

AAMA 507-07 THERMAL PERFORMANCE REPORT

(Revised)

Rendered to:

UNITED STATES ALUMINUM

SERIES/MODEL: Series 8100 Fixed Window

TYPE: Fixed

Report No:	A1442.02-116-45
Report Date:	09/10/10
Revised Report Date:	09/17/10



AAMA 507-07 THERMAL PERFORMANCE REPORT

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Rendered to:

UNITED STATES ALUMINUM
200 Singleton Drive
Waxahachie, Texas 75165

Report No: A1442.02-116-45
Report Date: 09/10/10
Simulation Date: 09/10/10
Revised Report Date: 09/17/10

Project Summary:

Architectural Testing, Inc. was contracted by United States Aluminum to provide U-Factor and Solar Heat Gain Coefficient thermal performance ratings on the Series 8100 Fixed Window - Fixed. The thermal performance ratings were determined in accordance with AAMA 507-07, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Building.

Reference Documents:

AAMA 507-07, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings

NFRC 100-2010, Procedure for Determining Fenestration Product U-Factors

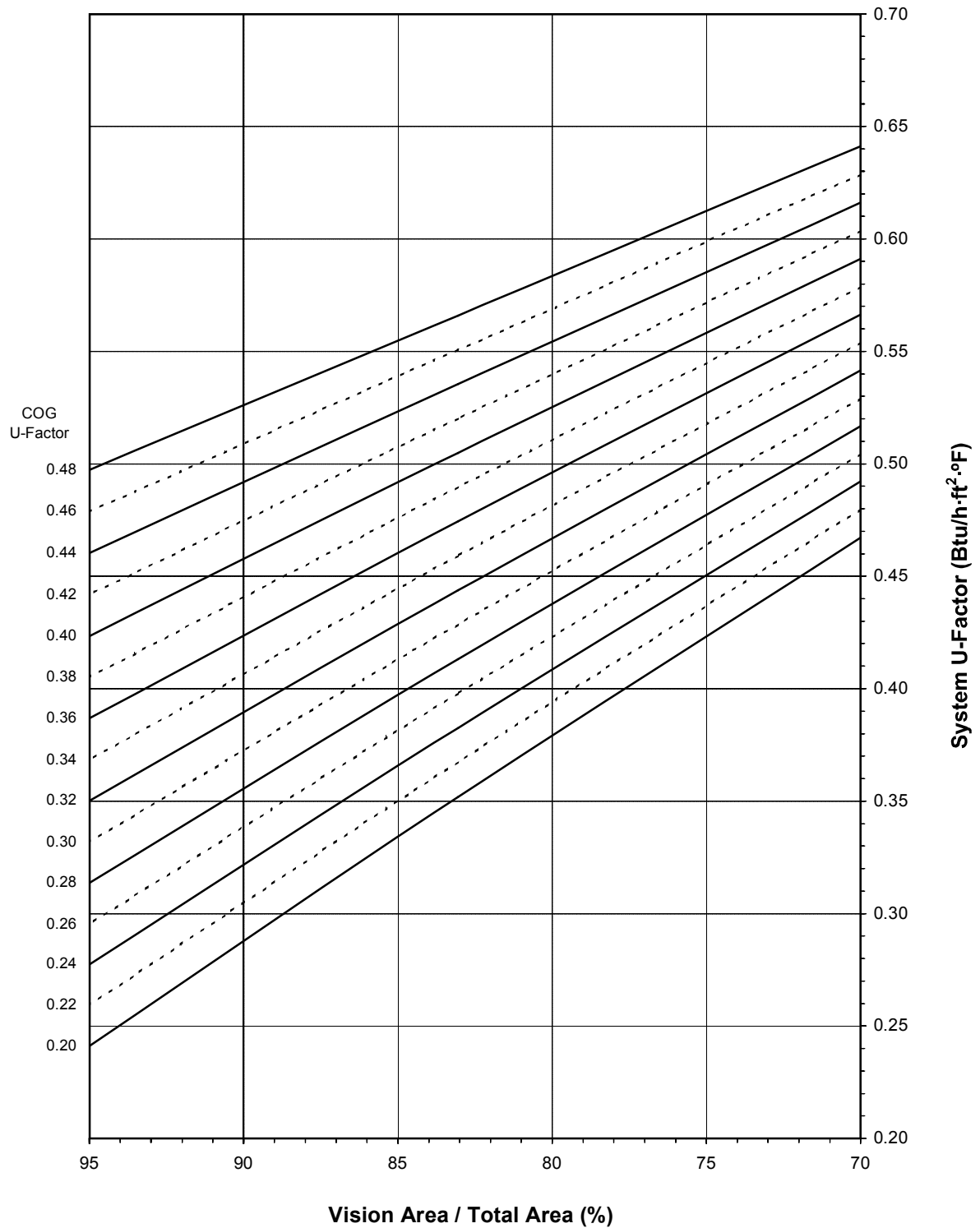
NFRC 200-2010, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

