



Testing Evaluation Laboratories, Inc.

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TAS 202-94, TAS 201-94 and TAS 203-94 TEST RESULTS

IAS Lab Accreditation Number: TL-299

Report No: TEL 01993391
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Issued to:

Fleetwood Windows and Doors
One Fleetwood Way
Corona, CA 92879

Project Summary: Testing Evaluation Laboratories, Inc. (TEL) was contracted by Fleetwood Windows and Doors to perform tests on the 350-T Casement Windows with and without the 3800-T Fixed Window 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:

High Velocity Hurricane Zone Protocols TAS 202-94, TAS 201-94 and TAS 203-94

Test Specimen Description:

Series / Model:	350-T Aluminum Casement Windows/3800-T Fixed Windows
Type:	Aluminum Casement Window – X Specimens 1, 1a, 1b, 1c, 2, 2a, 3, 3a, 3b, 3c, 4, 4a Aluminum Casement Window with Fixed Windows – O/X/O Specimens 5, 5a, 6, 6a
Overall Size:	44.375" x 86.375" – (X) - Specimens 1, 1a, 1b, 1c 42.00" x 84.00" – (X) - Specimens 2, 2a, 3, 3a, 3b, 3c, 4, 4a 44.375" x 180.00" – (O/X/O) - Specimens 5, 5a, 6, 6a
Daylight Opening:	35.50" x 77.50" – Specimens 1, 1a, 1b, 1c, 2, 2a, 3, 3a, 3b, 3c, 4, 4a 41.25" x 31.25" – Specimens 5, 5a, 6, 6a – Upper Fixed Panel 35.50" x 77.50" – Specimens 5, 5a, 6, 6a – Casement 41.25" x 57.25" – Specimens 5, 5a, 6, 6a – Lower Fixed Panel
Frame Material:	Aluminum
Finish:	Mill Finish

For Tested Elevation, Vertical Cross Sections, Horizontal Cross Sections, Components, Frame Anchoring, Glazing Detail and Bill of Materials See Attached Drawing #'s L-9484, L-9485, L-9486, L-9487, L-9488, L-9489 and L-9490.

STRUCTURAL TESTS (TAS 202)

Specimen 1 – 44.375" x 86.375" Aluminum Casement Window (X)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

	Results
Air Infiltration per ASTM E283-04 @ 1.57 psf)	0.041 SCFM/FT ²
Air Exfiltration per ASTM E283-04 @ 1.57 psf)	0.193 SCFM/FT ²

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

	Results
Water Resistance per ASTM E331-00 @ 6.75 psf	No Leakage

Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.059"	0.014"	0.155"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.060"	0.008"	0.155"

Deflection/Set Locations:

Location 1: Center of Top Rail.

Forced Entry 300 lbs in direction to open - Passed

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

STRUCTURAL TESTS (TAS 202)

Specimen 3 – 42.00" x 84.00" Aluminum Casement Window (X)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

	Results
Air Infiltration per ASTM E283-04 @ 1.57 psf)	0.064 SCFM/FT ²
Air Exfiltration per ASTM E283-04 @ 1.57 psf)	0.183 SCFM/FT ²

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

	Results
Water Resistance per ASTM E331-00 @ 9.75 psf	No Leakage

Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.101"	0.005"	0.213"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.358"	0.022"	0.213"

Deflection/Set Locations:

Location 1: Center of Cam Locks.

Forced Entry 300 lbs in direction to open - Passed

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

STRUCTURAL TESTS (TAS 202)

Specimen 3b – 42.00" x 84.00" Aluminum Casement Window (X)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

Air Infiltration per ASTM E283-04 @ 1.57 psf)	Results 0.025 SCFM/FT ²
Air Exfiltration per ASTM E283-04 @ 1.57 psf)	0.065 SCFM/FT ²

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

Water Resistance per ASTM E331-00 @ 9.75 psf	Results No Leakage
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Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.049"	0.001"	0.213"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.212"	0.000"	0.213"

Deflection/Set Locations:

Location 1: Center of Cam Locks.

Forced Entry – Passed – No Entry

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

STRUCTURAL TESTS (TAS 202)

Specimen 4 – 42.00" x 84.00" Aluminum Casement Window (X)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

		Results
Air Infiltration per ASTM E283-04	@ 1.57 psf)	0.045 SCFM/FT ²
Air Exfiltration per ASTM E283-04	@ 1.57 psf)	0.040 SCFM/FT ²

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

		Results
Water Resistance per ASTM E331-00	@ 9.75 psf	No Leakage

Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.116"	0.003"	0.213"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.464"	0.048"	0.213"

Deflection/Set Locations:

Location 1: Center of Cam Locks.

Forced Entry – Passed – No Entry

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

STRUCTURAL TESTS (TAS 202)

Specimen 5 – 44.375" x 180.00" Aluminum Casement Window w/Fixed - (O/X/O)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

	Results
Air Infiltration per ASTM E283-04 @ 1.57 psf)	0.018 SCFM/FT ²
Air Exfiltration per ASTM E283-04 @ 1.57 psf)	0.193 SCFM/FT ²

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

	Results
Water Resistance per ASTM E331-00 @ 9.75 psf	No Leakage

Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.035"	0.001"	0.178"
			2	0.144"	0.000"	0.155"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.043"	0.000"	0.178"
			2	0.221"	0.024"	0.155"

Deflection/Set Locations:

- Location 1: Center of Transom.*
- Location 2: Top of Sash at Lock Stile.*

Forced Entry – Passed – No Entry

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

STRUCTURAL TESTS (TAS 202)

Specimen 6 – 44.375" x 180.00" Aluminum Casement Window w/Fixed - (O/X/O)

Design Pressure Positive 65.0 Negative 65.0

Structural Loads (ASTM E330-14)

	Results
Air Infiltration per ASTM E283-04 @ 1.57 psf)	SEE SPECIMEN 5 FOR THESE RESULTS
Air Exfiltration per ASTM E283-04 @ 1.57 psf)	SEE SPECIMEN 5 FOR THESE RESULTS.

Range	Time (sec)	Load (psf)
Half Test Positive	30	32.50
Design Positive	30	65.00
Half Test Negative	30	32.50
Design Negative	30	65.00

Water Resistance per ASTM E331-00 **SEE SPECIMEN 5 FOR THESE RESULTS.**

Range	Time (sec)	Load (psf)	Location	Deflection	Set	Allowable Set
Half Proof Positive	10	48.75				
Test Positive	30	97.50	1	0.045"	0.003"	0.178"
			2	0.106"	0.000"	0.155"
Half Proof Negative	10	48.75				
Test Negative	30	97.50	1	0.053"	0.009"	0.178"
			2	0.158"	0.035"	0.155"

Deflection/Set Locations:

*Location 1: Center of Transom.
Location 2: Top of Sash at Lock Stile.*

Forced Entry – Passed – No Entry

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 1a – 44.375" x 86.375" Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.00"	43.00"	49.8 fps
2	Pass	31.50"	14.00"	49.6 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.				

TAS 201 and 203– 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	1.81
0% to 60%	0.0 to 39.0	300	2.18
50% to 80%	32.5 to 52.0	600	1.76
30% to 100%*	19.5 to 65.0	100	2.82

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.74
50% to 80%	32.5 to 52.0	1050	2.18
0% to 60%	0.0 to 39.0	50	2.44
20% to 50%	13.0 to 32.5	3350	1.87

*Glass deflected 1.88" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 1b – 44.375" x 86.375" Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.00"	44.00"	50.3 fps
2	Pass	32.50"	12.50"	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.				

TAS 201 and 203– 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	2.36
0% to 60%	0.0 to 39.0	300	2.80
50% to 80%	32.5 to 52.0	600	2.33
30% to 100%*	19.5 to 65.0	100	2.79

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.82
50% to 80%	32.5 to 52.0	1050	2.01
0% to 60%	0.0 to 39.0	50	2.92
20% to 50%	13.0 to 32.5	3350	2.30

*Glass deflected 1.88" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 1c – 44.375" x 86.375" Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.50"	46.50"	49.6 fps
2	Pass	10.50"	78.00"	49.5 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.				

TAS 201 and 203– 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	1.63
0% to 60%	0.0 to 39.0	300	2.19
50% to 80%	32.5 to 52.0	600	1.50
30% to 100%*	19.5 to 65.0	100	2.30

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.01
50% to 80%	32.5 to 52.0	1050	1.75
0% to 60%	0.0 to 39.0	50	2.05
20% to 50%	13.0 to 32.5	3350	1.18

*Glass deflected 1.88" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 2a – 42.00” x 84.00” Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	23.50"	45.50"	49.3 fps
2	Pass	31.00"	10.50"	49.8 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.				

TAS 201 and 203– 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	1.90
0% to 60%	0.0 to 39.0	300	2.74
50% to 80%	32.5 to 52.0	600	1.76
30% to 100%*	19.5 to 65.0	100	2.28

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.40
50% to 80%	32.5 to 52.0	1050	1.94
0% to 60%	0.0 to 39.0	50	2.56
20% to 50%	13.0 to 32.5	3350	1.75

*Glass deflected 2.75" from original plane at 100% Positive load and 3.25" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 3a – 42.00” x 84.00” Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	20.50"	42.50"	50.1 fps
2	Pass	32.50"	9.00"	49.8 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.				

TAS 201 and 203– 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	2.00
0% to 60%	0.0 to 39.0	300	2.75
50% to 80%	32.5 to 52.0	600	2.55
30% to 100%*	19.5 to 65.0	100	2.45

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.76
50% to 80%	32.5 to 52.0	1050	2.21
0% to 60%	0.0 to 39.0	50	2.88
20% to 50%	13.0 to 32.5	3350	2.35

*Glass deflected 2.50” from original plane at 100% Positive load and 2.63” 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 3c – 42.00" x 84.00" Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.00"	46.50"	49.8 fps
2	Pass	31.25"	8.50"	49.5 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.				

TAS 201 and 203– 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	1.97
0% to 60%	0.0 to 39.0	300	2.16
50% to 80%	32.5 to 52.0	600	1.64
30% to 100%*	19.5 to 65.0	100	2.25

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.63
50% to 80%	32.5 to 52.0	1050	2.00
0% to 60%	0.0 to 39.0	50	2.41
20% to 50%	13.0 to 32.5	3350	1.95

*Glass deflected 2.13" from original plane at 100% Positive load and 3.25" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 4a – 42.00” x 84.00” Aluminum Casement Window (X)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	21.00"	41.00"	50.1 fps
2	Pass	32.50"	10.50"	50.2 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.				

TAS 201 and 203– 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	2.20
0% to 60%	0.0 to 39.0	300	2.16
50% to 80%	32.5 to 52.0	600	1.69
30% to 100%*	19.5 to 65.0	100	2.10

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	2.40
50% to 80%	32.5 to 52.0	1050	1.70
0% to 60%	0.0 to 39.0	50	2.75
20% to 50%	13.0 to 32.5	3350	1.35

*Glass deflected 2.25” from original plane at 100% Positive load and 2.25” 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 5a – 44.375” x 180.00” Aluminum Casement Window w/Fixed - (O/X/O)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.00"	105.00"	50.0 fps
2	Pass	33.25"	72.00"	49.9 fps
3	Pass	22.50"	30.50"	50.1 fps
4	Pass	35.50"	10.50"	49.8 fps
5	Pass	22.00"	60.00"	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.				

TAS 201 and 203– 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	1.30
0% to 60%	0.0 to 39.0	300	1.71
50% to 80%	32.5 to 52.0	600	1.20
30% to 100%*	19.5 to 65.0	100	2.05

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	1.35
50% to 80%	32.5 to 52.0	1050	1.15
0% to 60%	0.0 to 39.0	50	2.28
20% to 50%	13.0 to 32.5	3350	1.21

*Glass deflected 2.25" from original plane at 100% Positive load and 2.25" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

IMPACT AND CYCLING TESTS (TAS 201/203)

Specimen 6a – 44.375” x 180.00” Aluminum Casement Window w/Fixed - (O/X/O)

TAS 201 and 203 – Large Missile Impact (2 x 4 Southern Yellow Pine)

Cond. Temp Of Specimen	Missile Level	Missile Weight	Missile Length	Muzzle Distance From Specimen
75°F	D	8.0 lbs, 14 oz	7'-10"	17'2"

Impact Location	Results	X - Measurement	Y - Measurement	Speed
1	Pass	22.50"	104.50"	49.8 fps
2	Pass	35.00"	70.00"	49.9 fps
3	Pass	23.00"	30.50"	50.0 fps
4	Pass	36.00"	10.00"	50.0 fps
5	Pass	22.25"	60.00"	49.8 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.				

TAS 201 and 203– 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	1.05
0% to 60%	0.0 to 39.0	300	1.72
50% to 80%	32.5 to 52.0	600	1.06
30% to 100%*	19.5 to 65.0	100	1.70

Negative % of Test Load	Negative Pressure Range (psf)	Number Of Cycles	Average Cycle Time (Sec)
30% to 100%*	19.5 to 65.0	50	1.57
50% to 80%	32.5 to 52.0	1050	1.40
0% to 60%	0.0 to 39.0	50	2.39
20% to 50%	13.0 to 32.5	3350	1.37

*Glass deflected 3.00" 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.

Christian Seifried, Test Technician

Mfg Observers – Corey Jones

General Note:

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

Drawing Reference:

The test specimen drawings have been reviewed by TEL and are representative of the test specimens reported herein.

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 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.

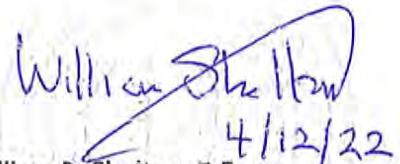
Testing Evaluation Laboratories, Inc.'s letter, reports, its name or insignia or mark are for the exclusive use of the client so named herein and any other use is strictly prohibited. The report, letters and the name of Testing Evaluation Laboratories, Inc., its seal or mark shall not be used in any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



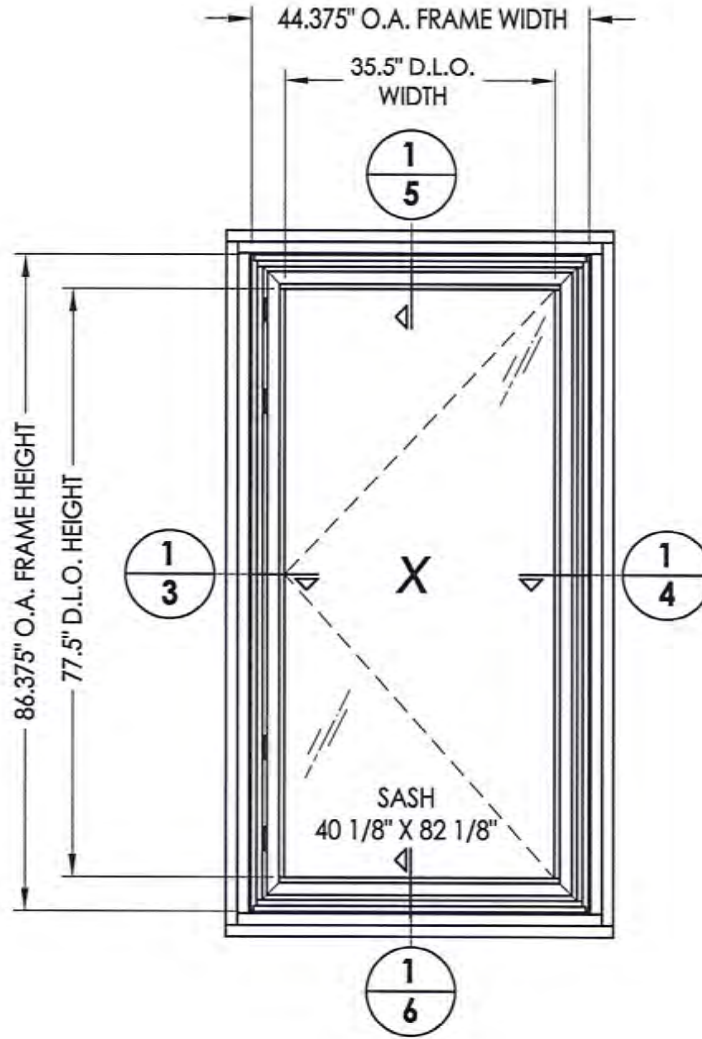
Vivian K. Wright,
President




William B. Sheiton, P.E.
Florida P.E. # 26686

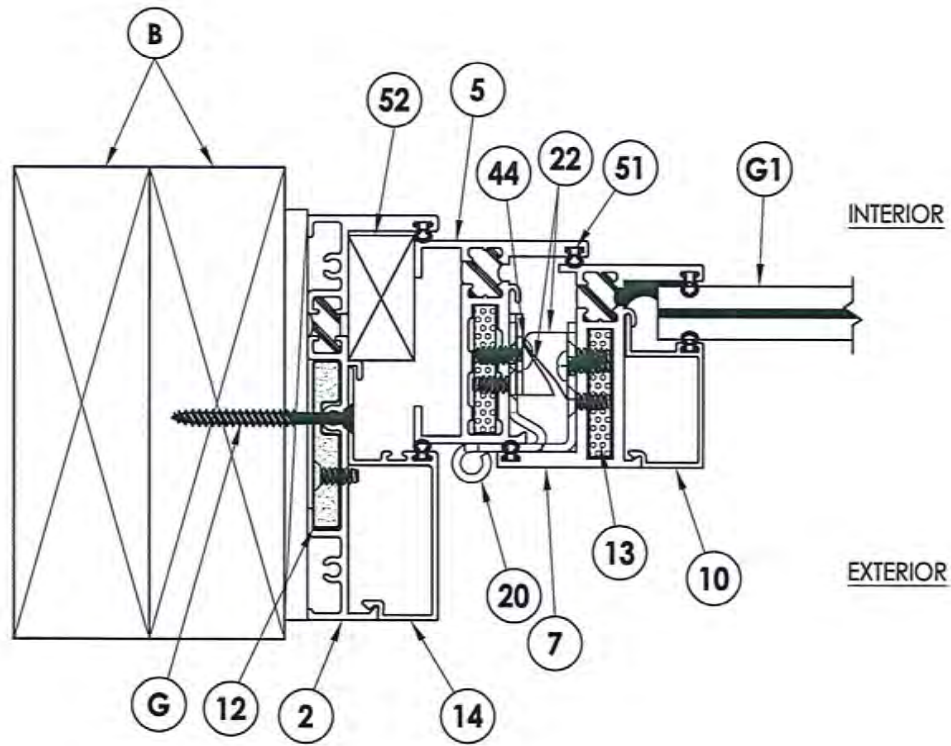
Revision Log

Rev No.	Date	Page(s)	Revision(s)
0	12/14/2021	NA	Original Report Issue
1	3/19/2022	Report page 1	Corrected identification of product (name)



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

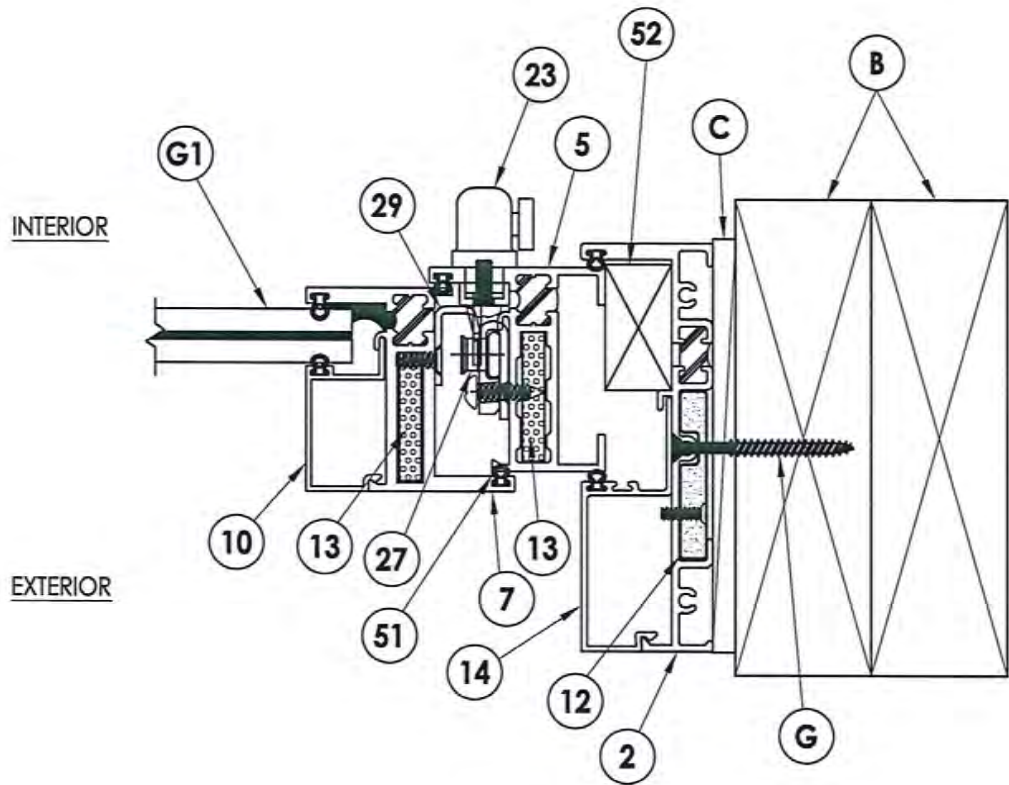
PRODUCT: FLEETWOOD SPEC. 1, 1a, 1b, 1c		PART OR ASSEMBLY: TEST ELEVATIONS	
NO.	DATE	BY	REVISIONS
			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9484			
SHEET 2 OF 9			



