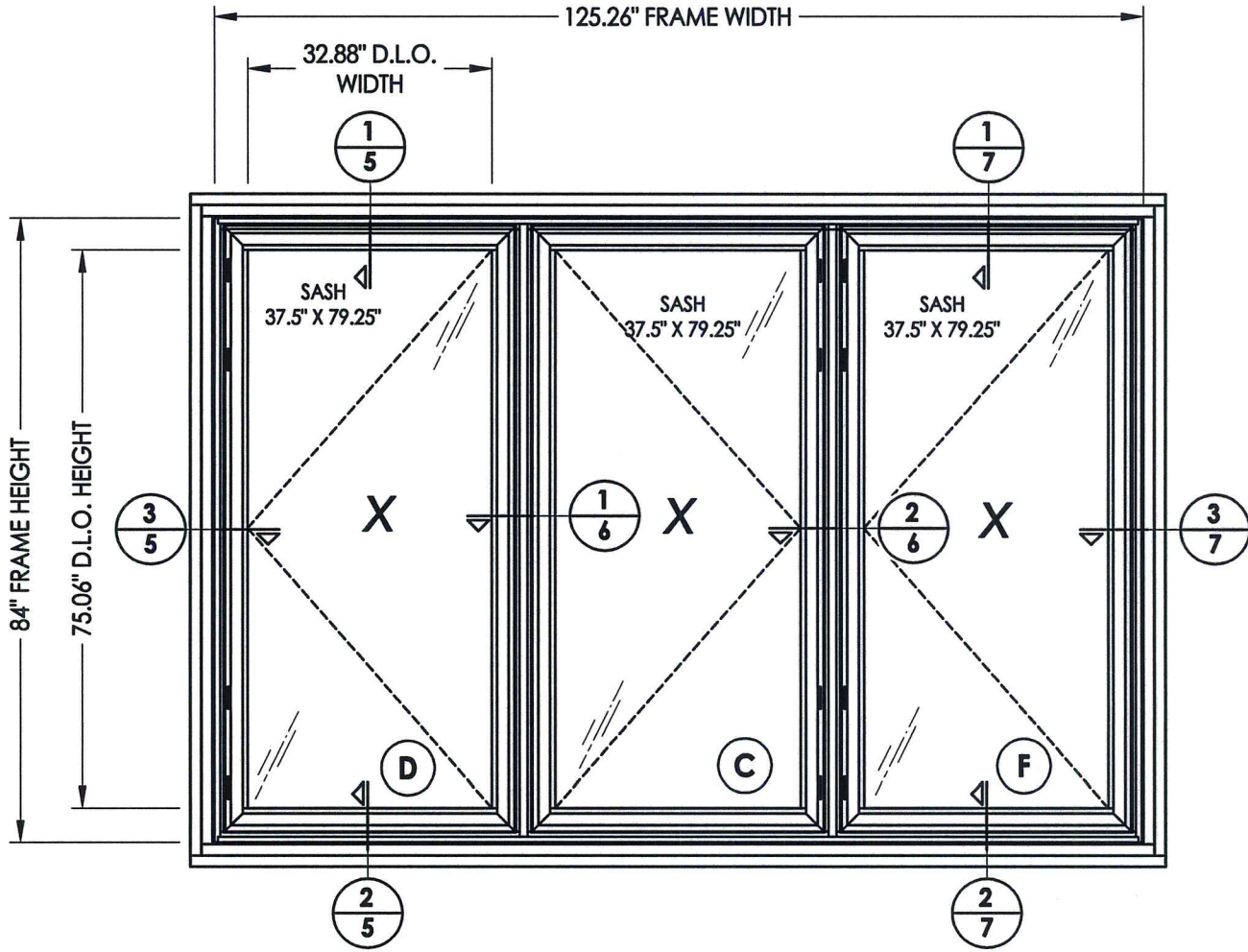


**SPEC. #3, 3A**

**SPEC. #1, 1A, 1B, 1C**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gw

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		TEST ELEVATION	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 2 OF 13			

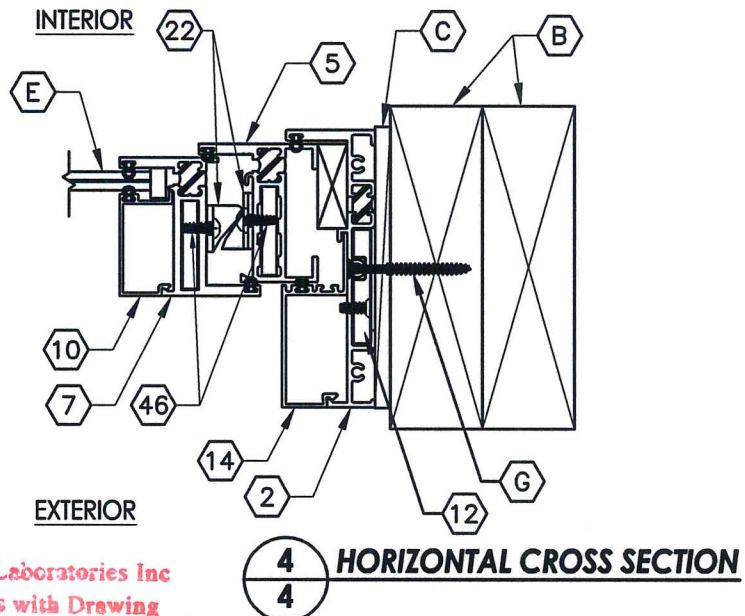
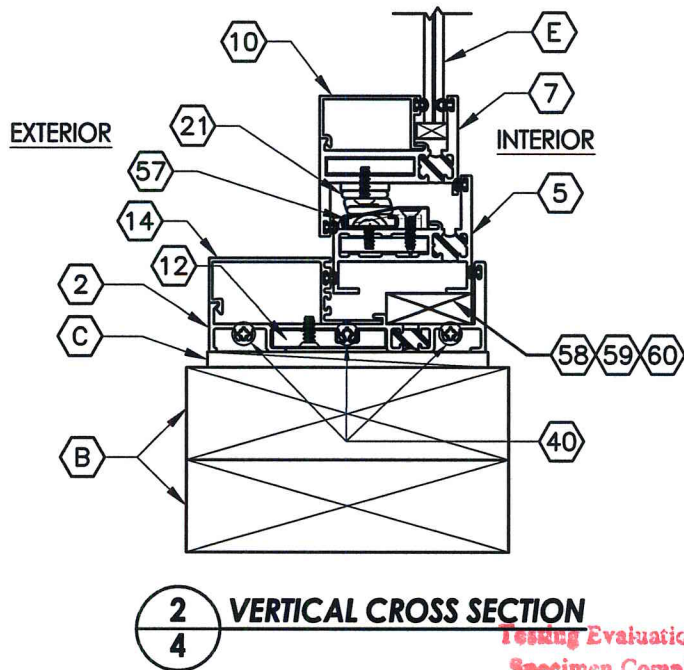
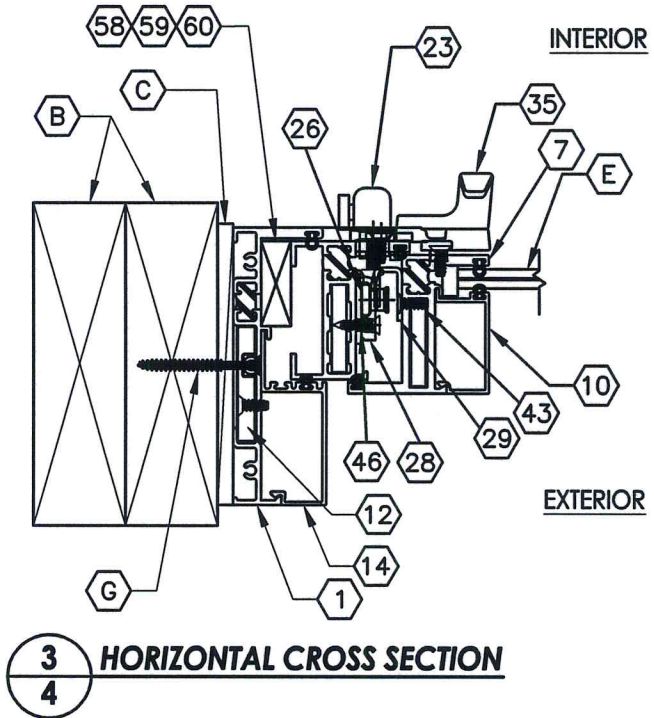
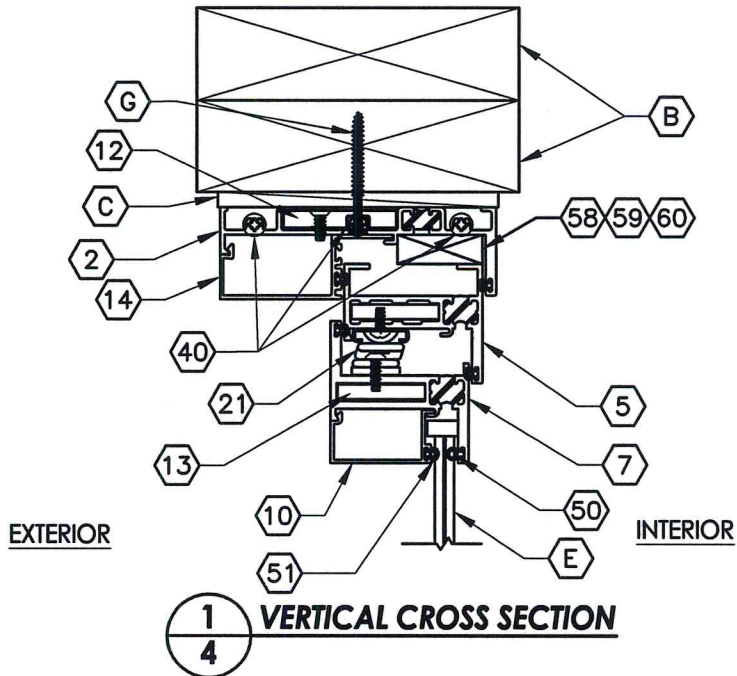


**SPEC. #4, 4A**


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *gaw*

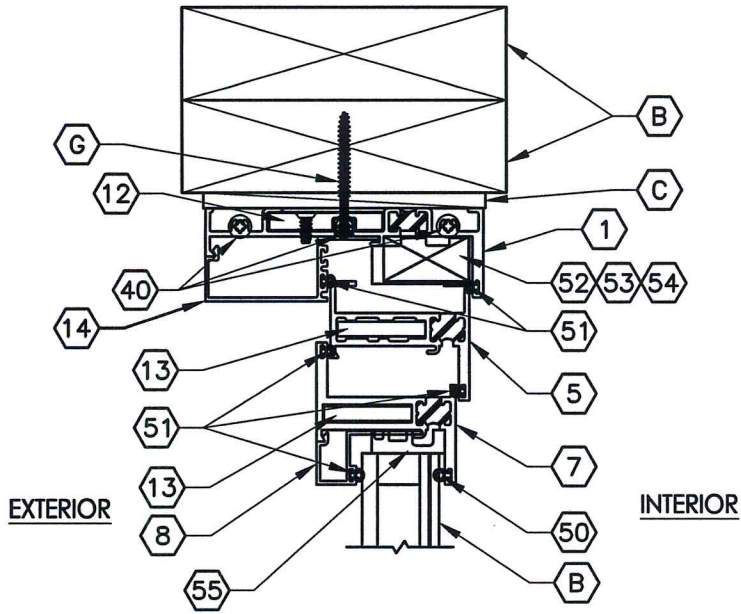
PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY: TEST ELEVATION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 3 OF 13			



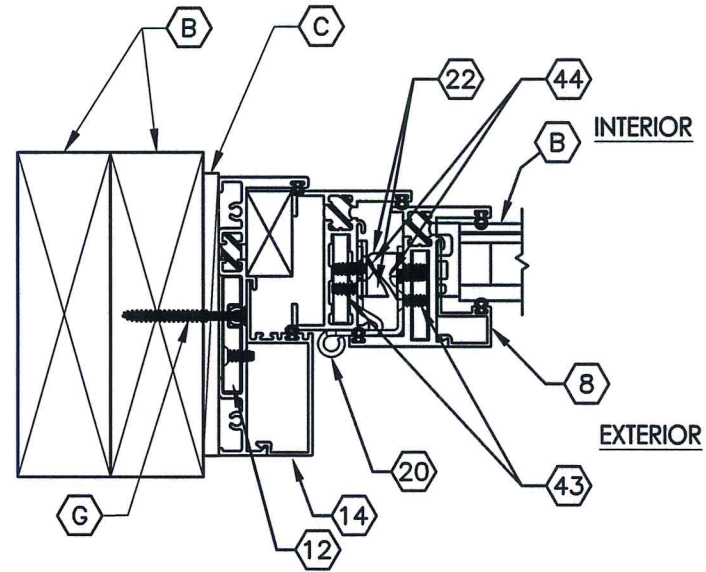


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by 900

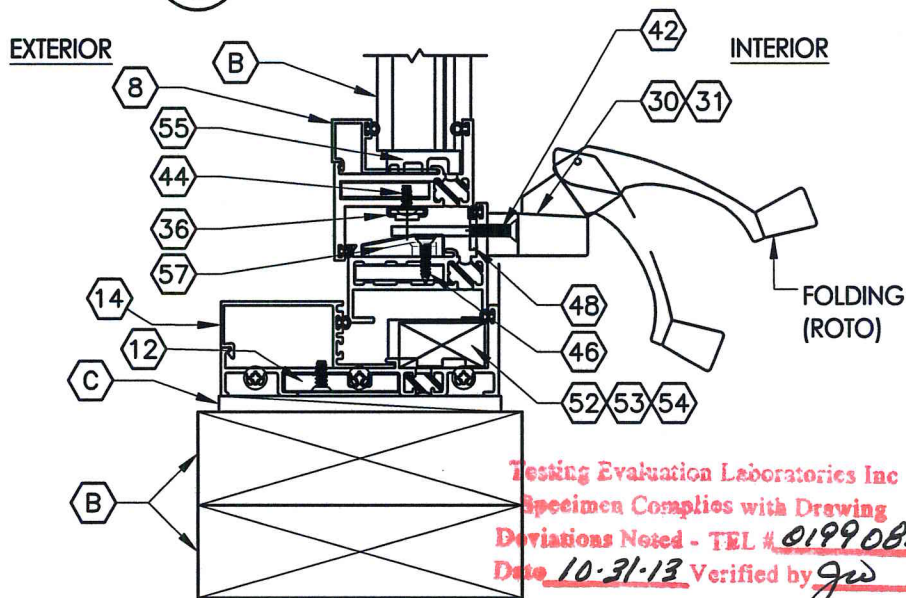
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL AND VERTICAL CROSS SECTIONS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 4 OF 13			



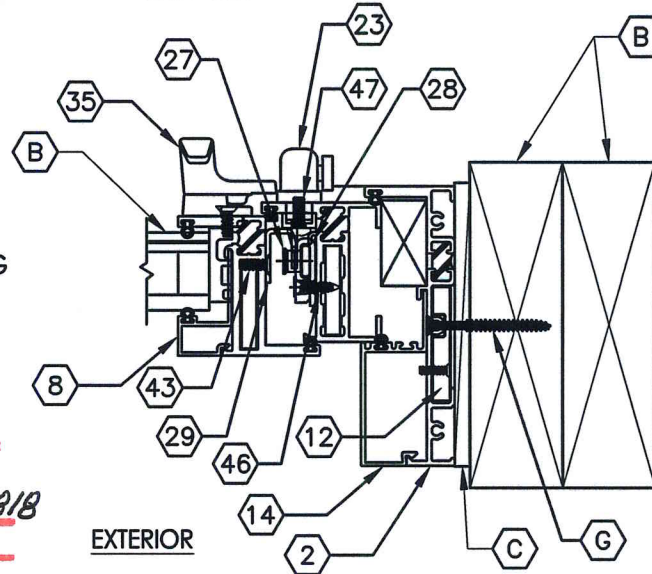
**1** VERTICAL CROSS SECTION  
**5**



**3** HORIZONTAL CROSS SECTION  
**5**



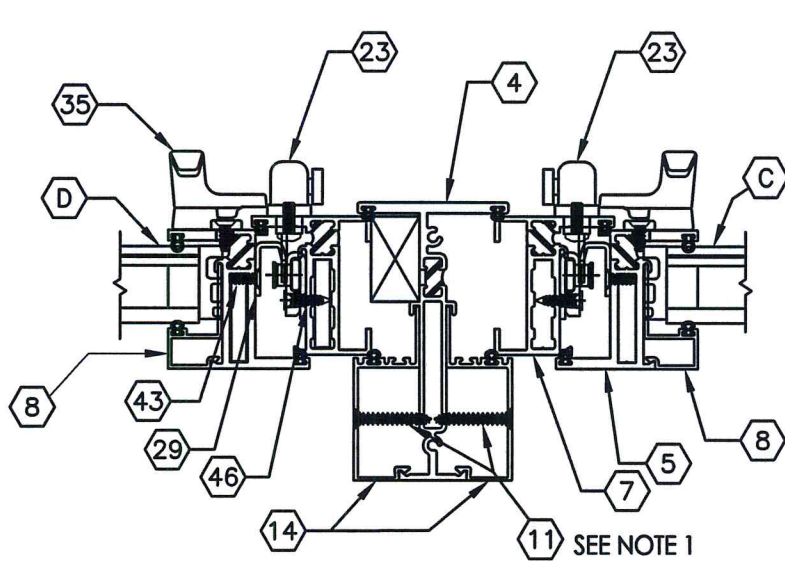
**2** VERTICAL CROSS SECTION  
**5**



**4** HORIZONTAL CROSS SECTION  
**5**

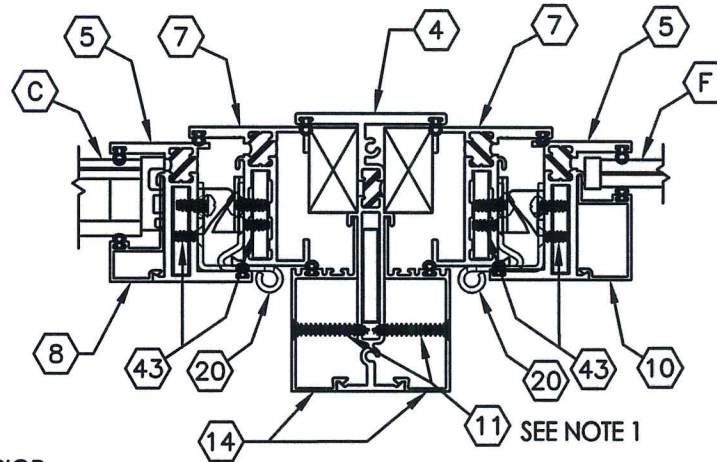
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 0199 0818  
Date 10-31-13 Verified by *gwd*

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL AND VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 5 OF 13			



**1**  
**6** **HORIZONTAL CROSS SECTION**

INTERIOR



**2**  
**6** **HORIZONTAL CROSS SECTION**

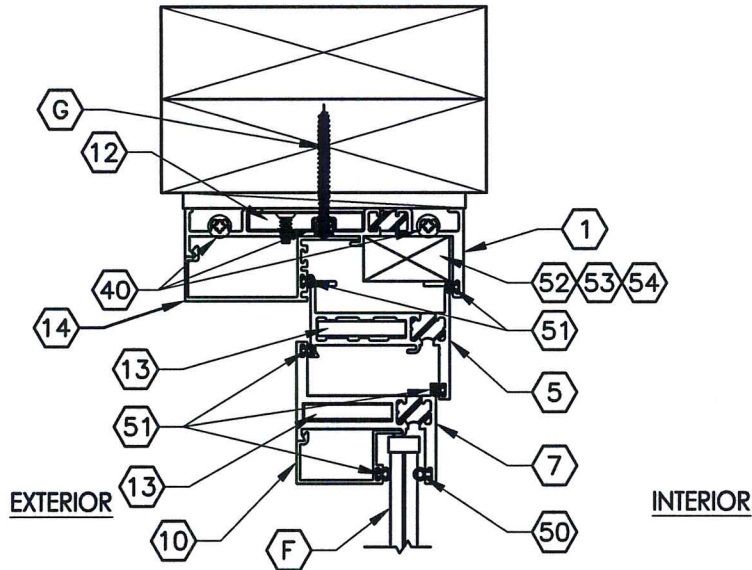
EXTERIOR

**NOTE:**

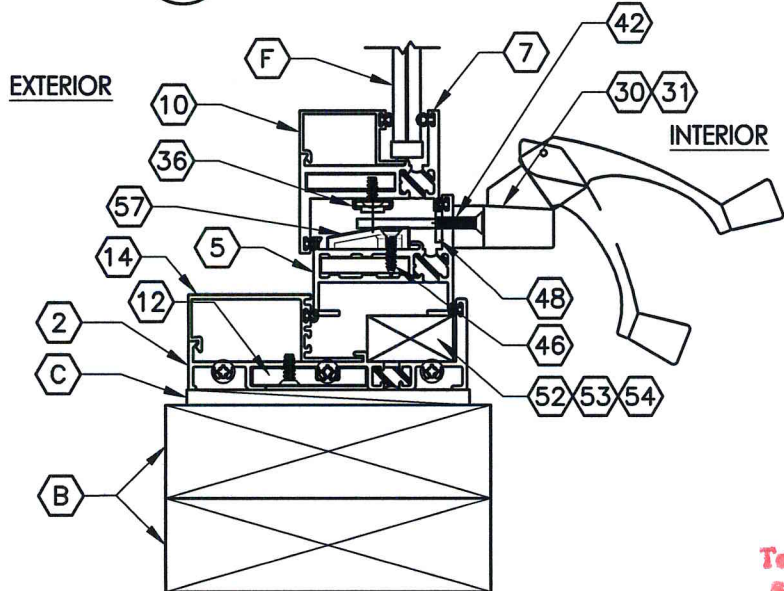
1. Item #11 located 4" from each end then 12" on center for (8) total.

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *gw*

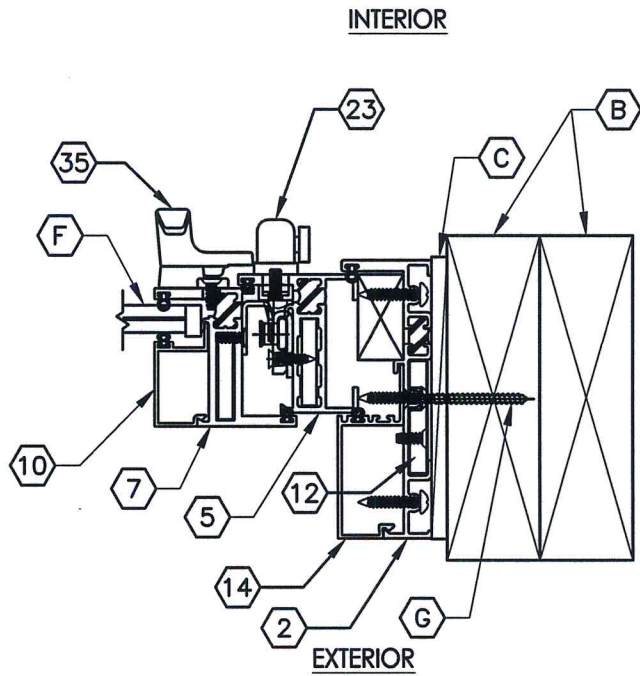
PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 6 OF 13			



**1**  
**7** VERTICAL CROSS SECTION



**2**  
**7** VERTICAL CROSS SECTION



**3**  
**7** HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gw

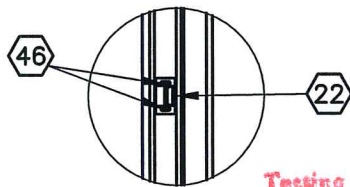
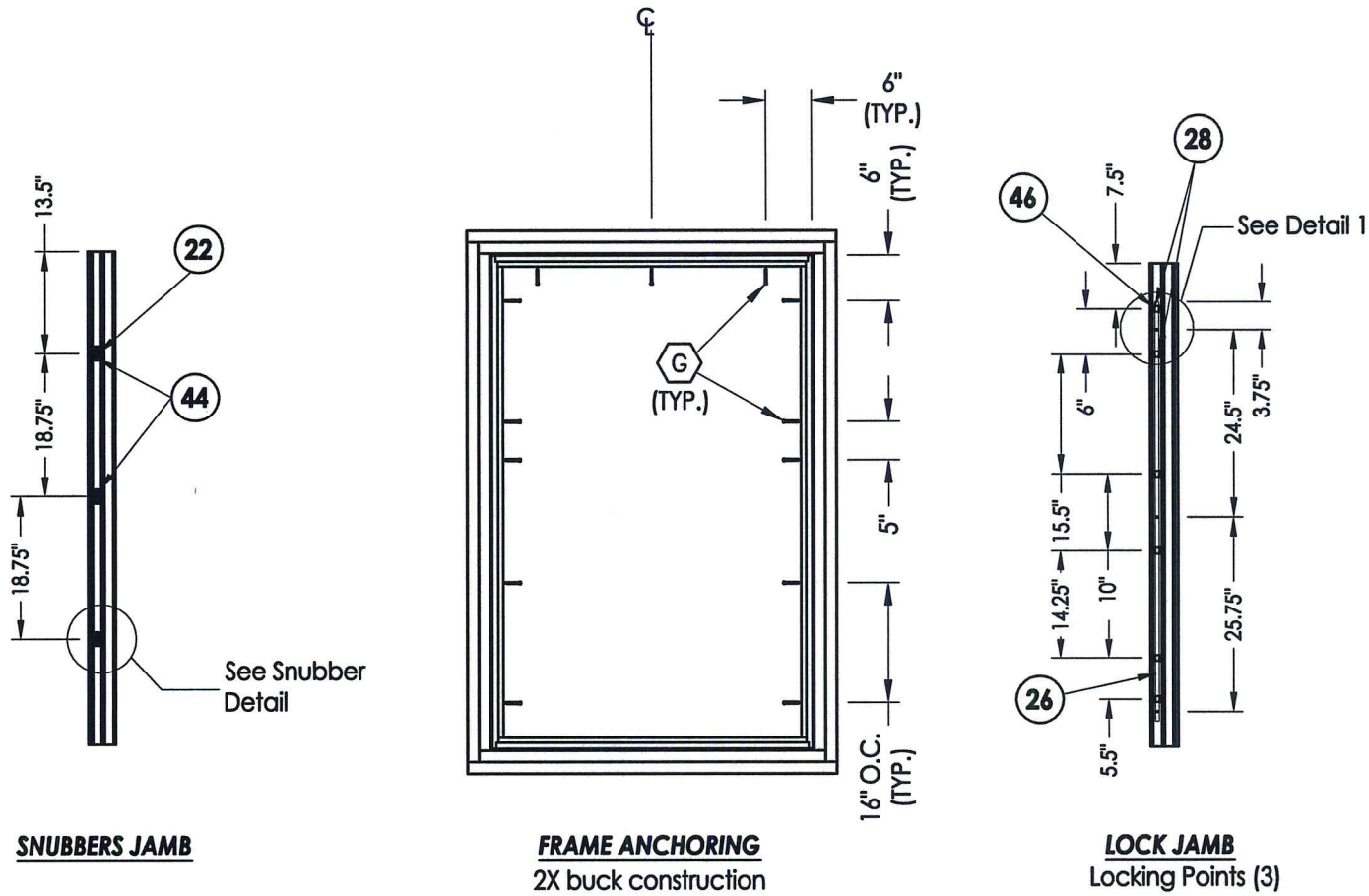
PRODUCT:  
 FLEETWOOD  
 KONA 3800  
 CASEMENT WINDOW