Simulation Specimen Description:

Series/Model: Series 8100 Fixed Window
Type: Fixed
Frame Material: Painted Aluminum
Specimen Size: 1200mm wide by 1500mm high (47-1/4" by 59-1/16")
Configuration: Single Vision Lite
Drawing Reference: United States Aluminum Drawing: 8100 FW

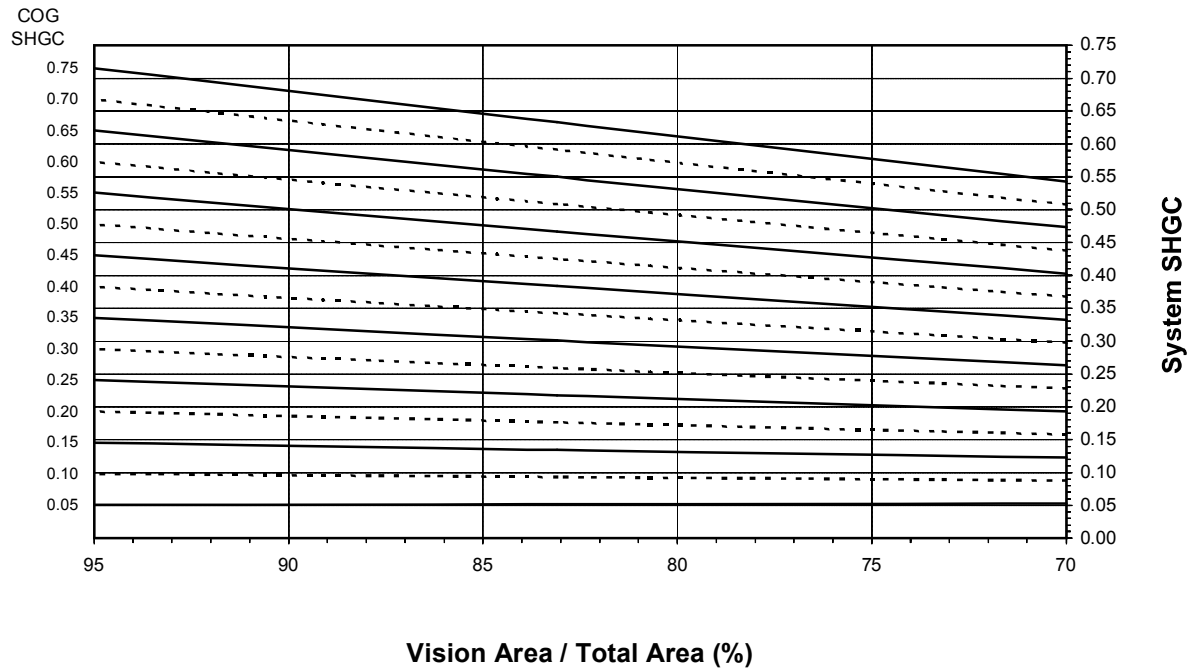
**United States Aluminum
Series 8100 Fixed Window - Fixed**