1 HORIZONTAL CROSS SECTION
3

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

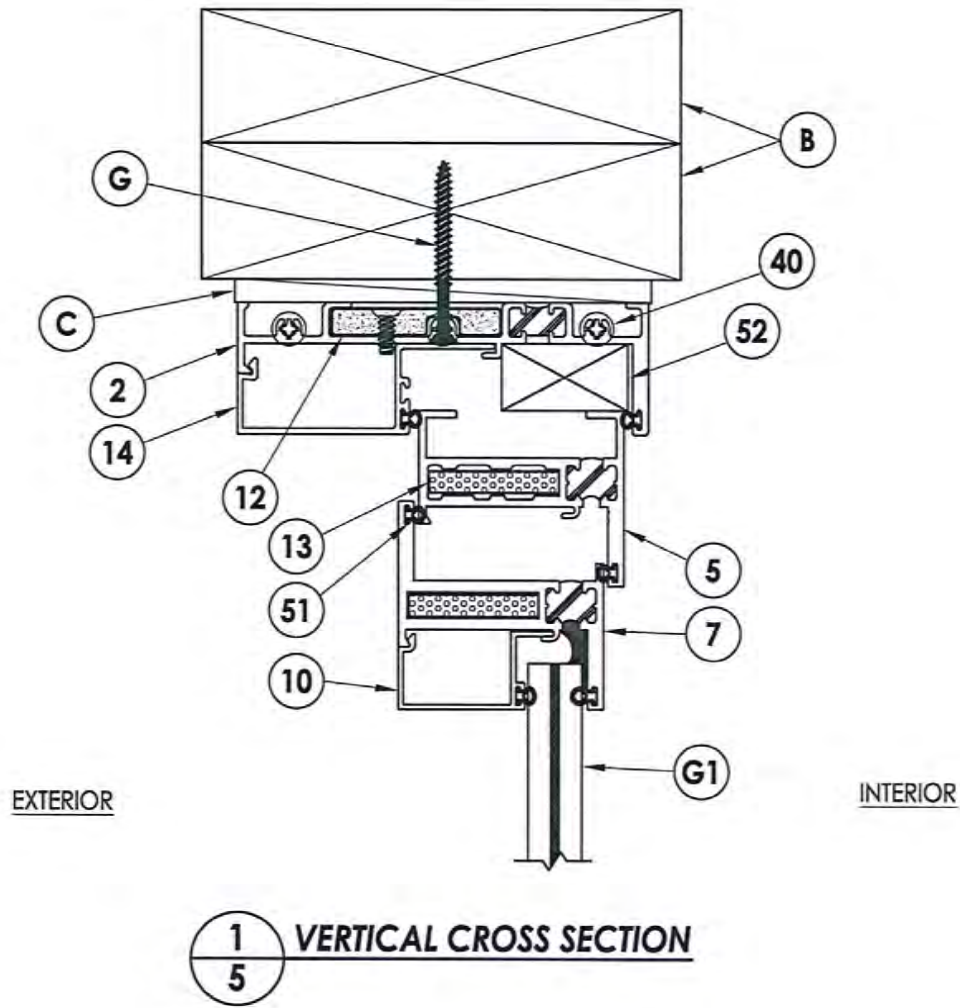
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PART OR ASSEMBLY:		CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9484			
SHEET 3 OF 9			




1
4 HORIZONTAL CROSS SECTION

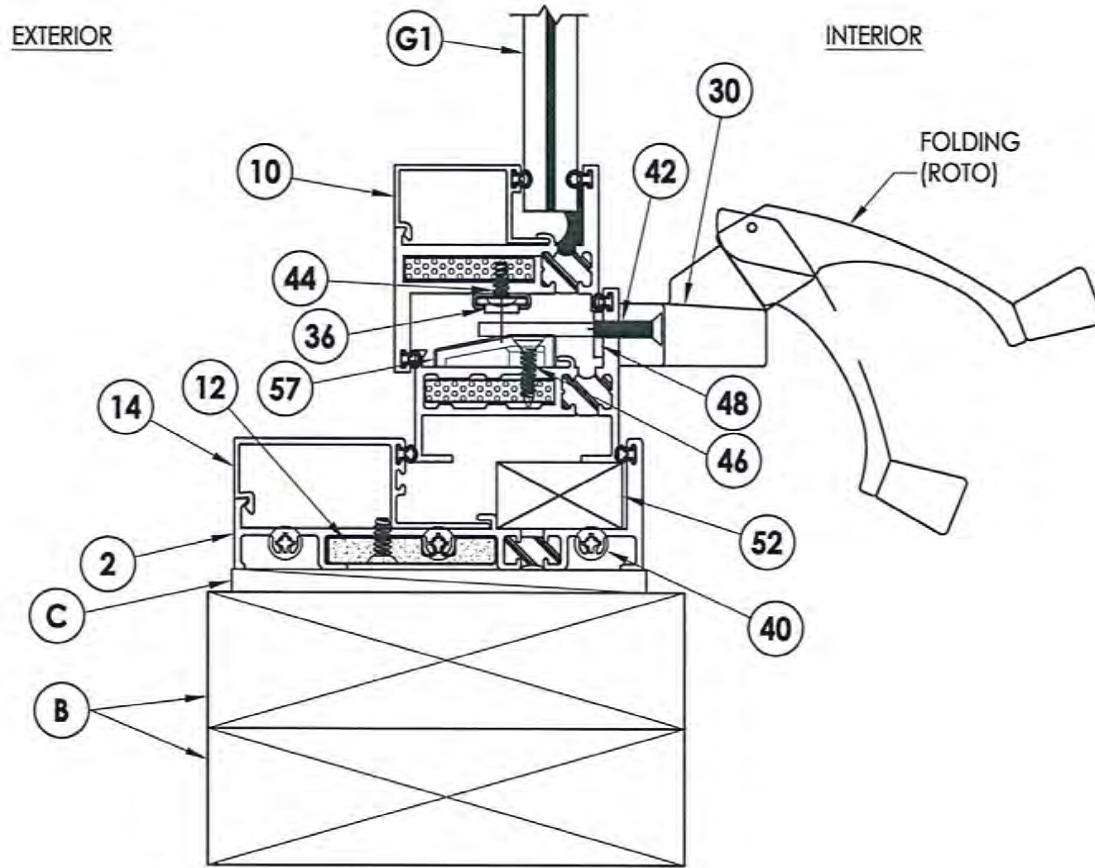
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 1, 1a, 1b, 1c	
PART OR ASSEMBLY:		CROSS SECTION	
NO.	DATE	REVISIONS	BY
<div style="border: 1px solid black; padding: 5px; text-align: center;"> RW BUILDING CONSULTANTS, INC. 813.659.9197 </div>			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.:			
L-9484			
SHEET <u>4</u> OF <u>9</u>			



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

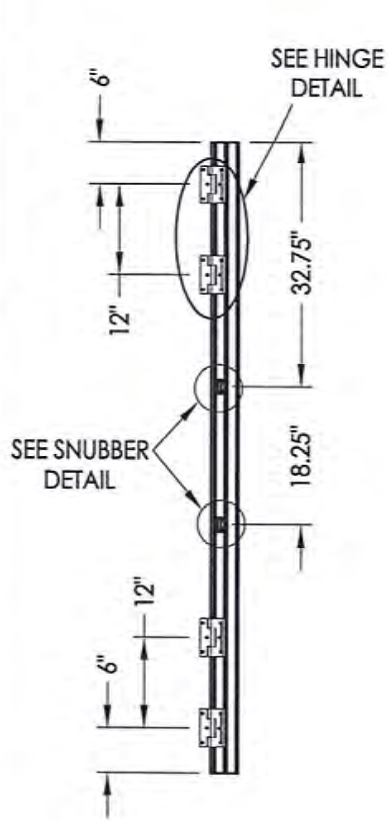
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NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9484			
SHEET 5 OF 9			



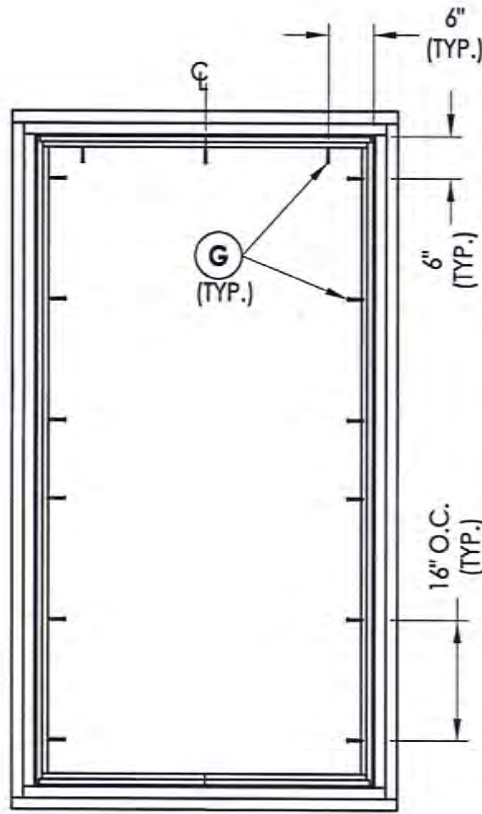
1 **VERTICAL CROSS SECTION**
6

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

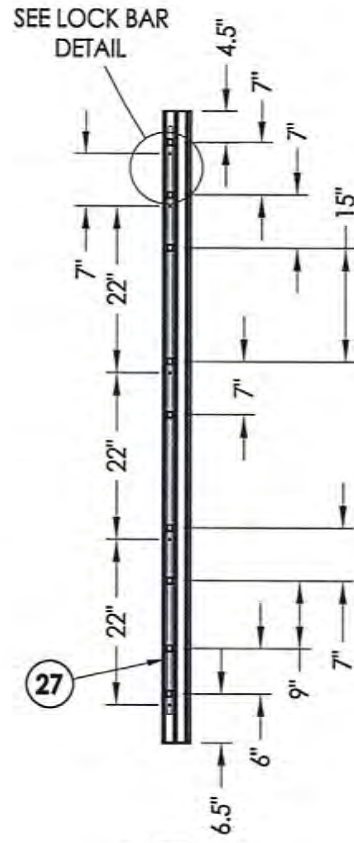
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NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9484			
SHEET <u>6</u> OF <u>9</u>			



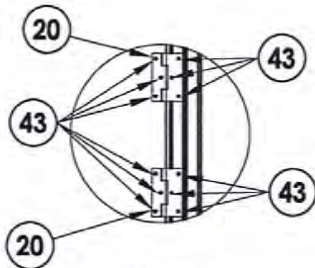
HINGE JAMB



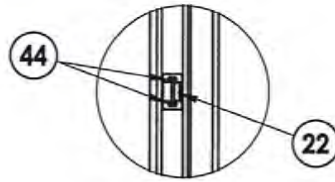
**FRAME ANCHORING
2X TEST BUCK**



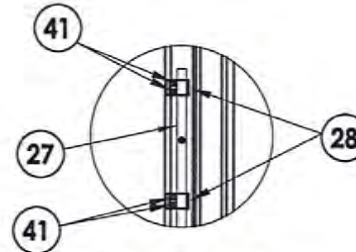
**LOCK JAMB
LOCKING POINTS (5)**



HINGE DETAIL



SNUBBER DETAIL



LOCK BAR DETAIL

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:

FLEETWOOD
 SPEC. 1, 1a, 1b, 1c

PART OR ASSEMBLY:

FRAME ANCHORING

NO.	DATE	BY	REVISIONS

RW BUILDING
 CONSULTANTS, INC.
 813.659.9197

DATE: 10/19/21

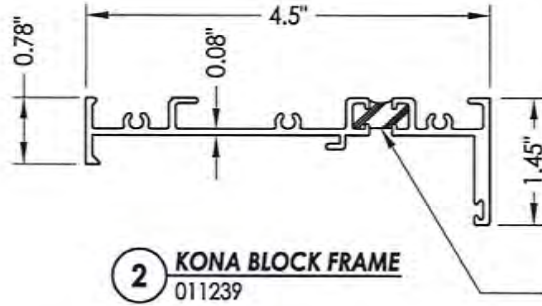
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DWG. BY: LFS

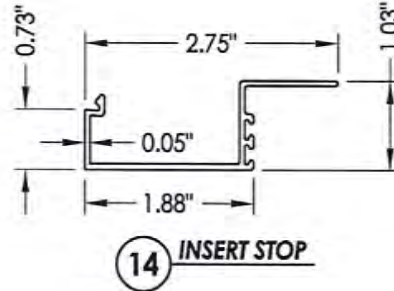
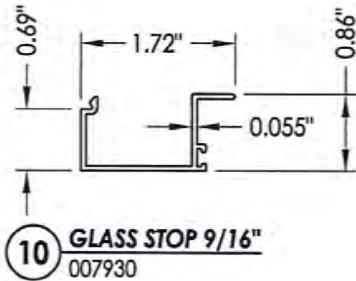
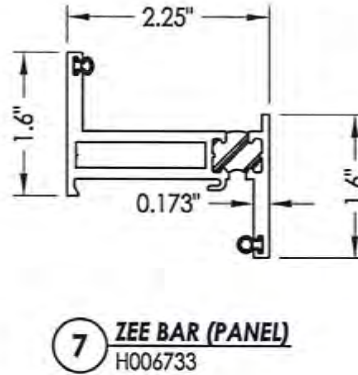
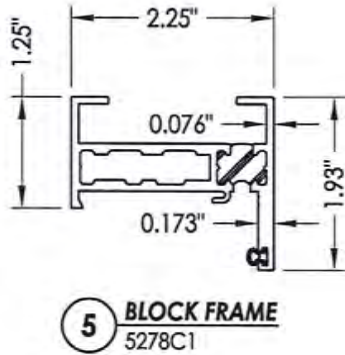
CHK. BY: RW

DRAWING NO.:
 L-9484

SHEET 7 OF 9



THERMAL BREAK
(LIQUID POLYURETHANE)
BY AZON
(TYP.)

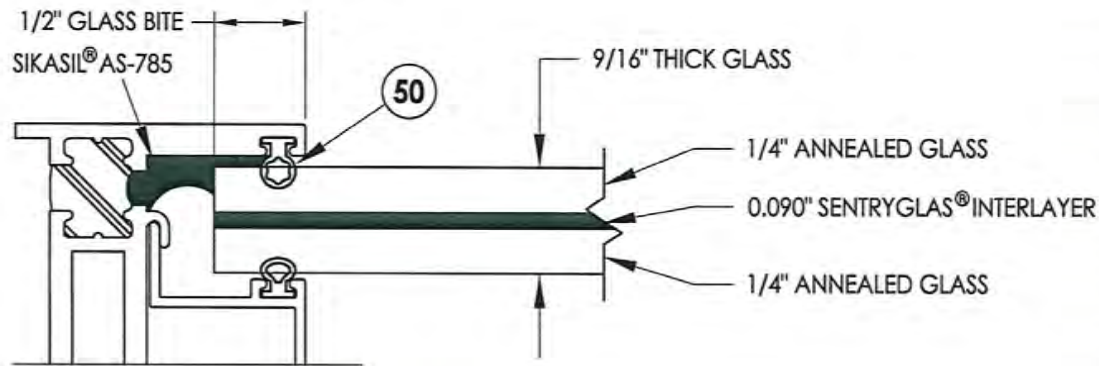


Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 1, 1a, 1b, 1c	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-9484			
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 2-1/2" PFH WOOD SCREW	STEEL
2	KONA BLOCK FRAME	6063-T6 ALUM
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
10	GLASS STOP 9/16"	6063-T6 ALUM
12	SHEAR BLOCK	6061-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
14	INSERT STOP	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER - COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
27	5 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	-
29	KEEPER	SS
30	CASEMENT ROTOR GEAR	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
41	SCREW NO 8, PHP, .750"	STEEL
42	MACHINE SCREW NO 10-32, FHP .75"	STEEL
43	SCREW NO 10, UFHP .5"	STEEL
44	SCREW NO 10, PHP, .50"	STEEL
46	SCREW NO 8, FHP, .750"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
52	WOOD BLOCK (3/4" X 1-1/4")	-
57	PIVOT SHIM	-




G1 GLAZING DETAIL

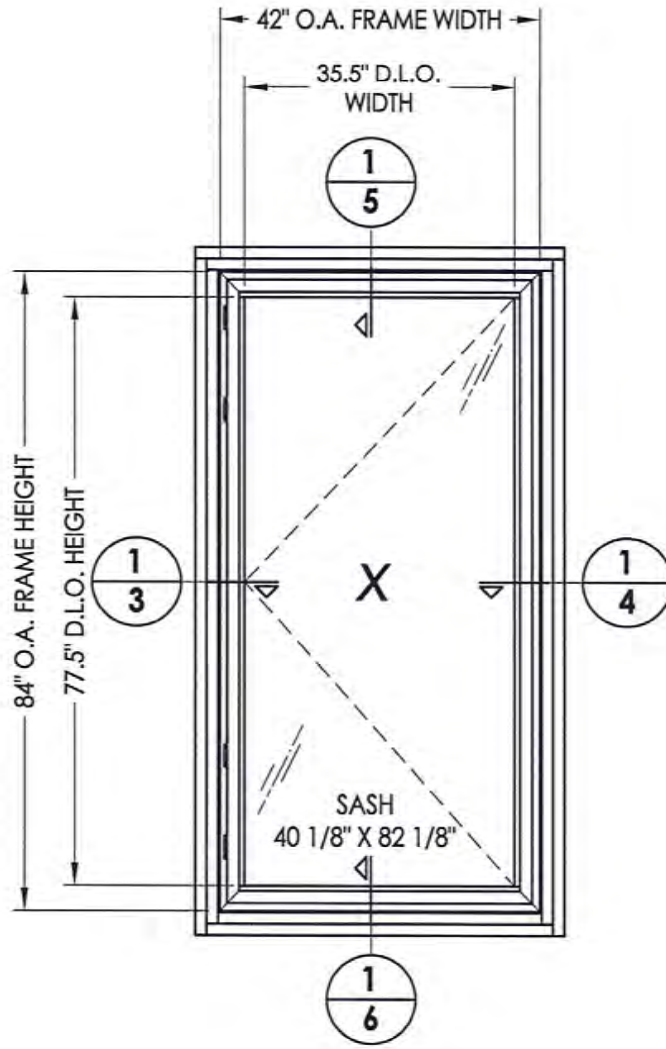
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 1, 1a, 1b, 1c	
PART OR ASSEMBLY:		COMPONENTS & GLAZING DETAILS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9484			
SHEET 9 OF 9			

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of Contents
2	Test Elevation
3	Horizontal Cross Section
4	Horizontal Cross Section
5	Vertical Cross Section
6	Vertical Cross Section
7	Frame Anchoring
8	Glazing Detail
9	Bill of Materials & Components

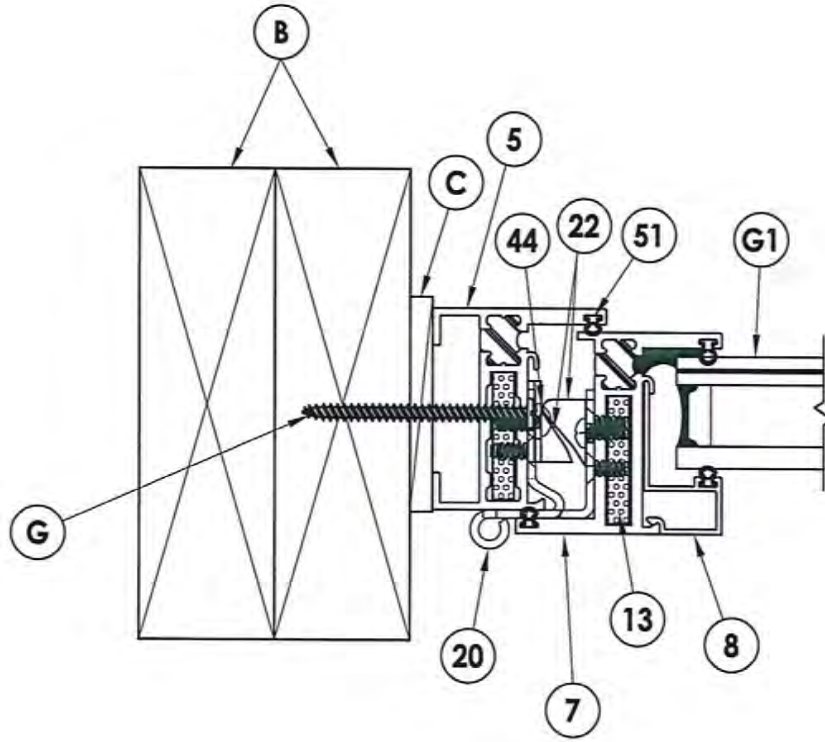
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 2, 2a	
PART OR ASSEMBLY: TABLE OF CONTENTS	
	BY
	REVISIONS
	NO. DATE
	BY
	
DATE: 10/19/21	
SCALE: N.T.S.	
DWG. BY: LFS	
CHK. BY: RW	
DRAWING NO.: L-9485	
SHEET <u>1</u> OF <u>9</u>	




Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

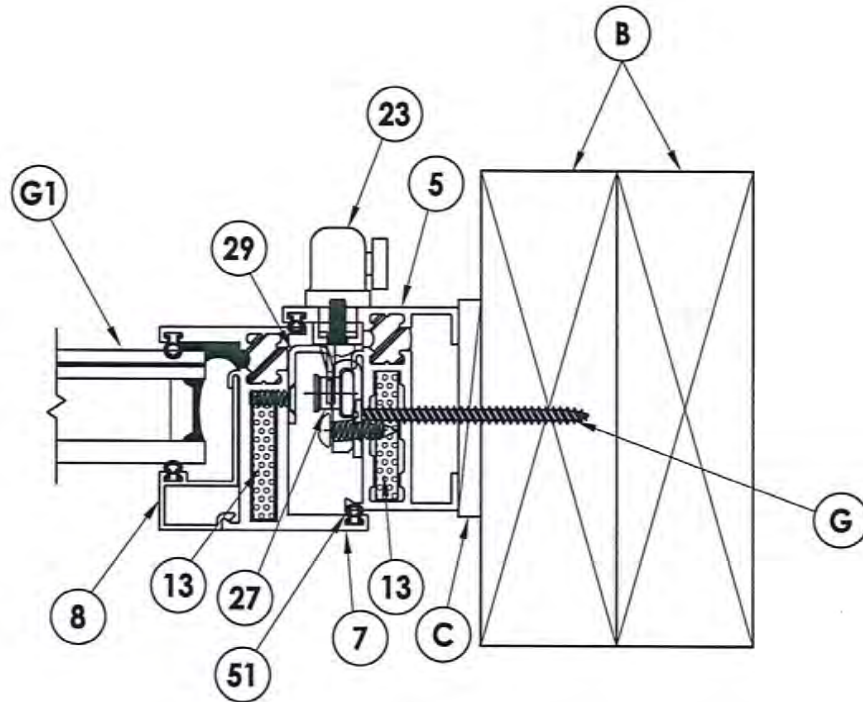
PRODUCT:		FLEETWOOD SPEC. 2, 2a	
PART OR ASSEMBLY:		TEST ELEVATIONS	
NO.	DATE	REVISIONS	BY
			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET 2 OF 9			