PART OR ASSEMBLY:  
 HORIZONTAL AND VERTICAL  
 CROSS SECTIONS

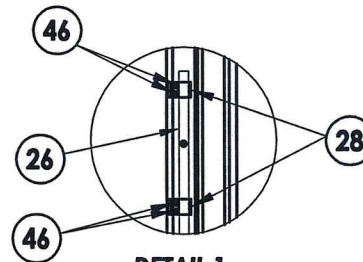
NO.		DATE	BY	REVISIONS

RW BUILDING  
 CONSULTANTS, INC.  
 813.659.9197

DATE: 9/25/13  
 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.:  
 L-7031  
 SHEET 7 OF 13



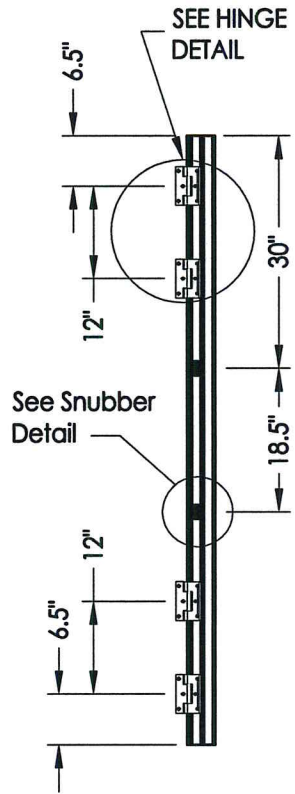
**SNUBBER DETAIL**



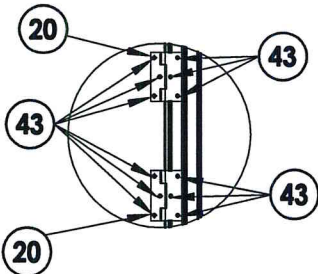
**DETAIL 1**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW

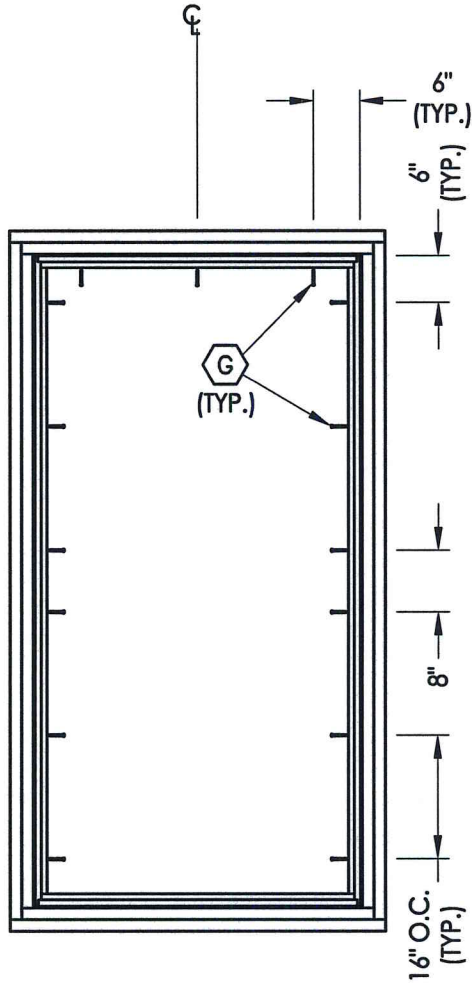
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		FRAME ANCHORING	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE:		9/25/13	
SCALE:		N.T.S.	
DWG. BY:		JK	
CHK. BY:		LFS	
DRAWING NO.:		L-7031	
SHEET		8 OF 13	



**HINGE JAMB**



**HINGE DETAIL**



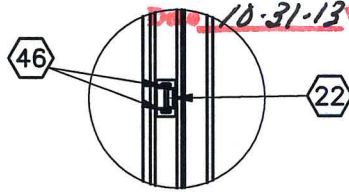
**FRAME ANCHORING**

2X buck construction Laboratories Inc

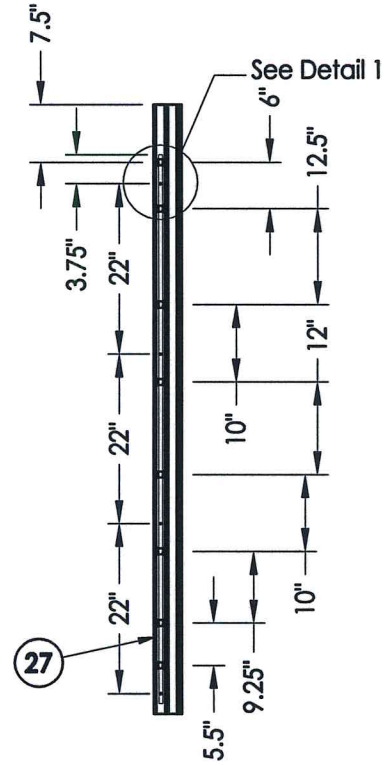
Specimen Complies with Drawing

Deviations Noted - TEL # 01990818

Date 10-31-13 Verified by Jw

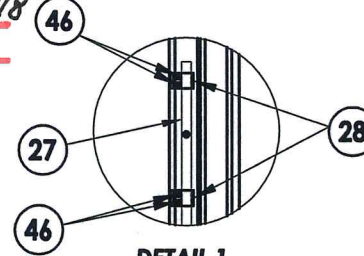


**SNUBBER DETAIL**



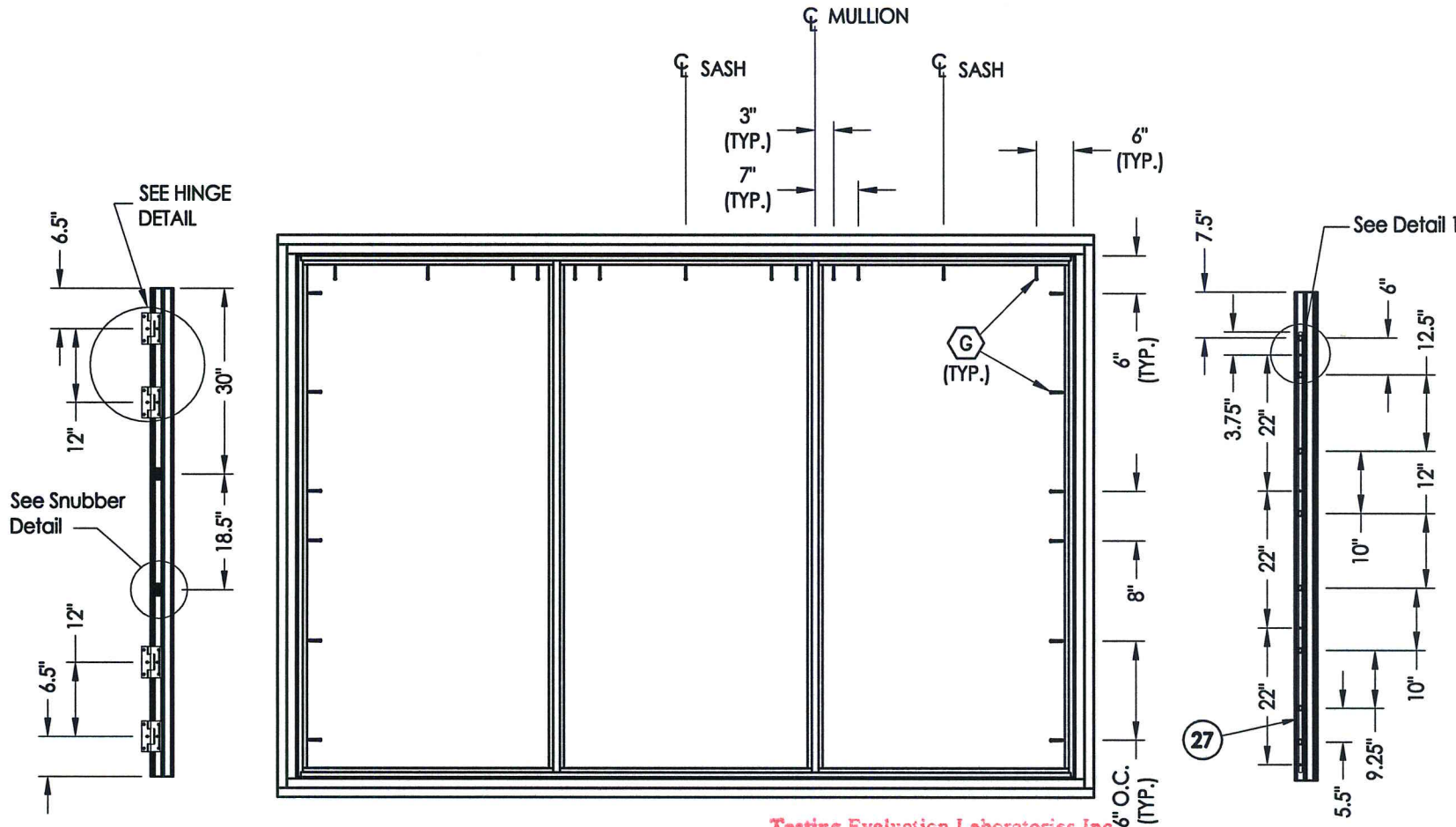
**LOCK JAMB**

Locking Points (4)

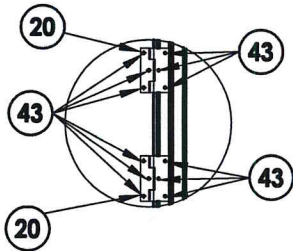


**DETAIL 1**

PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 9 OF 13			

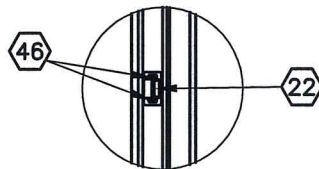


**HINGE JAMB**



**HINGE DETAIL**

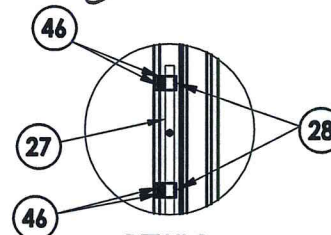
**FRAME ANCHORING**  
2X buck construction



**SNUBBER DETAIL**

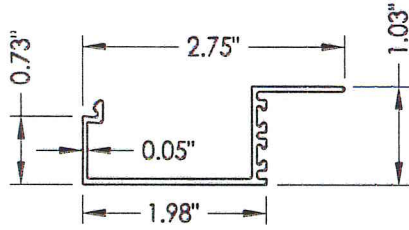
Testing Evaluation Laboratories Inc.  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *JW*

**LOCK JAMB**

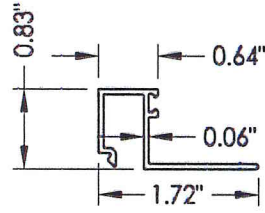


**DETAIL 1**

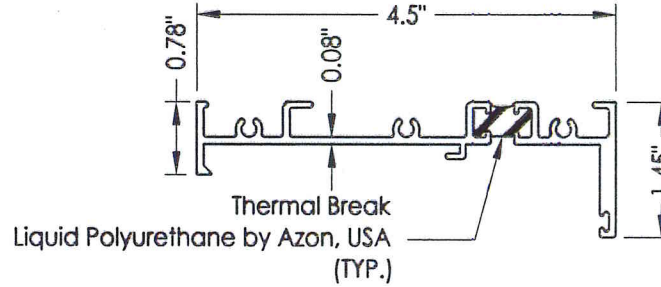
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		FRAME ANCHORING	
NO.	DATE	REVISIONS	BY
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 10 OF 13			



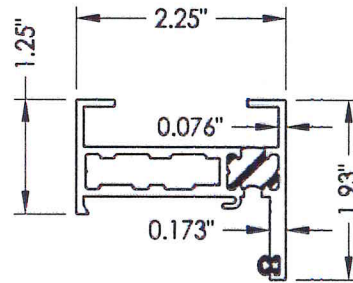
**14 INSERT STOP**  
011448



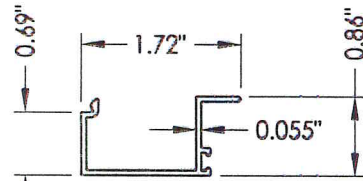
**8 GLASS STOP 1-1/4"**  
901487



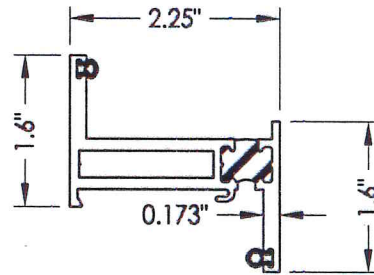
**2 KONA BLOCK FRAME**  
011239



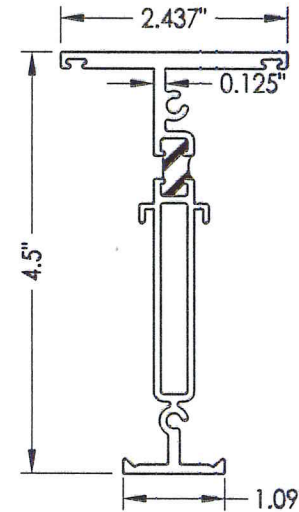
**5 BLOCK FRAME**  
5278C1



**10 GLASS STOP 5/16", 7/16"**  
007930



**7 ZEE BAR (PANEL)**  
H006733

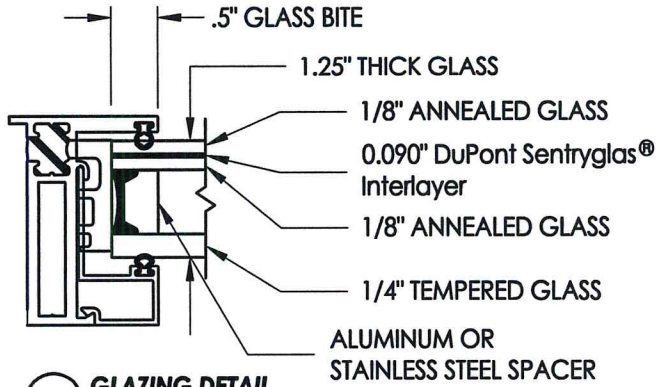


**4 MULLION**  
H011241

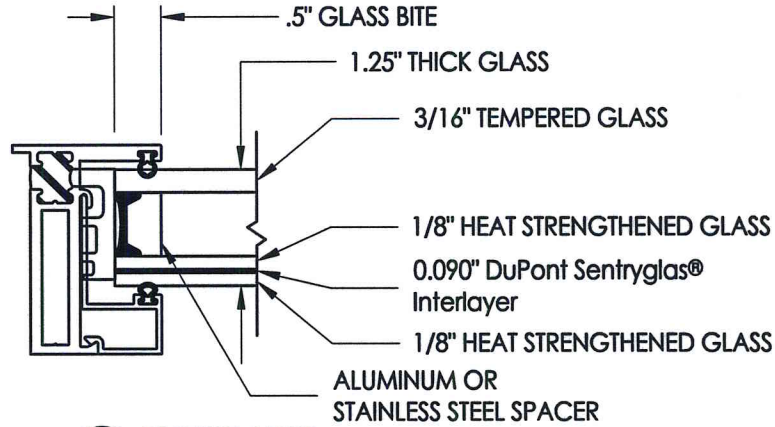
Testing Evaluation Laboratories Inc  
Specimen Coraplies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by gw

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7031			
SHEET 11 OF 13			

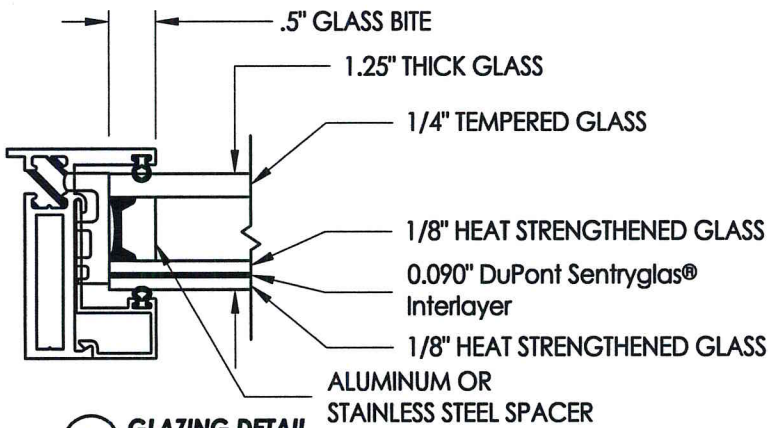




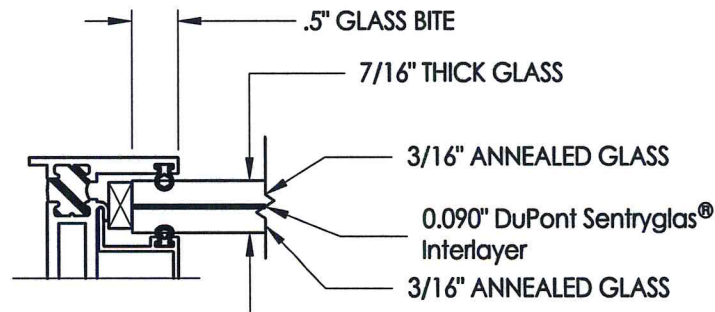
**B GLAZING DETAIL**



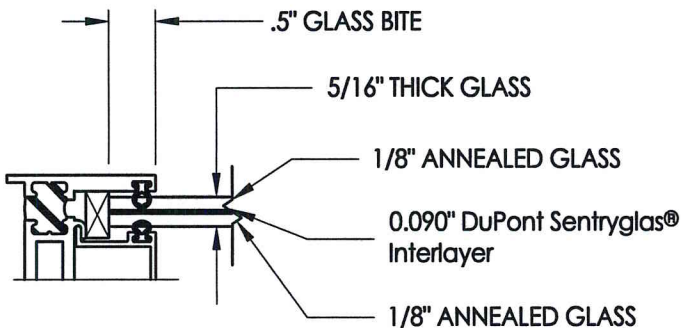
**C GLAZING DETAIL**



**D GLAZING DETAIL**



**F GLAZING DETAIL**



**E GLAZING DETAIL**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990918  
 Date 10-31-13 Verified by *JW*

PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY:		GLAZING DETAILS	
NO.		DATE		BY	
NO.		DATE		REVISIONS	
RW BUILDING CONSULTANTS, INC. 813.659.9197					
DATE: 9/25/13					
SCALE: N.T.S.					
DWG. BY: JK					
CHK. BY: LFS					
DRAWING NO.: L-7031					
SHEET 12 OF 13					

**BILL OF MATERIALS**

ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
G	#10 x 2" PPH WOOD SCREW	STEEL
2	KONA BLOCK FRAME	6063-T6 ALUM
4	MULLION	6063-T6 ALUM
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP (1-1/4")	6063-T6 ALUM
9	GLASS STOP (1/4")	6063-T6 ALUM
10	GLASS STOP (5/16", 7/16")	6063-T6 ALUM
11	#8 x 1-1/2" PFH SMS	STEEL
12	SHEAR BLOCK	ALUM
13	CORNER KEY	ALUM
14	INSERT STOP	6063-T6 ALUM
20	SS. BUTT HINGE	SS
21	4 BAR HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
26	3 POINTS LOCKING BAR	SS
27	4 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	-
29	KEEPER	SS
30	CASEMENT ROTOR GEAR 13.5"	SS
35	CAM HANDLE / STRIKE PLATE	SS

36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
42	MACHINE SCREW NO 10-32, FHP .75"	STEEL
43	SCREW NO 10 , UFHP .5"	STEEL
44	SCREW NO 8, PHP, .50"	STEEL
46	SCREW NO 8, FHP, .750"	STEEL
47	MACHINE SCREW NO 10-32, PHP .5"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)-TREMCO	-
51	MINI BULB VINYL(EPDM 70 DUROMETER)-TREMCO	-
52	WOOD BLOCK .750" X 1.250"	-
53	ALUMINUM BLOCK .750" X 1.250"	-
54	PVC BLOCK .750" X 1.250"	-
55	SETTING BLOCK	-
56	SETTING BLOCK 4" x 1/4" x 1"	-
57	PIVOT SHIM	-
58	WOOD BLOCK .50" X 1.250"	-
59	ALUMINUM BLOCK .50" X 1.250"	-
60	PVC BLOCK .50" X 1.250"	-
61	SETTING BLOCK 4" x 1/8" x 1"	-

PRODUCT:

FLEETWOOD  
KONA 3800  
CASEMENT WINDOW

PART OR ASSEMBLY:

BILL OF MATERIALS

NO.	DATE	BY	REVISIONS

**RW** BUILDING  
CONSULTANTS, INC.  
813.659.9197

DATE: 9/25/13

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

DRAWING NO.:

L-7031

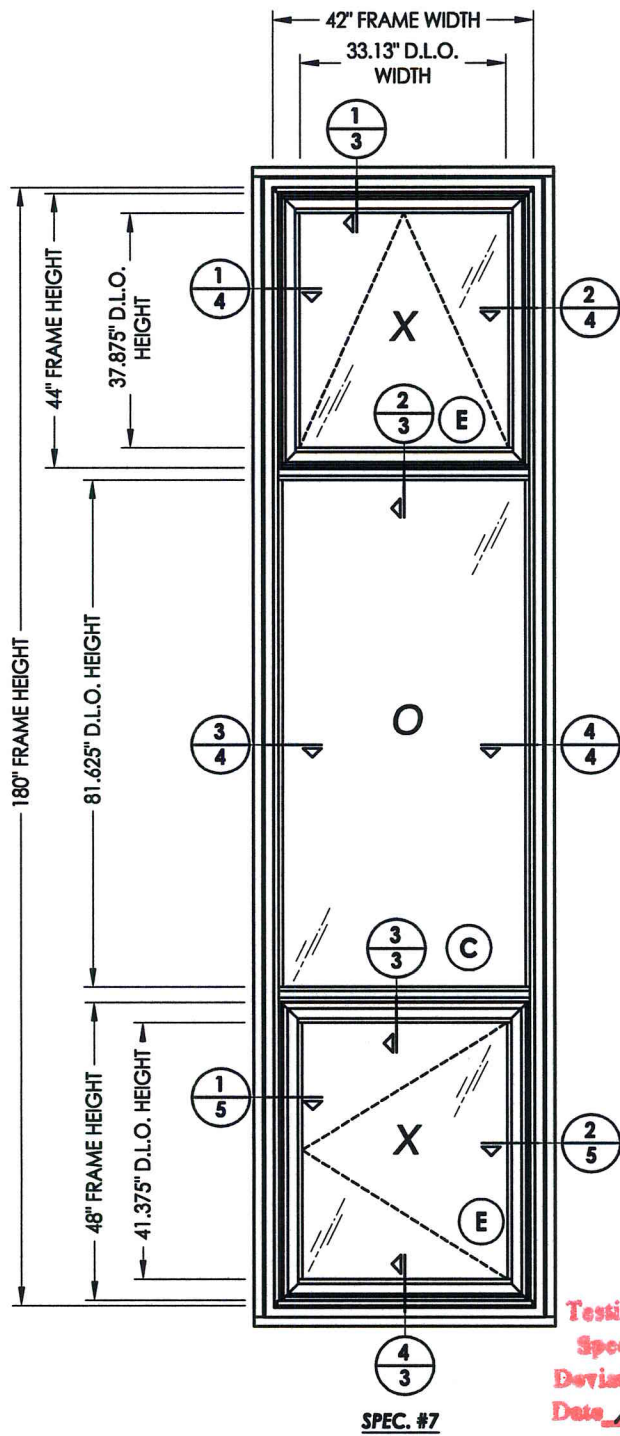
SHEET 13 OF 13

Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by JW

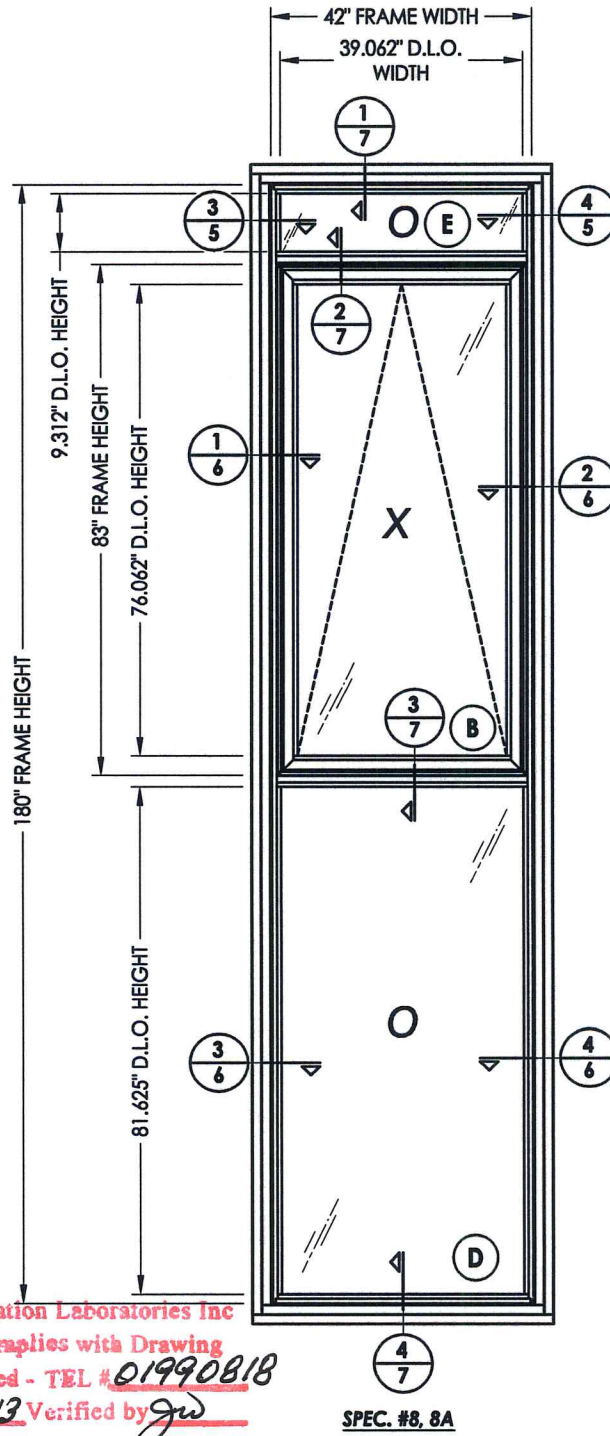
TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of contents
2	Test elevation
3	Vertical cross sections
4	Horizontal cross sections
5	Horizontal cross sections
6	Horizontal cross sections
7	Vertical cross sections
8	Frame anchoring
9	Frame anchoring
10	Components
11	Glazing details
12	Bill of materials