System U-Factor vs. Percentage of Vision Area

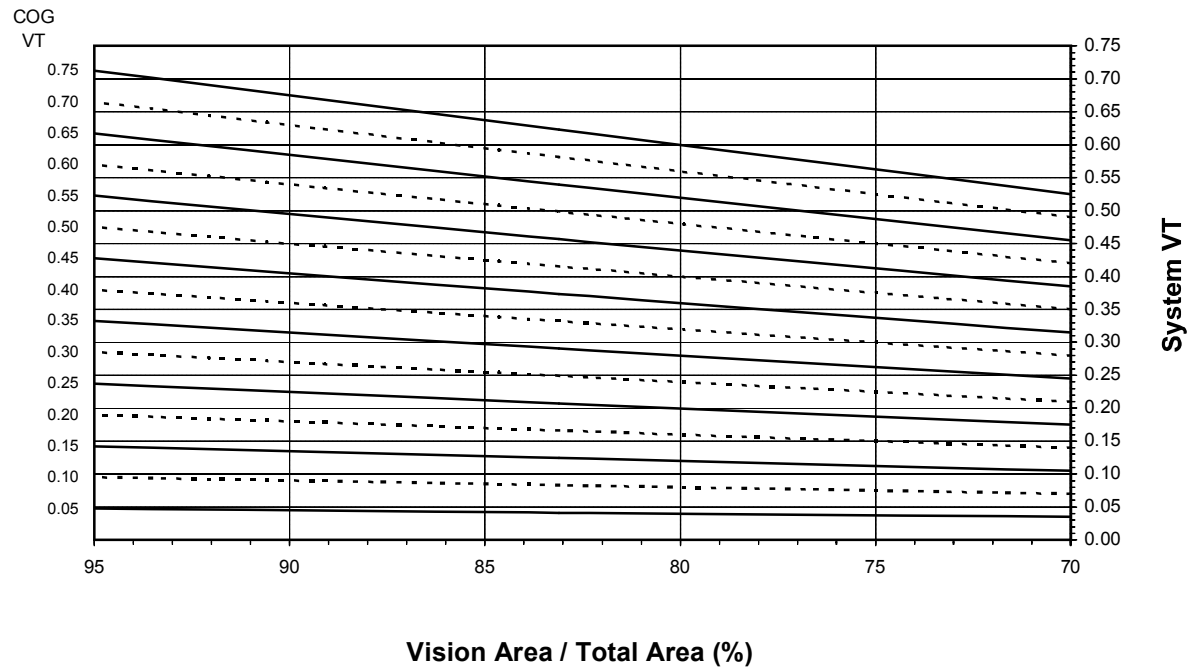


**United States Aluminum
Series 8100 Fixed Window - Fixed**

System SHGC vs. Percentage of Vision Area



System VT vs. Percentage of Vision Area



**United States Aluminum
Series 8100 Fixed Window - Fixed**

Size Specific U-Factor Matrix*

Glazing Option	Center of Glass U-Factor	Overall U-Factor
1	0.48	0.57
2	0.46	0.55
3	0.44	0.54
4	0.42	0.52
5	0.40	0.50
6	0.38	0.49
7	0.36	0.47
8	0.34	0.46
9	0.32	0.44
10	0.30	0.43
11	0.28	0.41
12	0.26	0.40
13	0.24	0.38
14	0.22	0.37
15	0.20	0.35

Size Specific SHGC Matrix*

Center of Glass SHGC	Overall SHGC
0.75	0.63
0.70	0.59
0.65	0.55
0.60	0.51
0.55	0.47
0.50	0.43
0.45	0.38
0.40	0.34
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.05

Size Specific VT Matrix*

Center of Glass VT	Overall VT
0.75	0.62
0.70	0.58
0.65	0.54
0.60	0.50
0.55	0.46
0.50	0.42
0.45	0.37
0.40	0.33
0.35	0.29
0.30	0.25
0.25	0.21
0.20	0.17
0.15	0.12
0.10	0.08
0.05	0.04

*Size Specific U-Factor, SHGC, and VT Matrices are based on the standard Fixed specimen size of 1200mm wide by 1500mm high (47-1/4" by 59-1/16"). This represents 83.1% Vision Area / Total Area.