1 HORIZONTAL CROSS SECTION
3

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

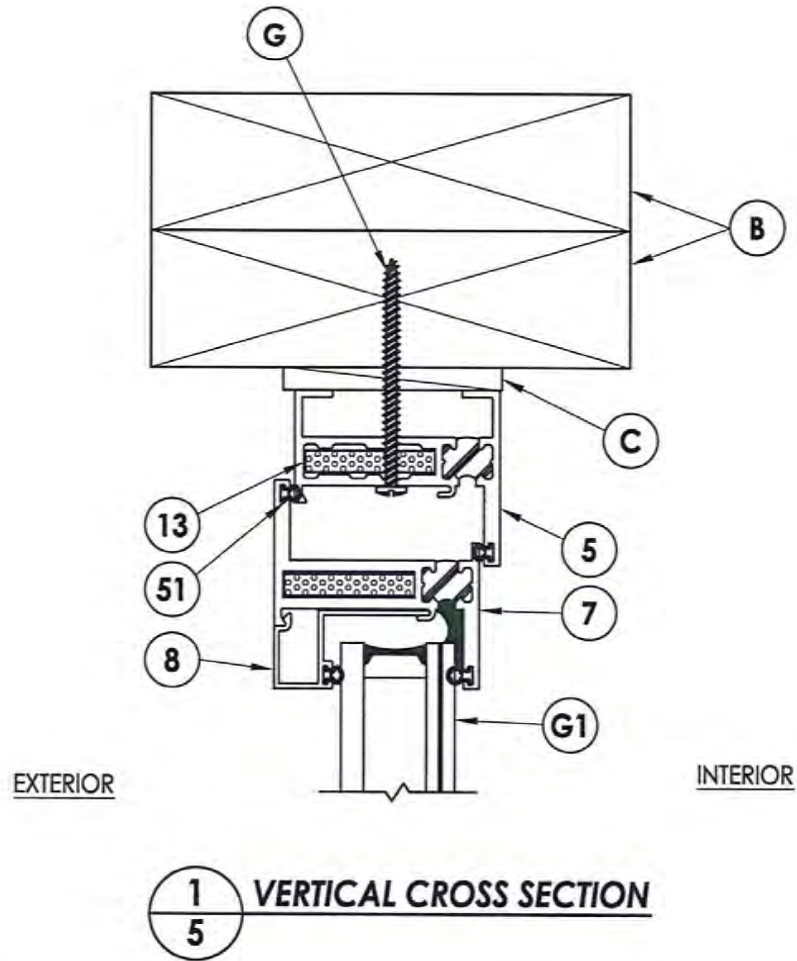
PRODUCT: FLEETWOOD SPEC. 2, 2a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET <u>3</u> OF <u>9</u>			



1
4 HORIZONTAL CROSS SECTION

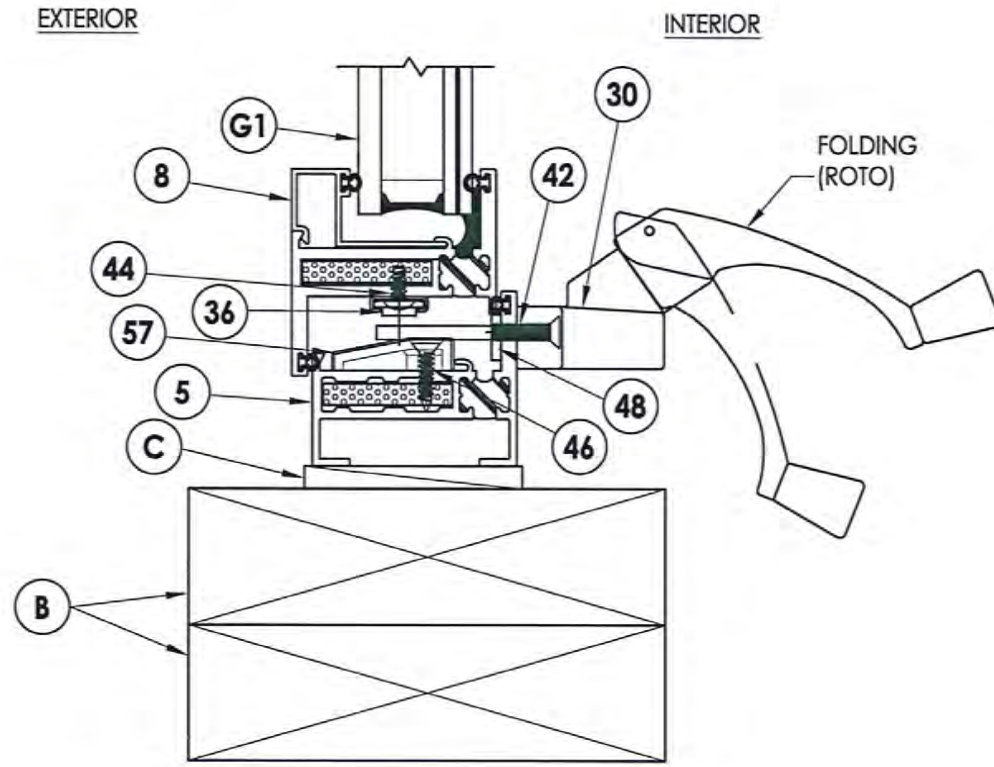
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 2, 2a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET 4 OF 9			



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

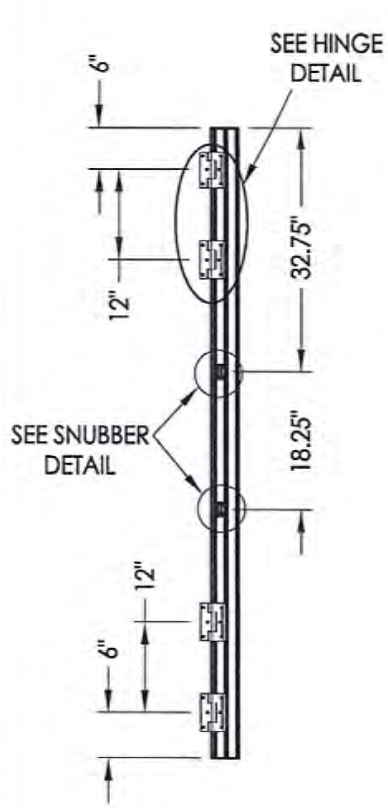
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		NO.	DATE
		BY	REVISIONS
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DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET <u>5</u> OF <u>9</u>			



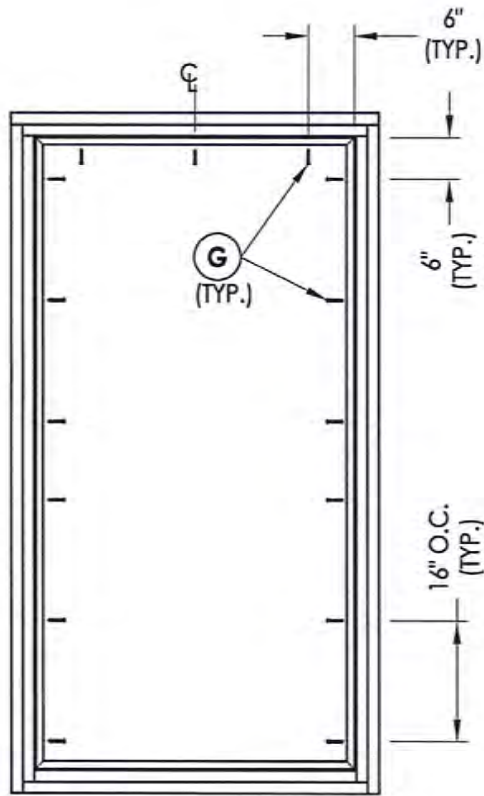
1 **VERTICAL CROSS SECTION**
6

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 2, 2a	
PART OR ASSEMBLY:		CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET 6 OF 9			



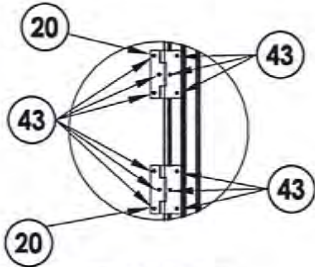
HINGE JAMB



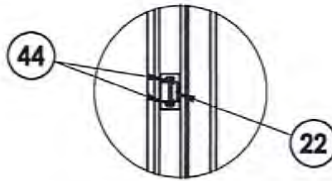
**FRAME ANCHORING
2X TEST BUCK**



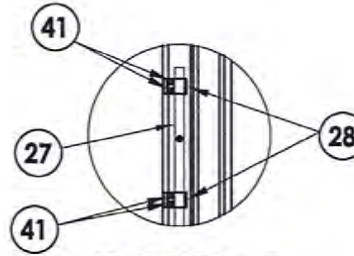
**LOCK JAMB
LOCKING POINTS (5)**



HINGE DETAIL



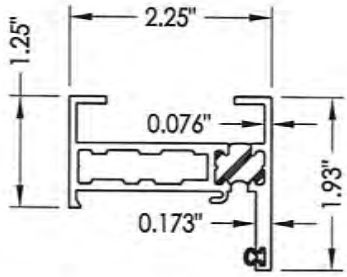
SNUBBER DETAIL



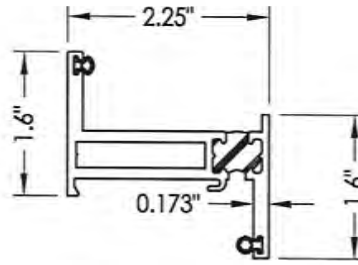
LOCK BAR DETAIL

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

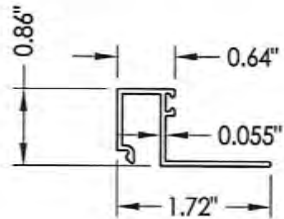
PRODUCT: FLEETWOOD SPEC. 2, 2a		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9485			
SHEET 7 OF 9			



5 **BLOCK FRAME**
5278C1



7 **ZEE BAR (PANEL)**
H006733



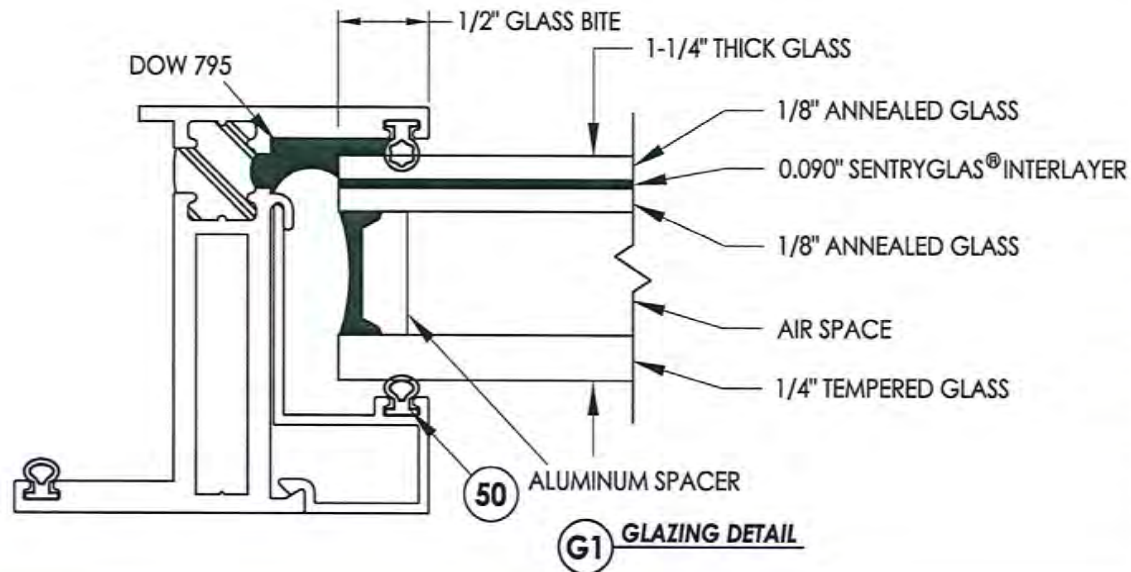
8 **GLASS STOP 1-1/4"**
901487

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 2, 2a	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.:			
L-9485			
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 2-1/2" PPH SMS	STEEL
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP 1-1/4"	6063-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
27	5 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	-
29	KEEPER	SS
30	CASEMENT ROTOR GEAR	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
41	SCREW NO 8, PHP, .750"	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
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
57	PIVOT SHIM	-



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:

FLEETWOOD
 SPEC. 2, 2a

PART OR ASSEMBLY:

COMPONENTS &
 GLAZING DETAILS

NO.	DATE	BY	REVISIONS

RW BUILDING
 CONSULTANTS, INC.
 813.659.9197

DATE: 10/19/21

SCALE: N.T.S.

DWG. BY: LFS

CHK. BY: RW

DRAWING NO.:

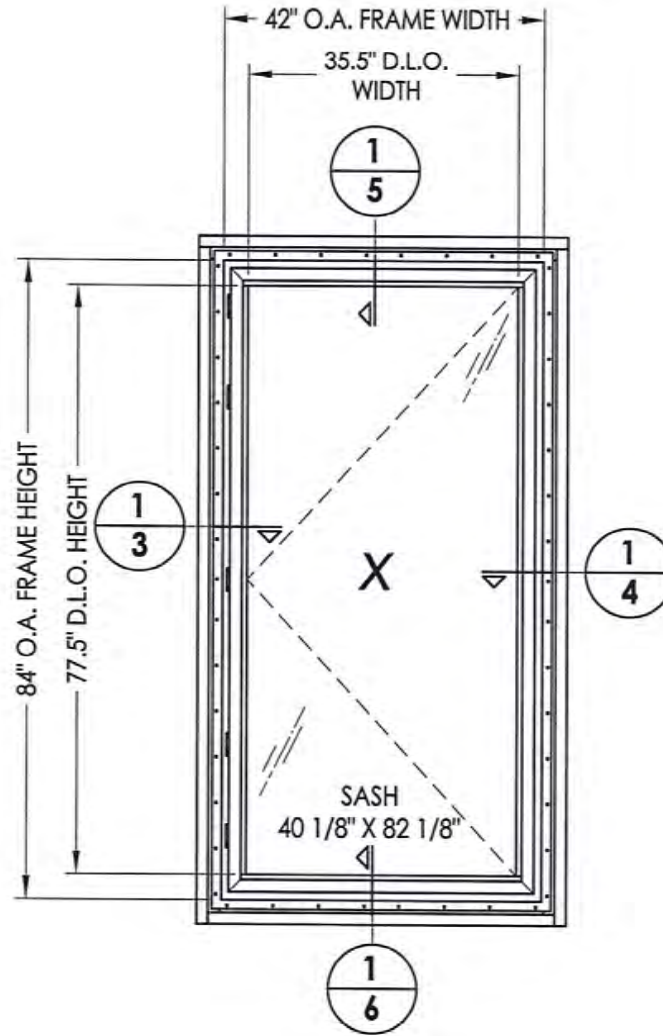
L-9485

SHEET 9 OF 9


TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of Contents
2	Test Elevation
3	Horizontal Cross Section
4	Horizontal Cross Section
5	Vertical Cross Section
6	Vertical Cross Section
7	Frame Anchoring
8	Glazing Detail
9	Bill of Materials & Components

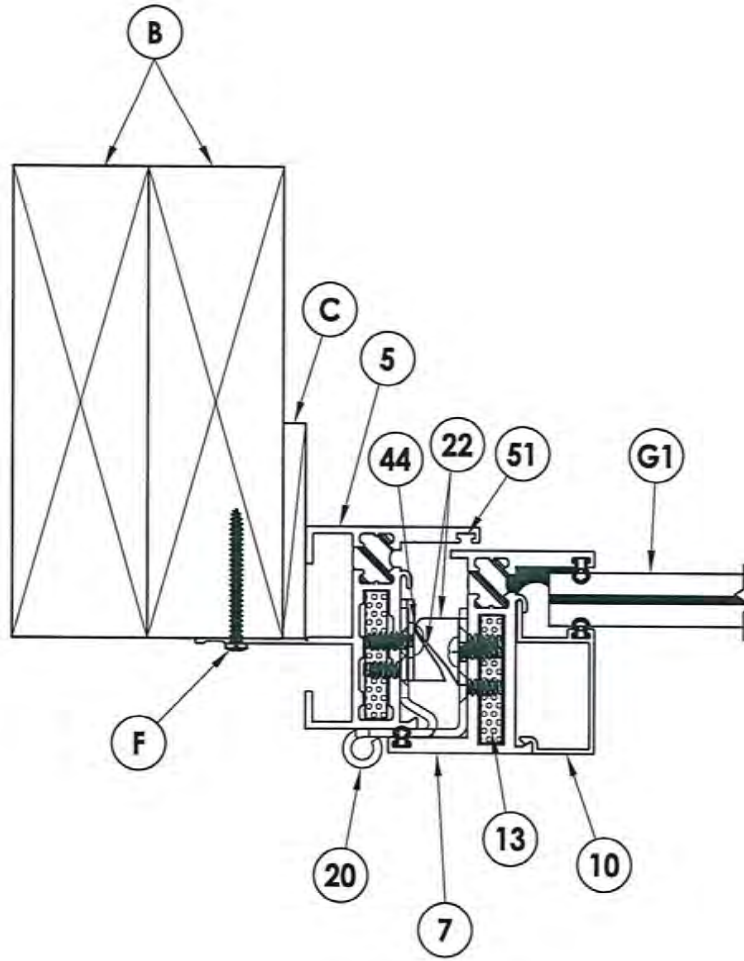
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PART OR ASSEMBLY: TABLE OF CONTENTS	
	BY
	REVISIONS
	DATE
	NO.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> RW BUILDING CONSULTANTS, INC. 813.659.9197 </div>	
DATE: 10/19/21	
SCALE: N.T.S.	
DWG. BY: LFS	
CHK. BY: RW	
DRAWING NO.: L-9486	
SHEET 1 OF 9	

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

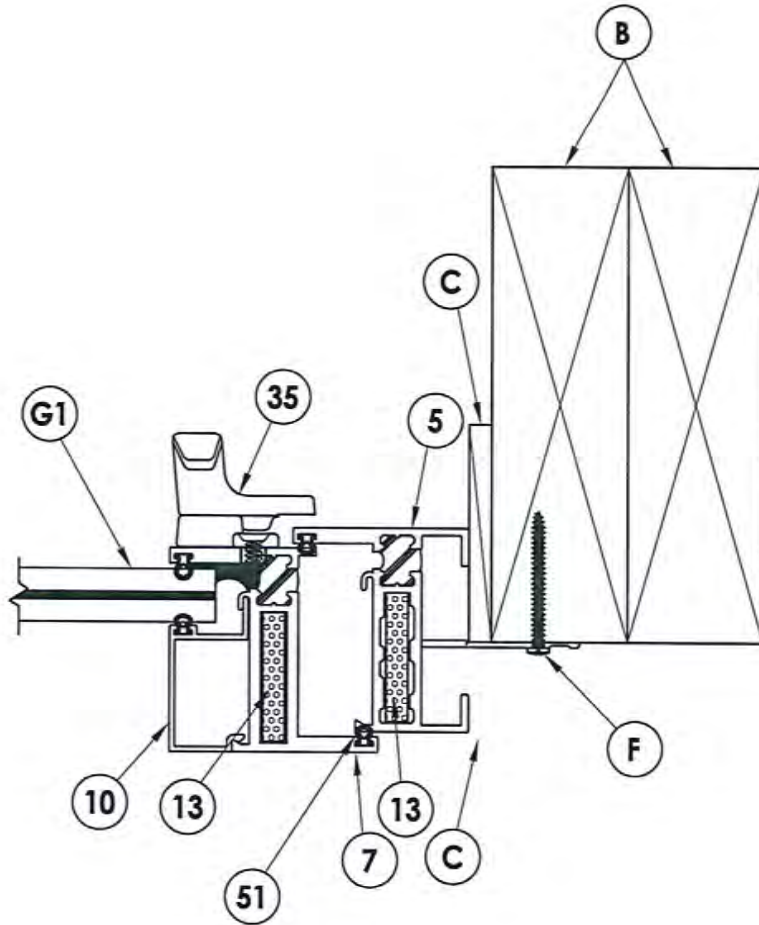
PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: TEST ELEVATIONS	
NO.	DATE	REVISIONS	BY
			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET <u>2</u> OF <u>9</u>			



1
3 HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET 3 OF 9			

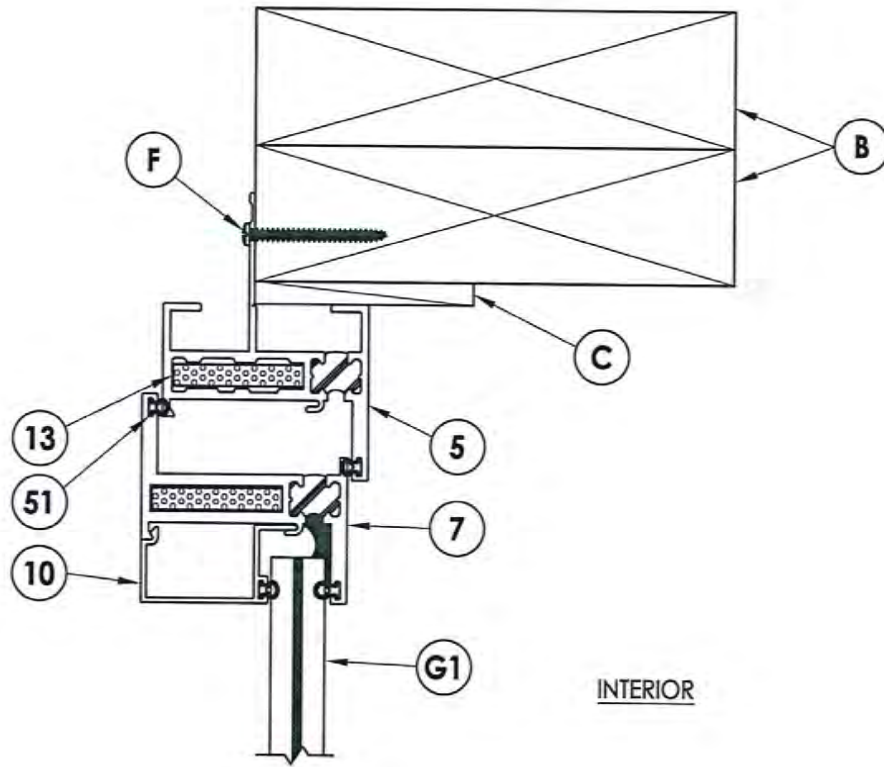


1
4 **HORIZONTAL CROSS SECTION**

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 3, 3a	
PART OR ASSEMBLY:		CROSS SECTION	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.:			
L-9486			
SHEET <u>4</u> OF <u>9</u>			