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gw

PRODUCT:	FLEETWOOD KONA 3800 CASEMENT WINDOW																											
PART OR ASSEMBLY:	TABLE OF CONTENTS																											
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NO.	DATE	BY																										
REVISIONS																												
<div style="border: 1px solid black; padding: 5px;">                  RW BUILDING CONSULTANTS, INC.                  813.659.9197             </div>																												
DATE: 9/25/13																												
SCALE: N.T.S.																												
DWG. BY: JK																												
CHK. BY: LFS																												
DRAWING NO.: L-7032																												
SHEET <u>1</u> OF <u>12</u>																												



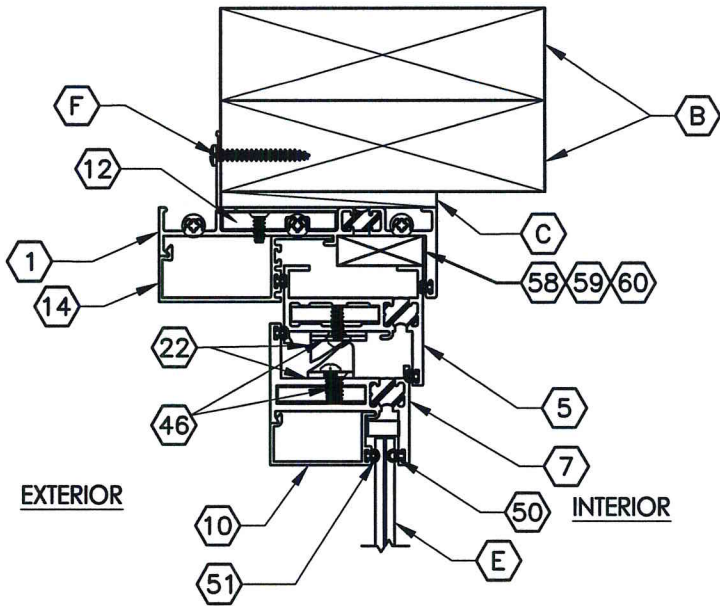
SPEC. #7



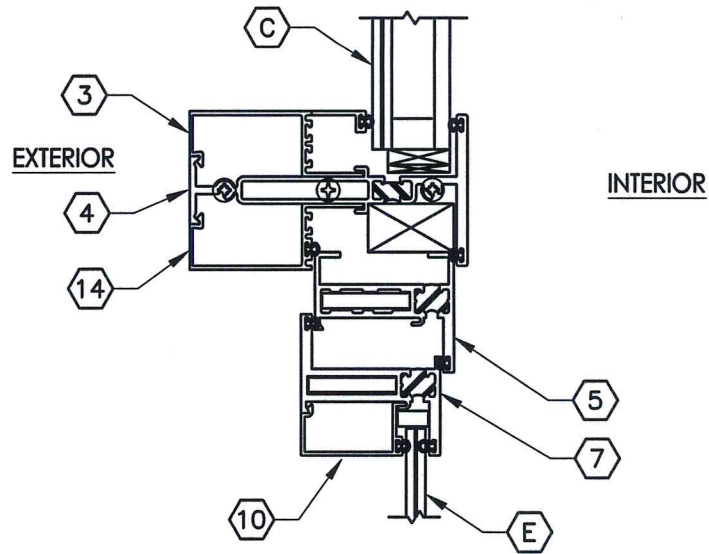
SPEC. #8, 8A

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by ju

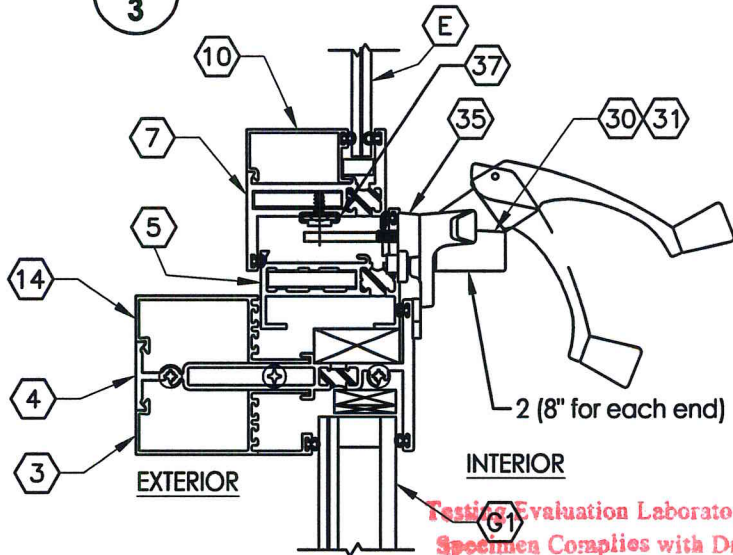
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		TEST ELEVATION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 2 OF 12			



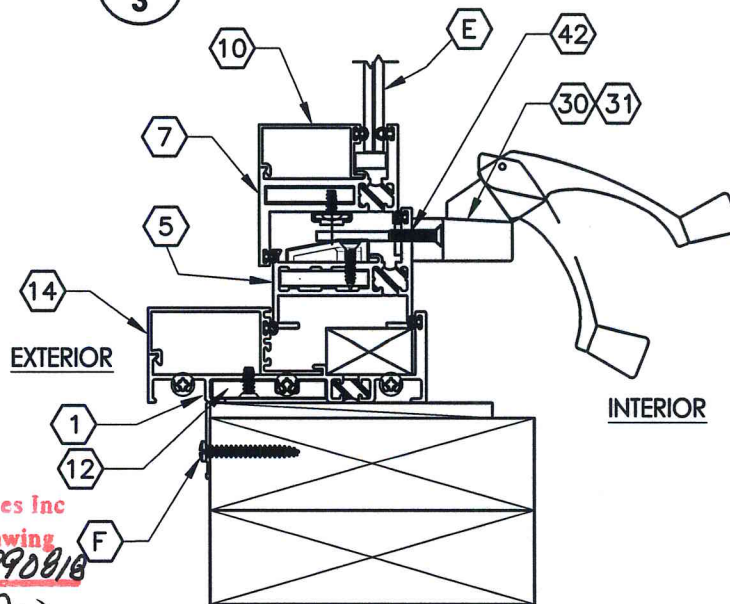
**1**  
**3** VERTICAL CROSS SECTION



**3**  
**3** VERTICAL CROSS SECTION



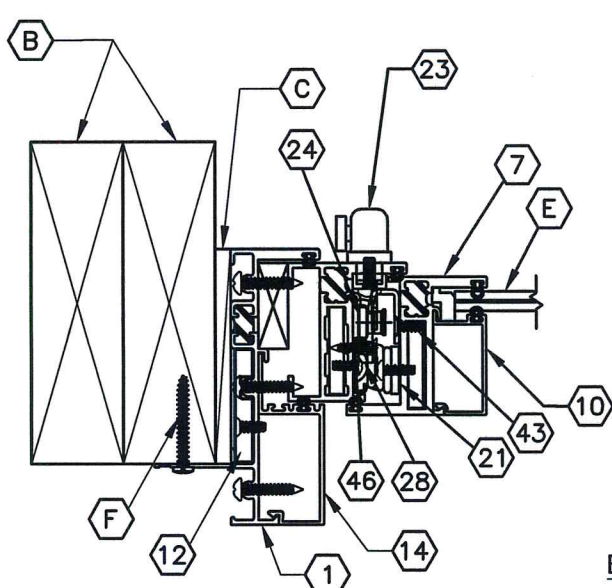
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**3** VERTICAL CROSS SECTION



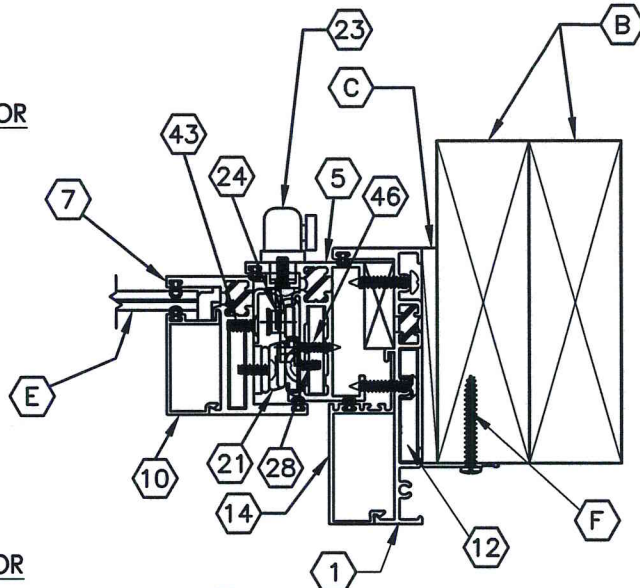
**4**  
**3** VERTICAL CROSS SECTION

Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by *ju*

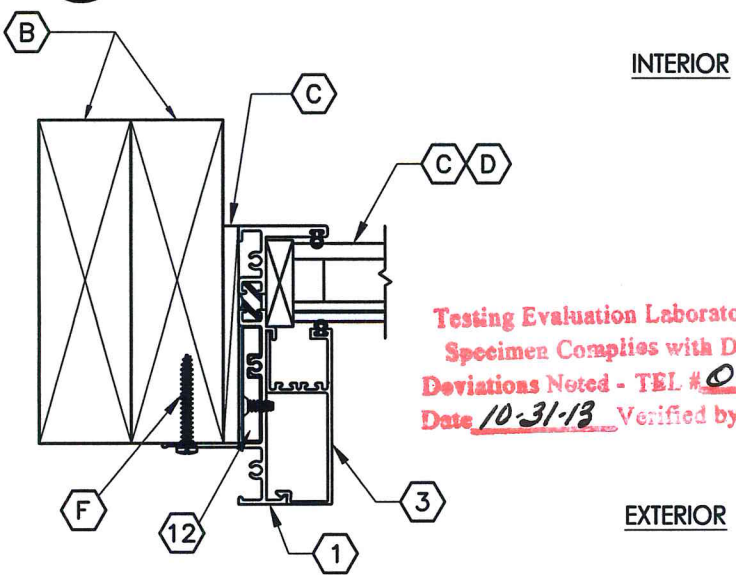
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 3 OF 12			



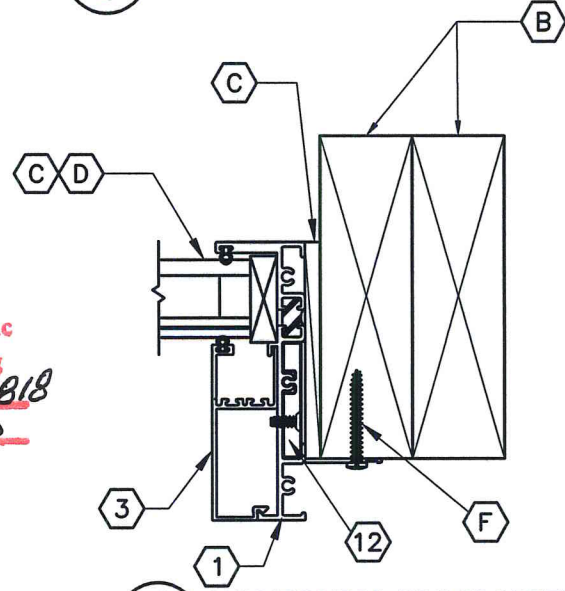
**1**  
**4** **HORIZONTAL CROSS SECTION**



**2**  
**4** **HORIZONTAL CROSS SECTION**



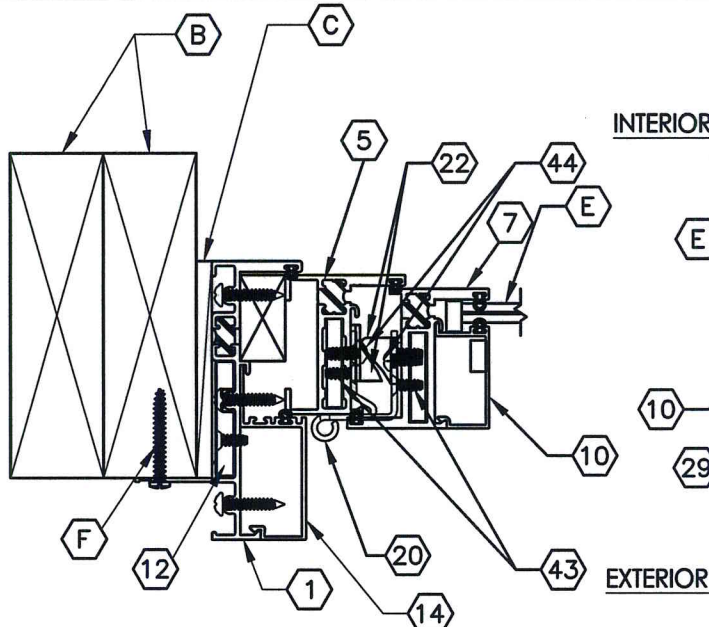
**3**  
**4** **HORIZONTAL CROSS SECTION**



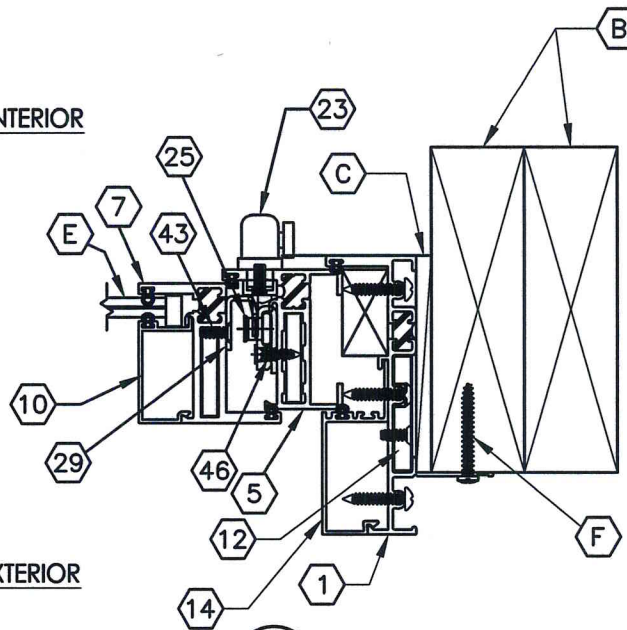
**4**  
**4** **HORIZONTAL CROSS SECTION**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *gw*

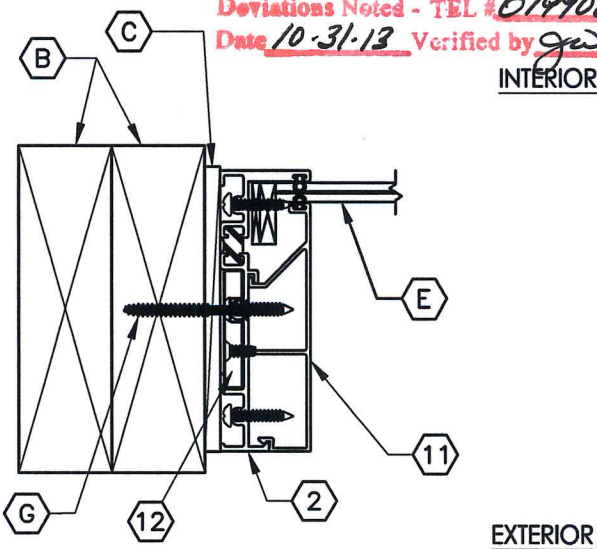
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 4 OF 12			



**1**  
**5** HORIZONTAL CROSS SECTION

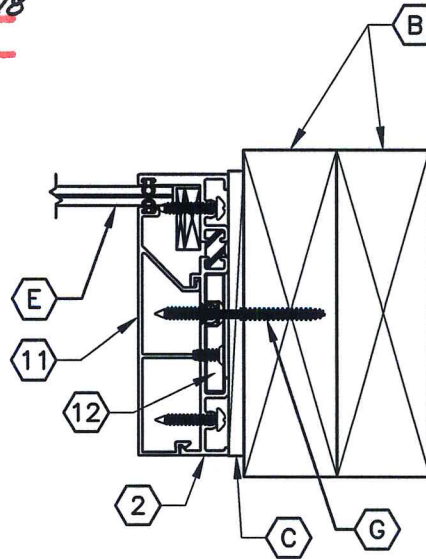


**2**  
**5** HORIZONTAL CROSS SECTION



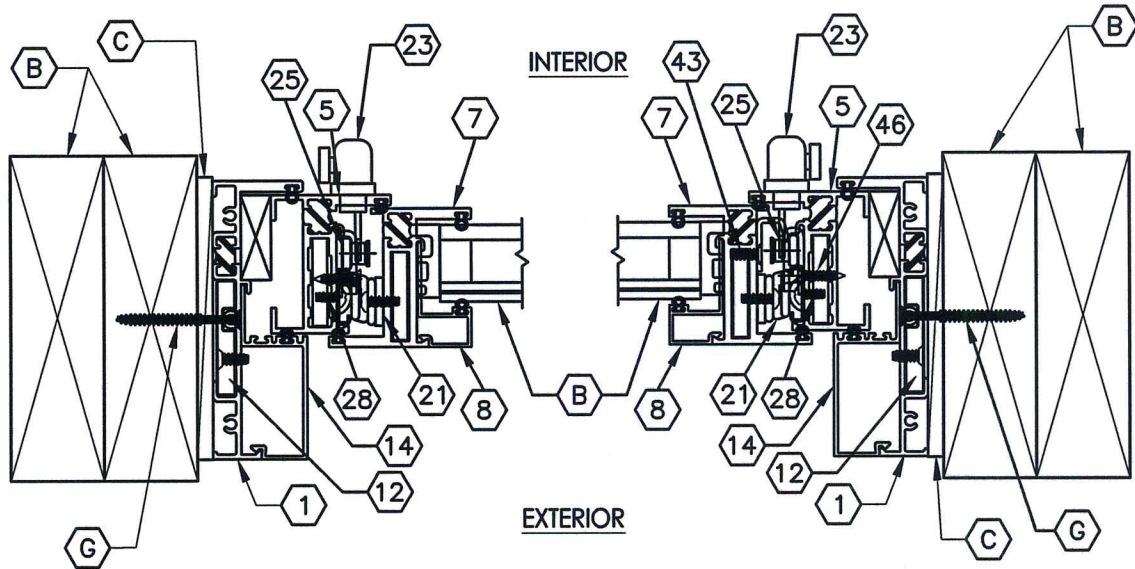
**3**  
**5** HORIZONTAL CROSS SECTION

Insulation Laboratories Inc  
 Specimen Coraplies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW



**4**  
**5** HORIZONTAL CROSS SECTION

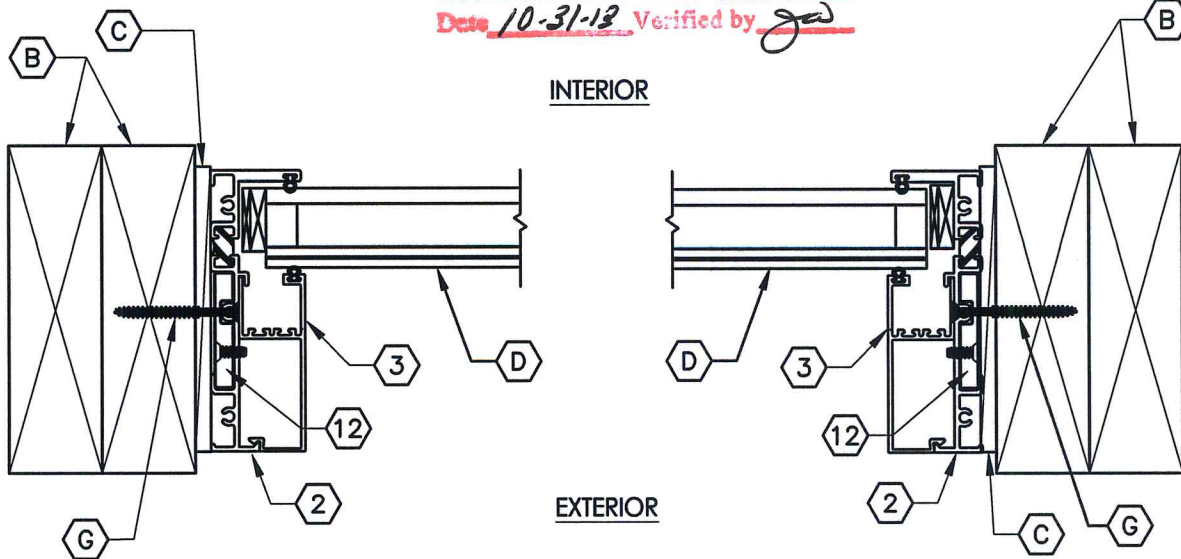
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 5 OF 12			



**1**  
**6** **HORIZONTAL CROSS SECTION**

**2**  
**6** **HORIZONTAL CROSS SECTION**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by Jed



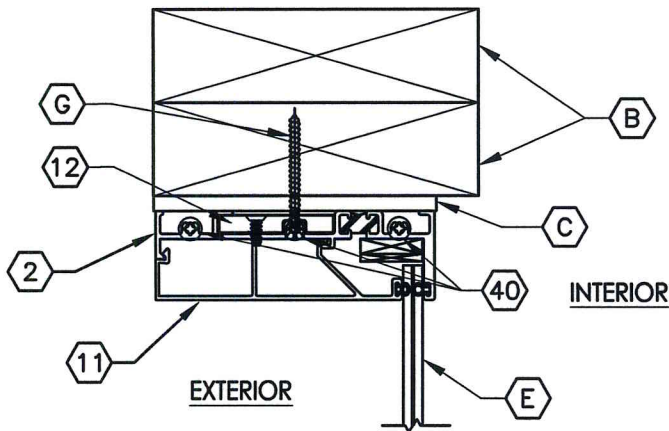
**3**  
**6** **HORIZONTAL CROSS SECTION**

**4**  
**6** **HORIZONTAL CROSS SECTION**

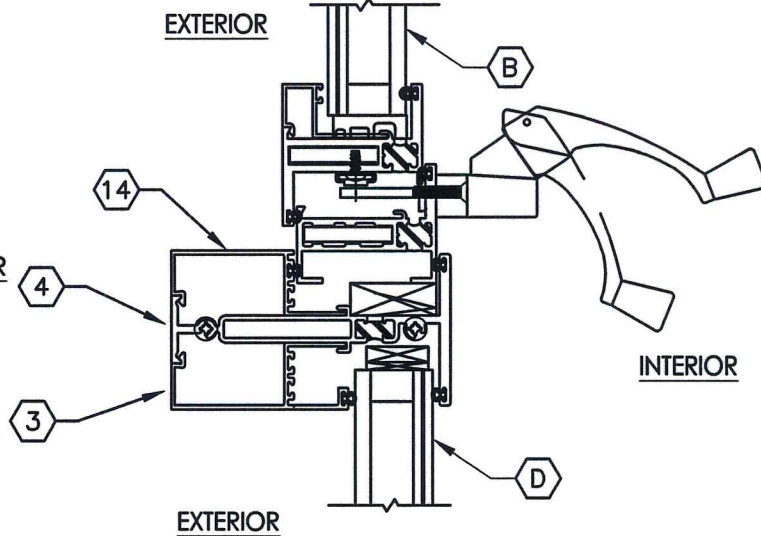
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET <u>6</u> OF <u>12</u>			



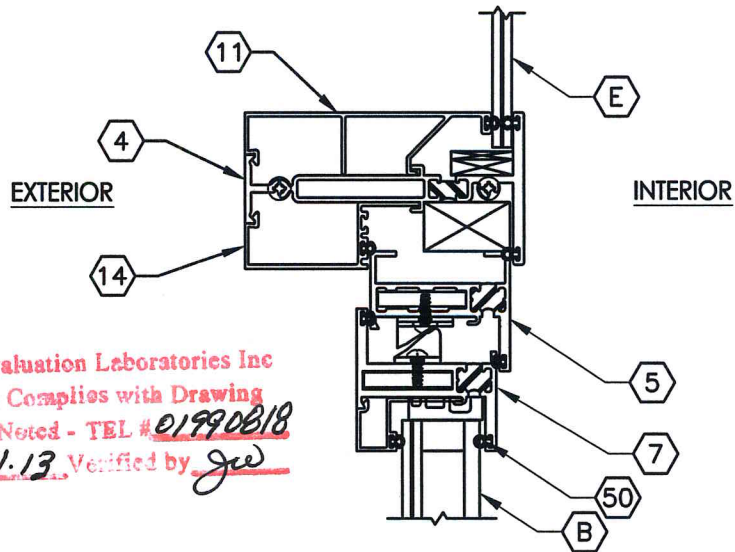
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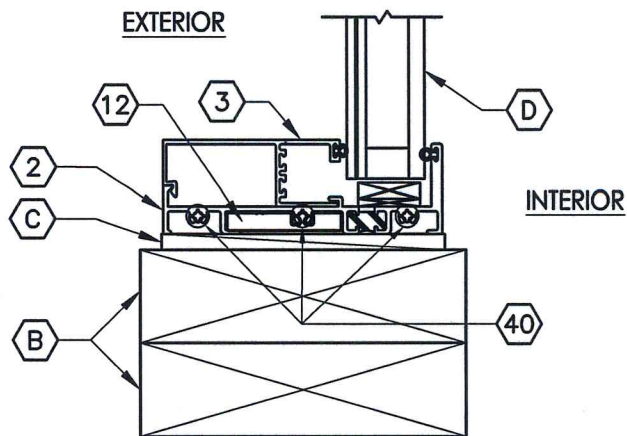
**1**  
**7** **VERTICAL CROSS SECTION**