Vision Area Data

Revised Report Date: 09/17/10

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70% Vision Area	NFRC 100-2010	95% Vision Area
							25.63" by 32.04"	47.24" by 59.06"	165.35" by 206.69"
1	0.48	43.7	Head	2.1060	1.0038	0.5137	0.6413	0.5660	0.4974
			L Jamb	2.1060	1.0198	0.5131			
			R Jamb	2.1060	1.0198	0.5131			
			Sill	3.0970	0.8978	0.5253			
2	0.46	44.8	Head	2.1060	1.0040	0.4994	0.6287	0.5507	0.4788
			L Jamb	2.1060	1.0201	0.4987			
			R Jamb	2.1060	1.0201	0.4987			
			Sill	3.0970	0.8982	0.5111			
3	0.44	45.8	Head	2.1060	1.0042	0.4850	0.6162	0.5354	0.4603
			L Jamb	2.1060	1.0203	0.4844			
			R Jamb	2.1060	1.0203	0.4844			
			Sill	3.0970	0.8985	0.4970			
4	0.42	46.8	Head	2.1060	1.0045	0.4708	0.6037	0.5202	0.4419
			L Jamb	2.1060	1.0205	0.4702			
			R Jamb	2.1060	1.0205	0.4702			
			Sill	3.0970	0.8989	0.4829			
5	0.40	47.9	Head	2.1060	1.0047	0.4565	0.5912	0.5049	0.4235
			L Jamb	2.1060	1.0208	0.4560			
			R Jamb	2.1060	1.0208	0.4560			
			Sill	3.0970	0.8993	0.4689			
6	0.38	48.9	Head	2.1060	1.0050	0.4425	0.5787	0.4896	0.4051
			L Jamb	2.1060	1.0210	0.4419			
			R Jamb	2.1060	1.0210	0.4419			
			Sill	3.0970	0.8997	0.4551			
7	0.36	50.0	Head	2.1060	1.0053	0.4283	0.5663	0.4744	0.3867
			L Jamb	2.1060	1.0213	0.4278			
			R Jamb	2.1060	1.0213	0.4278			
			Sill	3.0970	0.9001	0.4412			
8	0.34	51.0	Head	2.1060	1.0055	0.4144	0.5539	0.4591	0.3684
			L Jamb	2.1060	1.0216	0.4140			
			R Jamb	2.1060	1.0216	0.4140			
			Sill	3.0970	0.9004	0.4275			
9	0.32	52.0	Head	2.1060	1.0058	0.4003	0.5415	0.4438	0.3502
			L Jamb	2.1060	1.0219	0.3999			
			R Jamb	2.1060	1.0219	0.3999			
			Sill	3.0970	0.9009	0.4136			
10	0.30	53.1	Head	2.1060	1.0061	0.3865	0.5291	0.4285	0.3319
			L Jamb	2.1060	1.0222	0.3861			
			R Jamb	2.1060	1.0222	0.3861			
			Sill	3.0970	0.9013	0.4000			
11	0.28	54.2	Head	2.1060	1.0065	0.3725	0.5168	0.4132	0.3137
			L Jamb	2.1060	1.0226	0.3722			
			R Jamb	2.1060	1.0226	0.3722			
			Sill	3.0970	0.9017	0.3862			



Vision Area Data

Revised Report Date: 09/17/10

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70% Vision Area	NFRC 100-2010	95% Vision Area
							25.63" by 32.04"	47.24" by 59.06"	165.35" by 206.69"
12	0.26	55.2	Head	2.1060	1.0068	0.3587	0.5044	0.3979	0.2955
			L Jamb	2.1060	1.0229	0.3584			
			R Jamb	2.1060	1.0229	0.3584			
			Sill	3.0970	0.9021	0.3725			
13	0.24	56.3	Head	2.1060	1.0071	0.3449	0.4921	0.3826	0.2774
			L Jamb	2.1060	1.0233	0.3446			
			R Jamb	2.1060	1.0233	0.3446			
			Sill	3.0970	0.9025	0.3589			
14	0.22	57.3	Head	2.1060	1.0074	0.3312	0.4798	0.3673	0.2595
			L Jamb	2.1060	1.0236	0.3309			
			R Jamb	2.1060	1.0236	0.3309			
			Sill	3.0970	0.9029	0.3454			
15	0.20	58.4	Head	2.1060	1.0029	0.3175	0.4672	0.3518	0.2413
			L Jamb	2.1060	1.0240	0.3172			
			R Jamb	2.1060	1.0240	0.3172			
			Sill	3.0970	0.9034	0.3318			

Detailed drawings, datasheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are simulated values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client named herein and relates only to the specimen(s) simulated. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

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Simulation Technician

REVIEWED BY:


Digitally Signed by: Kevin Louder

Kevin S. Louder
Project Engineer

JAM:jam

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

Appendix A: Drawings and Bills of Material (11)