EXTERIOR



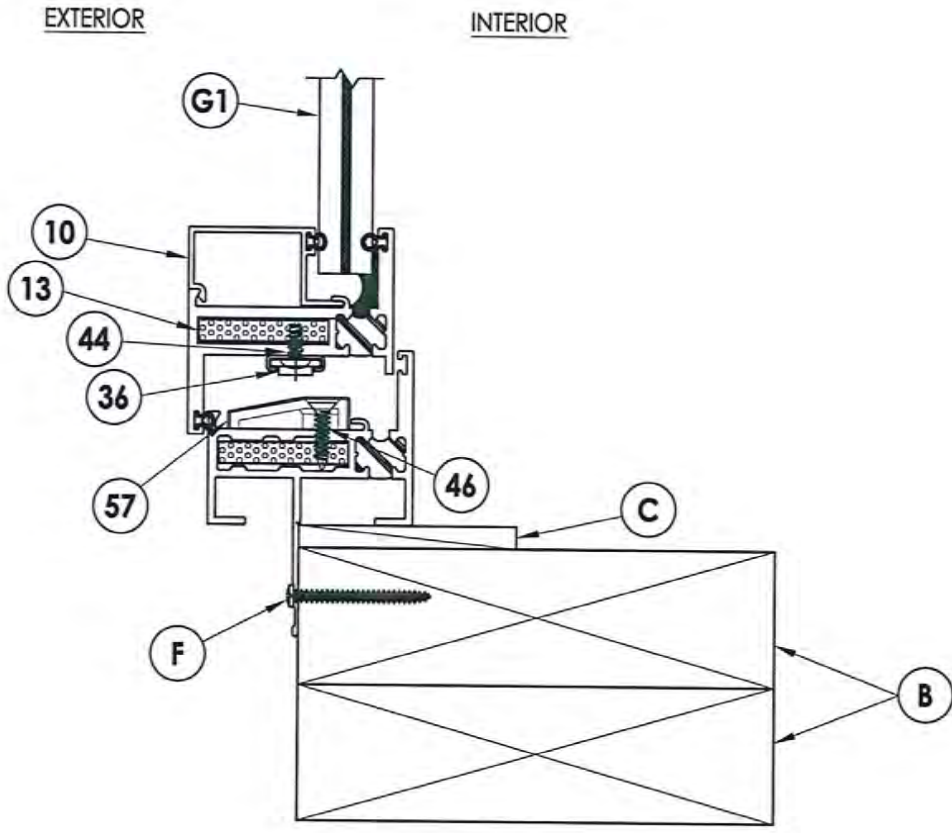
INTERIOR

1
5
VERTICAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: CROSS SECTION	
			BY
			REVISIONS
		NO.	DATE
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET 5 OF 9			

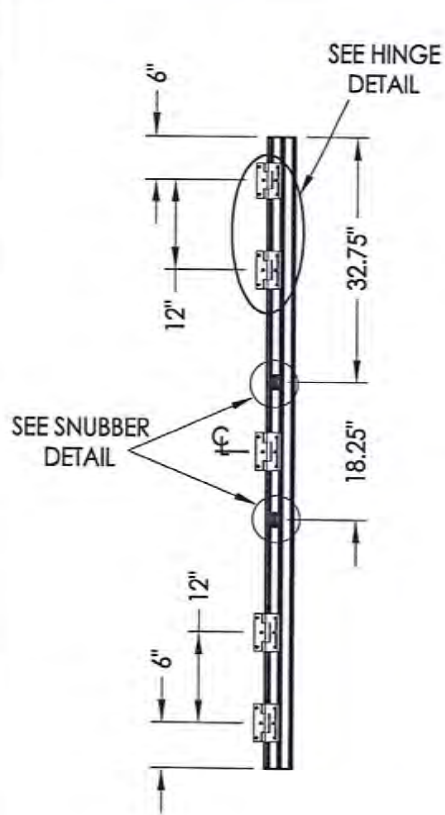
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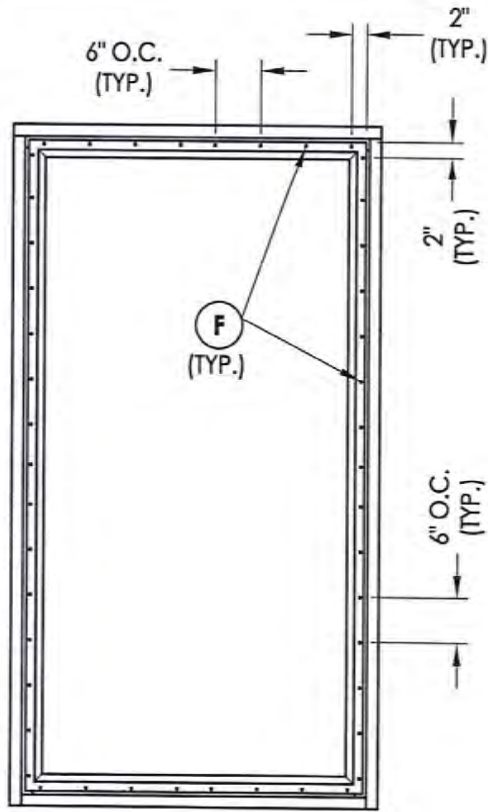
1
6 **VERTICAL CROSS SECTION**

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

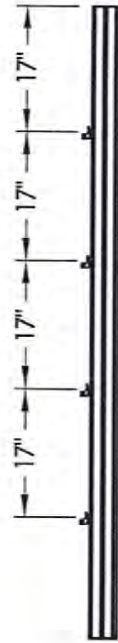
PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET 6 OF 9			



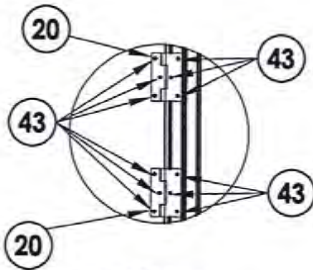
HINGE JAMB



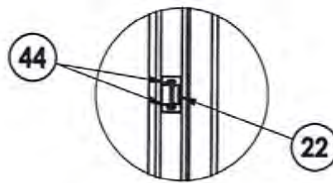
**FRAME ANCHORING
2X TEST BUCK**



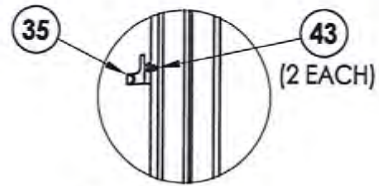
**LOCK JAMB
CAM LOCKING POINTS (4)**



HINGE DETAIL



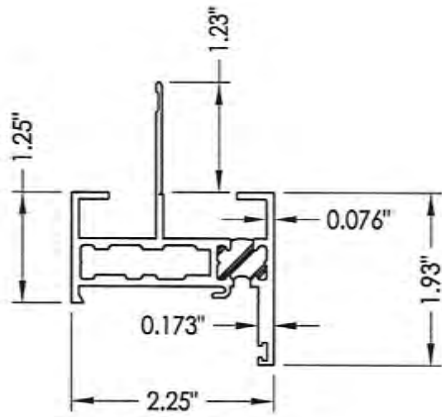
SNUBBER DETAIL



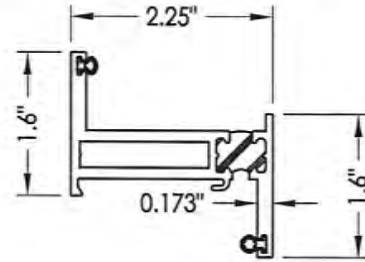
CAM LOCK DETAIL

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

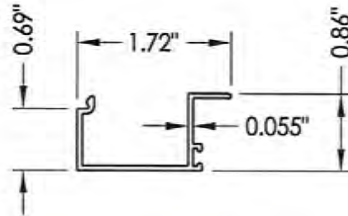
PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET 7 of 9			



5 BLOCK FRAME
5278C1



7 ZEE BAR (PANEL)
H006733



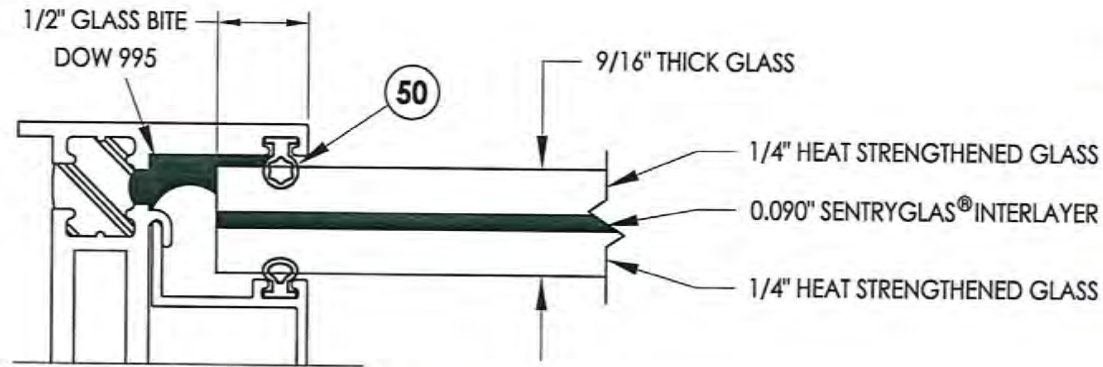
10 GLASS STOP 9/16"
007930

Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 3, 3a	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.:			
L-9486			
SHEET 8 OF 9			

BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#8 X 1-1/2" PPH SMS	STEEL
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
10	GLASS STOP 9/16"	6063-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
35	CAM HANDLE / STRIKE PLATE	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
43	SCREW NO 10 , UFHP 0.5"	STEEL
44	SCREW NO 8, PHP, 0.5"	STEEL
46	SCREW NO 8, FHP, 0.75"	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
57	PIVOT SHIM	-



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

G1 GLAZING DETAIL


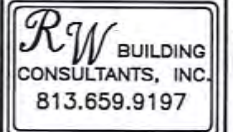
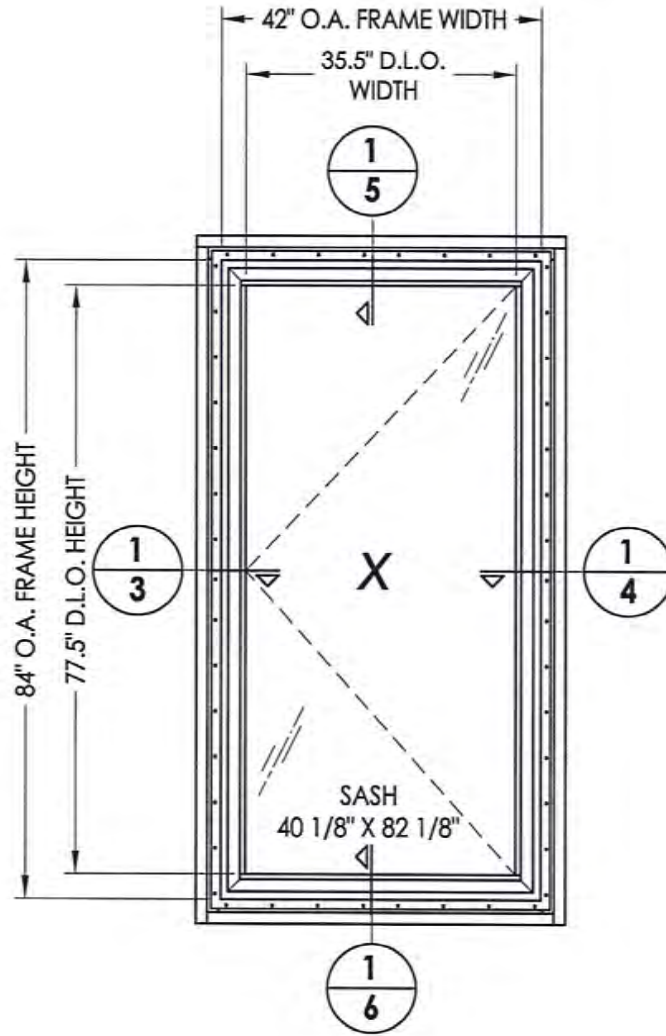
PRODUCT: FLEETWOOD SPEC. 3, 3a		PART OR ASSEMBLY: COMPONENTS & GLAZING DETAILS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9486			
SHEET 9 OF 9			

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of Contents
2	Test Elevation
3	Horizontal Cross Section
4	Horizontal Cross Section
5	Vertical Cross Section
6	Vertical Cross Section
7	Frame Anchoring
8	Glazing Detail
9	Bill of Materials & Components

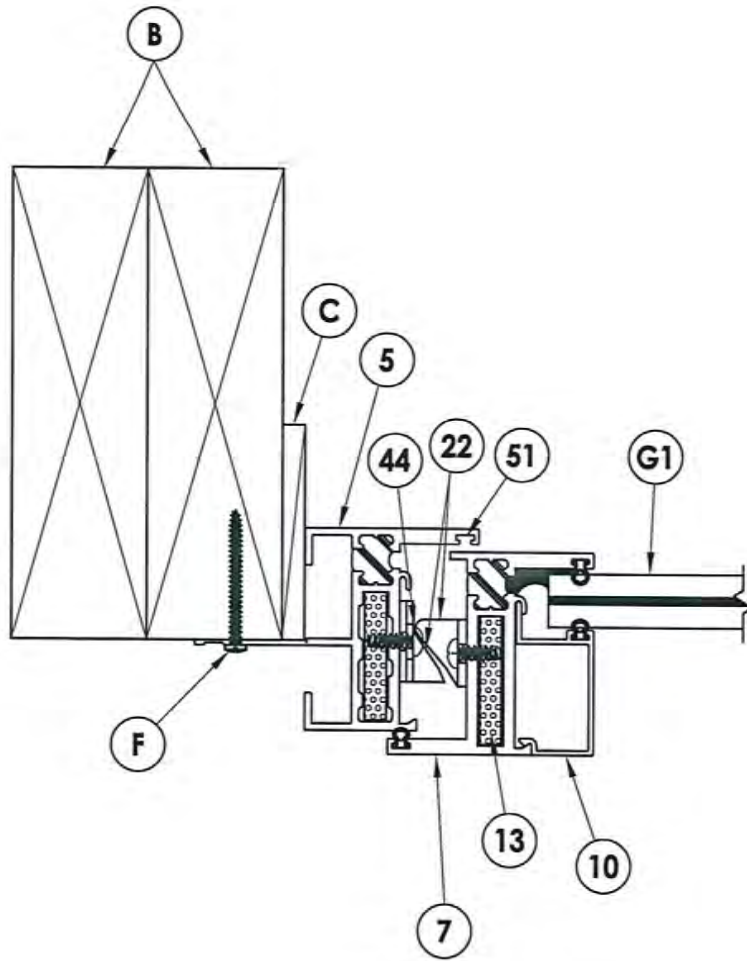
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC: 3b, 3c	
PART OR ASSEMBLY: TABLE OF CONTENTS	
NO.	DATE
REVISIONS	
BY	
 RW BUILDING CONSULTANTS, INC. 813.659.9197	
DATE: <u>10/19/21</u>	
SCALE: <u>N.T.S.</u>	
DWG. BY: <u>LFS</u>	
CHK. BY: <u>RW</u>	
DRAWING NO.: <u>L-9487</u>	
SHEET <u>1</u> OF <u>9</u>	



Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

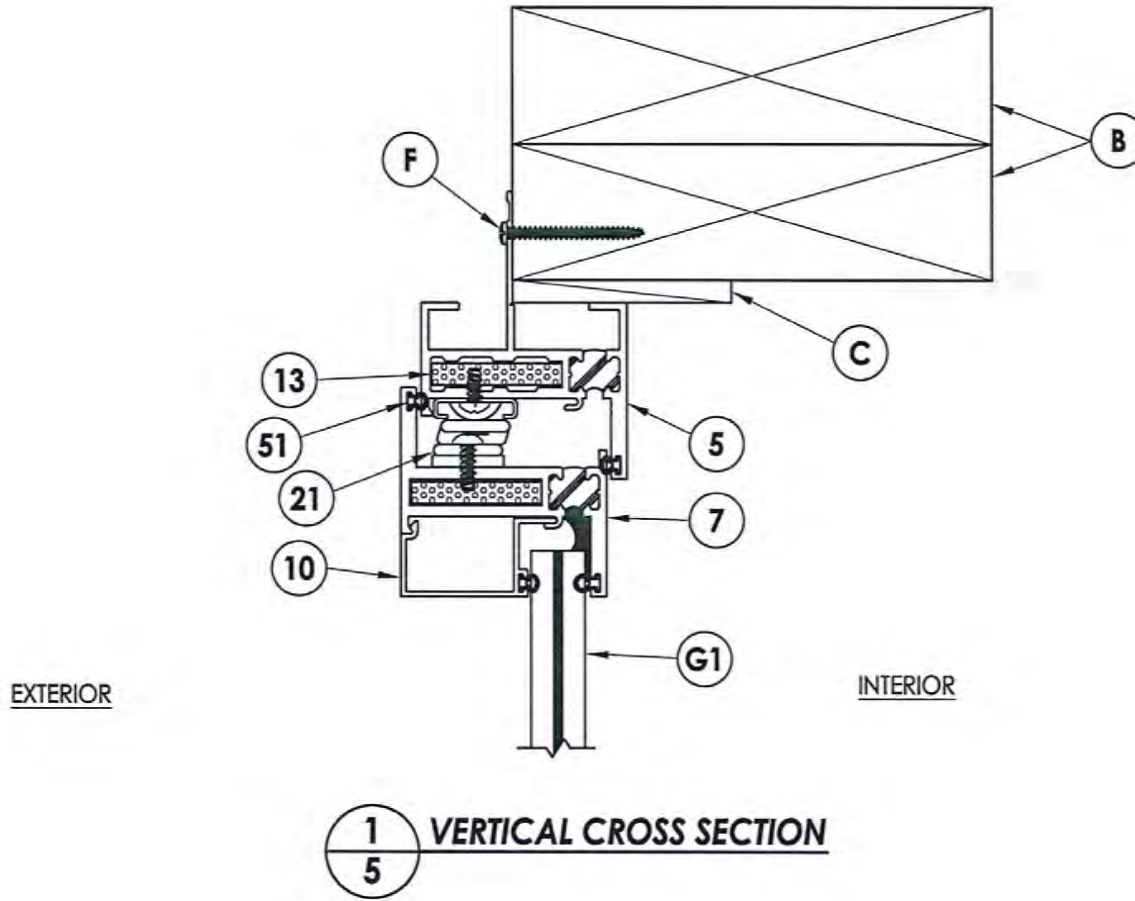
PRODUCT:		FLEETWOOD SPEC. 3b, 3c	
PART OR ASSEMBLY:		TEST ELEVATIONS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET <u>2</u> OF <u>9</u>			



1 HORIZONTAL CROSS SECTION
3

Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 3b, 3c		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET 3 OF 9			

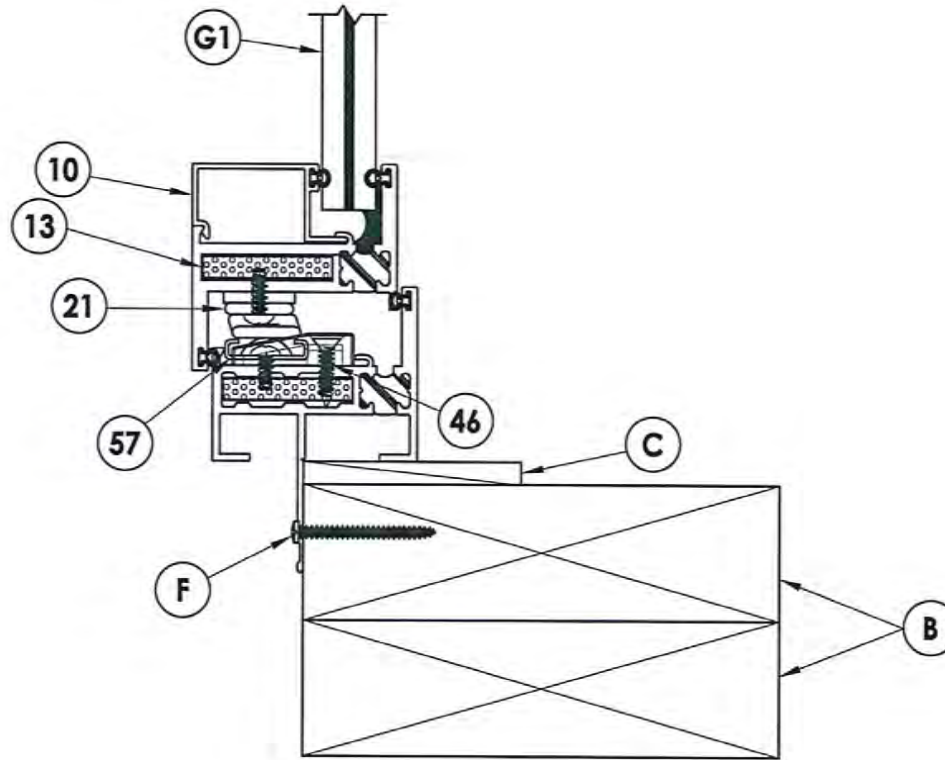


Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 3b, 3c		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET 5 OF 9			

EXTERIOR

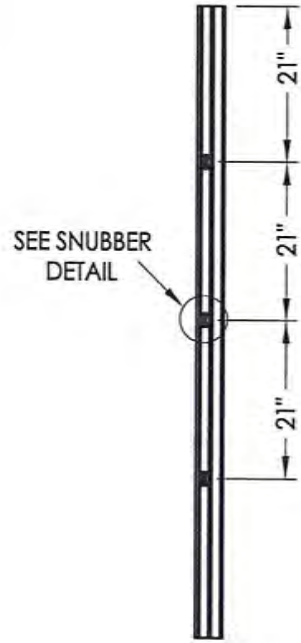
INTERIOR



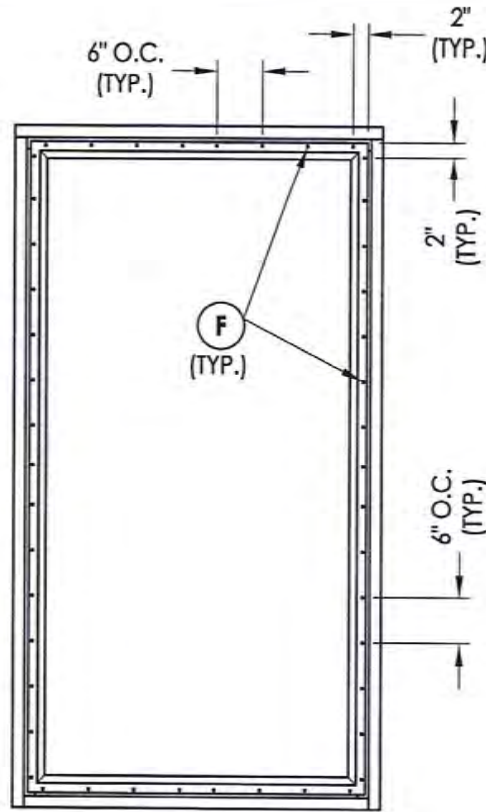
1
6 VERTICAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

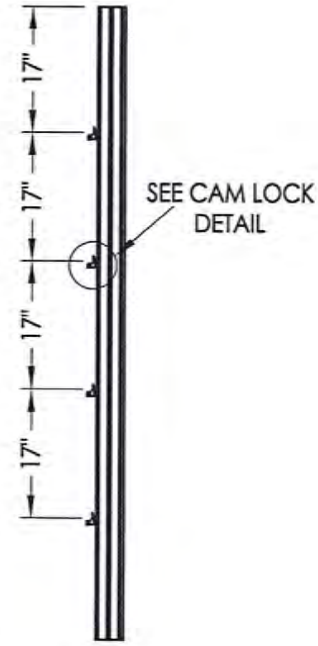
PRODUCT: FLEETWOOD SPEC. 3b, 3c		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET <u>6</u> OF <u>9</u>			