**3**  
**7** **VERTICAL CROSS SECTION**



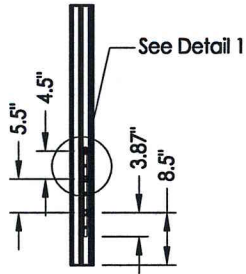
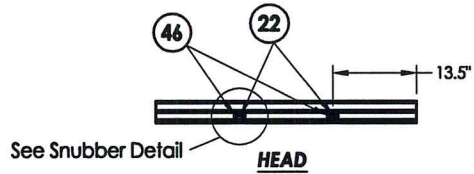
**2**  
**7** **VERTICAL CROSS SECTION**



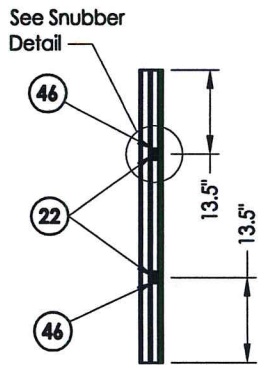
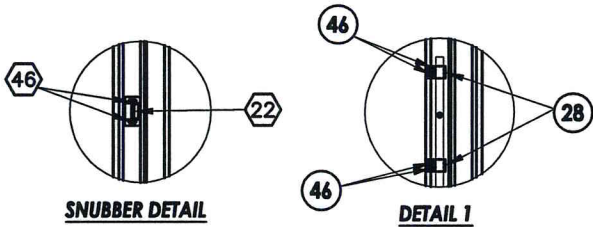
**4**  
**7** **VERTICAL CROSS SECTION**

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *ju*

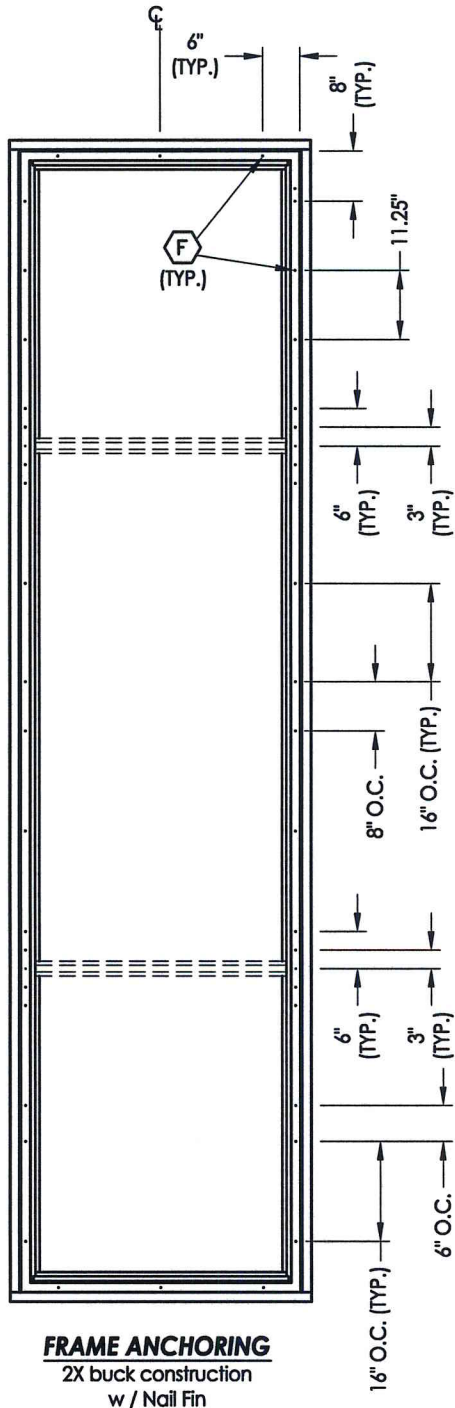
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 7 OF 12			



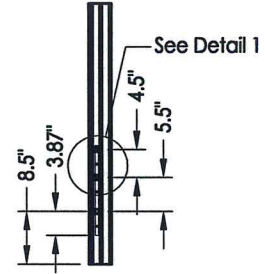
**LOCK JAMB**  
Single Point Lock  
(Jamb Sides Horizontal Awning)



**SNUBBER JAMB**  
(Casement)

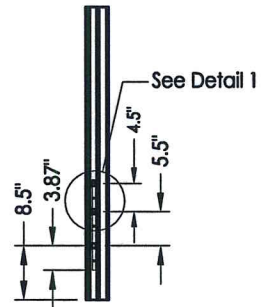


**FRAME ANCHORING**  
2X buck construction  
w / Nail Fin



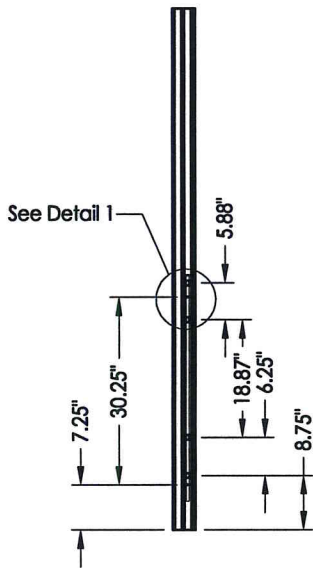
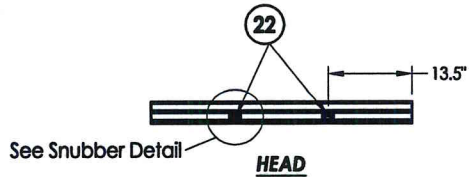
**LOCK JAMB**  
Single Point Lock  
(Jamb Sides Horizontal Awning)

Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by je

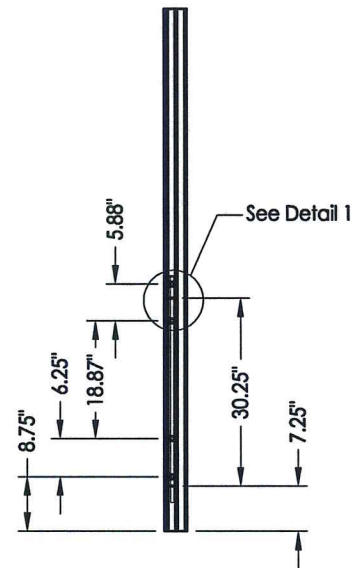
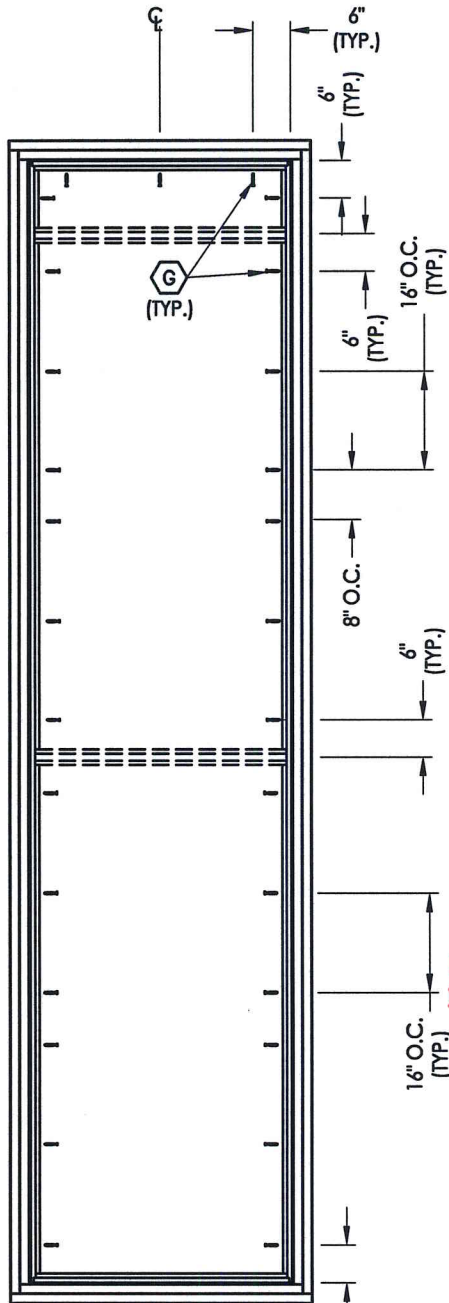
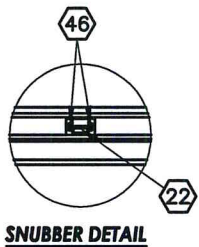


**LOCK JAMB**  
Two Point Lock  
(Casement)

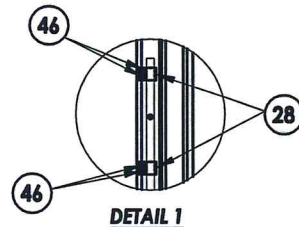
<b>PRODUCT:</b>		FLEETWOOD KONA 3800 CASEMENT WINDOW	
<b>PART OR ASSEMBLY:</b>		FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 8 OF 12			



**LOCK JAMB**  
 Two Point Lock  
 (Casement)



**LOCK JAMB**  
 Two Point Lock  
 (Casement)



Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *gsw*

PRODUCT:  
**FLEETWOOD**  
**KONA 3800 CASEMENT WINDOW**

PART OR ASSEMBLY:  
**FRAME ANCHORING**

NO.	DATE	REVISIONS	BY

**RW BUILDING CONSULTANTS, INC.**  
 813.659.9197

DATE: 9/25/13

SCALE: N.T.S.

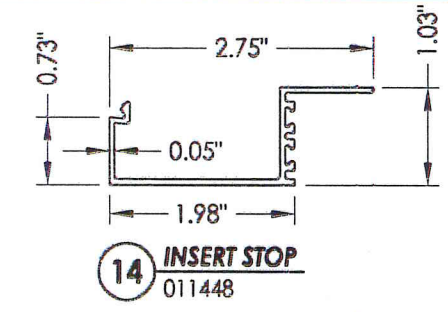
DWG. BY: JK

CHK. BY: LFS

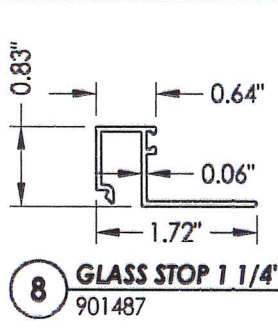
DRAWING NO.:

L-7032

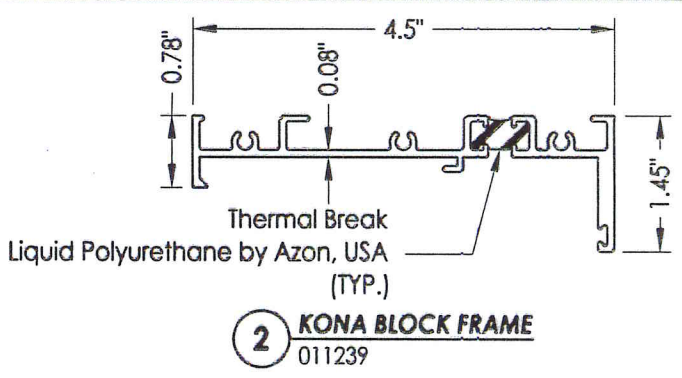
SHEET 9 OF 12



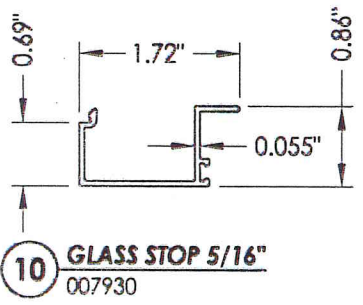
**14 INSERT STOP**  
011448



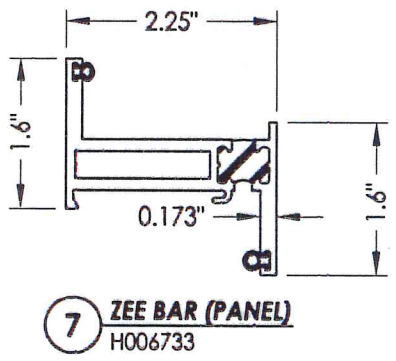
**8 GLASS STOP 1 1/4"**  
901487



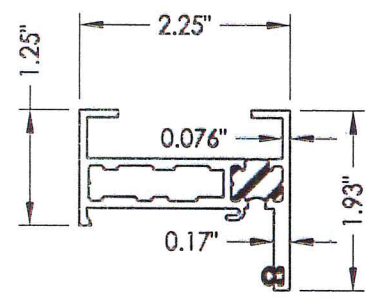
**2 KONA BLOCK FRAME**  
011239



**10 GLASS STOP 5/16"**  
007930

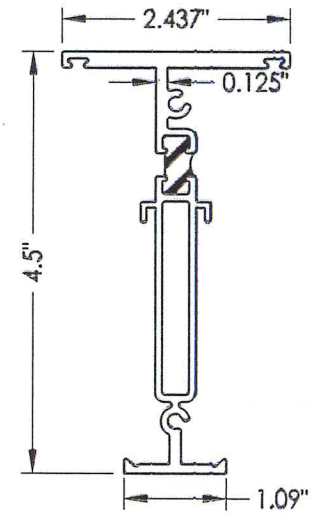


**7 ZEE BAR (PANEL)**  
H006733

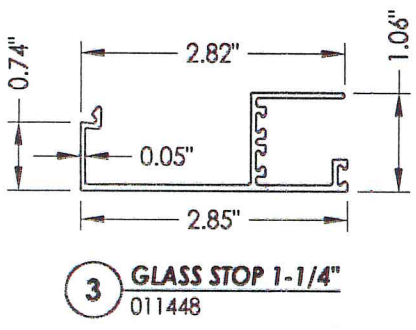


**5 BLOCK FRAME**  
5278C1

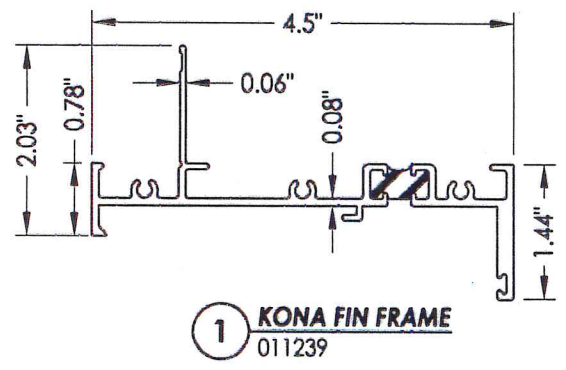
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by JW



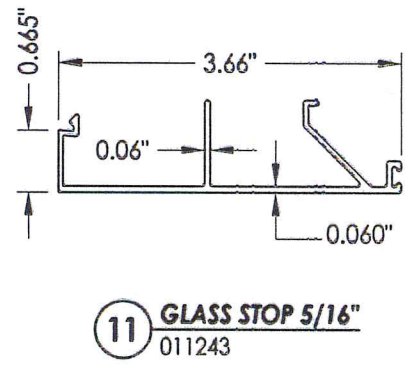
**4 MULLION**  
H011241



**3 GLASS STOP 1-1/4"**  
011448

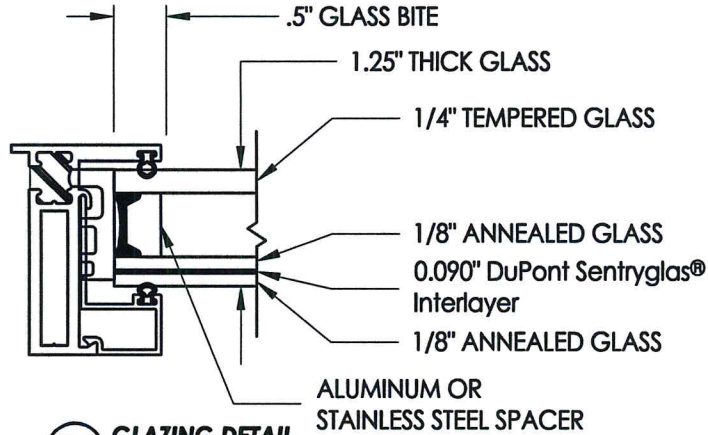


**1 KONA FIN FRAME**  
011239

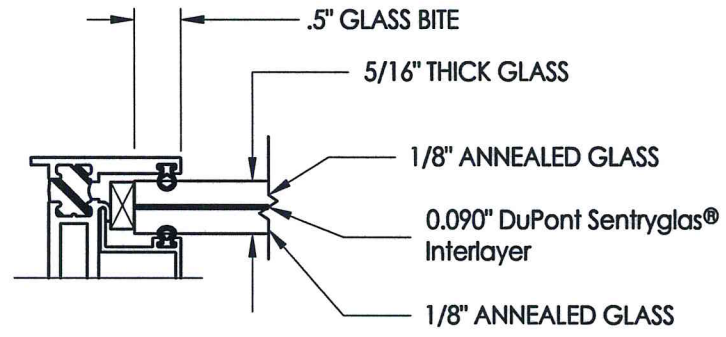


**11 GLASS STOP 5/16"**  
011243

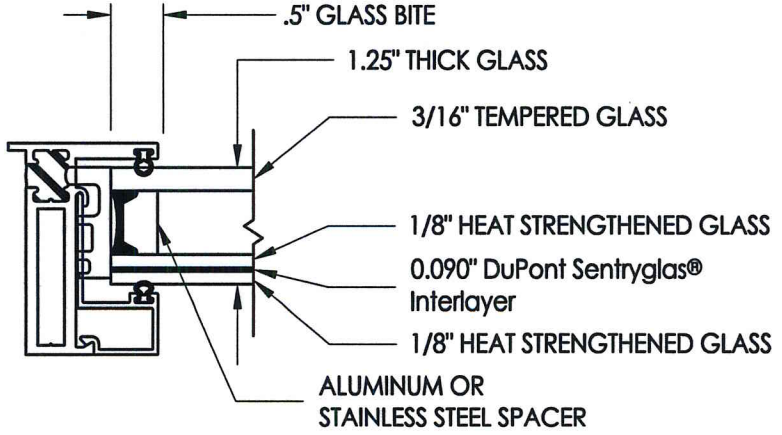
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 10 OF 12			



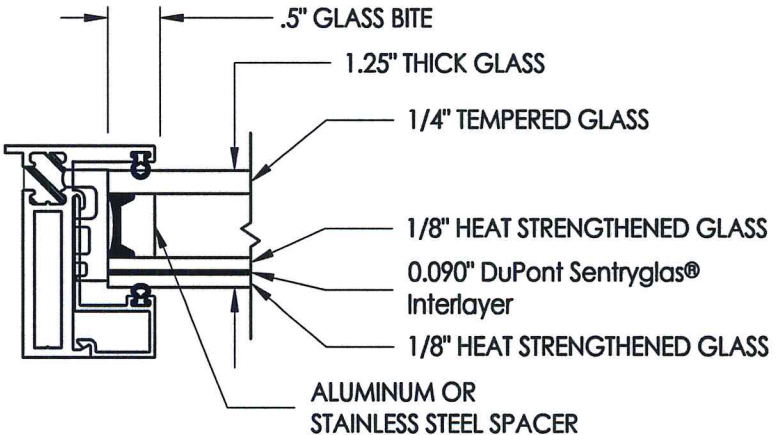
**B** GLAZING DETAIL



**E** GLAZING DETAIL



**C** GLAZING DETAIL



**D** GLAZING DETAIL


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW

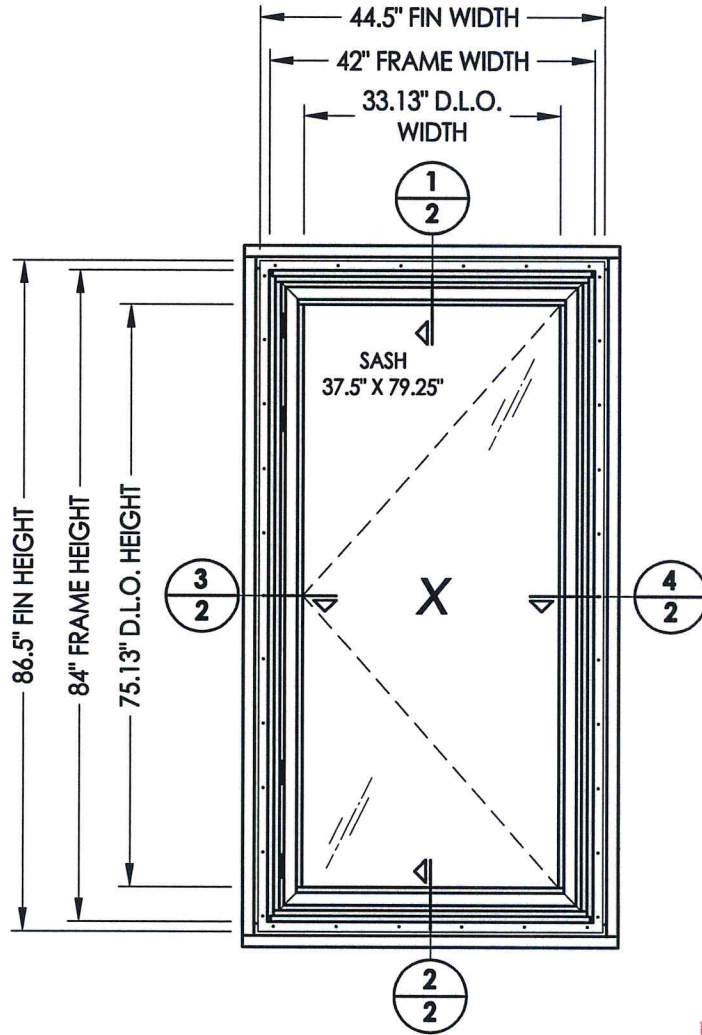
PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY: GLAZING DETAILS	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032			
SHEET 11 OF 12			

BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#10 x 1-1/2" PFH WOOD SCREW	STEEL
G	#10 x 2" PFH WOOD SCREW	STEEL
1	KONA FIN FRAME	6063-T6 ALUM
2	KONA BLOCK FRAME	6063-T6 ALUM
3	GLASS STOP 1 1/4"	6063-T6 ALUM
4	MULLION	6063-T6 ALUM
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP 1 1/4"	6063-T6 ALUM
10	GLASS STOP 1/2"	6063-T6 ALUM
11	GLASS STOP 5/8"	6063-T6 ALUM
12	SHEAR BLOCK	ALUM
13	CORNER KEY	ALUM
14	INSERT STOP	ALUM
20	SS. BUTT HINGE	SS
21	4 BAR HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	ZINC ALLOY
23	MULTIPOINT LOCK HANDLE	SS
24	SINGLE POINT LOCKING BAR	SS
25	2 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	PLASTIC
29	KEEPER	SS
30	CASEMENT ROTOR GEAR 13.5"	SS
35	CAM HANDLE / STRIKE PLATE	SS
36	CASEMENT SS. TRACK	SS
37	AWNING SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
42	MACHINE SCREW NO 10-32, FHP .75"	STEEL
43	SCREW NO 10 , UFHP .5"	STEEL
44	SCREW NO 8, PHP, .50"	STEEL

46	SCREW NO 8, FHP, .750"	STEEL
47	MACHINE SCREW NO 10-32, PHP .5"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)-TREMCO	-
51	MINI BULB VINYL(EPDM 70 DUROMETER)-TREMCO	-
52	WOOD BLOCK .750" X 1.250"	-
53	ALUMINUM BLOCK .750" X 1.250"	-
54	PVC BLOCK .750" X 1.250"	-
55	SETTING BLOCK	-
56	SETTING BLOCK 4" x 1/4" x 1"	-
57	PIVOT SHIM	-
58	WOOD BLOCK .50" X 1.250"	-
59	ALUMINUM BLOCK .50" X 1.250"	-
60	PVC BLOCK .50" X 1.250"	-
61	SETTING BLOCK 4" x 1/8" x 1"	-

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-12 Verified by gw

PRODUCT:	FLEETWOOD KONA 3800 CASEMENT WINDOW			
	PART OR ASSEMBLY:			
NO.	DATE	REVISIONS		BY
				
DATE: 9/25/13				
SCALE: N.T.S.				
DWG. BY: JK				
CHK. BY: LFS				
DRAWING NO.: L-7032				
SHEET 12 OF 12				

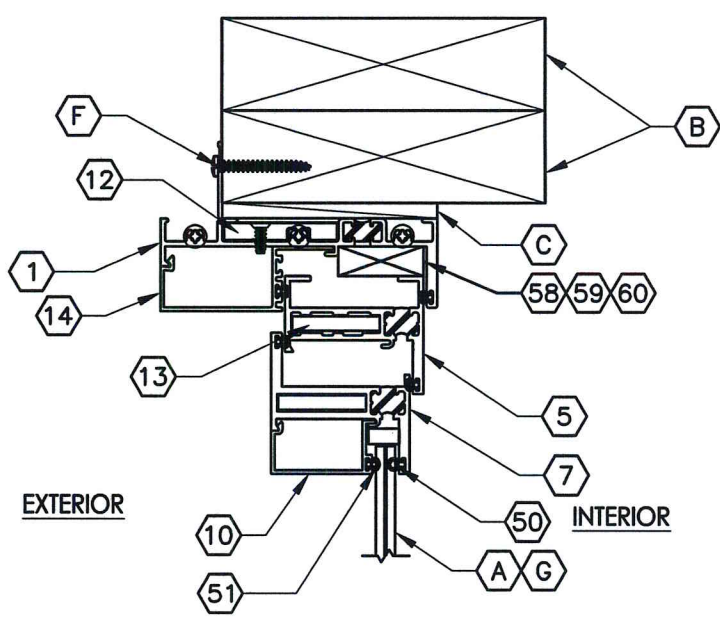


**SPEC # 2, 2A GLASS TYPE A**  
**SPEC # 5, 5A GLASS TYPE G**

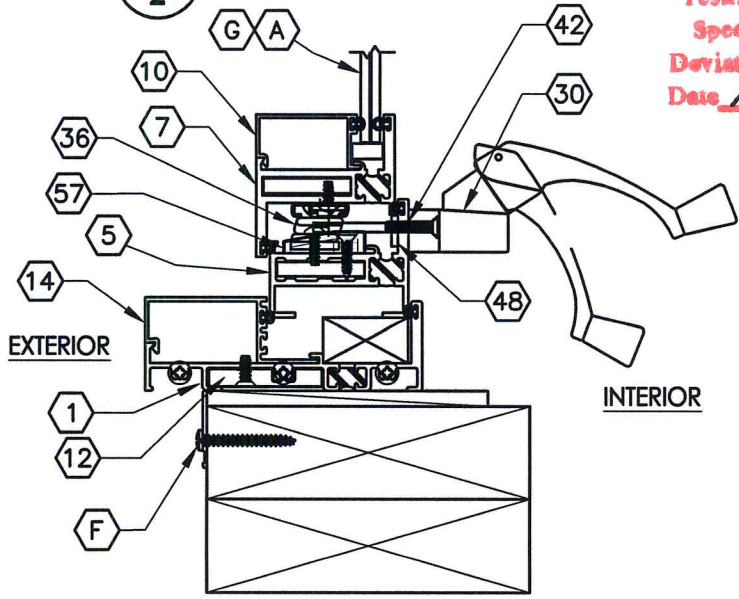
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 0199 0818  
Date 10-31-12 Verified by JK