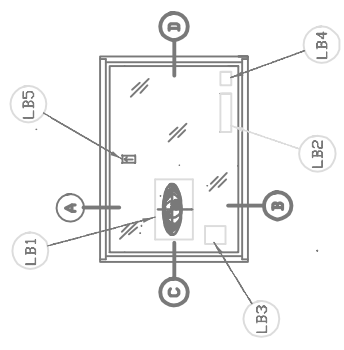
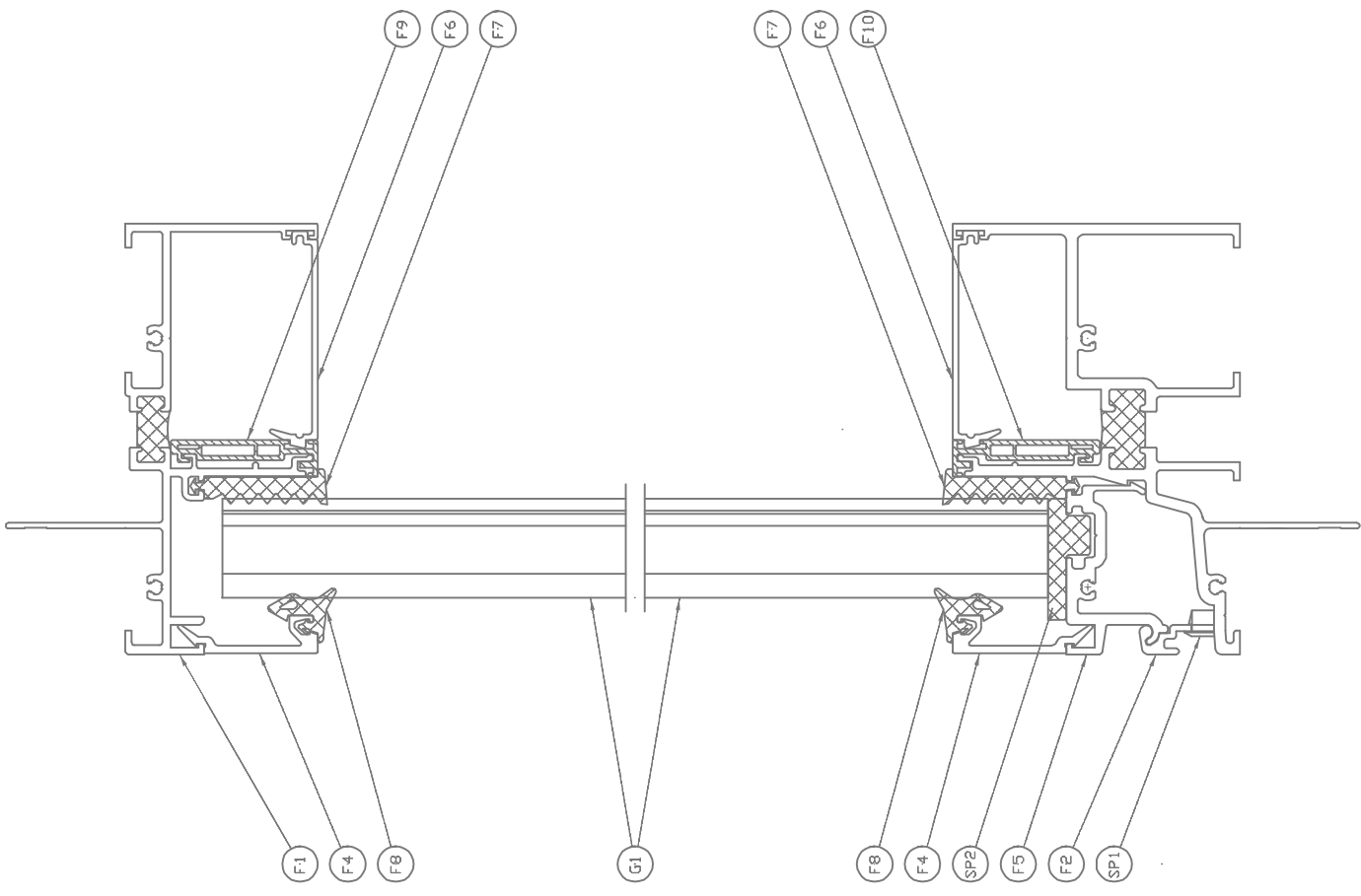
Revision Log

Rev. #	Date	Page(s)	Revision(s)
.02 R0	9/10/2010	All	Original Report Issue
.02 R1	9/17/2010	Appendix A	Revised Drawings

All drawings and Bills of Material used in simulating this product are enclosed in this Appendix.