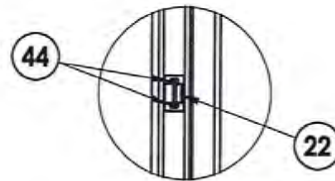
SNUBBERS JAMB



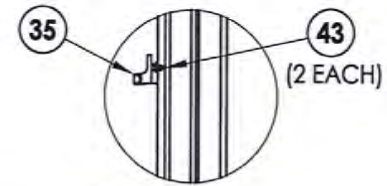
FRAME ANCHORING
2X TEST BUCK



LOCK JAMB
CAM LOCKING POINTS (4)



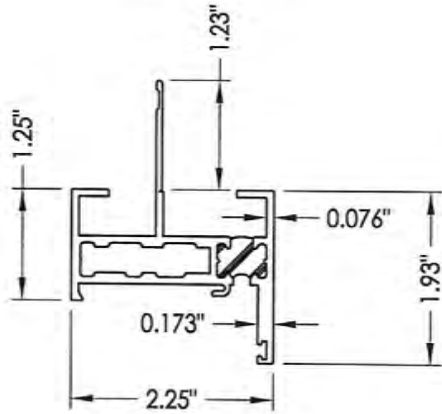
SNUBBER DETAIL



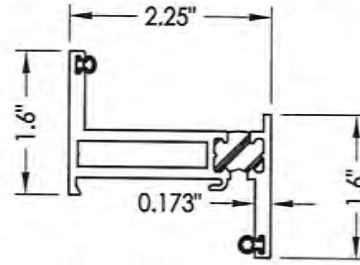
CAM LOCK DETAIL

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

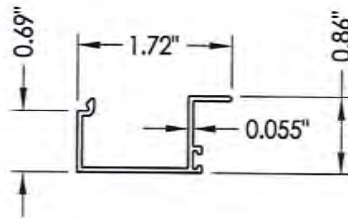
PRODUCT: FLEETWOOD SPEC. 3b, 3c		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET 7 OF 9			



5 **BLOCK FRAME**
5278C1



7 **ZEE BAR (PANEL)**
H006733



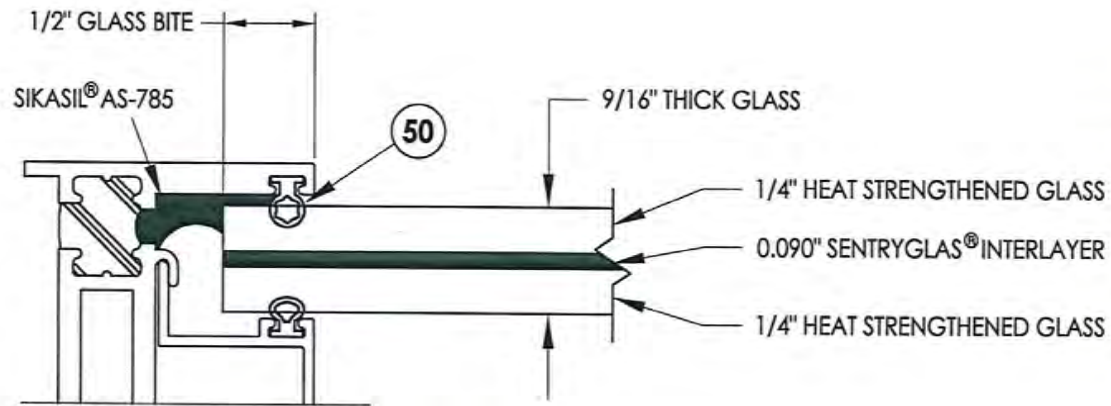
10 **GLASS STOP 9/16"**
007930

Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 3b, 3c	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-9487			
SHEET 8 OF 9			

BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#8 X 1-1/2" PPH SMS	STEEL
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
10	GLASS STOP 9/16"	6063-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
21	4 BAR HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
35	CAM HANDLE / STRIKE PLATE	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
43	SCREW NO 10, UFHP 0.5"	STEEL
44	SCREW NO 8, PHP, 0.5"	STEEL
46	SCREW NO 8, FHP, 0.75"	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
57	PIVOT SHIM	-




G1 GLAZING DETAIL

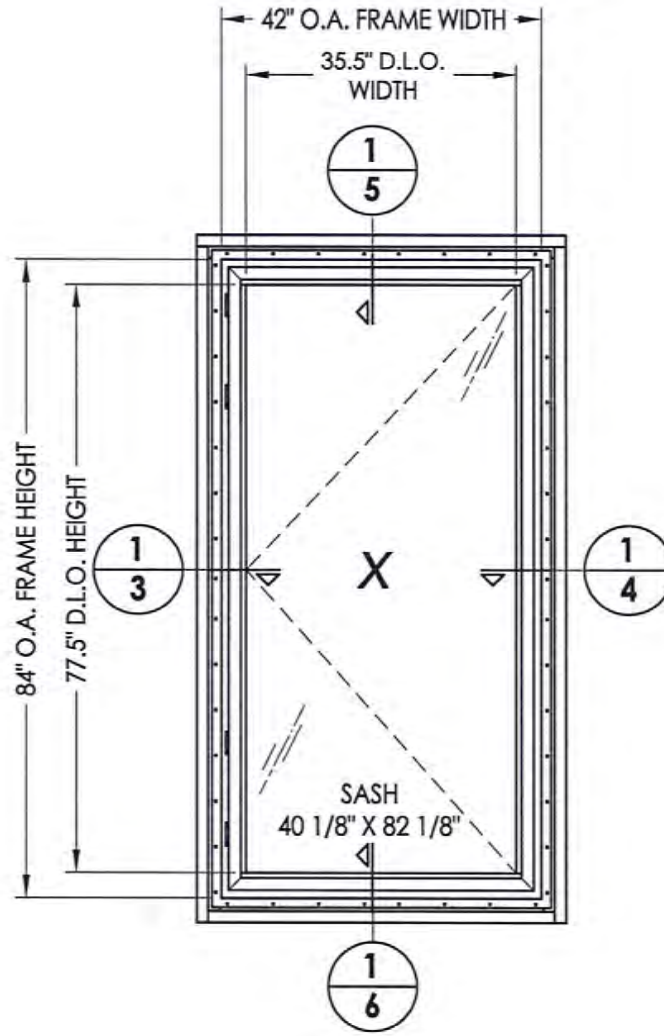
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 3b, 3c		PART OR ASSEMBLY: COMPONENTS & GLAZING DETAILS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9487			
SHEET 9 OF 9			

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of Contents
2	Test Elevation
3	Horizontal Cross Section
4	Horizontal Cross Section
5	Vertical Cross Section
6	Vertical Cross Section
7	Frame Anchoring
8	Glazing Detail
9	Bill of Materials & Components

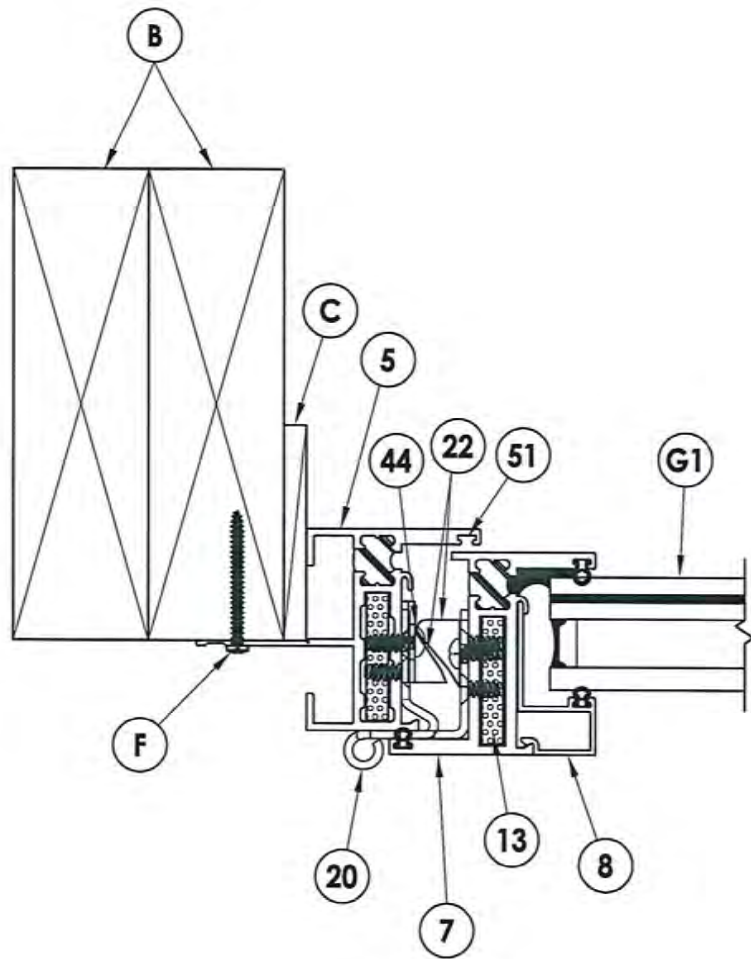
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 4, 4a	
PART OR ASSEMBLY: TABLE OF CONTENTS	
	BY
	NO.
	DATE
	REVISIONS
	
DATE: 10/19/21	
SCALE: N.T.S.	
DWG. BY: LFS	
CHK. BY: RW	
DRAWING NO.: L-9488	
SHEET 1 OF 9	



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

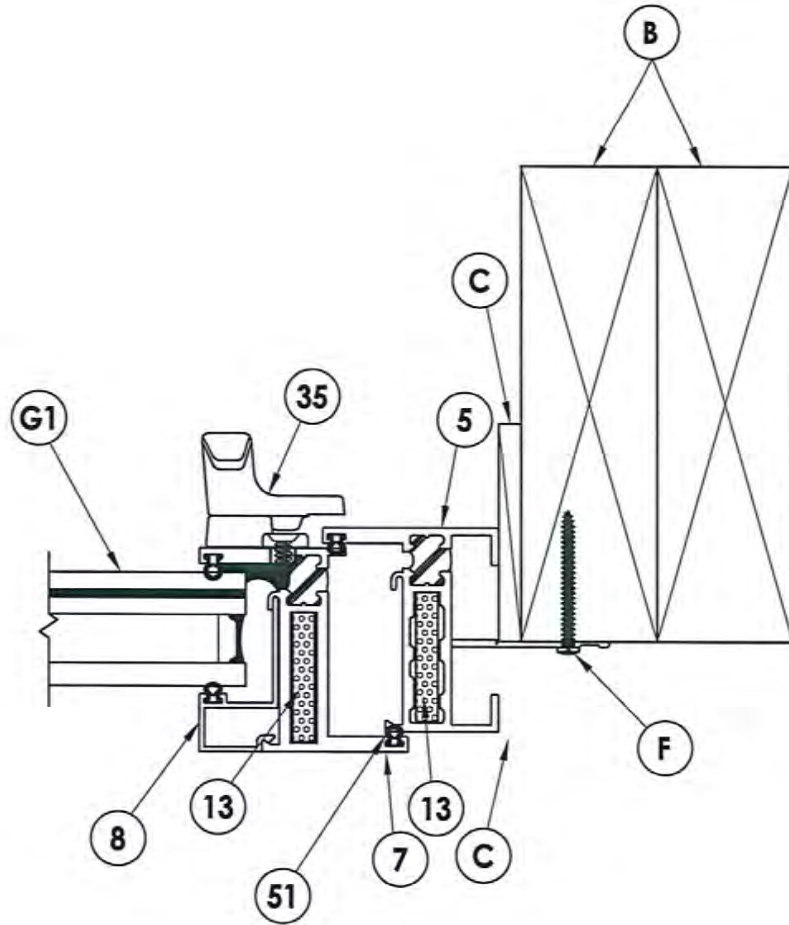
PRODUCT: FLEETWOOD SPEC. 4, 4a		PART OR ASSEMBLY: TEST ELEVATIONS	
NO.		DATE	
BY		REVISIONS	
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 2 OF 9			



1
3 HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

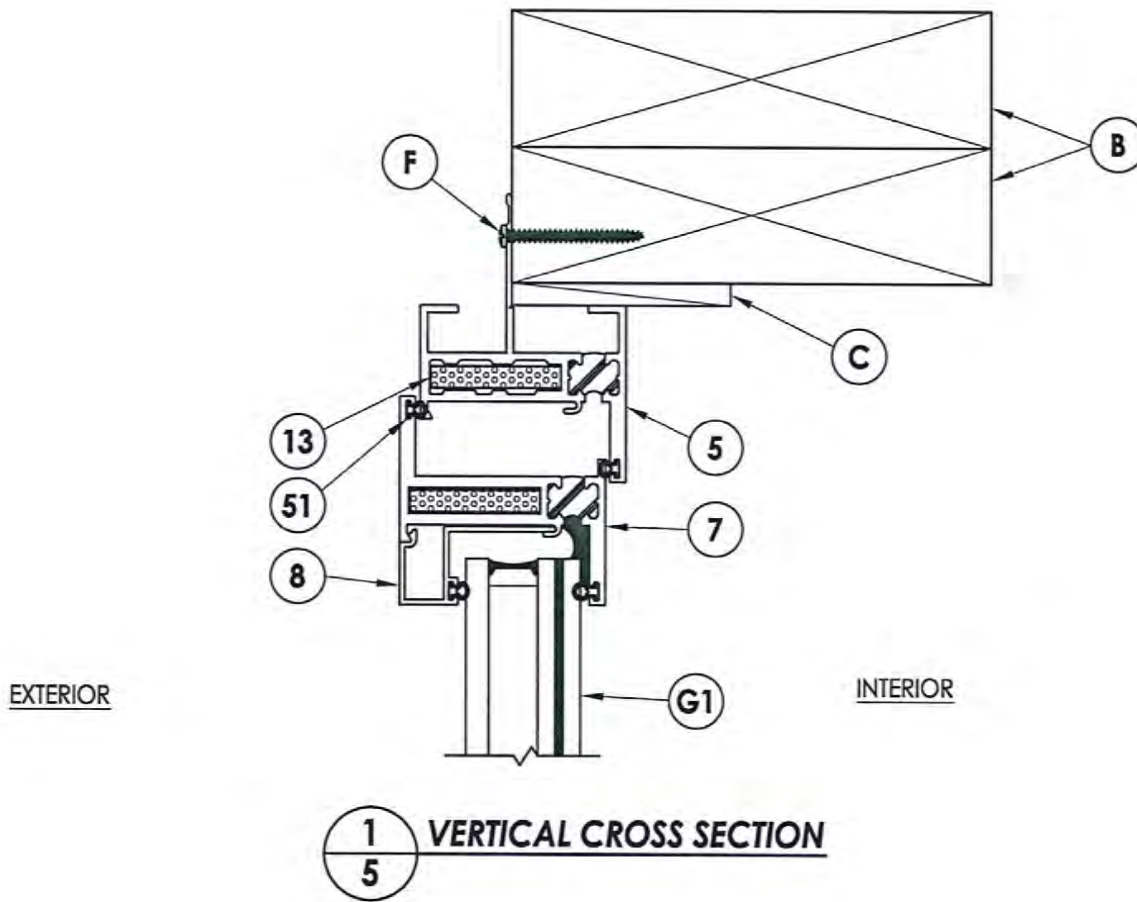
PRODUCT:		FLEETWOOD SPEC. 4, 4a	
PART OR ASSEMBLY:		CROSS SECTION	
		BY	
		NO.	
		DATE	
		REVISIONS	
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 3 OF 9			



1
4 **HORIZONTAL CROSS SECTION**

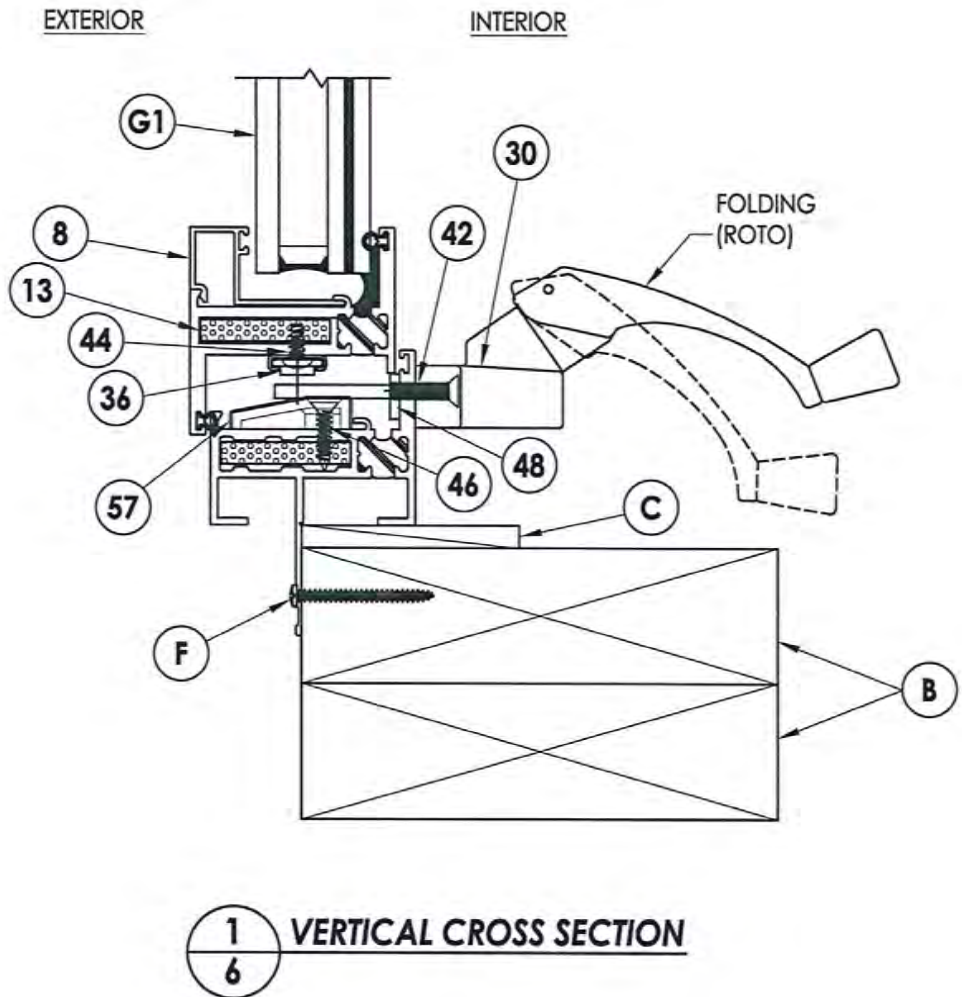
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 4, 4a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 4 OF 9			



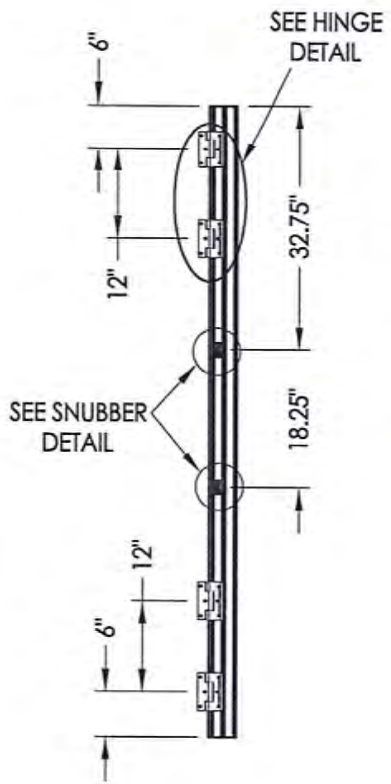
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 4, 4a		PART OR ASSEMBLY: CROSS SECTION	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 5 OF 9			

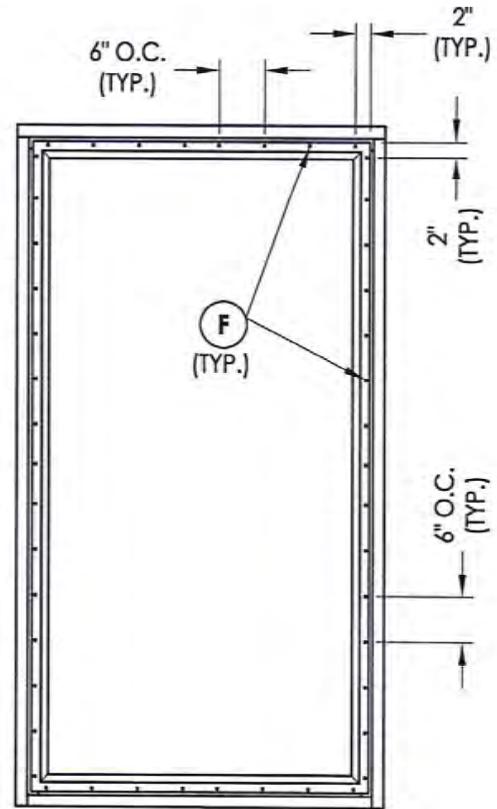


Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

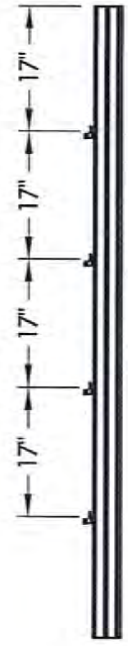
PRODUCT:		FLEETWOOD SPEC. 4, 4a	
PART OR ASSEMBLY:		CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 6 OF 9			



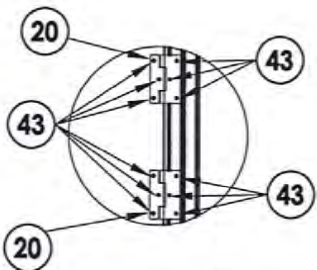
HINGE JAMB



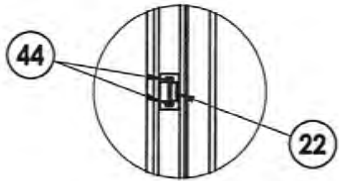
**FRAME ANCHORING
2X TEST BUCK**



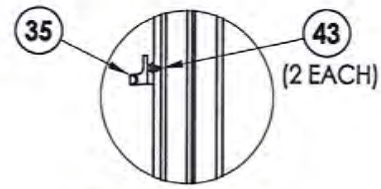
**LOCK JAMB
CAM LOCKING POINTS (4)**



HINGE DETAIL



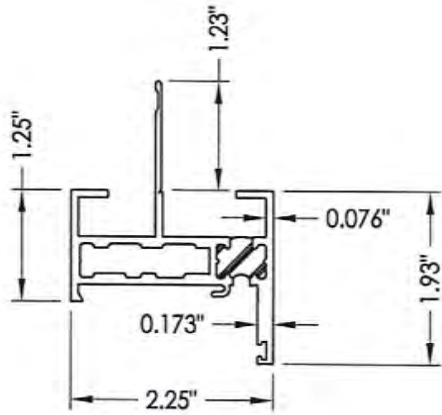
SNUBBER DETAIL



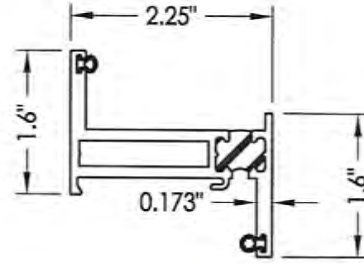
CAM LOCK DETAIL

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

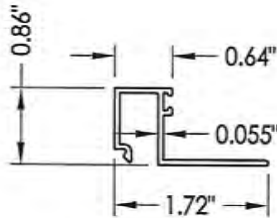
PRODUCT: FLEETWOOD SPEC. 4, 4a		PART OR ASSEMBLY: FRAME ANCHORING	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 7 OF 9			