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of contents and test elevation
2	Horizontal and vertical cross sections
3	Frame anchoring
4	Components and glazing details
5	Bill of materials

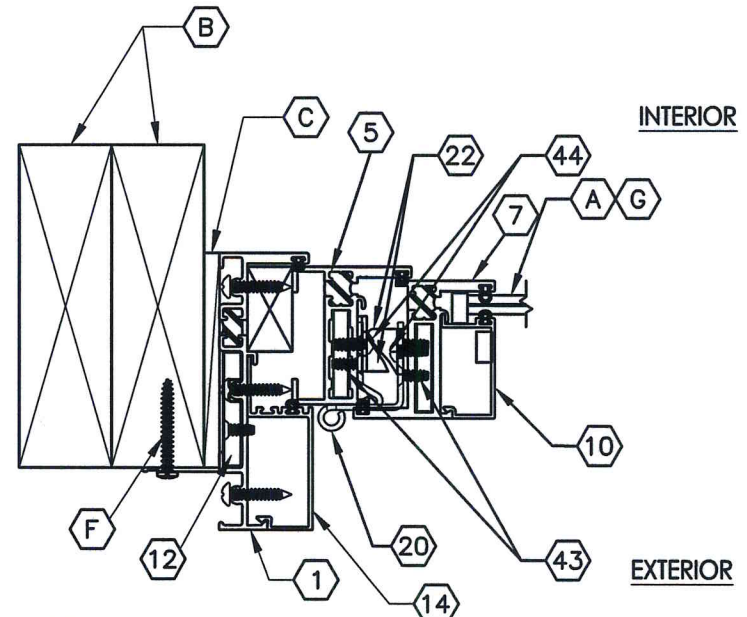
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		TABLE OF CONTENTS AND TEST ELEVATION	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032A			
SHEET 1 OF 5			



**1**  
**2** VERTICAL CROSS SECTION

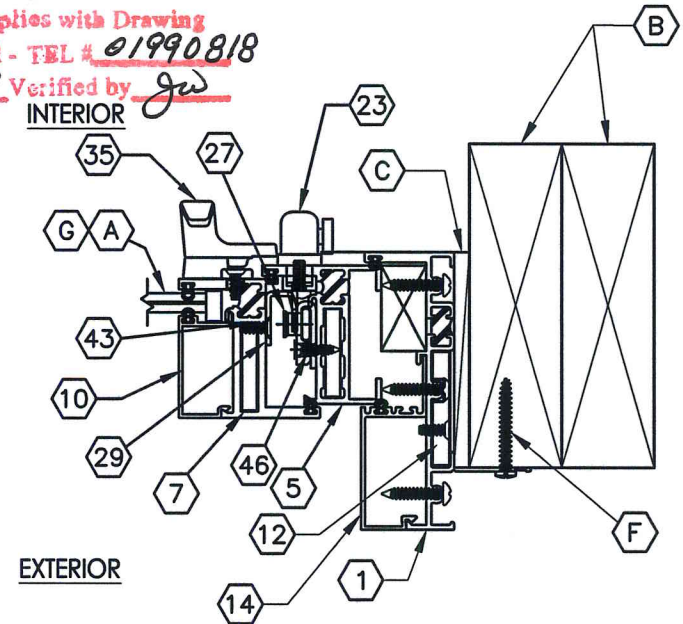


**2**  
**2** VERTICAL CROSS SECTION



**3**  
**2** HORIZONTAL CROSS SECTION

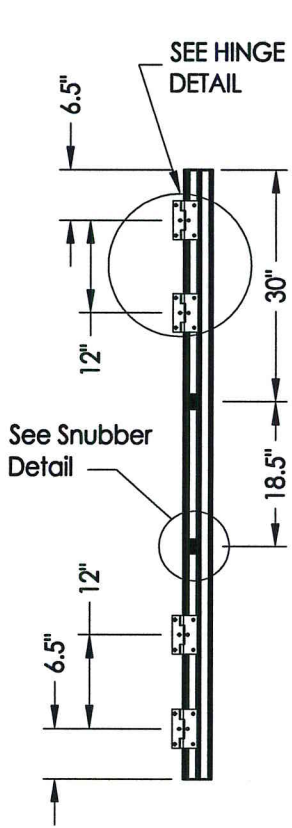
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-21-13 Verified by *gw*



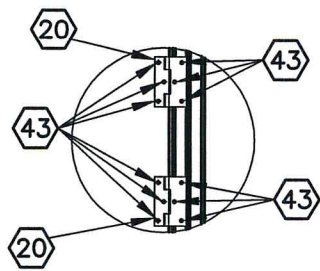
**4**  
**2** HORIZONTAL CROSS SECTION

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL AND VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032A			
SHEET 2 OF 5			

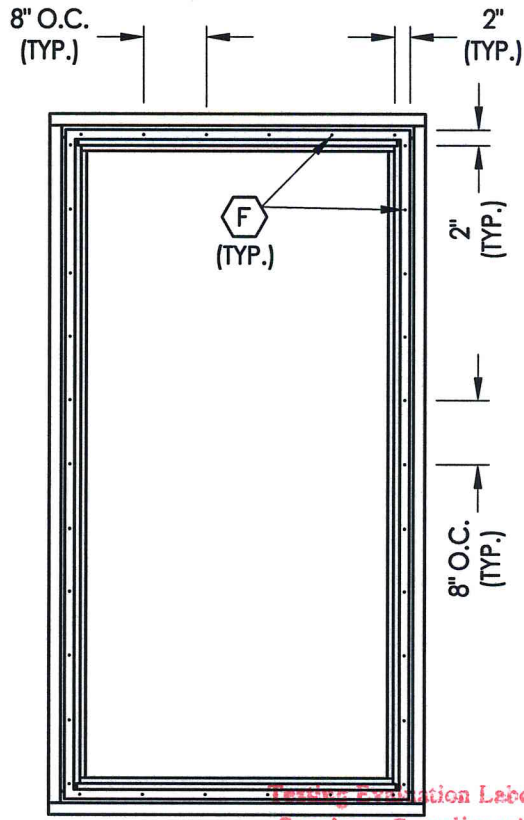




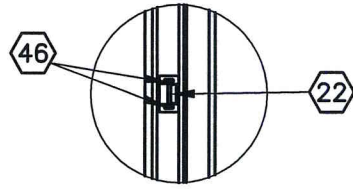
**HINGE JAMB**



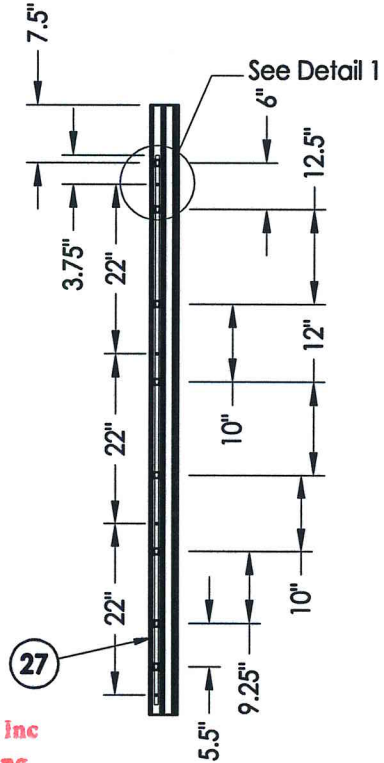
**HINGE DETAIL**



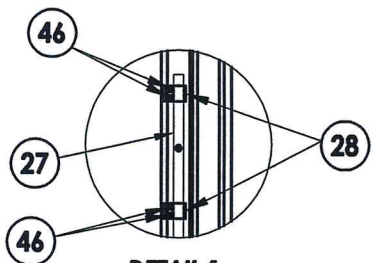
**FRAME ANCHORING**  
2X buck construction



**SNUBBER DETAIL**



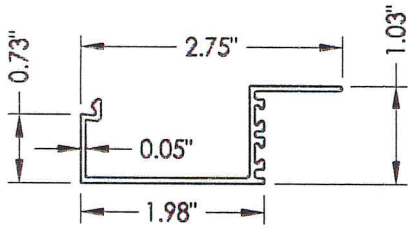
**LOCK JAMB**  
Locking Points (4)



**DETAIL 1**

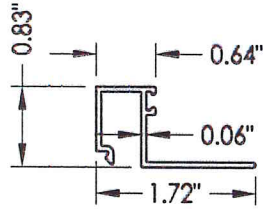
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10.31.13 Verified by JW

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032A			
SHEET 3 OF 5			

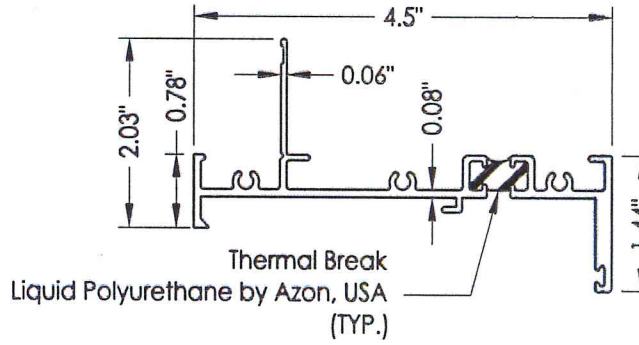


**14 INSERT STOP**  
011448

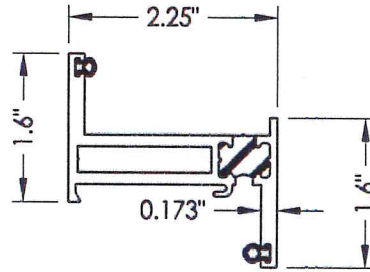
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by gzw



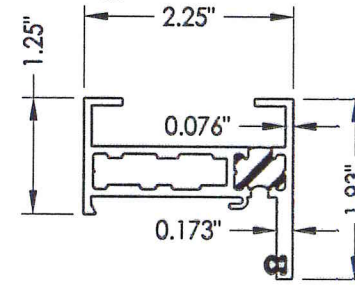
**8 GLASS STOP 1-1/4"**  
901487



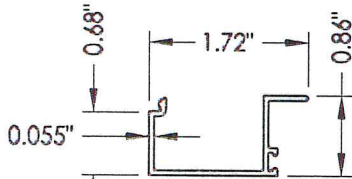
**1 KONA FIN FRAME**  
011239



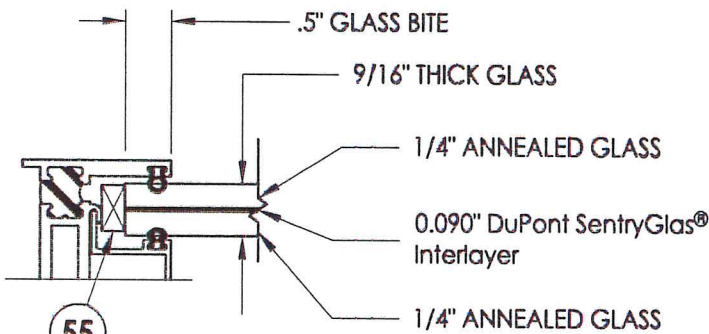
**7 ZEE BAR (PANEL)**  
H006733



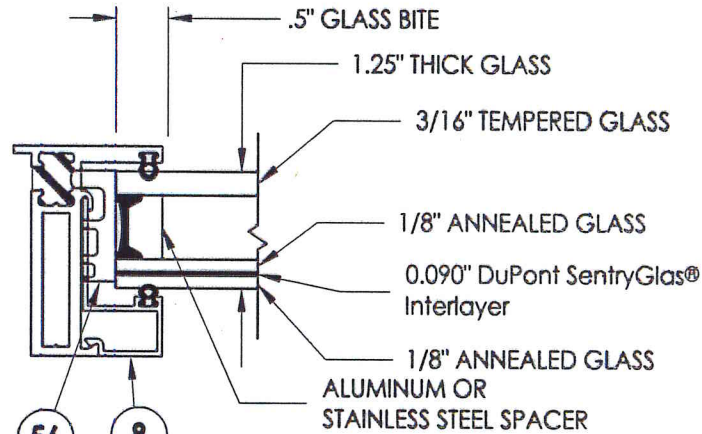
**5 BLOCK FRAME**  
5278C1



**10 GLASS STOP 9/16"**  
007930



**G GLAZING DETAIL**  
Spec #5, 5A



**A GLAZING DETAIL**  
Spec. #2, 2A


PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		COMPONENTS AND GLAZING DETAILS	
NO.	DATE	REVISIONS	BY
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032A			
SHEET 4 OF 5			

**BILL OF MATERIALS**

ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#10 x 1-1/2" PPH WOOD SCREW	STEEL
G	#10 x 2" PFH WOOD SCREW	STEEL
1	KONA FIN FRAME	6063-T6 ALUM
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP 1 1/4"	6063-T6 ALUM
10	GLASS STOP 1/2"	6063-T6 ALUM
12	SHEAR BLOCK	ALUM
13	CORNER KEY	ALUM
14	INSERT STOP	ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
27	4 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	PLASTIC
29	KEEPER	SS
30	CASEMENT ROTOR GEAR 13.5"	SS
35	CAM HANDLE / STRIKE PLATE	SS
36	CASEMENT SS. TRACK	SS
42	MACHINE SCREW NO 10-32, FHP .75"	STEEL
43	SCREW NO 10, UFHP .5"	STEEL
44	SCREW NO 8, PHP, .50"	STEEL
46	SCREW NO 8, FHP, .750"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)-TREMCO	-
51	MINI BULB VINYL(EPDM 70 DUROMETER)-TREMCO	-
55	SETTING BLOCK	-

56	SETTING BLOCK 4" x 1/4" x 1"	-
57	PIVOT SHIM	-
58	WOOD BLOCK .50" X 1.250"	-
59	ALUMINUM BLOCK .50" X 1.250"	-
60	PVC BLOCK .50" X 1.250"	-

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-12 Verified by JW

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		BILL OF MATERIALS	
NO.	DATE	BY	REVISIONS
			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7032A			
SHEET 5 OF 5			

<b>TABLE OF CONTENTS</b>	
<b>SHEET #</b>	<b>DESCRIPTION</b>
1	Table of contents
2	Test elevation
3	Horizontal and vertical cross sections
4	Horizontal and vertical cross sections
5	Frame anchoring
6	Frame anchoring
7	Components
8	Glazing details
9	Bill of materials


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW

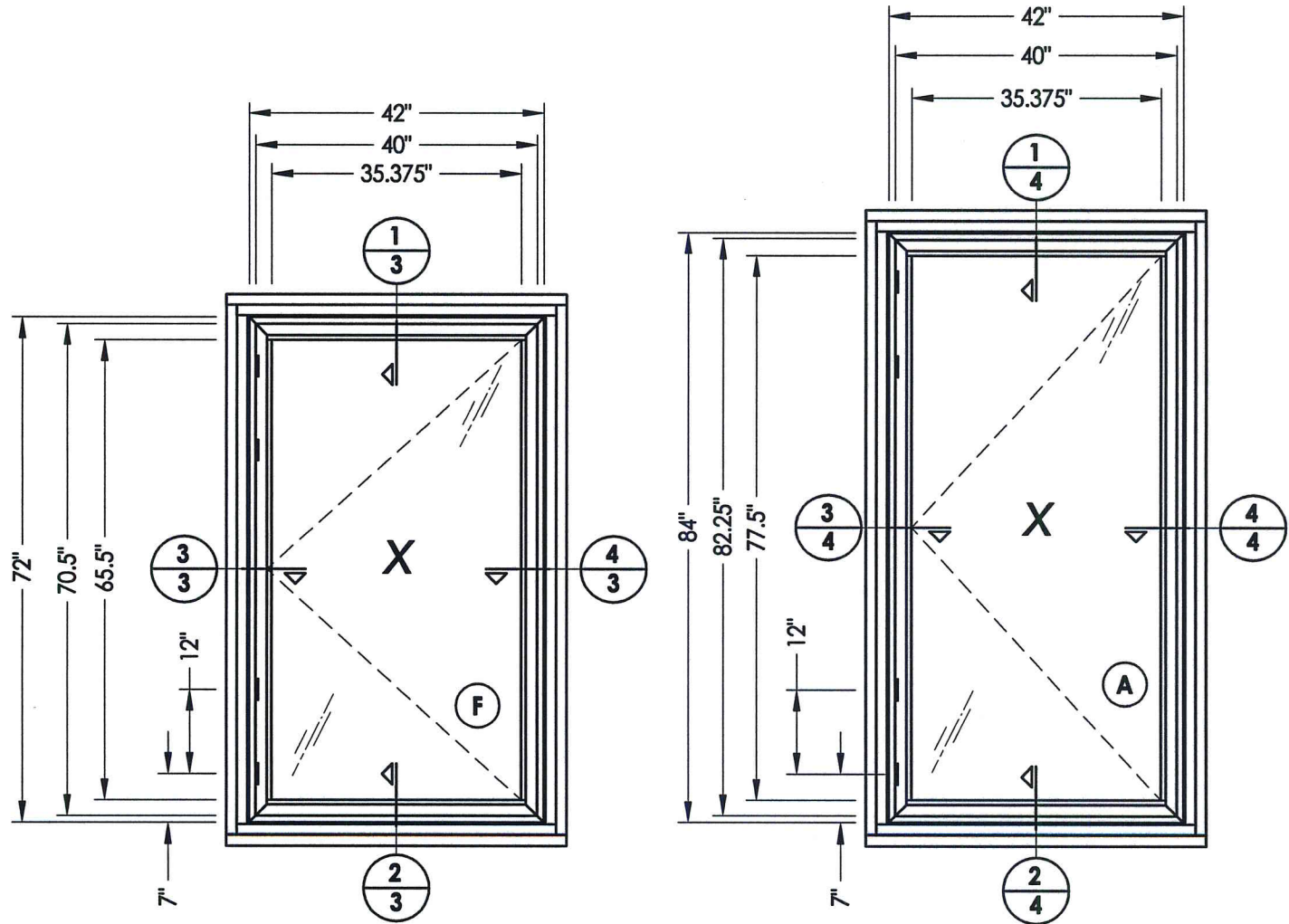
<b>PRODUCT:</b>	FLEETWOOD KONA 3800 CASEMENT WINDOW
<b>PART OR ASSEMBLY:</b>	TABLE OF CONTENTS

NO.	DATE	REVISIONS

 RW BUILDING CONSULTANTS, INC. 813.659.9197
DATE: 9/25/13
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: L-7033
SHEET <u>1</u> OF <u>9</u>

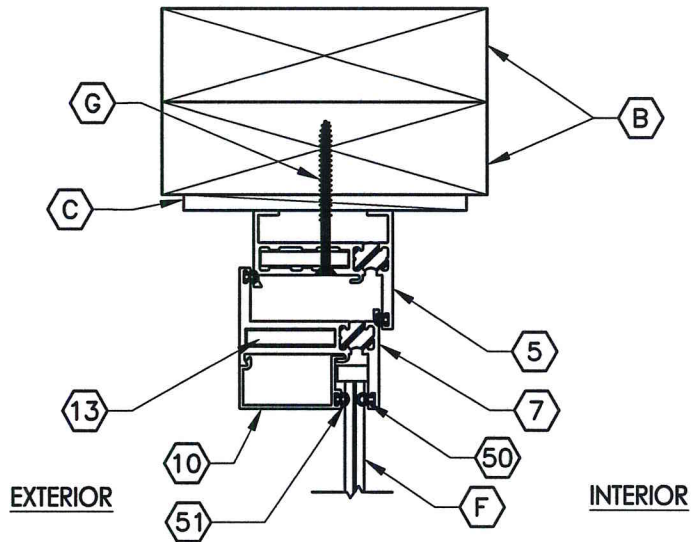


**SPEC# 12, 12A**

**SPEC# 6, 6A**

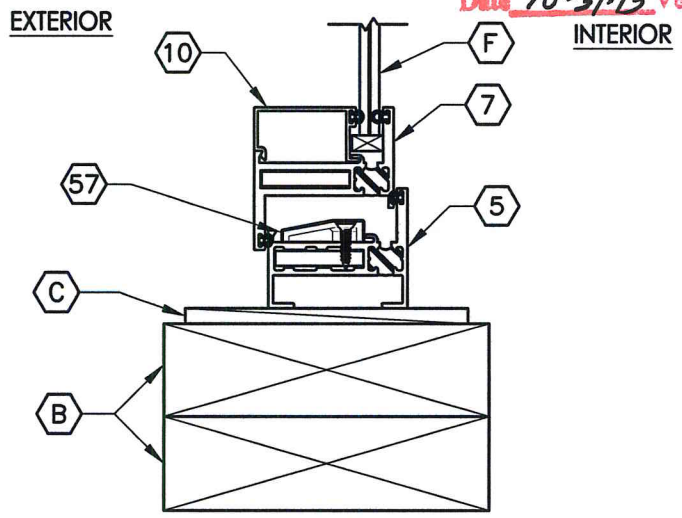
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		TEST ELEVATION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET <u>2</u> OF <u>9</u>			

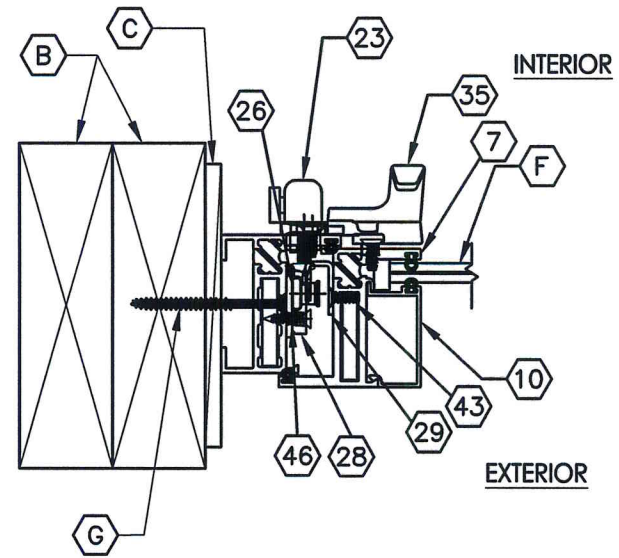


**1**  
**3** **VERTICAL CROSS SECTION**

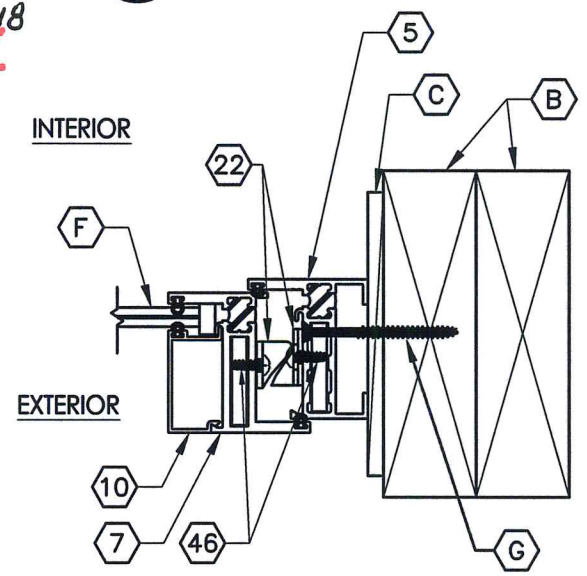
*Testing Evaluation Laboratories Inc*  
*Specimen Complies with Drawing*  
*Deviations Noted - TEL # 01990818*  
*Date 10-31-13 Verified by JW*



**2**  
**3** **VERTICAL CROSS SECTION**



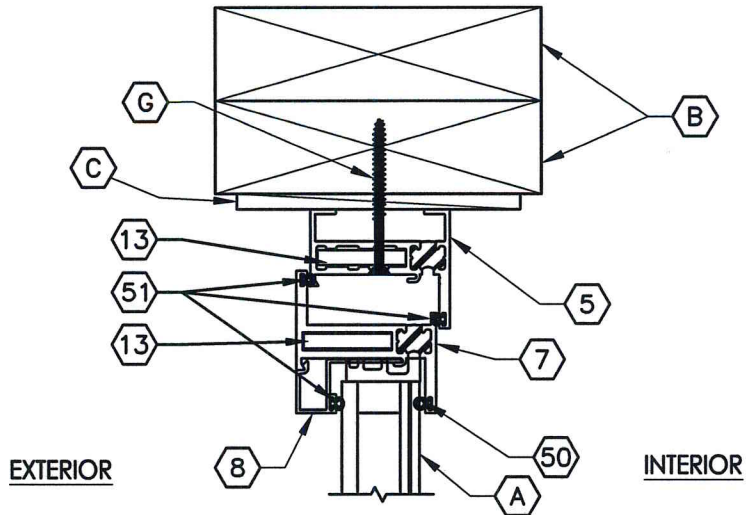
**3**  
**3** **HORIZONTAL CROSS SECTION**