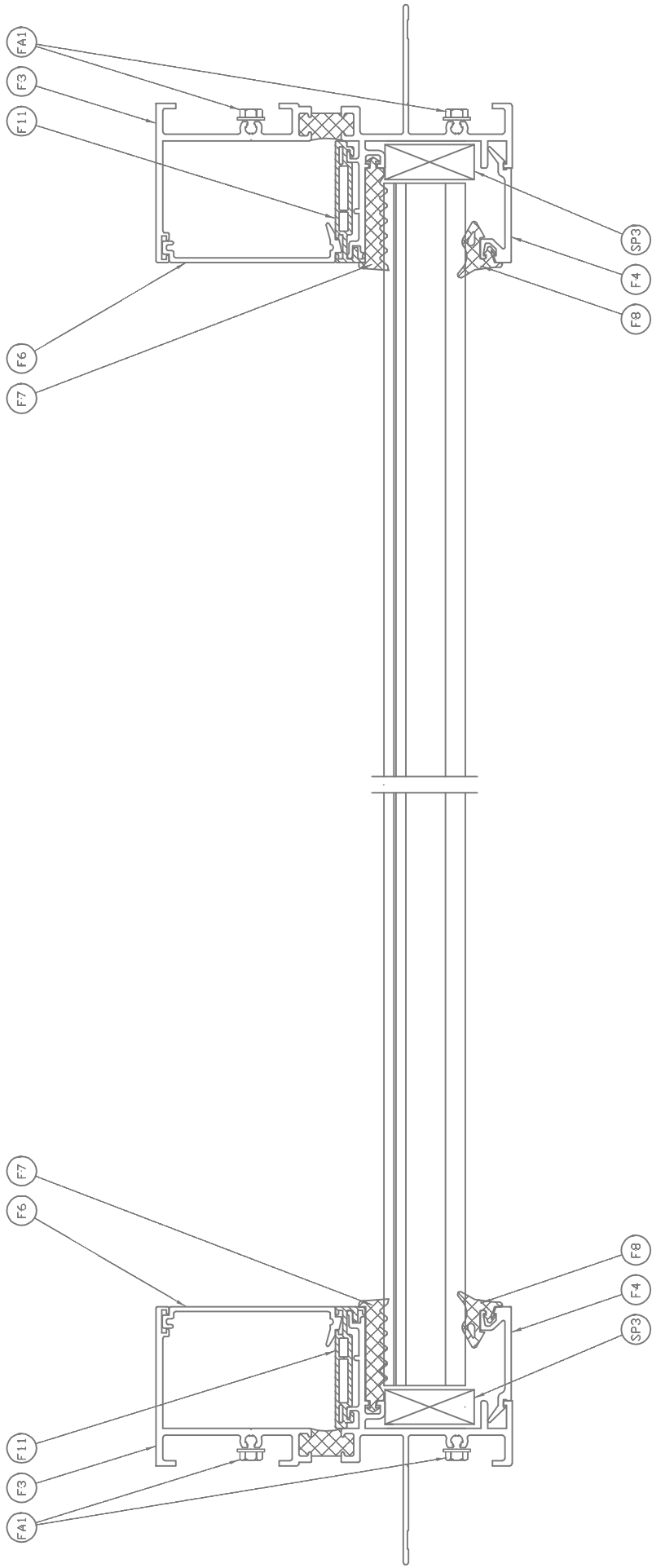
A

B



ELEVATION

U.S. ALUMINUM CORPORATION		8100FW-001	
Picture Window Layout		2 of 3	
05/03/10		U.S. ALUMINUM CORPORATION	
FULL SIZE		U.S. ALUMINUM CORPORATION	



D

C

U.S. ALUMINUM CORPORATION			
Millie C.		FIXED WINDOW LAYOUT	
05/03/10		{SERIES 8100FW-001}	
FULL SIZE		{SERIES 8100FW-001}	