5 **BLOCK FRAME**
5278C1



7 **ZEE BAR (PANEL)**
H006733



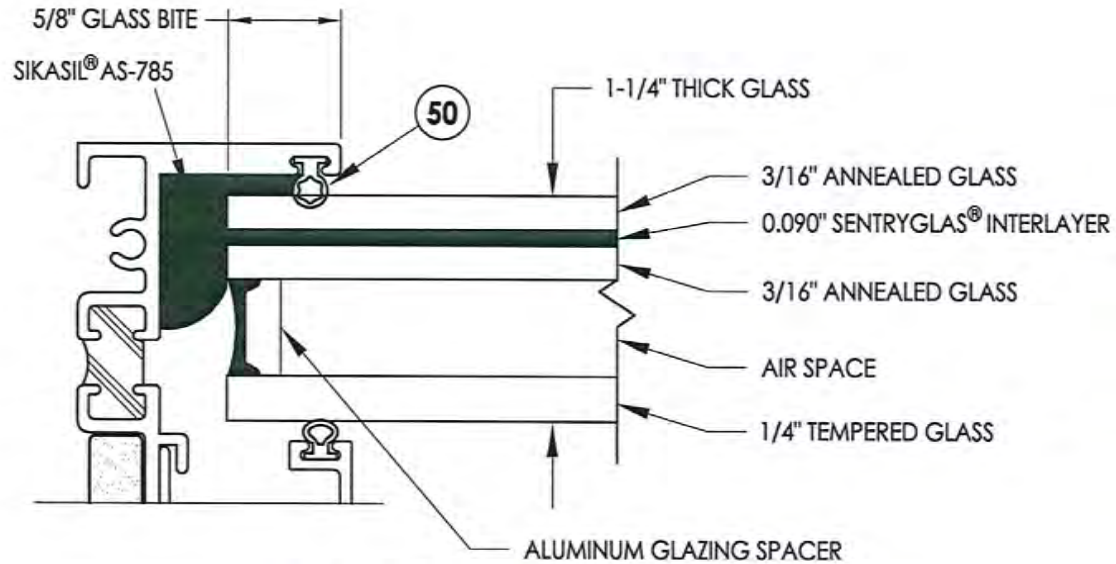
8 **GLASS STOP 1-1/4"**
901487

Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 4, 4a	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.:			
L-9488			
SHEET 8 OF 9			

BILL OF MATERIALS

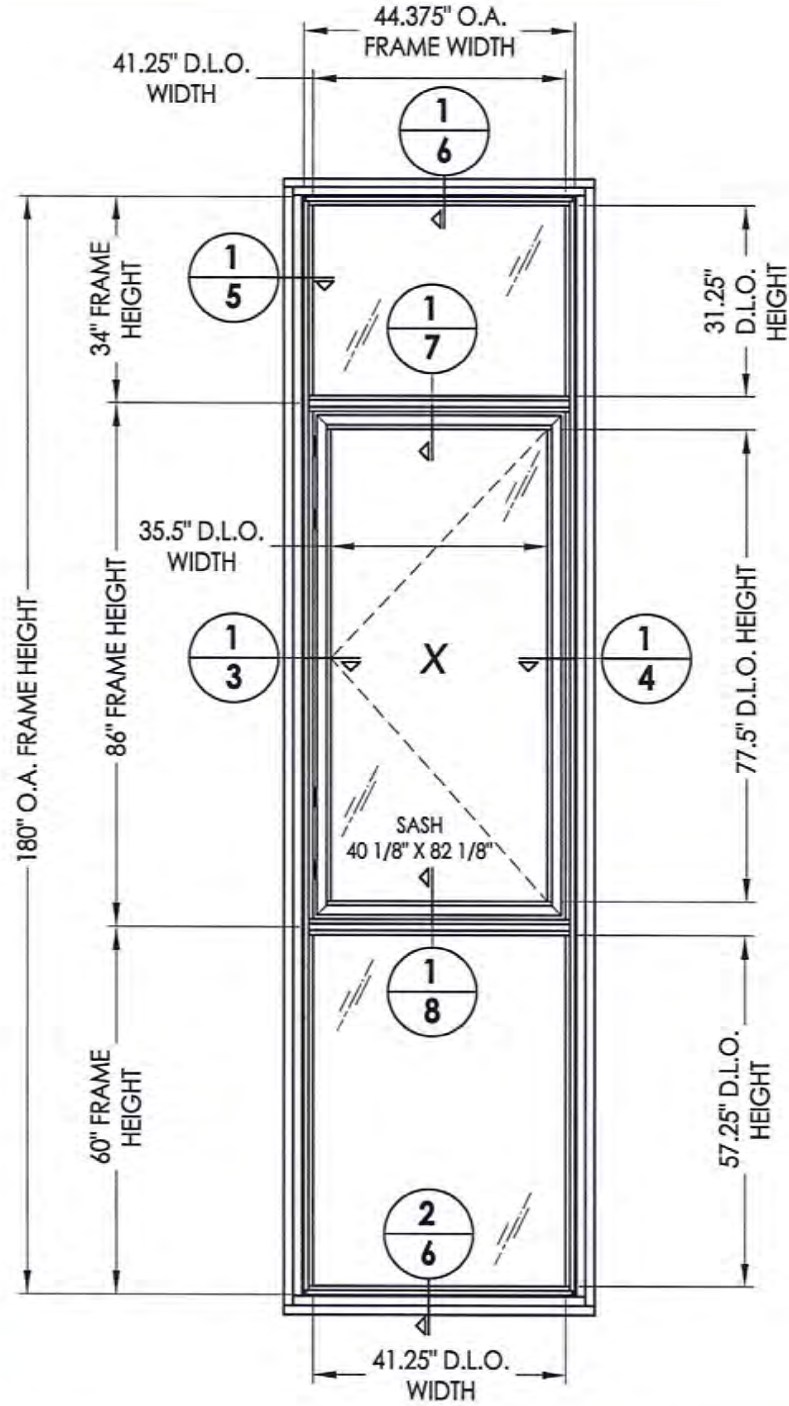
ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#8 X 1-1/2" PPH SMS	STEEL
5	WESTWOOD BLOCK FRAME	6063-T6 ALUM
7	WESTWOOD ZEE BAR (PANEL)	6063-T6 ALUM
8	GLASS STOP 1-1/4"	6063-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
30	CASEMENT ROTOR GEAR	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 0.75"	STEEL
43	SCREW NO 10, UFHP 0.5"	STEEL
44	SCREW NO 8, PHP, 0.5"	STEEL
46	SCREW NO 8, FHP, 0.75"	STEEL
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
57	PIVOT SHIM	-



G1 GLAZING DETAIL

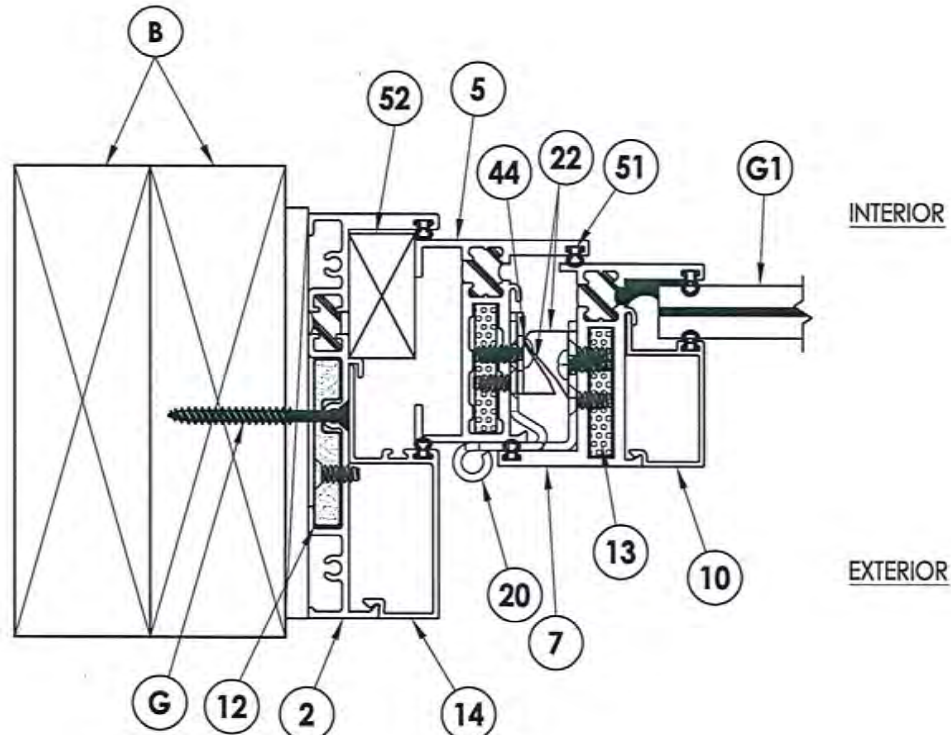
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 4, 4a	
PART OR ASSEMBLY:		COMPONENTS & GLAZING DETAILS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9488			
SHEET 9 OF 9			



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

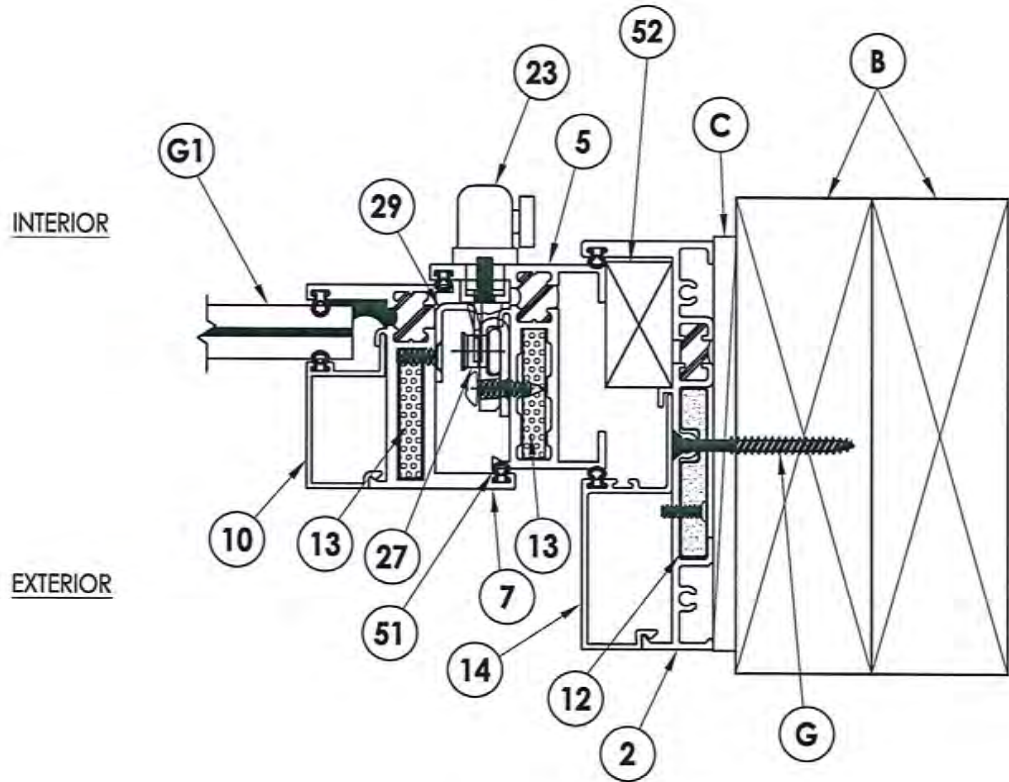
PRODUCT:		FLEETWOOD SPEC. 5, 5a	
PART OR ASSEMBLY:		TEST ELEVATIONS	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.:			
L-9489			
SHEET 2 OF 11			



1 HORIZONTAL CROSS SECTION
3

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

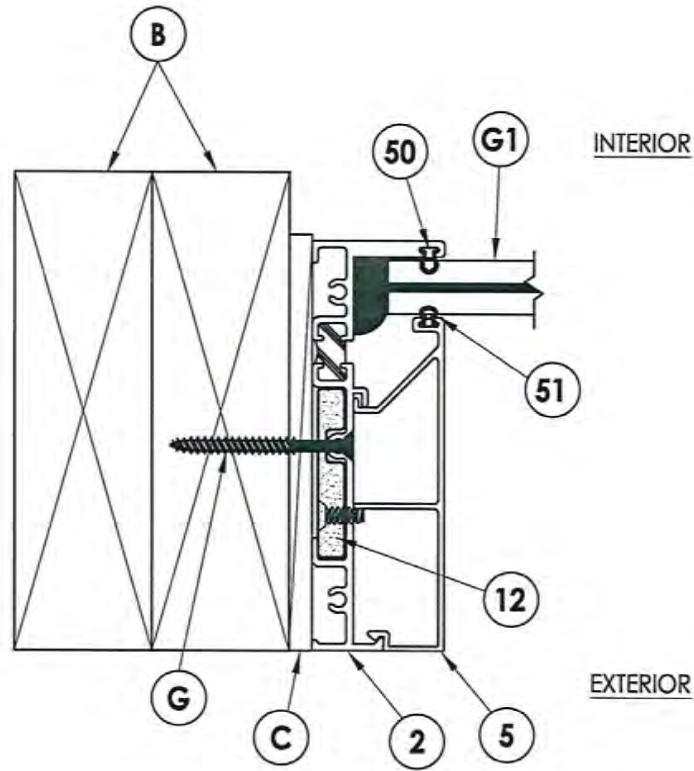
PRODUCT:		FLEETWOOD SPEC. 5, 5a	
PART OR ASSEMBLY:		HORIZONTAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 3 OF 11			



1
4 HORIZONTAL CROSS SECTION


Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

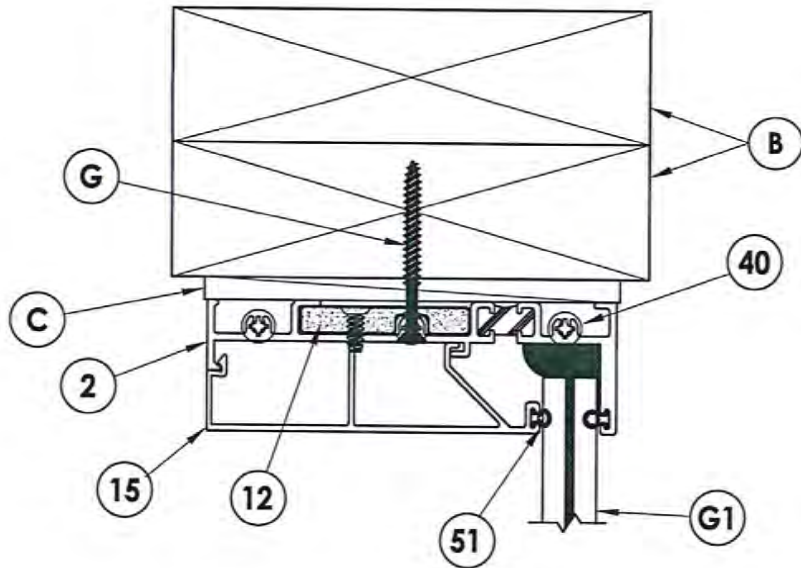
PRODUCT: FLEETWOOD SPEC. 5, 5a		PART OR ASSEMBLY: HORIZONTAL CROSS SECTION	
NO.	DATE	BY	REVISIONS
RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 4 OF 11			



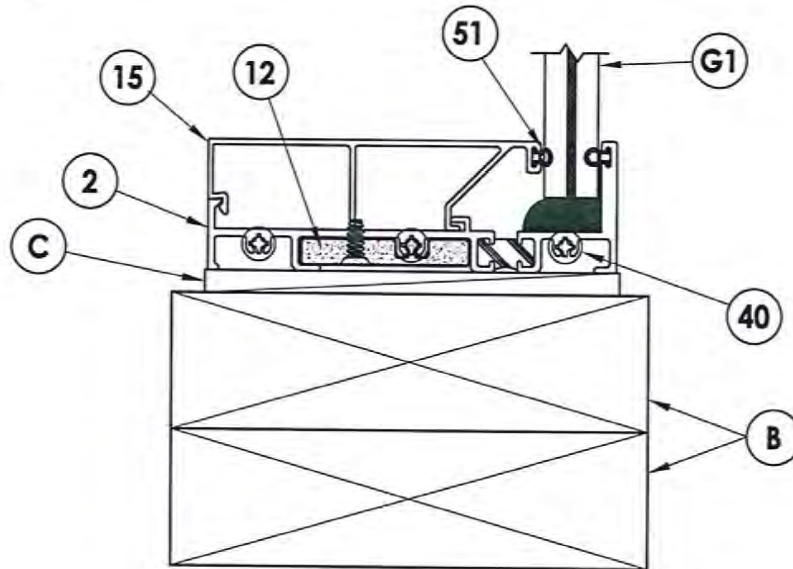
1
5 HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 5, 5a		PART OR ASSEMBLY: HORIZONTAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET <u>5</u> OF <u>11</u>			



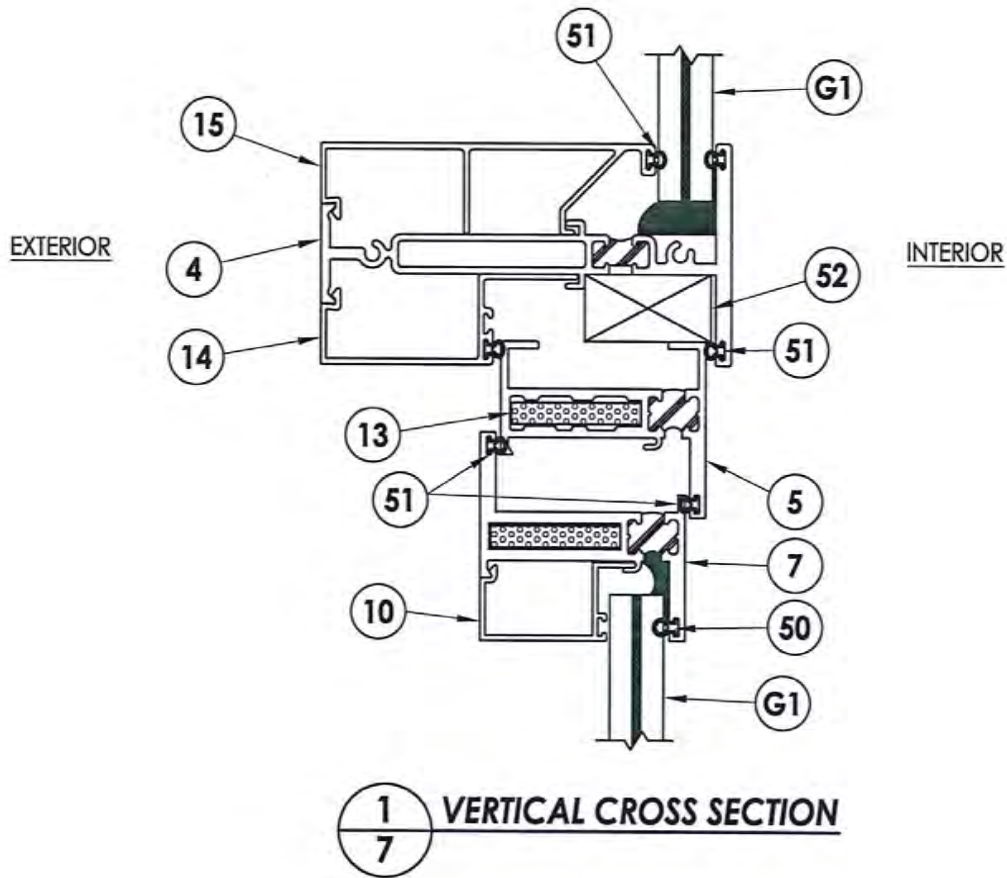
1
6 VERTICAL CROSS SECTION



2
6 VERTICAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 5, 5a	
PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 6 OF 11			

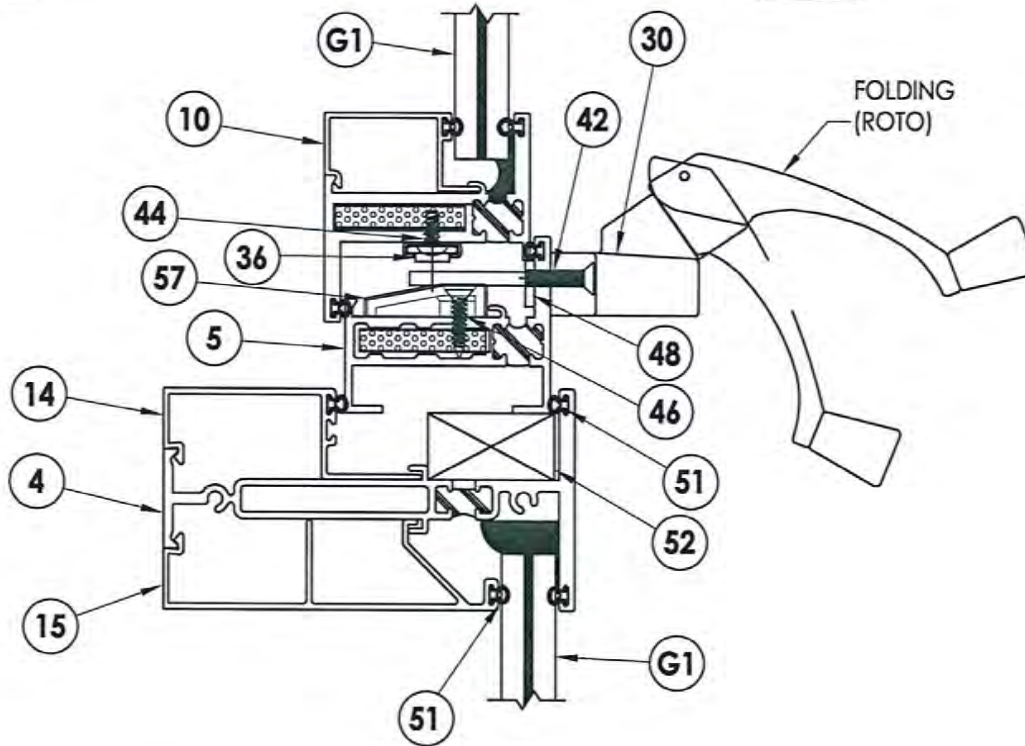


Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 5, 5a		PART OR ASSEMBLY: VERTICAL CROSS SECTION	
NO.	DATE	BY	REVISIONS
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 7 OF 11			