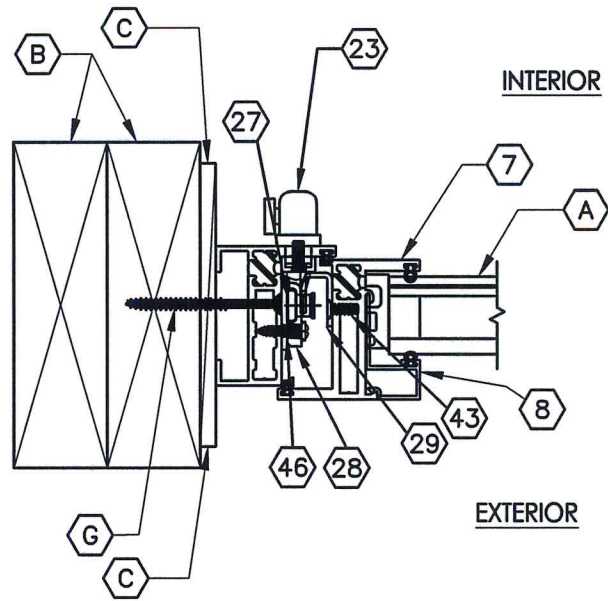
**4**  
**3** **HORIZONTAL CROSS SECTION**

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL AND VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 3 OF 9			

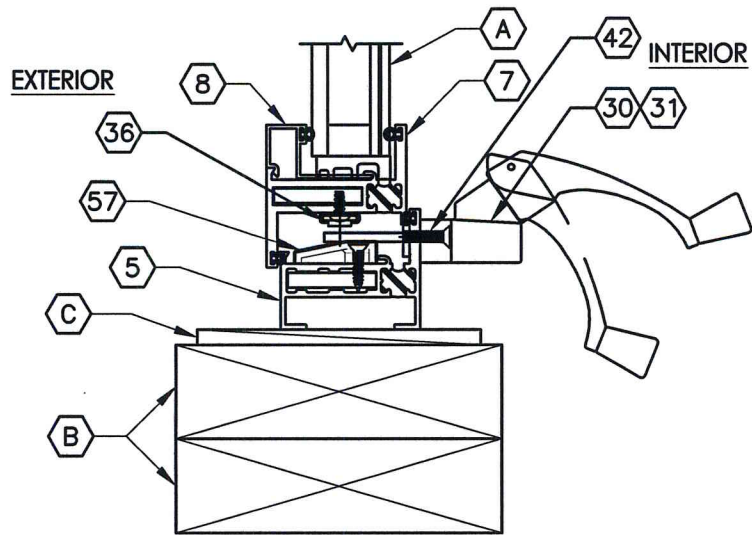
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *gww*



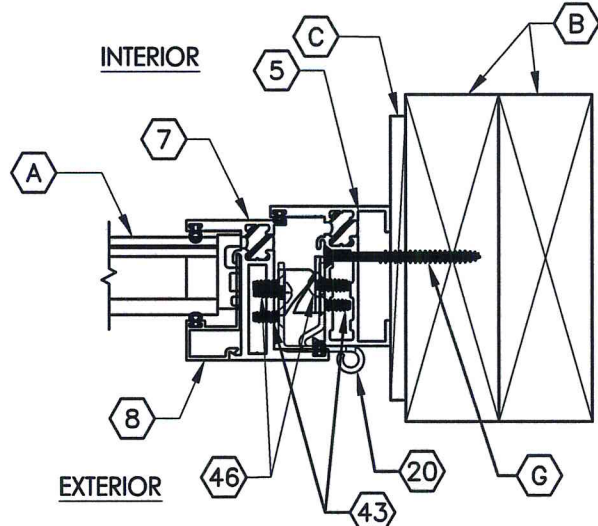
**1**  
4 **VERTICAL CROSS SECTION**



**3**  
4 **HORIZONTAL CROSS SECTION**



**2**  
4 **VERTICAL CROSS SECTION**



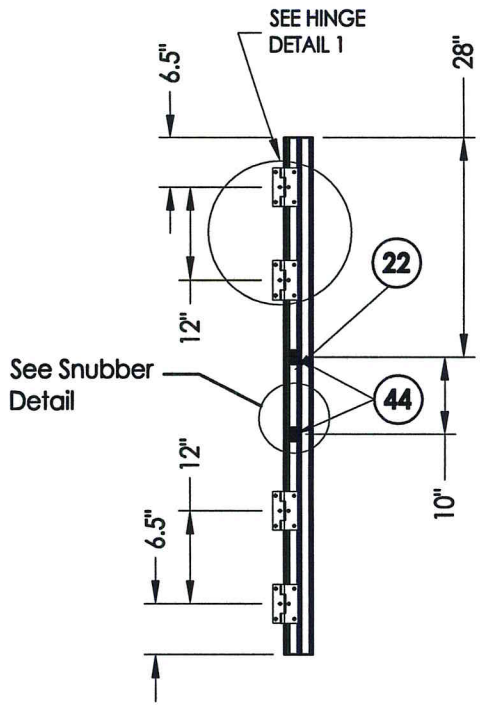
**4**  
4 **HORIZONTAL CROSS SECTION**

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		HORIZONTAL AND VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 <b>RW</b> BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 4 OF 9			

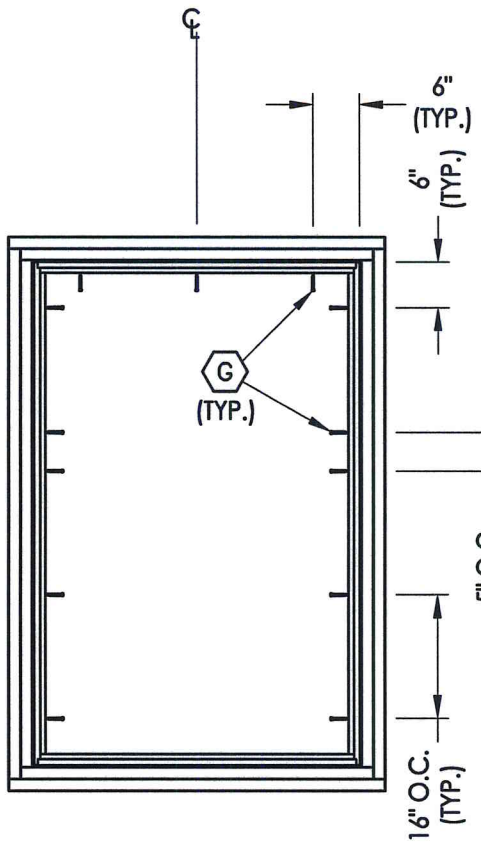
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© 2013 R.W. BUILDING CONSULTANTS INC.

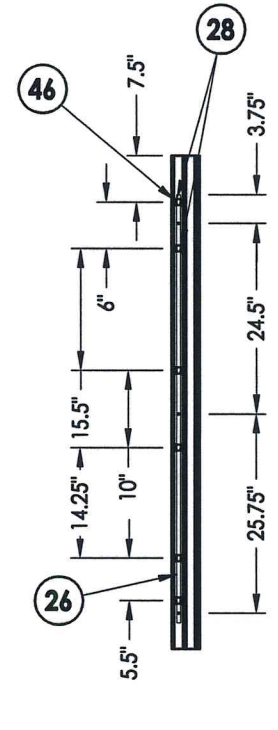
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-12 Verified by *ju*



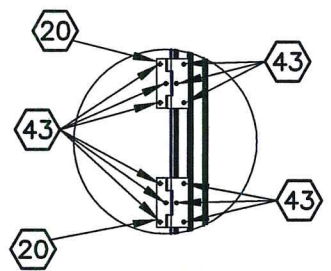
**SNUBBER JAMB**



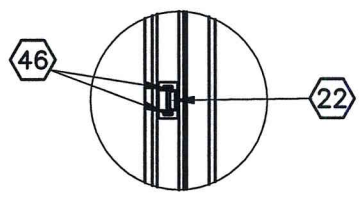
**FRAME ANCHORING**  
2X buck construction



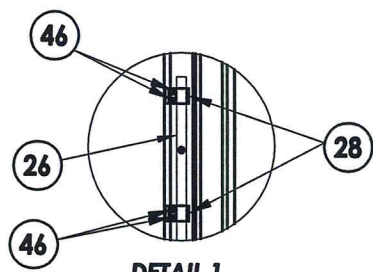
**LOCK JAMB**  
Locking Points (3)



**HINGE DETAIL**



**SNUBBER DETAIL**



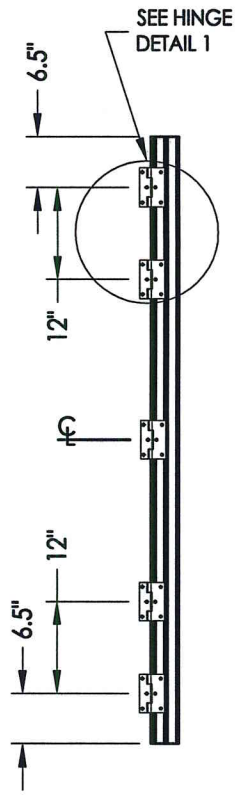
**DETAIL 1**

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 5 OF 9			

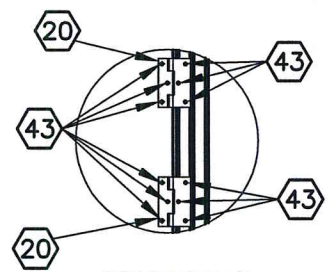
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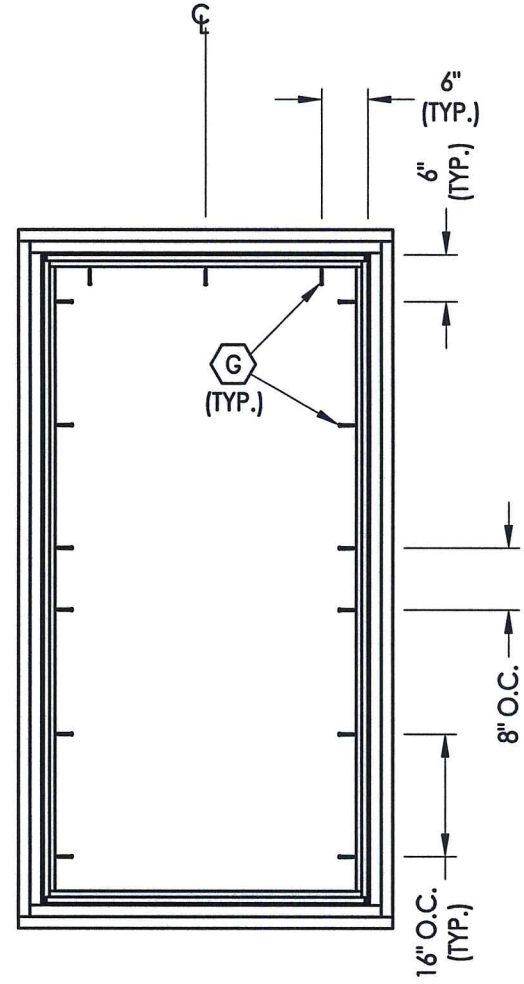
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-12 Verified by JW



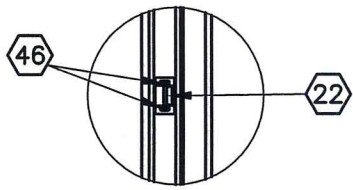
**HINGE JAMB**



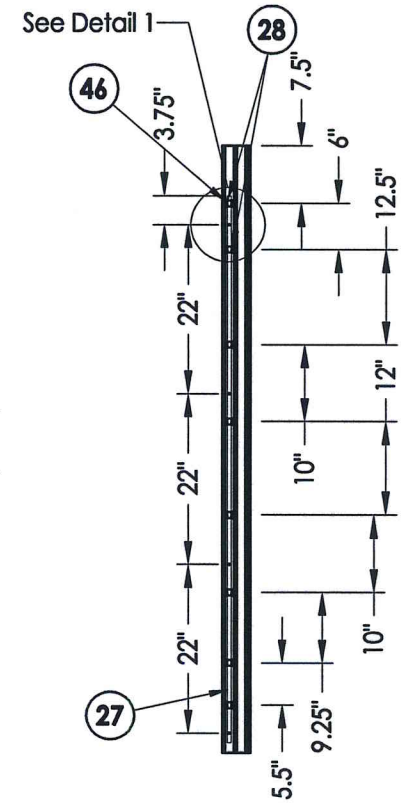
**HINGE DETAIL**



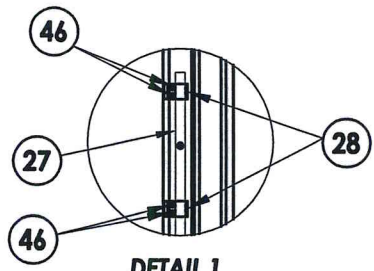
**FRAME ANCHORING**  
2X buck construction



**SNUBBER DETAIL**

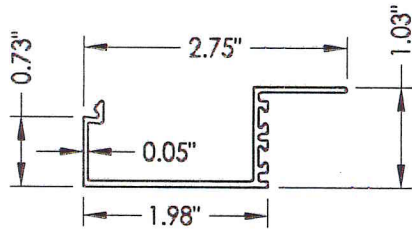


**LOCK JAMB**  
Locking Points (4)

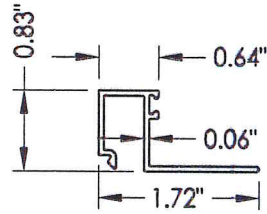


**DETAIL 1**

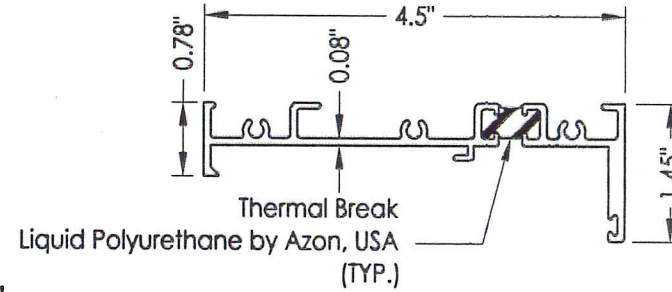
PRODUCT: FLEETWOOD KONA 3800 CASEMENT WINDOW		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	REVISIONS	BY
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 6 OF 9			



**14 INSERT STOP**  
011448

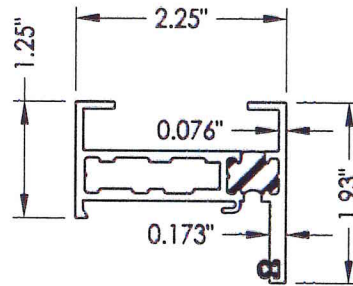


**8 GLASS STOP 1-1/4"**  
901487

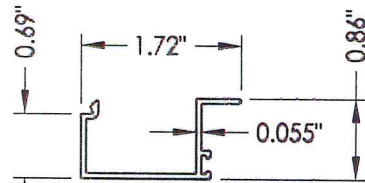


**2 KONA BLOCK FRAME**  
011239

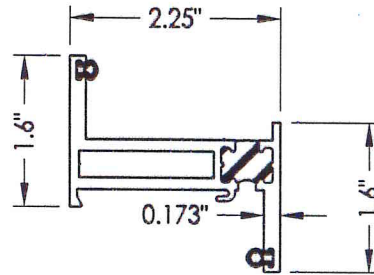
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW



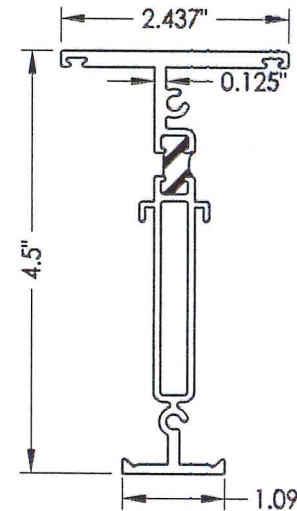
**5 BLOCK FRAME**  
5278C1



**10 GLASS STOP 5/16", 7/16"**  
007930



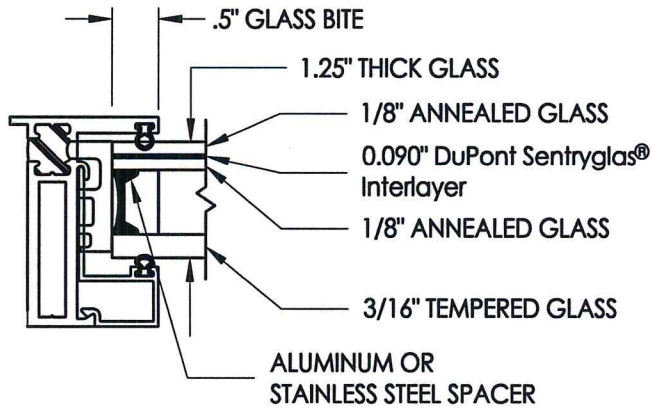
**7 ZEE BAR (PANEL)**  
H006733



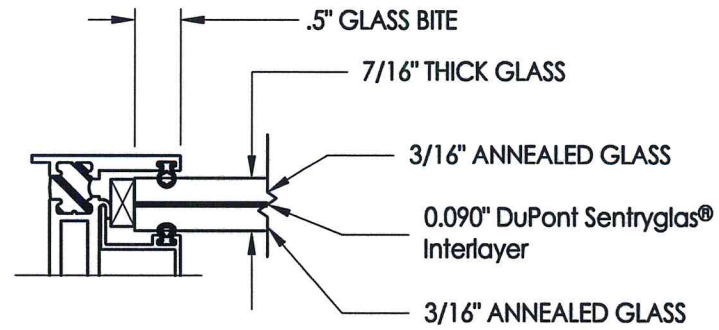
**4 MULLION**  
H011241

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 7 OF 9			

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10.21.13 Verified by gzw



**A** GLAZING DETAIL




**F** GLAZING DETAIL

PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		COMPONENTS AND GLAZING DETAILS	
NO.	DATE	REVISIONS	BY
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 8 OF 9			

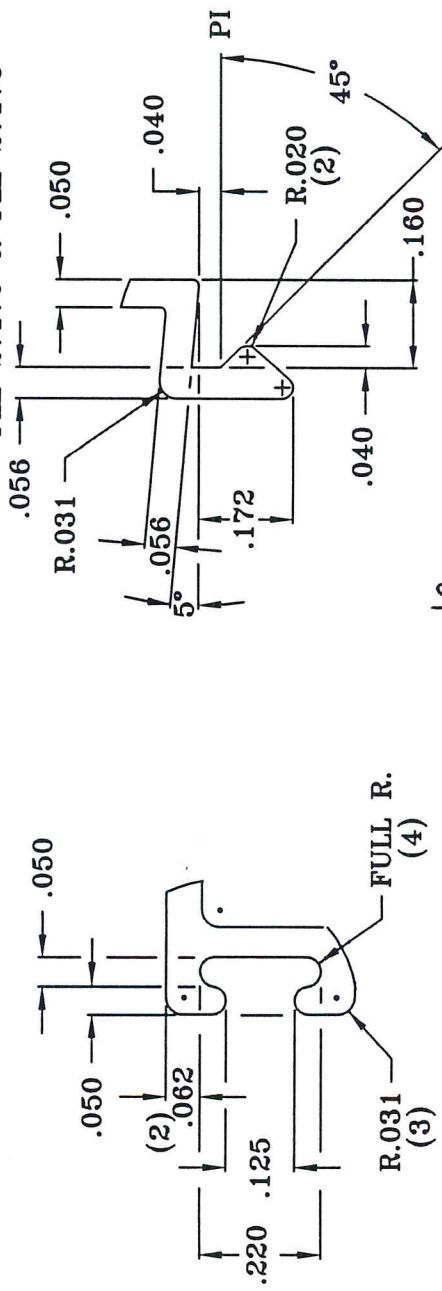
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
G	#10 x 2" PFH WOOD SCREW	STEEL
2	KONA BLOCK FRAME	6063-T6 ALUM
4	MULLION	6063-T6 ALUM
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP (1-1/4")	6063-T6 ALUM
10	GLASS STOP (7/16")	6063-T6 ALUM
13	CORNER KEY	ALUM
14	INSERT STOP	ALUM
20	SS. BUTT HINGE	SS
21	4 BAR HINGE	SS
22	SNUBBER	ZINC ALLOY
23	MULTIPOINT LOCK HANDLE	SS
26	3 POINTS LOCKING BAR	SS
27	4 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	PLASTIC
29	KEEPER	SS
30	CASEMENT ROTOR GEAR 13.5"	SS
35	CAM HANDLE / STRIKE PLATE	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
42	MACHINE SCREW NO 10-32, FHP .75"	STEEL
43	SCREW NO 10, UFHP .5"	STEEL
44	SCREW NO 8, PHP, .50"	STEEL
46	SCREW NO 8, FHP, .750"	STEEL
47	MACHINE SCREW NO 10-32, PHP .5"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)-TREMCO	-

51	MINI BULB VINYL(EPDM 70 DUROMETER)-TREMCO	-
52	WOOD BLOCK .750" X 1.250"	-
53	ALUMINUM BLOCK .750" X 1.250"	-
54	PVC BLOCK .750" X 1.250"	-
55	SETTING BLOCK	-
56	SETTING BLOCK 4" x 1/4" x 1"	-
57	PIVOT SHIM	-
58	WOOD BLOCK .50" X 1.250"	-
59	ALUMINUM BLOCK .50" X 1.250"	-
60	PVC BLOCK .50" X 1.250"	-
61	SETTING BLOCK 4" x 1/8" x 1"	-

Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10.31.13 Verified by gw

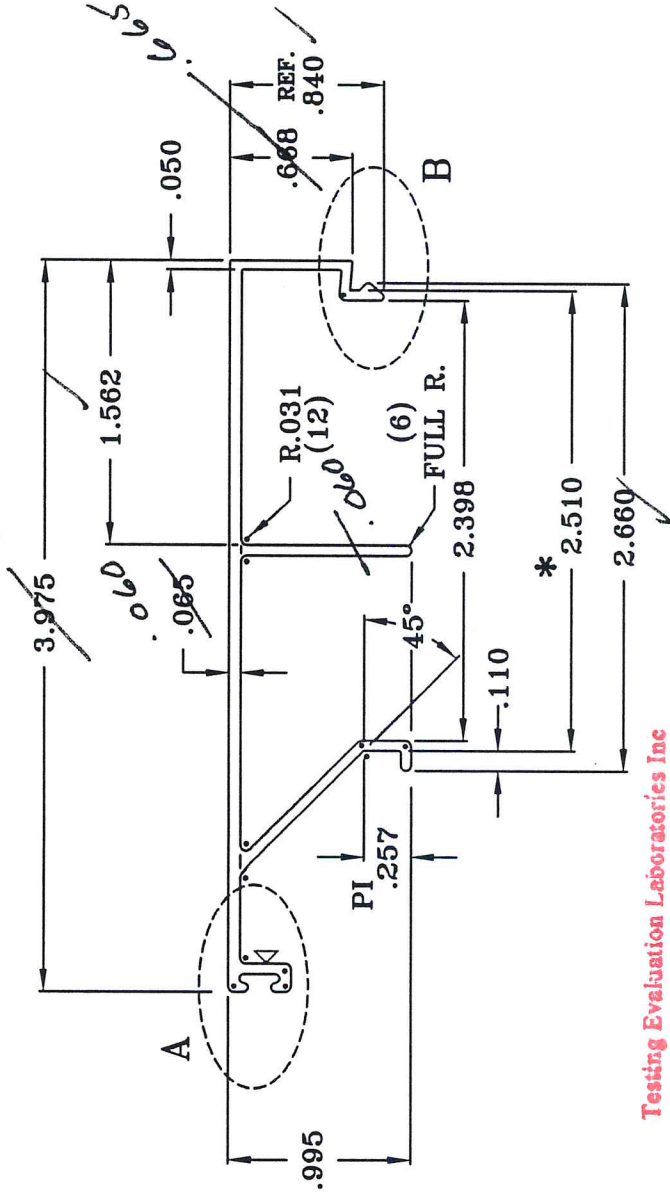
PRODUCT:		FLEETWOOD KONA 3800 CASEMENT WINDOW	
PART OR ASSEMBLY:		BILL OF MATERIALS	
NO.	DATE	BY	REVISIONS
			
DATE: 9/25/13			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-7033			
SHEET 9 OF 9			

FITS WITH PART#  
FLE 27176 & FLE 27178



DETAIL "A"  
SCALE: 3:1

DETAIL "B"  
SCALE: 3:1

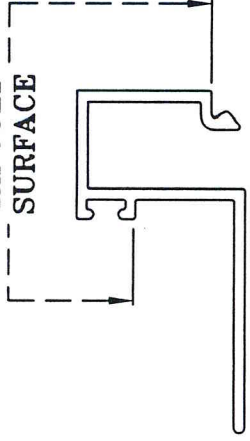


Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by *gjd*

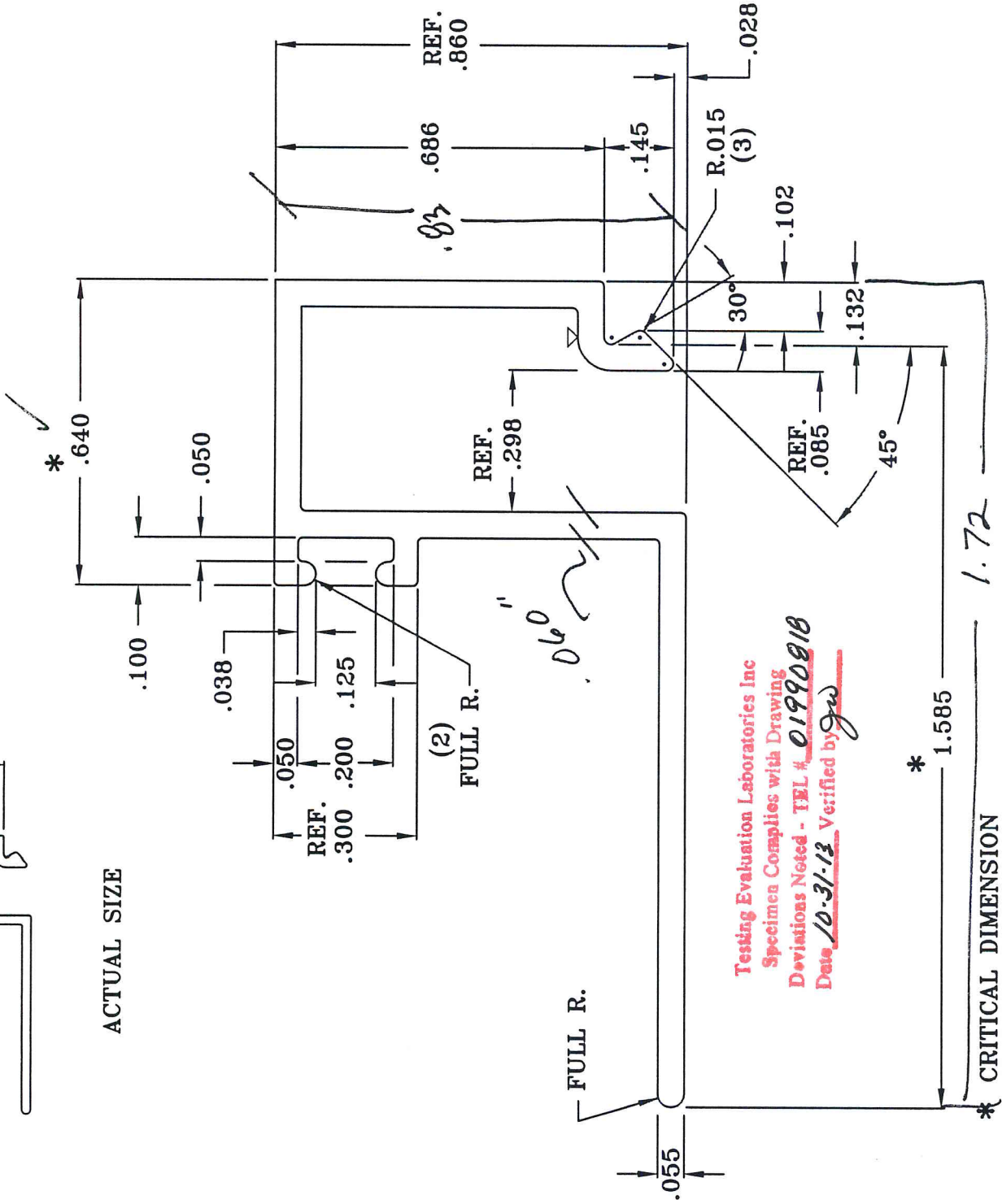
▷.010 R. X .010DEEPI.D. MARK NOTE: .056 TYP. WALL EXCEPT AS NOTED  
UNMARKED CORNERS .010 R.