EXTERIOR

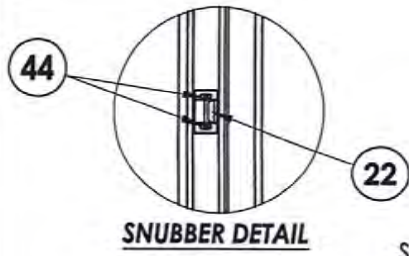
INTERIOR



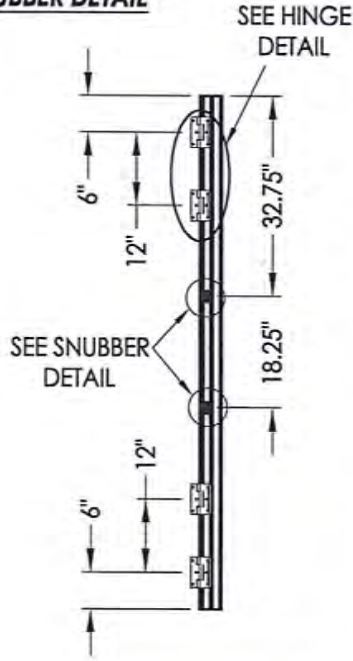
1
8 **VERTICAL CROSS SECTION**

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

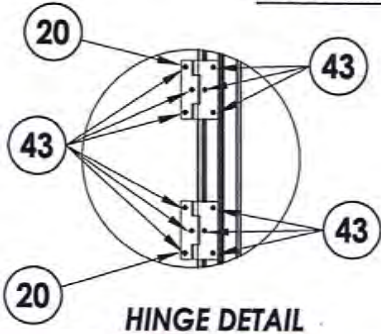
PRODUCT: FLEETWOOD SPEC. 5, 5a		PART OR ASSEMBLY: VERTICAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 8 OF 11			



SNUBBER DETAIL

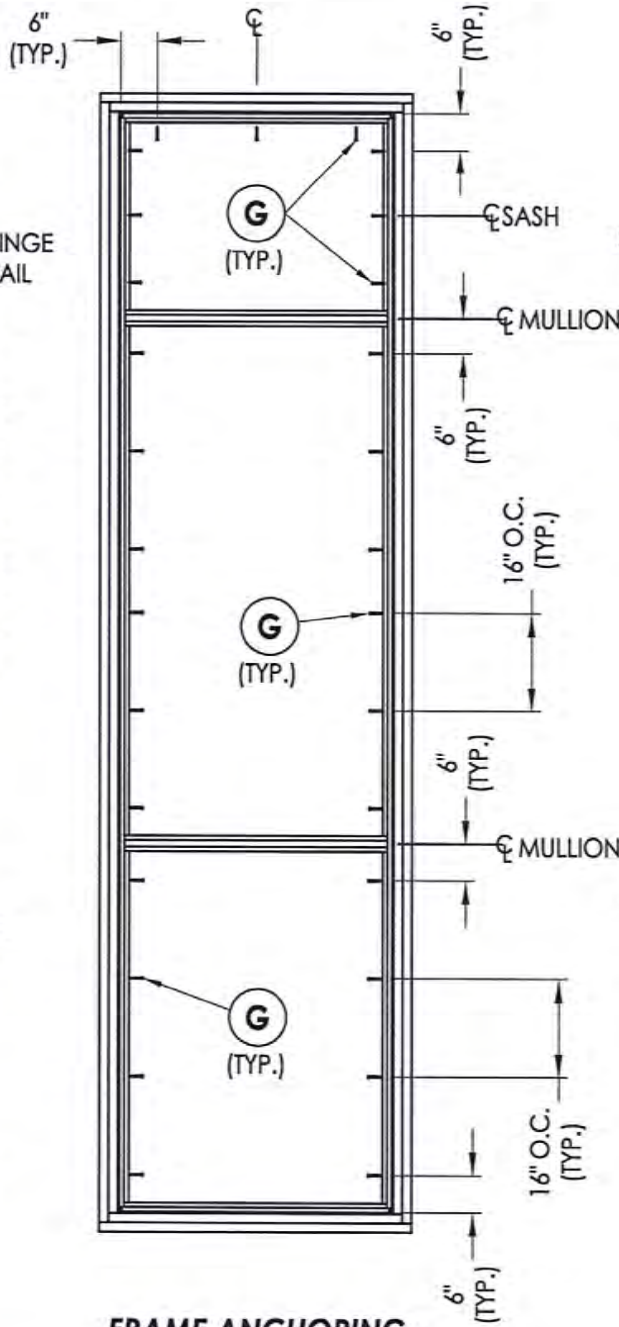


HINGE JAMB

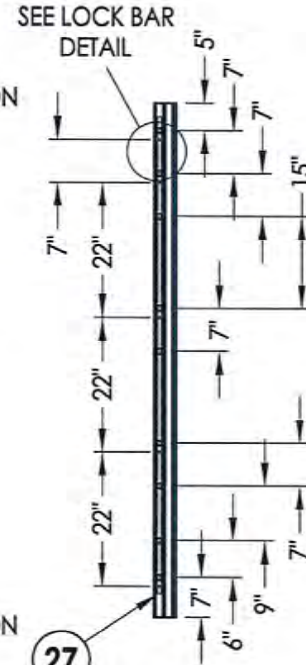


HINGE DETAIL

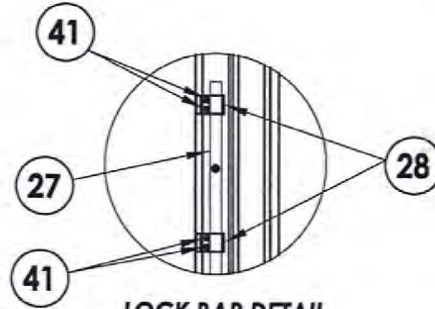
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW



FRAME ANCHORING
 2X TEST BUCK

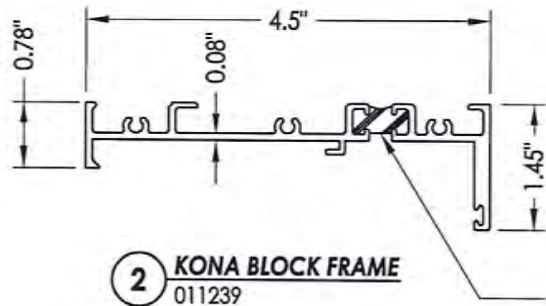


LOCK JAMB
 LOCKING POINTS (5)



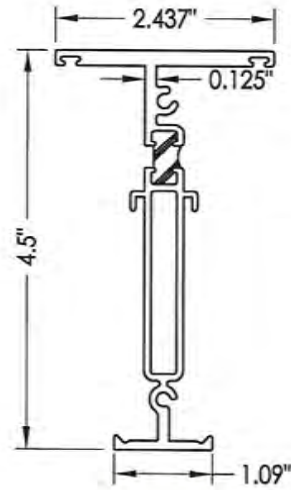
LOCK BAR DETAIL

PRODUCT:		FLEETWOOD SPEC. 5, 5a	
PART OR ASSEMBLY:		TEST ELEVATIONS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9489			
SHEET 9 OF 11			

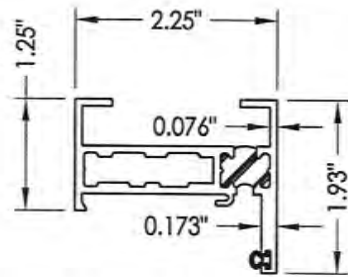


2 KONA BLOCK FRAME
011239

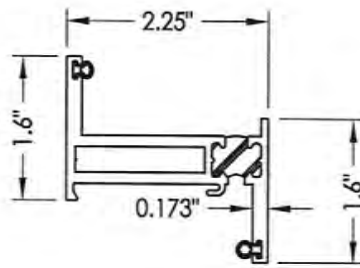
THERMAL BREAK
(LIQUID POLYURETHANE)
BY AZON
(TYP.)



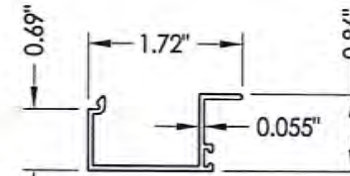
4 MULLION
H011241



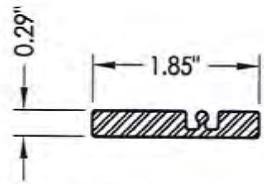
5 BLOCK FRAME
5278C1



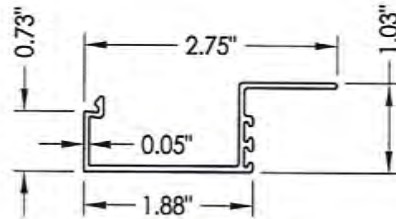
7 ZEE BAR (PANEL)
H006733



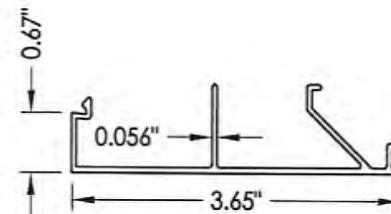
10 GLASS STOP 9/16"
007930



12 SHEAR BLOCK



14 INSERT STOP



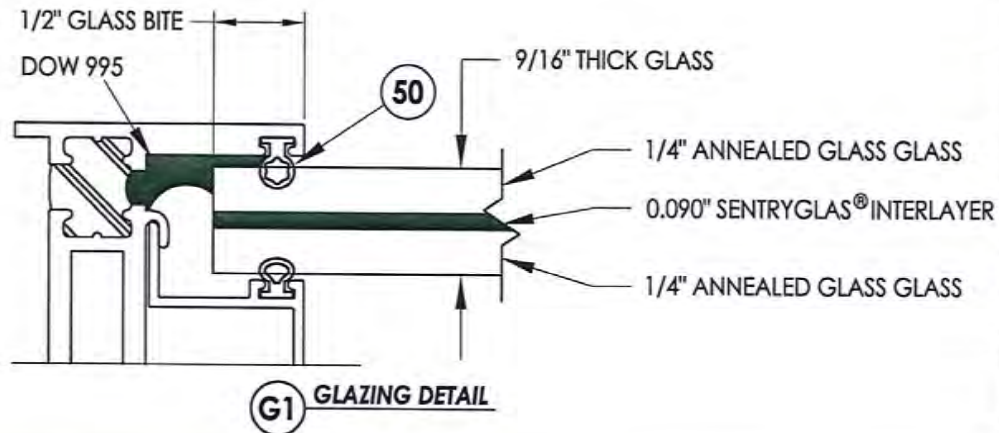
15 GLASS STOP 9/16"

PRODUCT:		FLEETWOOD SPEC. 5, 5a	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-9489			
SHEET 10 of 11			

Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

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
10	GLASS STOP 9/16"	6063-T6 ALUM
12	SHEAR BLOCK	6061-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
14	INSERT STOP	6063-T6 ALUM
15	GLASS STOP 9/16"	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
27	5 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	-
29	KEEPER	SS
30	CASEMENT ROTOR GEAR	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
41	SCREW NO 8, PHP, .750"	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
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
52	WOOD BLOCK (3/4" X 1-1/4")	-
57	PIVOT SHIM	-




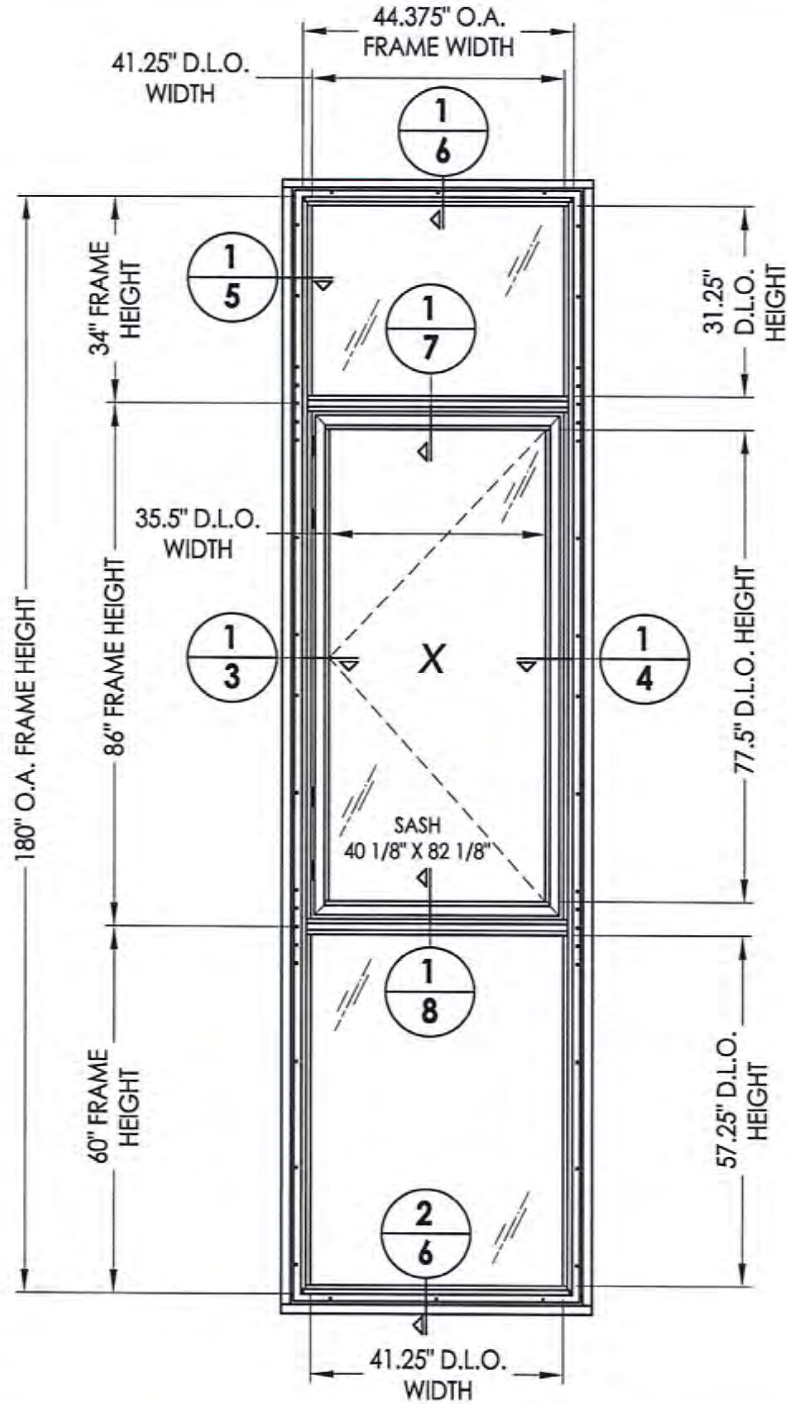
Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 5, 5a	PART OR ASSEMBLY: COMPONENTS & GLAZING DETAILS	REVISIONS	
		NO.	DATE
			BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197		DATE: 10/19/21	
		SCALE: N.T.S.	
		DWG. BY: LFS	
		CHK. BY: RW	
		DRAWING NO.:	
		L-9489	
		SHEET 11 OF 11	


TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Table of Contents
2	Test Elevation
3	Horizontal Cross Section
4	Horizontal Cross Section
5	Horizontal Cross Section
6	Vertical Cross Sections
7	Vertical Cross Section
8	Vertical Cross Section
9	Frame Anchoring
10	Glazing Detail
11	Bill of Materials & Components

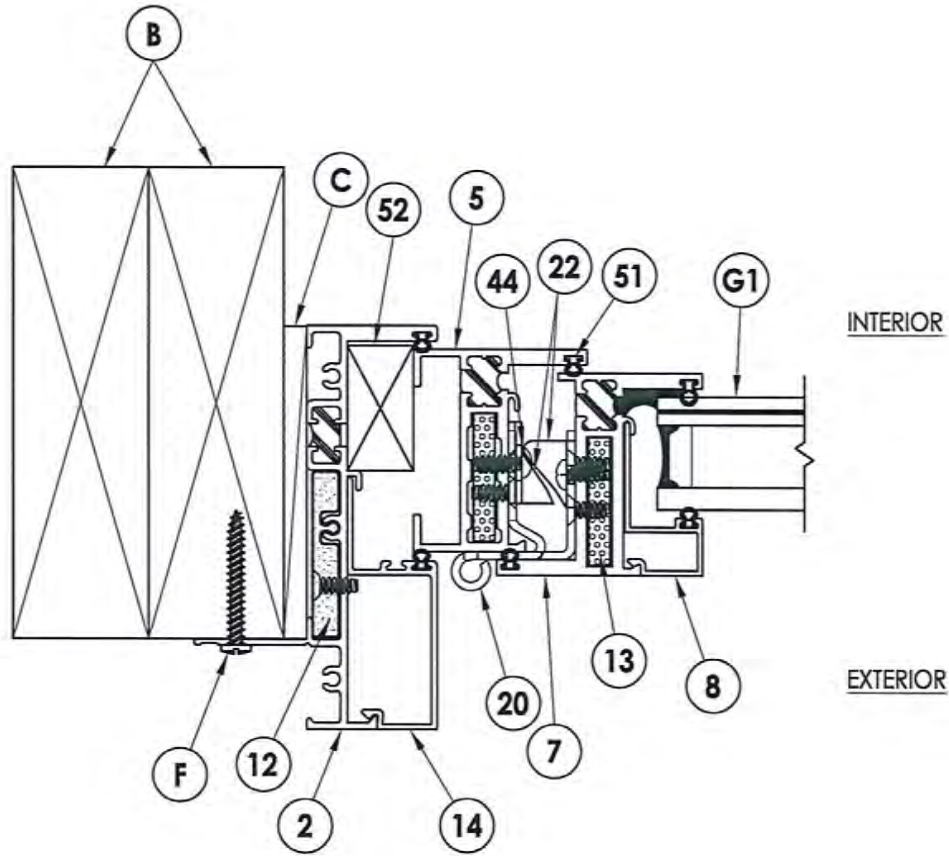
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 6, 6a	
PART OR ASSEMBLY:		TABLE OF CONTENTS	
		BY	
		REVISIONS	
		NO.	DATE
			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET <u>1</u> OF <u>11</u>			




Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

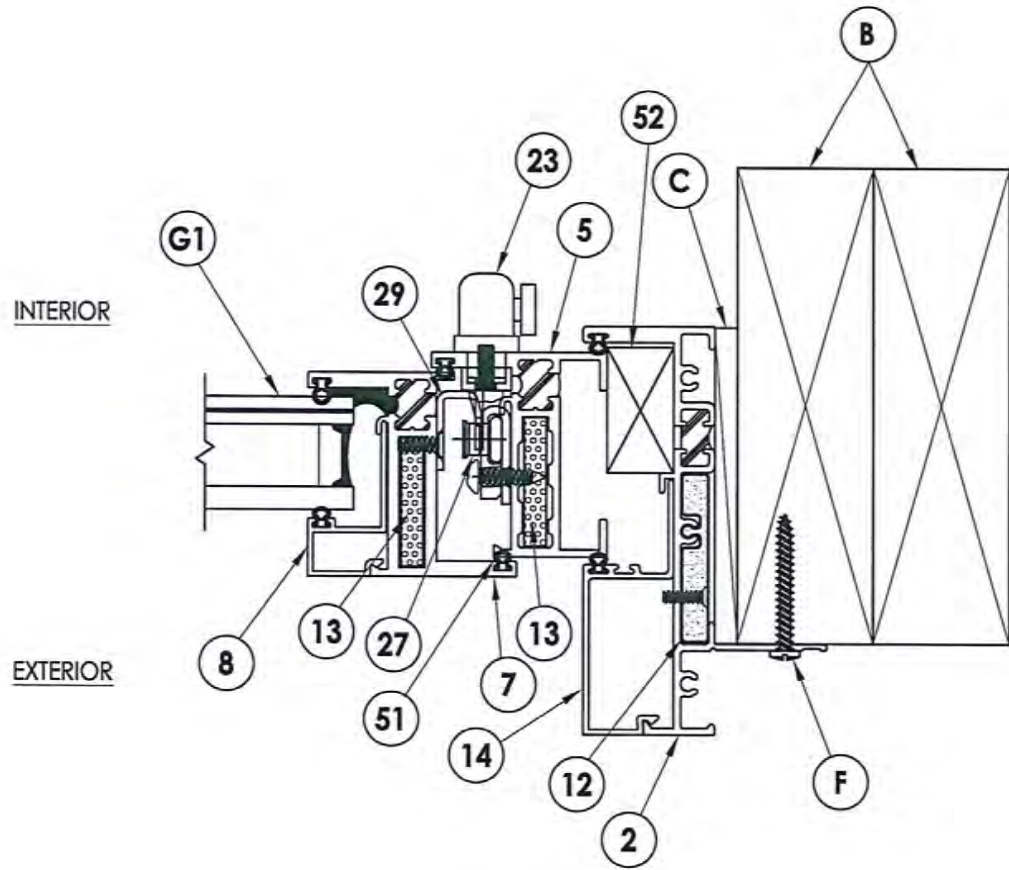
PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: TEST ELEVATIONS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 2 OF 11			



1 HORIZONTAL CROSS SECTION
3


Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

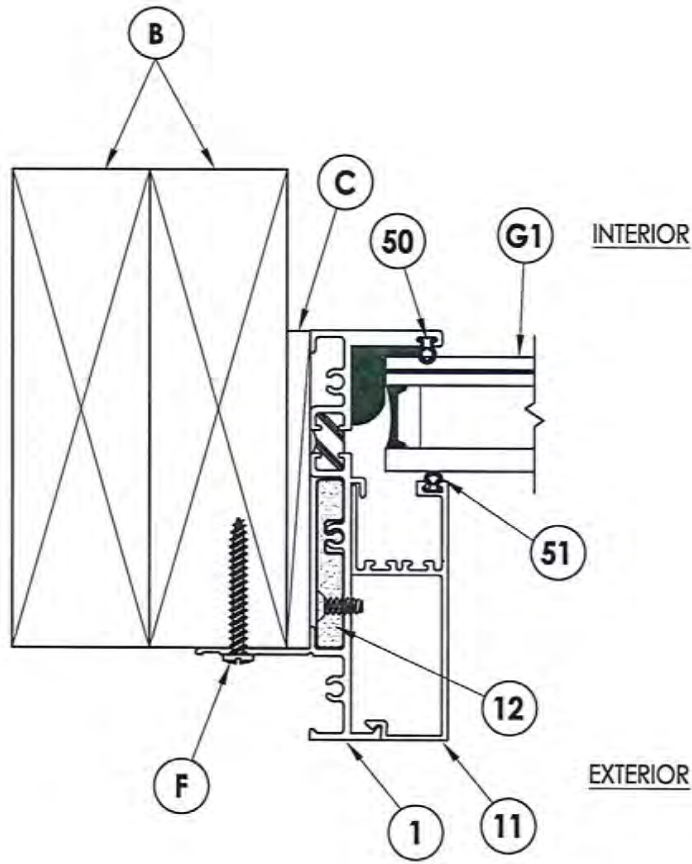
PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: HORIZONTAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 3 OF 11			



1
4 HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

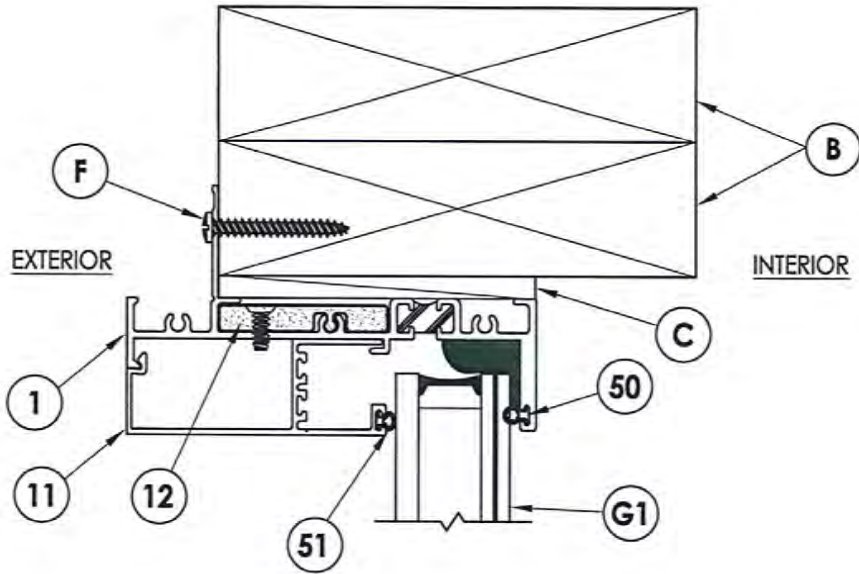
PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: HORIZONTAL CROSS SECTION	
NO.	DATE	BY	REVISIONS
			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 4 OF 11			



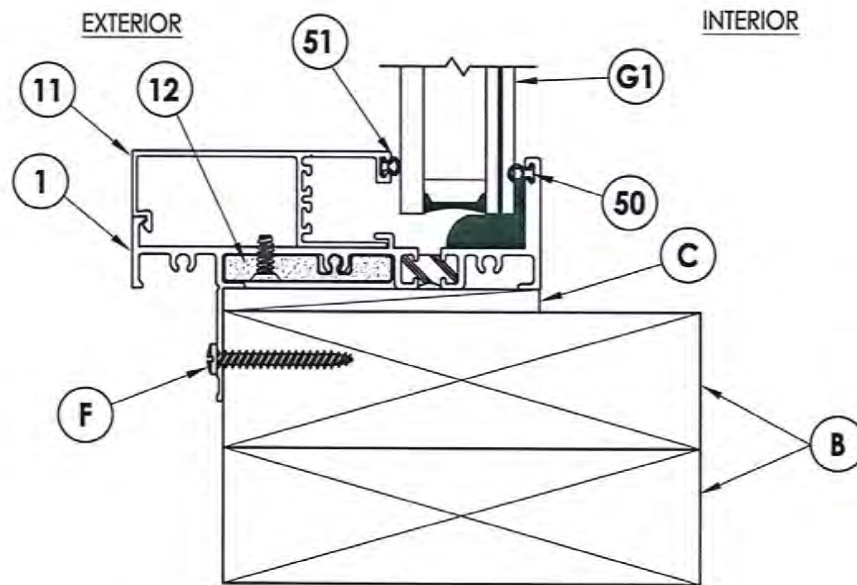
1 / **5** HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: HORIZONTAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET <u>5</u> OF <u>11</u>			



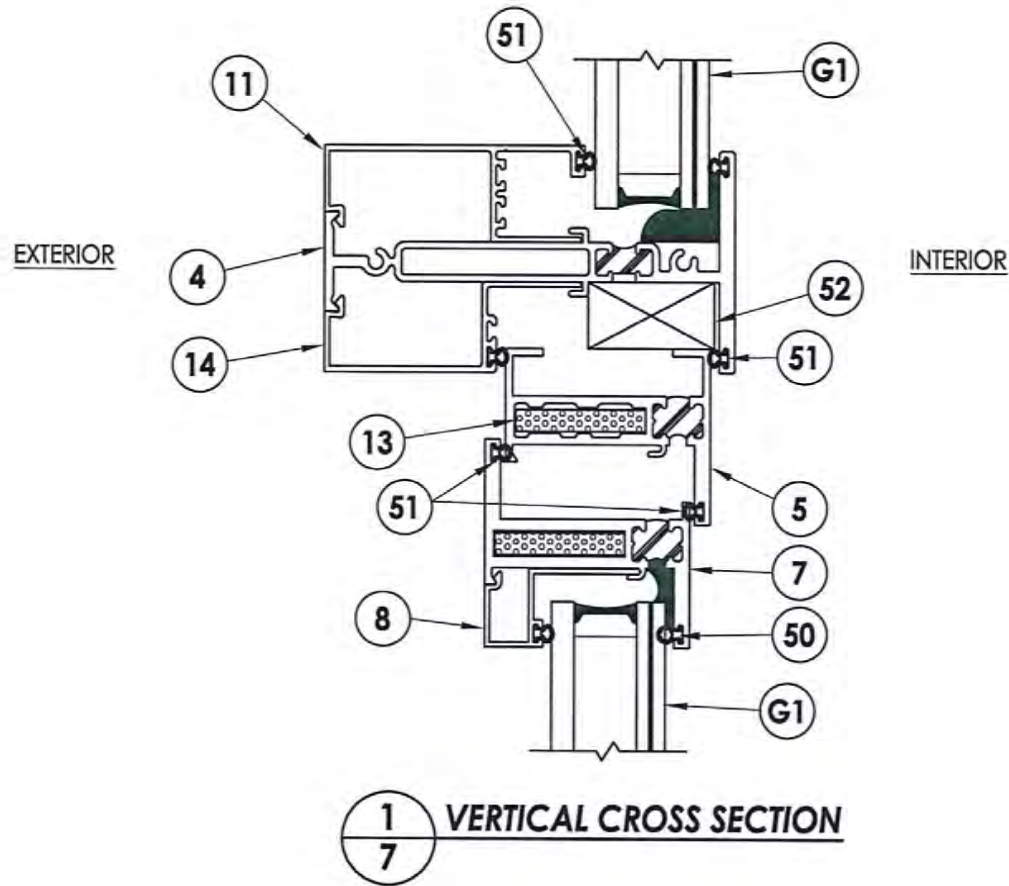
1
6 **VERTICAL CROSS SECTION**



2
6 **VERTICAL CROSS SECTION**

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: VERTICAL CROSS SECTIONS	
NO.	DATE	BY	REVISIONS
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 6 OF 11			



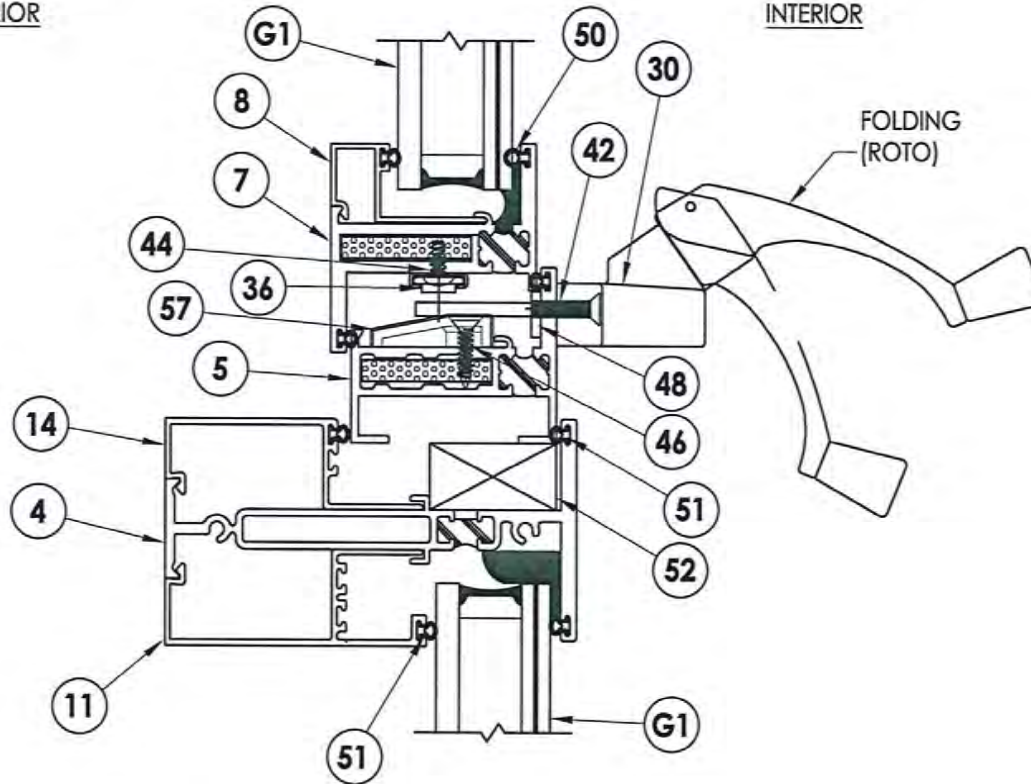
1
7 **VERTICAL CROSS SECTION**

Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: VERTICAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 7 OF 11			

EXTERIOR

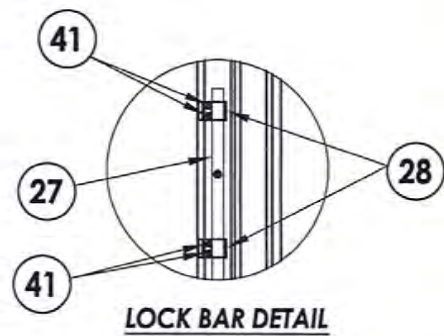
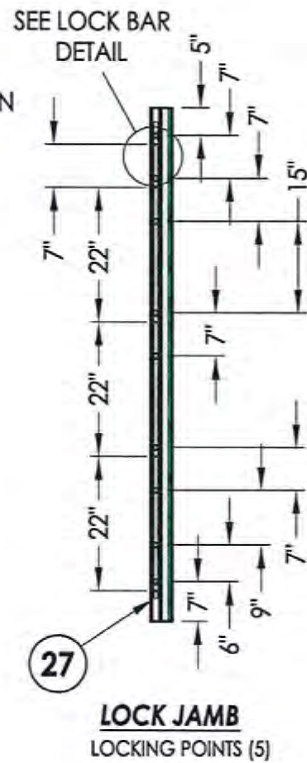
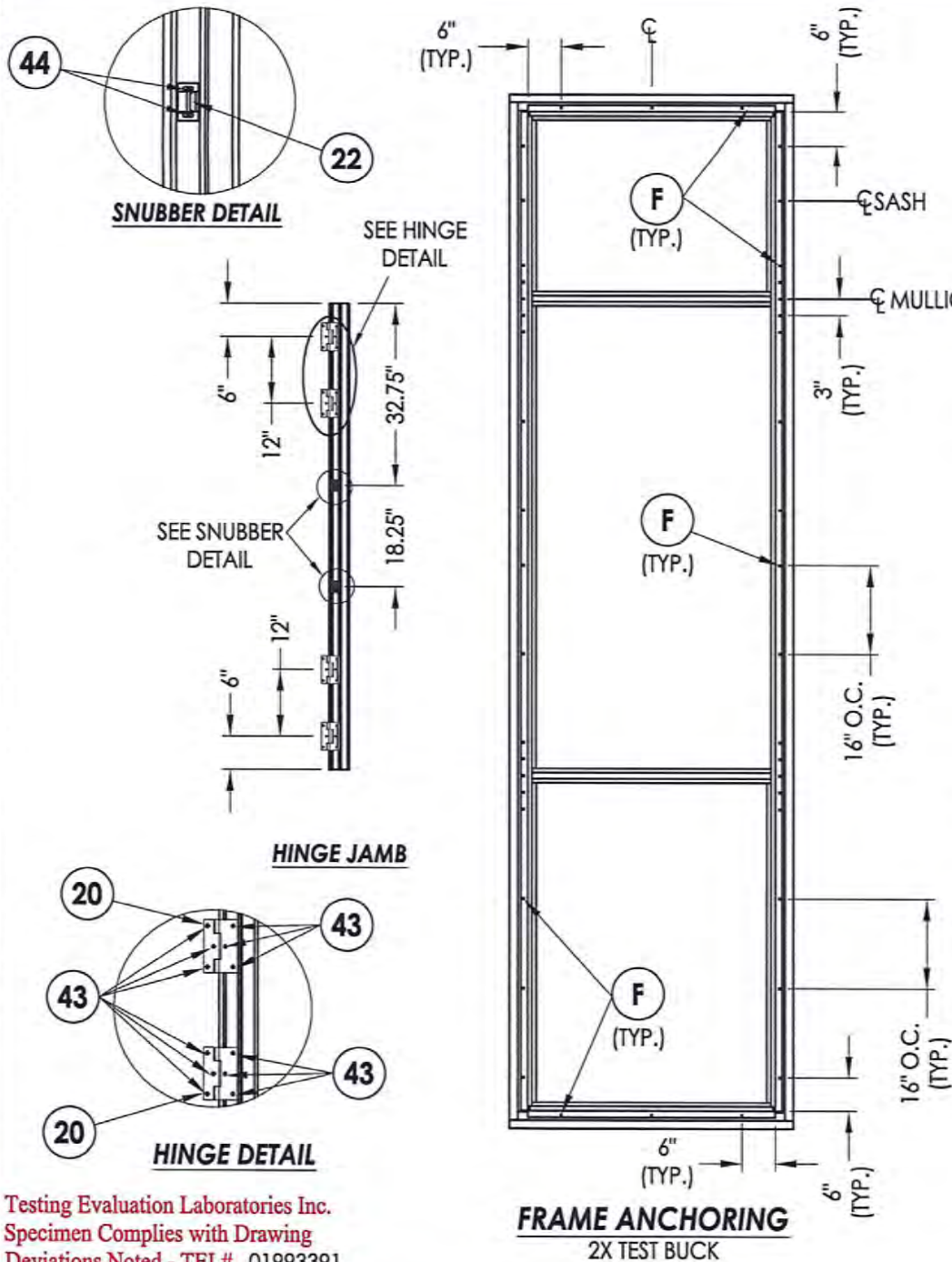
INTERIOR



1
8 **VERTICAL CROSS SECTION**

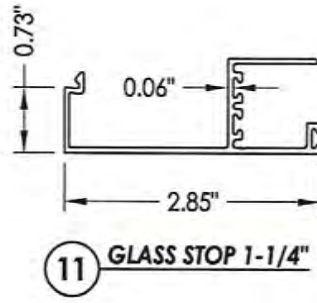
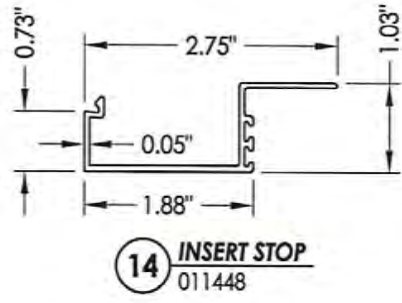
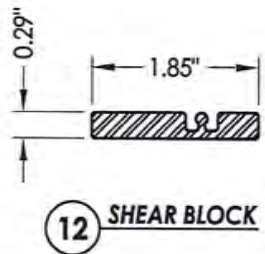
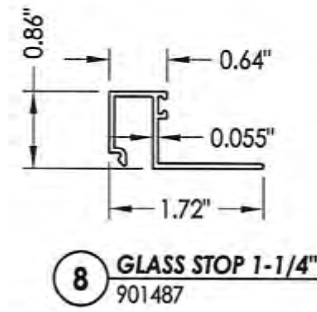
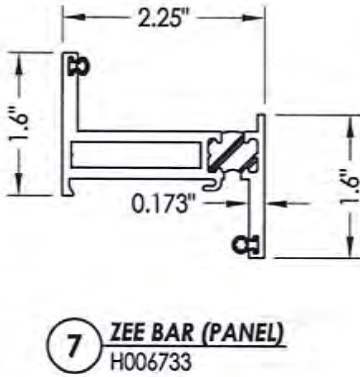
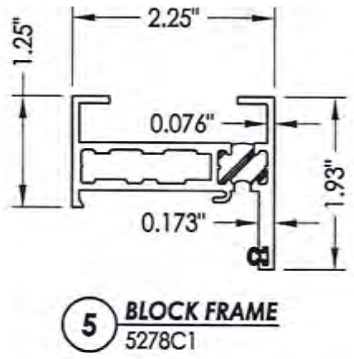
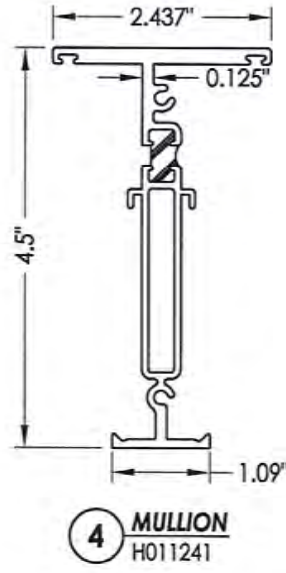
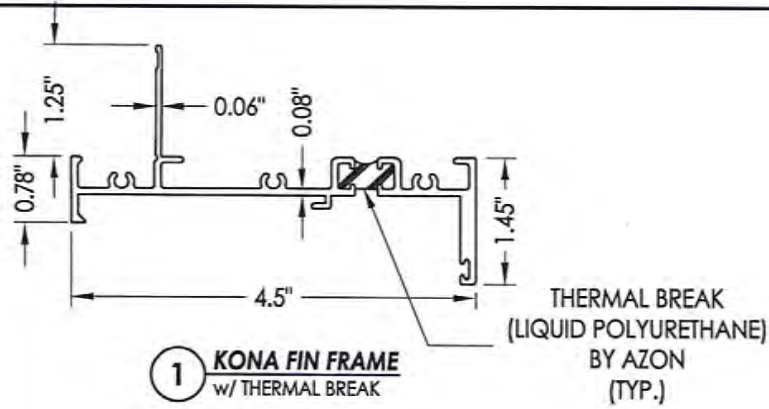
Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: VERTICAL CROSS SECTION	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 8 OF 11			



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

PRODUCT: FLEETWOOD SPEC. 6, 6a		PART OR ASSEMBLY: TEST ELEVATIONS	
NO.	DATE	REVISIONS	BY
 RW BUILDING CONSULTANTS, INC. 813.659.9197			
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: LFS			
CHK. BY: RW			
DRAWING NO.: L-9490			
SHEET 9 OF 11			

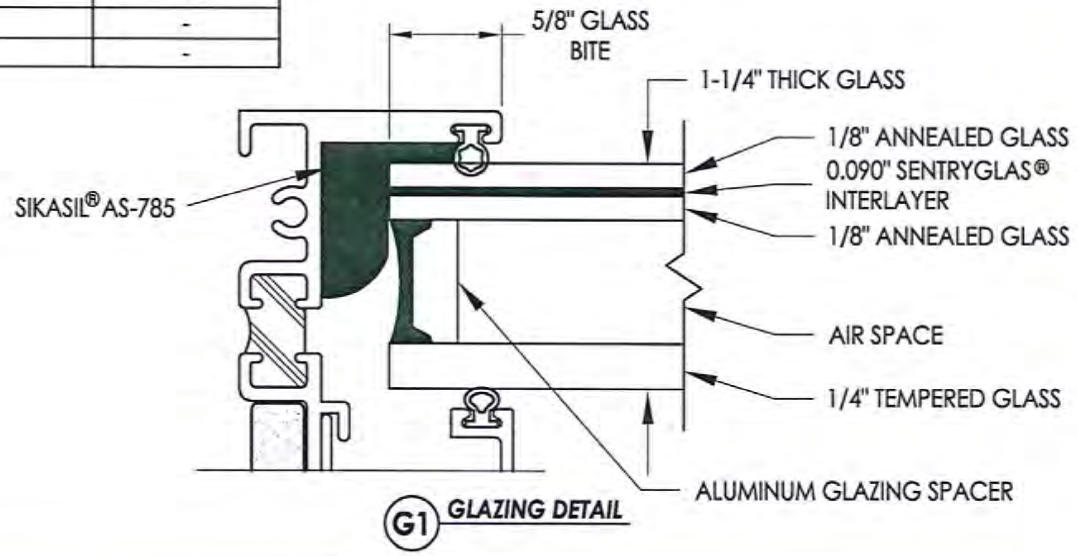


Testing Evaluation Laboratories Inc.
Specimen Complies with Drawing
Deviations Noted - TEL# 01993391
Date 11/01/2021 Verified by VKW

PRODUCT:		FLEETWOOD SPEC. 6, 6a	
PART OR ASSEMBLY:		COMPONENTS	
NO.	DATE	REVISIONS	BY
DATE: 10/19/21			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: L-9490			
SHEET 10 OF 11			

BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
F	#8 X 1-1/2" PPH SMS	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
11	GLASS STOP (1-1/4")	6063-T6 ALUM
12	SHEAR BLOCK	6061-T6 ALUM
13	CORNER KEY	6063-T6 ALUM
14	INSERT STOP	6063-T6 ALUM
20	SS. BUTT HINGE	SS
22	SNUBBER-COMMERCIAL PULL-IN BLOCK	SS
23	MULTIPOINT LOCK HANDLE	SS
27	5 POINTS LOCKING BAR	SS
28	TIE BAR GUIDE	-
29	KEEPER	SS
30	CASEMENT ROTOR GEAR	SS
36	CASEMENT SS. TRACK	SS
40	#10 X 1" PPH SMS	STEEL
41	SCREW NO 8, PHP, .750"	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
48	BACK UP NUTS	STEEL
50	BULB VINYL (EPDM 70 DUROMETER)	-
51	MINI BULB VINYL (EPDM 70 DUROMETER)	-
52	WOOD BLOCK (3/4" X 1-1/4")	-
57	PIVOT SHIM	-



Testing Evaluation Laboratories Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL# 01993391
 Date 11/01/2021 Verified by VKW

G1 GLAZING DETAIL

PRODUCT:	FLEETWOOD SPEC. 6, 6a	
	PART OR ASSEMBLY: COMPONENTS & GLAZING DETAILS	
NO.	DATE	BY
	REVISIONS	
DATE: 10/19/21		
SCALE: N.T.S.		
DWG. BY: LFS		
CHK. BY: RW		
DRAWING NO.: L-9490		
SHEET 11 OF 11		