CONTAINER	7/8	DIE RING	5	SPACER RING	2
AREA	.462	PORTS	2	BKR	11242
WT/PT	.554	W/P	POCKET	BOLSTER	2-B
PERL.	15.063	FLE 27180		DIE SIZE	9X2
DWN. BY	KEN	DATE	7/11/01	MAT'L	6063-T6
CHKD. BY		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED	
				CUSTOMER	FLEETWOOD ALUMINUM
				LET.	
				REVISION	SCALE 1:1
				BY	DATE
				PART NO.	011243
				DIE NO.	
SIERRA ALUMINUM COMPANY 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7864				GLAZING BEAD (1/4" GLASS)	

EXPOSED SURFACE



ACTUAL SIZE

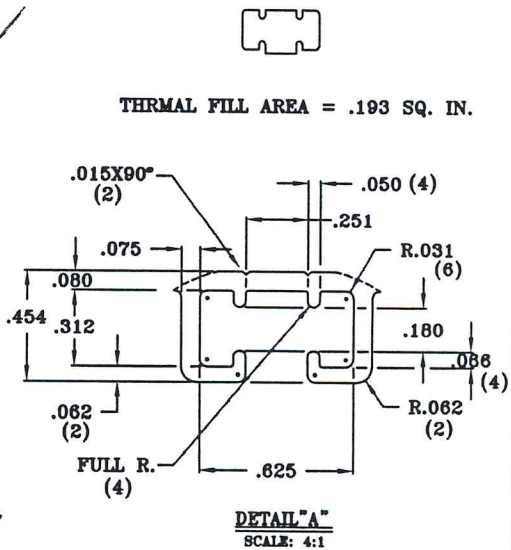
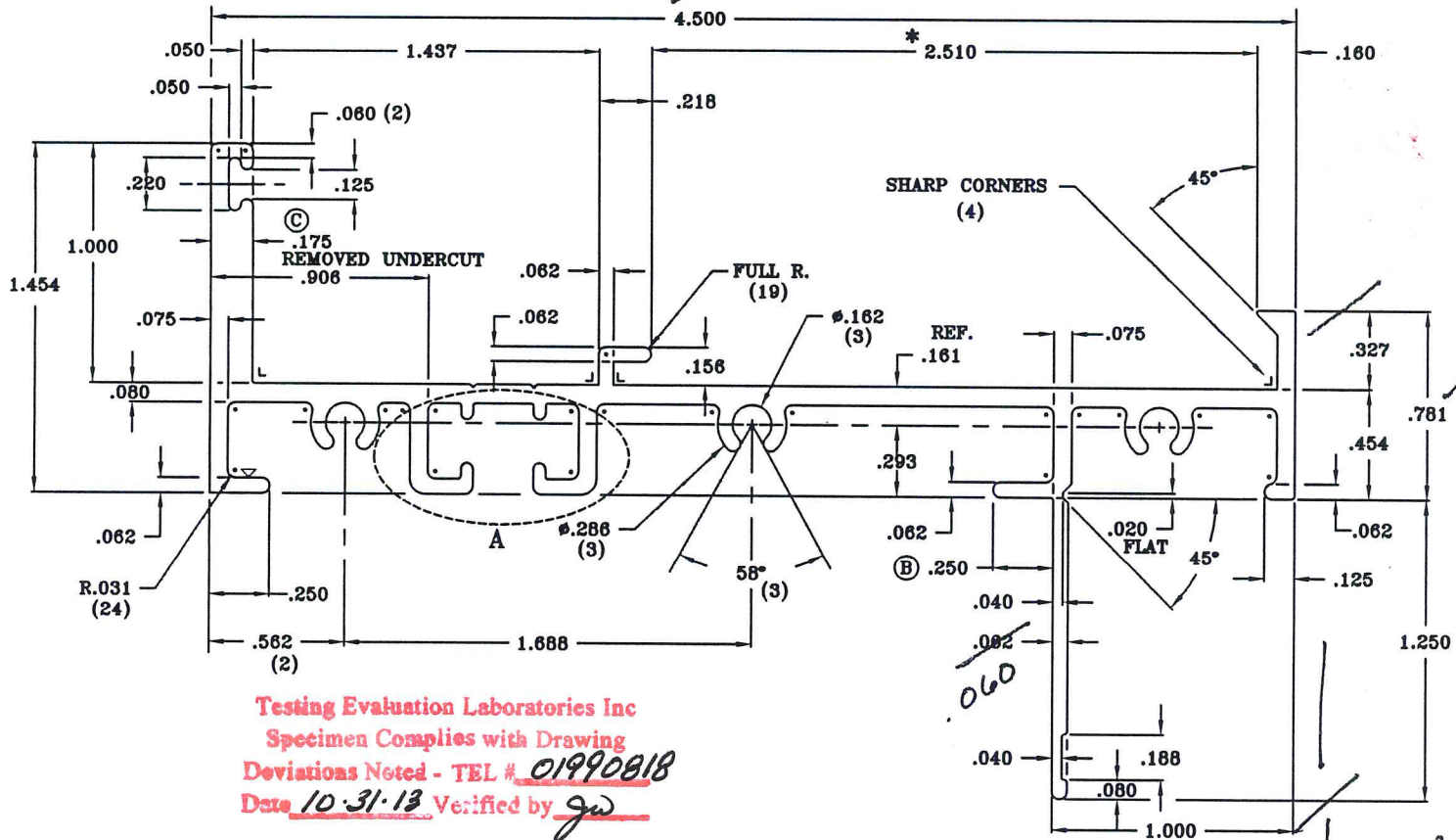


>.010 R. X .010DEEPI.D. MARK

NOTE: .055 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

CONTAINER	7	DIE RING	5	SPACER RING	2
AREA	.202	PORTS	4	BKR	901487
WT/FT	.242	W/P	POCKET	BOLSTER	STD-4
PERL	7.360	FLE33161		DIE SIZE	9X2
DWN. BY	KEN	DATE	3/12/04	MAT'L	6063-T6
CHKD. BY		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED	
			CUSTOMER	FLEETWOOD WINDOWS & DOORS	REVISION
			PART NAME	GLASS STOP, 1-1/4"	SCALE
					2:1
					N/C
					PART NO.
					05P12
					DIE NO.
					901487

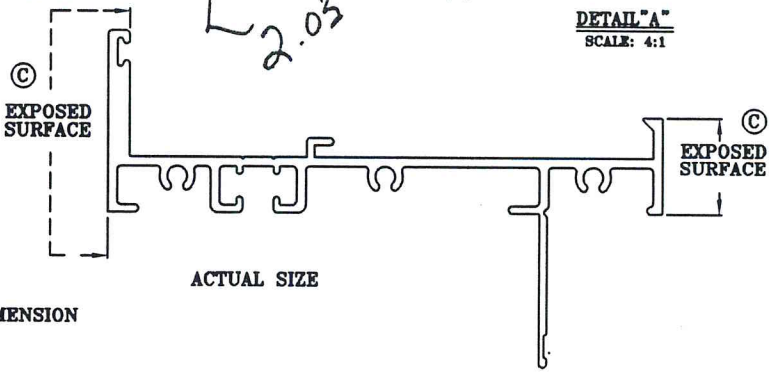
FITS WITH PARTS FLE 27177, FLE 27179, & FLE 27180



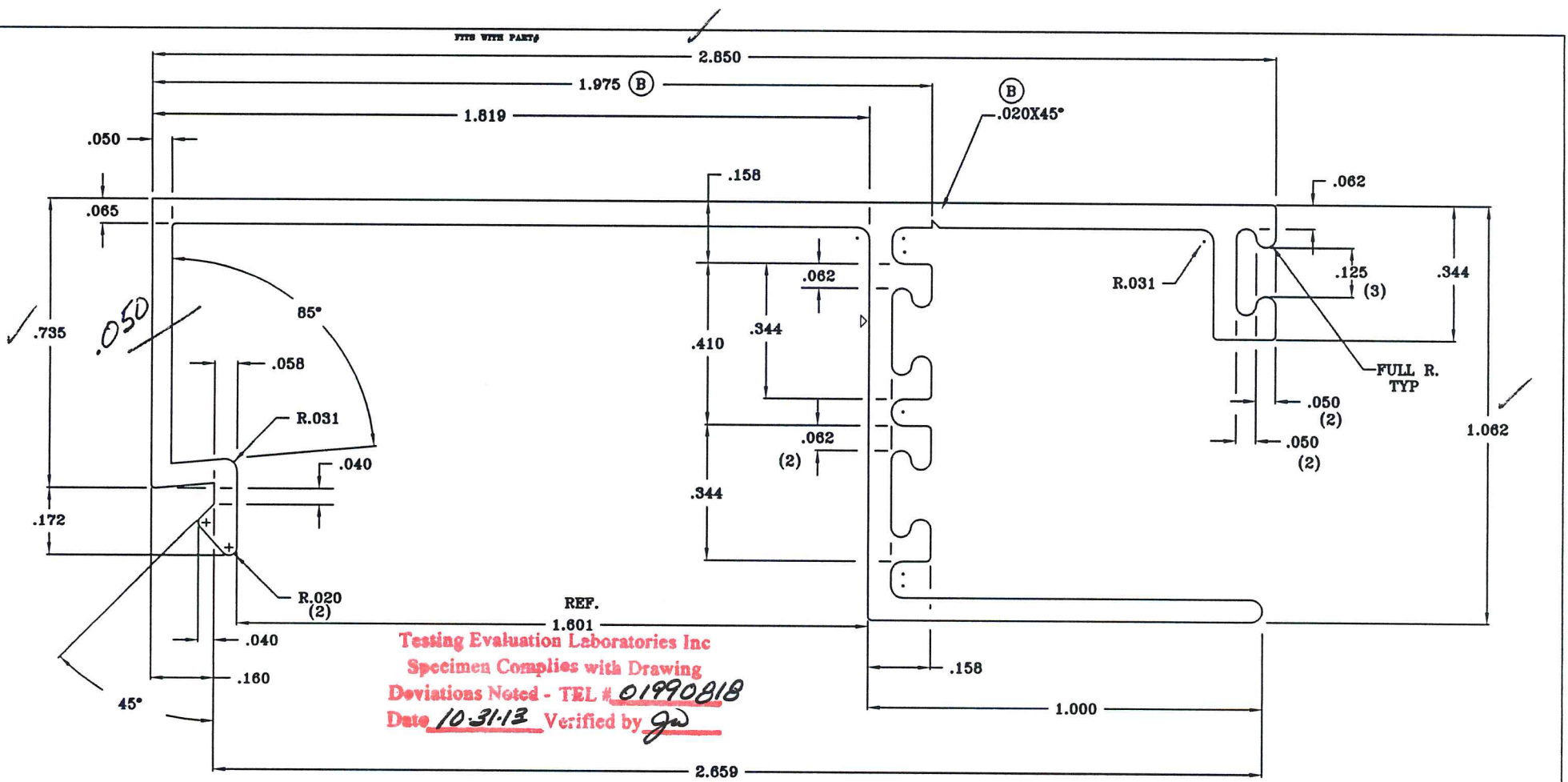
Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990818  
Date 10-31-13 Verified by gw

D.010 R. X .010DEEPI.D. MARK NOTE .075 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .910 R.

STADLER	7/8	DR RING	5	SPACER RING	2					
EA	.921	POSTS	1	DR	11238					
W/PT	1.105	W/P	POCKET	BOLSTER	11238	C	ADDED MISSING DIMENSION	ED	11/18/08	
DL	22.854	FLE	27176	DR SEK	9X2	C	REMOVED UNDERCUT W/PT. WAS 1.087, P.288.067	ED	11/18/08	
PL	KEN	DATE	11/12/03	MAT'L	6063-T6	B	ADDED MISSING DIM.	ED	7/28/01	
ED		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED		LET.	REVISION	BY	DATE	
			CUSTOMER	FLEETWOOD ALUMINUM		SCALE	2:1	PART NO.	3805	
ERRA ALUMINUM COMPANY 2945 Fleetwood Drive Riverside, California 92509 909781-7800 FAX (909)781-7864			PART NAME	4.500 FRAME BLOCK			930 N/C	DR NO.	011239	



\* CRITICAL DIMENSION

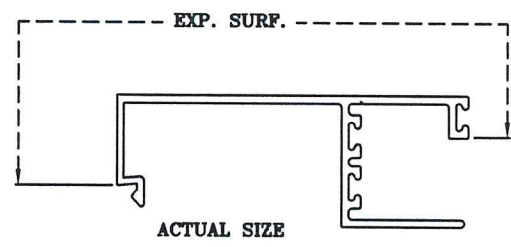


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gd

D.010 R. X .010DEEPL.D. MARK      NOTE: .058      TYP. WALL EXCEPT AS NOTED  
 UNMARKED CORNERS .010 R.

STAIRS	8	SEE EDGE	5	SPACES	2				
EA	.415	POSTS	3	SEE	011448				
V/P	.498	V/P	POCKET	SOLSTER	3-6				
HL	13.469	FLE	28807	SEE SIZE	9X2				
TY	KEN	DATE	4/24/02	MAT'L	6063-T6	D	RELOCATE .00024"	ED	9/29/08
ED.		DATE		STANDARD TOLERANCES		UNT.	REVISION	BY	DATE
				UNLESS OTHERWISE NOTED					
CUSTOMER				FLEETWOOD ALUMINUM		SCALE	PART NO.		
PART NAME				GLASS STOP		4:1	3811		
						N/C	DES. NO.		
							011448		

ERRA ALUMINUM COMPANY  
 2345 Fleetwood Drive  
 Riverside, California 92509  
 909)781-7800 FAX (909)781-7864

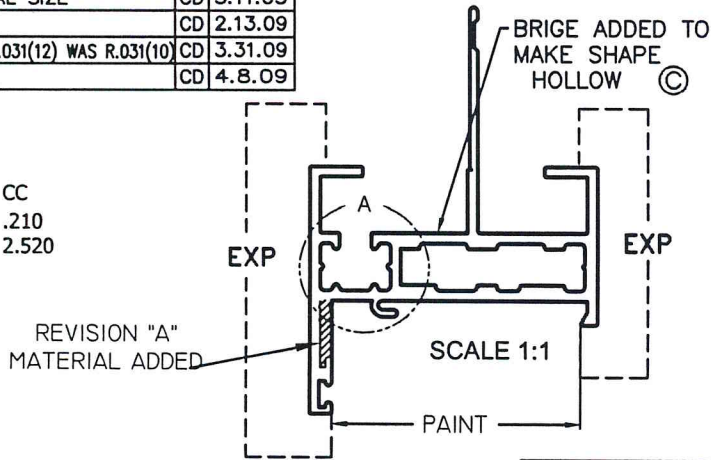




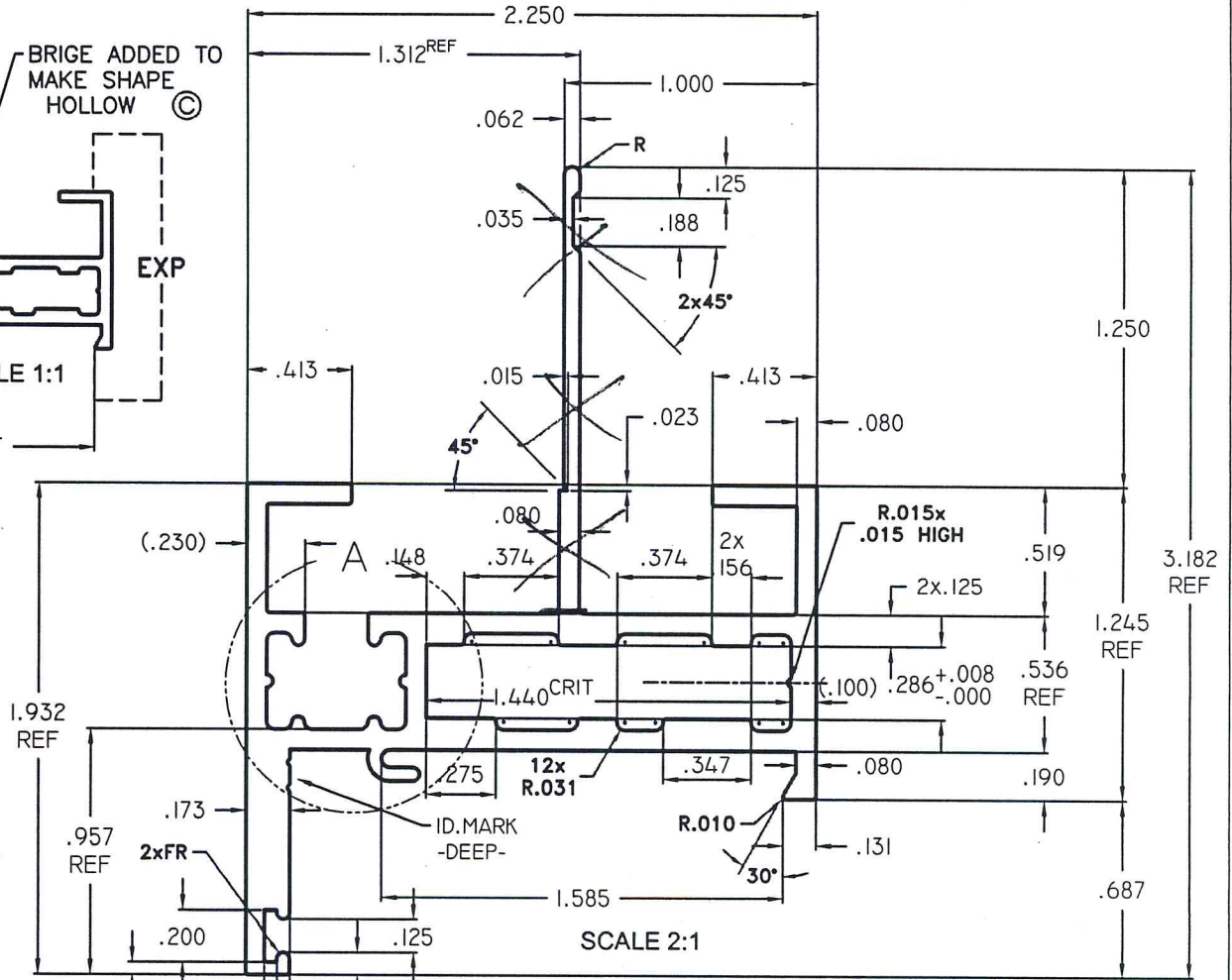
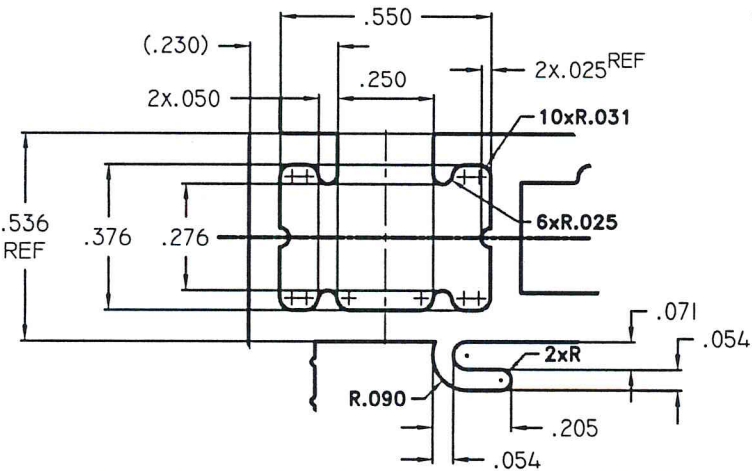
TOMER: FLEETWOOD ALUMINUM PART NAME: 5000 INSIDE GLAZE PERIM. (NAIL-ON)  
 PART NUMBER: 05P88

REVISIONS	BY	DATE
MATERIAL ADDED-SEE ACTUAL SIZE	CD	3.11.03
SEE BELOW	CD	2.13.09
NOW A HOLLOW DIE/.413 WAS .625/R.031(12) WAS R.031(10)	CD	3.31.09
REDRAWN	CD	4.8.09

TB CAVITY TYPE CC  
 AREA SQ" .210  
 VOLUME CUBIC"/FT. 2.520

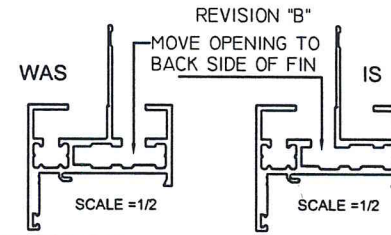


REVISION "A"  
 MATERIAL ADDED



MARKED WALLS: .080	UNMARKED CORNERS: R.010	UNMARKED FILLETS: R.010
S UNLESS OTHERWISE SPECIFIED, STANDARD ALUMINUM ASSOCIATION TOLERANCES APPLY • FRONTIER ID. MARK: TWO .010 R x .100 APART		
.927	PRESS 4	DWN CD
T 1.113	PORTS 11x7-2H	DATE 4.17.2014
21.012	W/P HOLLOW	D 5278
OR 19	BKR. HOLLOW	CLASS HOLLOW
3.57	BOL STD-2	17.205
0201/92	RATIO: PRESS 1:	ALLOY & TEMPER 6063-T6
	PRESS 2:	DIE NO. 5278
	PRESS 3:	REV. C1

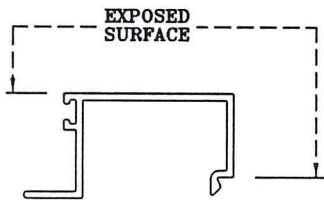
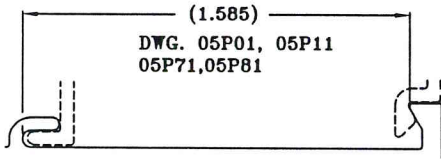
Path: C:\Users\RWBC2\AppData\Local\Microsoft\Windows\Temporary Internet Content.Outlook\10NJ3FJ05P88 DATE: 4/17/2014 4:33 PM



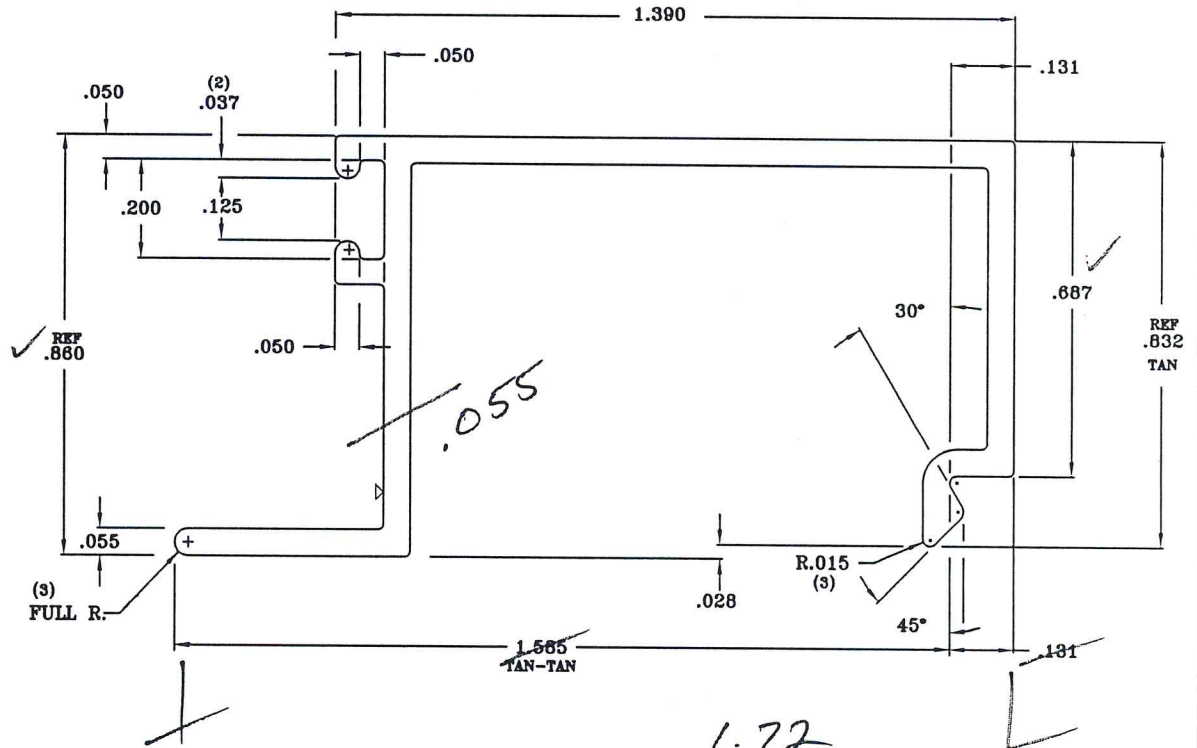
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *jd*

FITS WITH PART 6

DIE # \_\_\_\_\_  
DIE # \_\_\_\_\_



ACTUAL SIZE



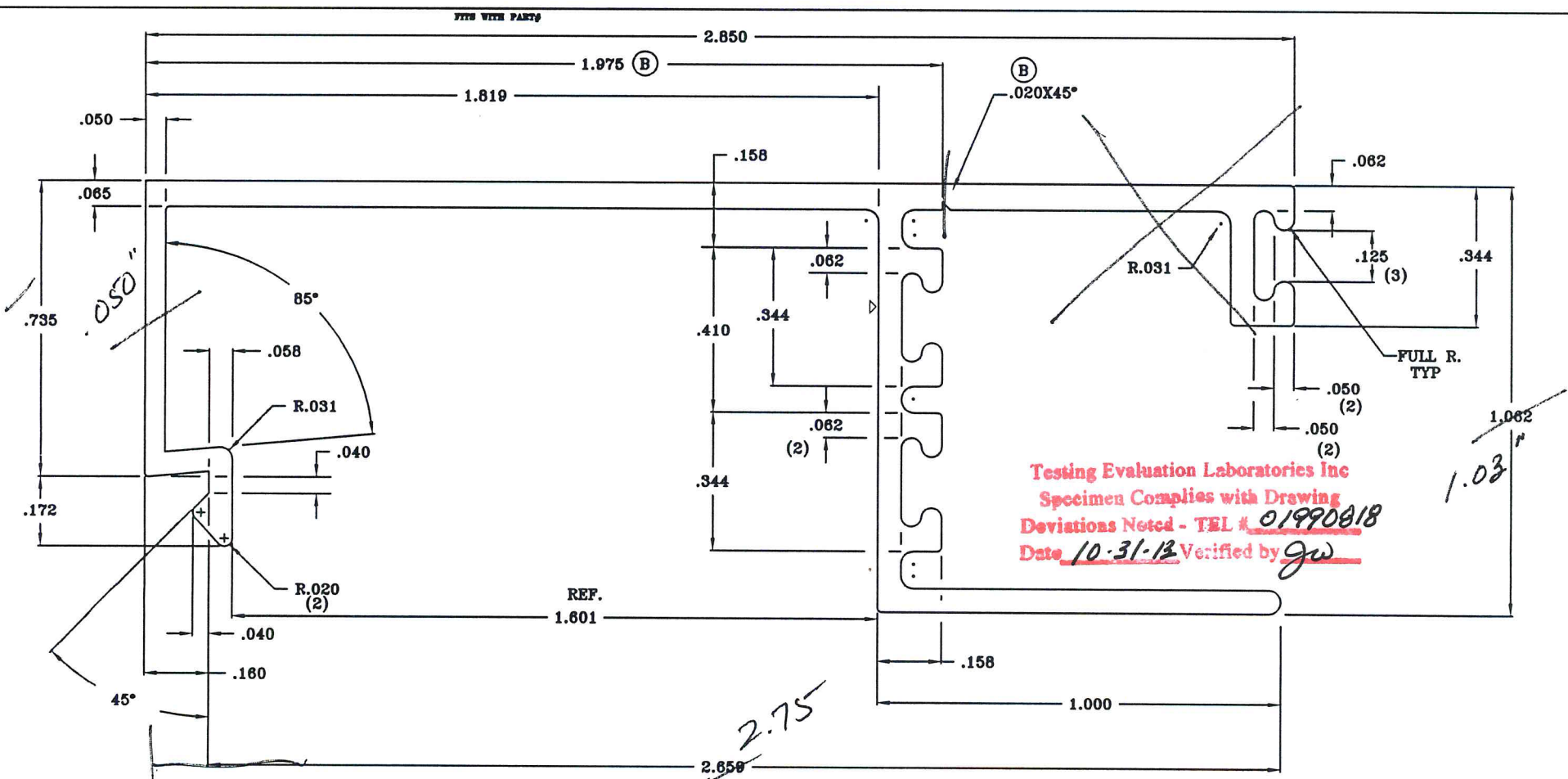
D.010 R. X .010HIGH I.D. MARK

NOTE: .055 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

STAINER	7	DIE RING	4	SPACER RING	3				
EA	.202	POSTS	4	HEX	2372				
W/P	.242	W/P	-	BOLSTER	4-9				
DL	7.337	FLE9886		DIE SIZE	9x1				
IN. Y.	HILDA	DATE	6/03/94	MATL.	6063-T6				
ED. Y.		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED		LET.		REVISED	BY
				CUSTOMER	FLEETWOOD ALUMINUM PRODUCTS	SCALE	4:1	PART NO.	05P08
				PART NAME	GLASS STOP 1/2" ...5000			DIE NO.	007930

ERRA ALUMINUM COMPANY  
2346 Fleetwood Drive  
Riverside, California 92509  
909)781-7800 FAX (909)781-7884

Testing Evaluation Laboratories Inc  
Specimen Complies with Drawing  
Deviations Noted - TEL # 01990018  
Date 10-31-13 Verified by JW

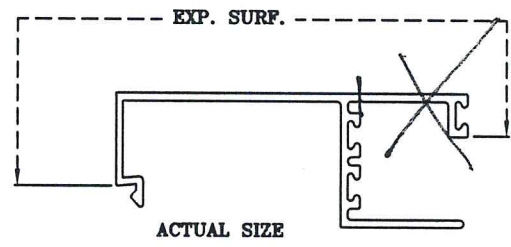


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gw

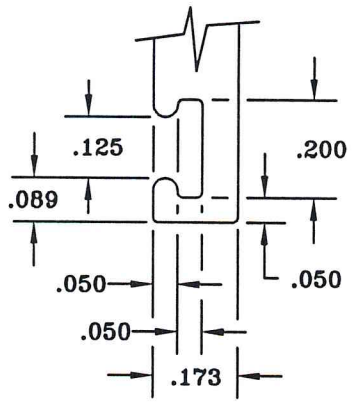
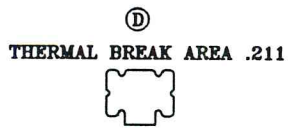
D.010 R. X .010DEEPI.D. MARK

NOTE: .058 TYP. WALL EXCEPT AS NOTED  
 UNMARKED CORNERS .010 R.

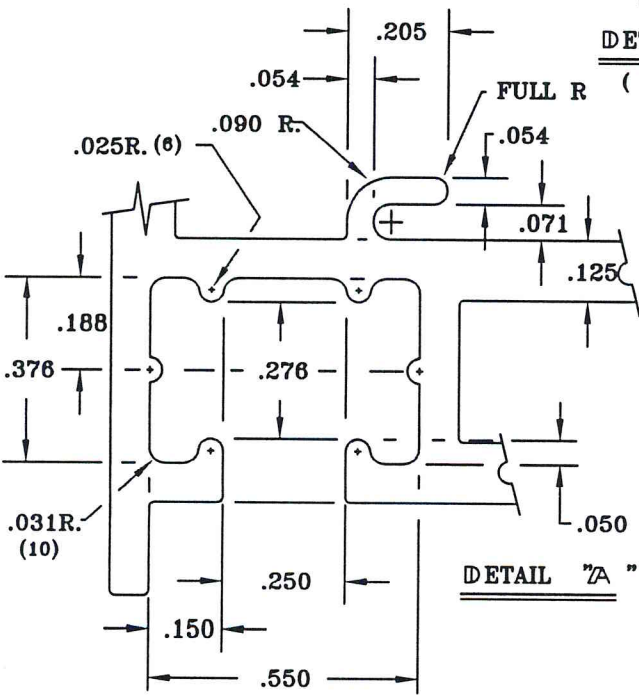
WEAVERS	8	SEE KING	5	SPACER KING	2				
BA	.415	PORTS	3	SEE	011448				
/FT	.498	V/P	POCKET	BOLSTER	3-6				
BL	13.469	FLE	28807	SEE SIZE	9X2				
R. F.	KEN	DATE	4/24/02	MAT'L	6063-T6	D	RELOCATE .0025"	ED	9/26/08
ED.		DATE		STANDARD TOLERANCES		LET.	REVISION	BY	DATE
				UNLESS OTHERWISE NOTED					
ERRA ALUMINUM COMPANY		CUSTOMER		SCALE		PART NO.			
2345 Fleetwood Drive		FLEETWOOD ALUMINUM		4:1		3811			
Riverside, California 92509		PART NAME		N/C		SER. NO.			
909)781-7800 FAX (909)781-7864		GLASS STOP				011448			



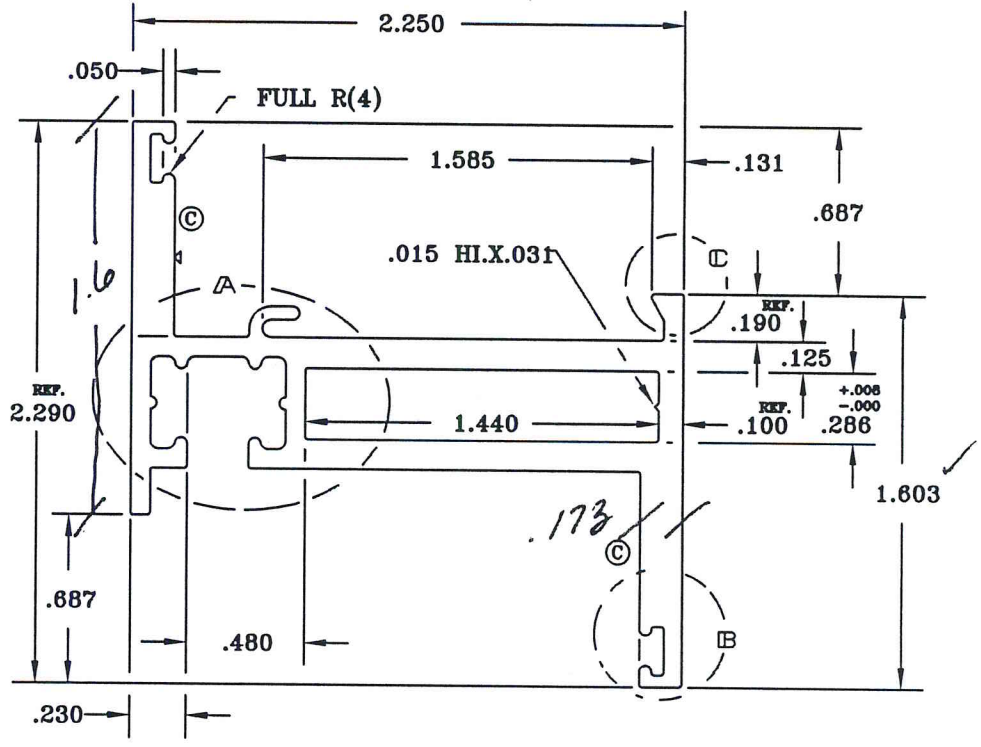
Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by gw



DETAIL "B"  
 ( 2 PLCS.)



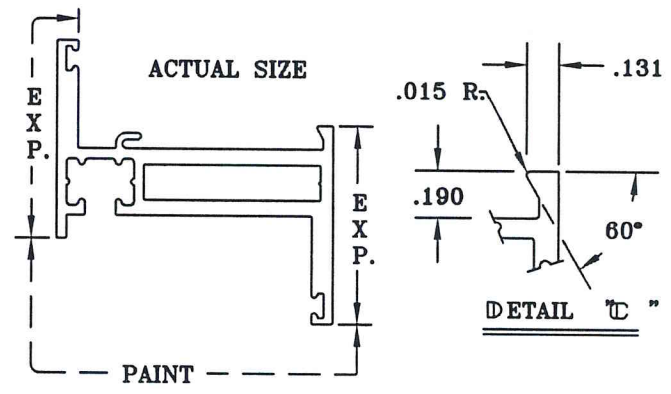
DETAIL "A"



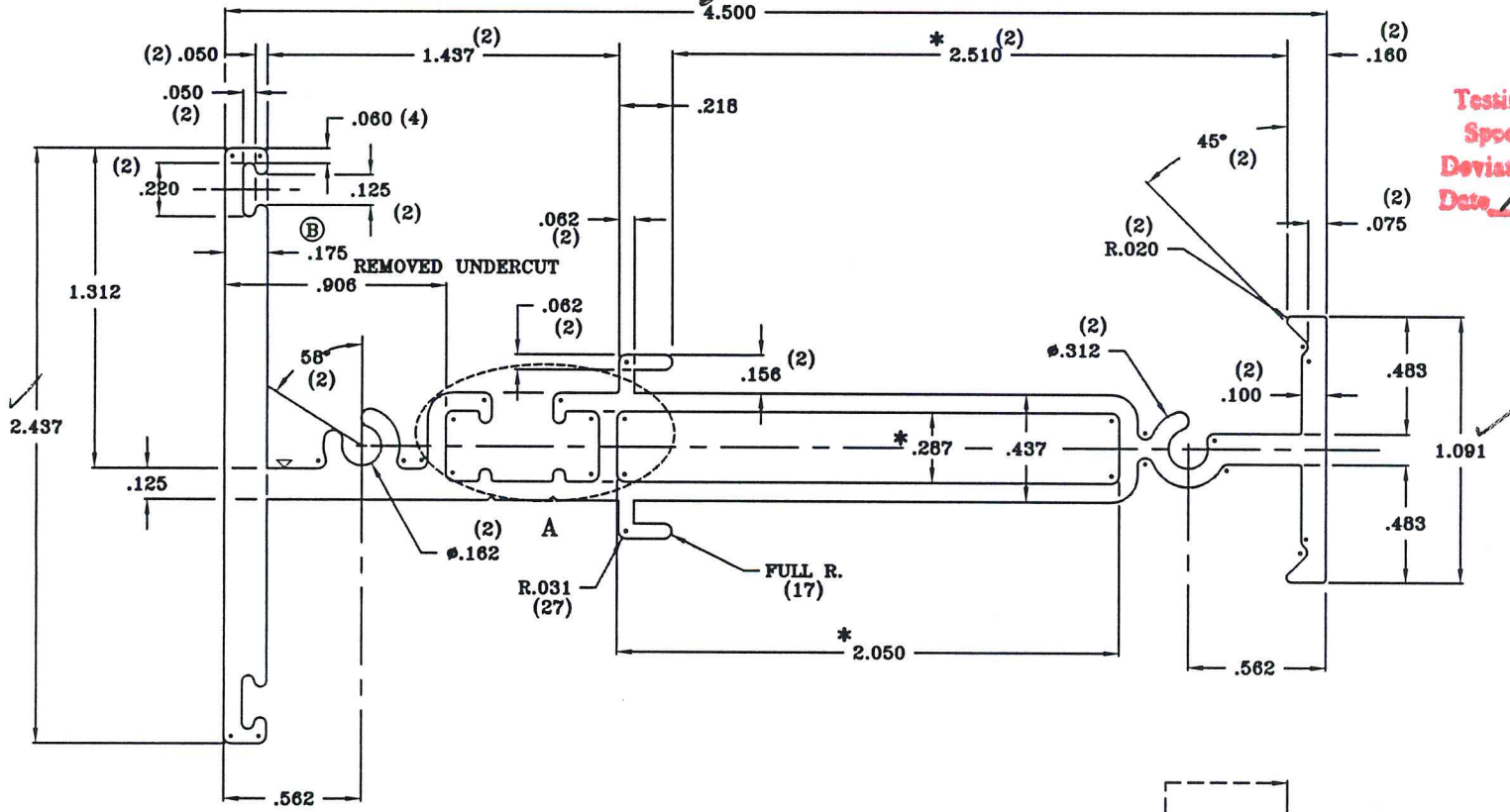
▷.010 R. X .010DEEPI.D. MARK

NOTE: .080 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

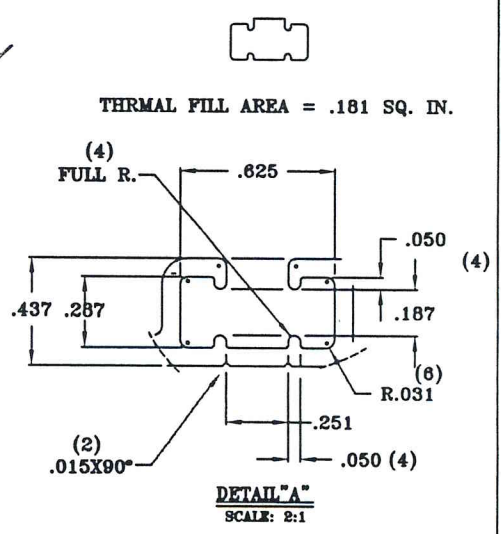
CONTAINER	EXE HING	SPACER KING						
AREA	.897	POSTS	1	EXE	-			
WT/FT	1.076	V/P	-	BOLSTER	1-2	D	ADD THERMAL BREAK AREA	TAS 2/21/06
PERL	16.076	FLEE6042		EXE HING	9X5	C	REMOVED UNDERCUTS WT/FT. WAS .976,F16.433	ED 3/14/03
DWR. BY	Kldg	DATE	3/14/03	MAT'L	6063-T6	B	REMOVED 185 STEP WT/FT. WAS 1.006,F16.416	ED 7/19/08
CHGD. BY		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED		LET.	REVISION	BY DATE
SIERRA ALUMINUM COMPANY		FLEETWOOD ALUMINUM PRODUCTS, INC.		SCALE	3:1	PART NO.	05P11	
2346 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7864		PART NAME		ZEE BAR		DES. NO.	H-006733	



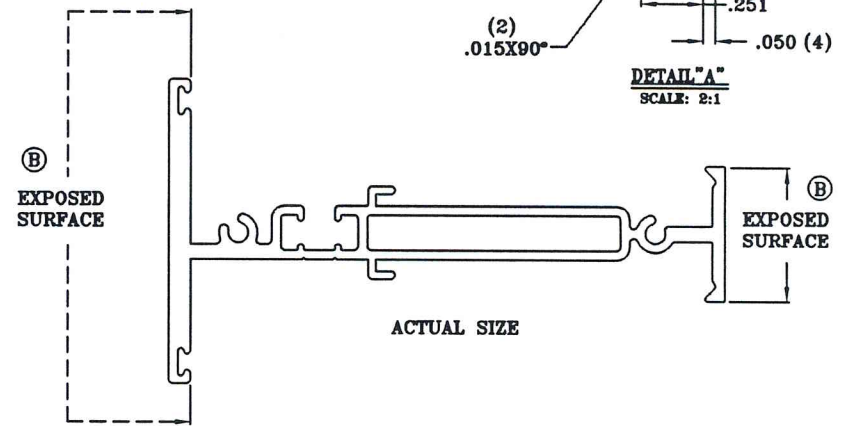
FITS WITH PARTS FILE 27177, FILE 27179, & FILE 27180



Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by JW



\* CRITICAL DIMENSION



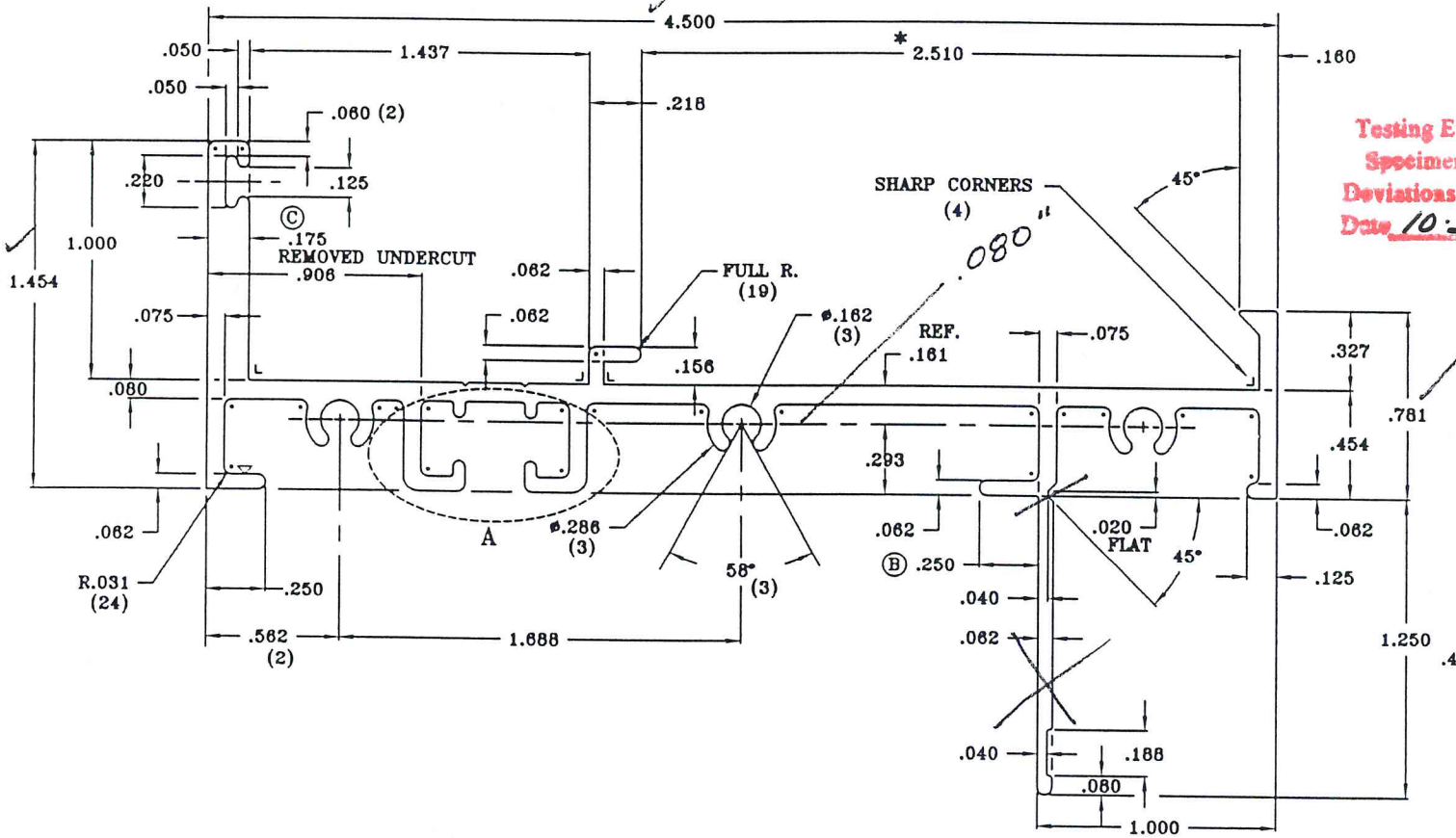
D.010 R. X .010DEEPI.D. MARK

NOTE: .075 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

STANCHION	8	DRIVE RING	5	SPACER RING	2				
RA	1.232	POSTS	1	HEX	-				
V/P	1.478	V/P	-	BOLSTER	11238				
BL	25.766	FLE 27178		DRIVE SIZE	9X5	D	ARMED EXPOSED SURFACE	ED	11/18/08
R.	KEN	DATE	11/12/03	MAT'L	6063-T6	D	REMOVED UNDERCUT	ED	11/18/08
ED.		DATE		STANDARD TOLERANCES UNLESS OTHERWISE NOTED		LET.	REVISION	BY	DATE
CUSTOMER		FLEETWOOD ALUMINUM		SCALE	2:1	PART NO.	3806		
PART NAME		MULLION		1900	N/C	DRW NO.	H-011241		

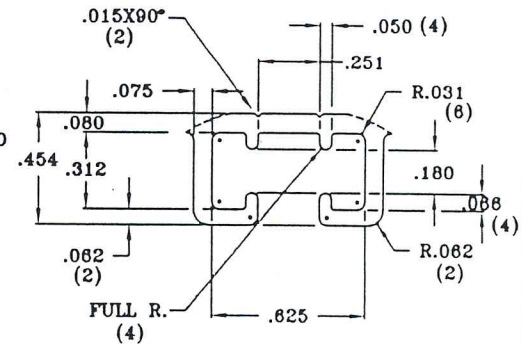
ERRA ALUMINUM COMPANY  
 2345 Fleetwood Drive  
 Riverside, California 92509  
 909781-7800 FAX (909)781-7864

PITS WITH PART#  
 FILE 27177, FILE 27179, & FILE 27180

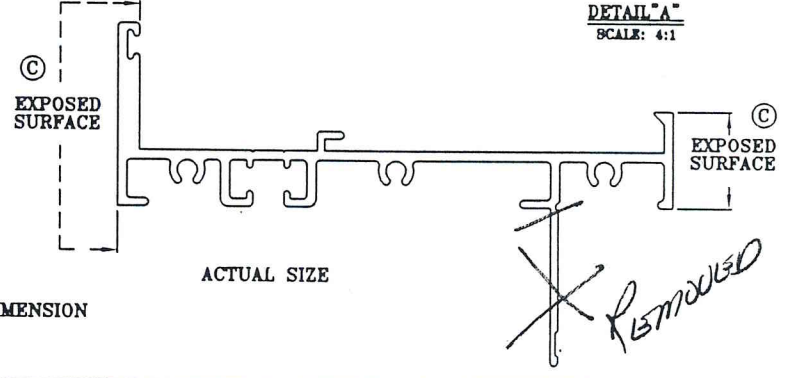


Testing Evaluation Laboratories Inc  
 Specimen Complies with Drawing  
 Deviations Noted - TEL # 01990818  
 Date 10-31-13 Verified by *JW*

THMAL FILL AREA = .193 SQ. IN.



DETAIL "A"  
 SCALE: 4:1



D.010 R. X .010DEEPI.D. MARK

NOTE: .075 TYP. WALL THICKNESS AS NOTED UNMARKED CORNERS .010 R.

QUANTITY	7/8	DES. ENGR	5	SPACE ENGR	2				
EA.	.921	POURTS	1	DESI.	11238				
WT	1.105	V/P	POCKET	BOLSTER	11238	C	ADDED P.K.N.	ED	11/18/08
DL	22.854	FLE	27178	DES. SKZ	9X2	C	REMOVED UNDERCUT	ED	11/18/08
BY	KEN	DATE	11/12/03	MATL.	6063-T8	B	ADDED MISSING DIM.	ED	7/28/01
ED.	STANDARD TOLERANCES UNLESS OTHERWISE NOTED		LET.	REVISION	BY	DATE			
BY	CUSTOMER		FLEETWOOD ALUMINUM		SCALE	2:1	PART NO.	3805	
ERRA ALUMINUM COMPANY 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7864		PART NAME		4.500 FRAME BLOCK		930 N/C	DES. NO.	011239	

\* CRITICAL DIMENSION