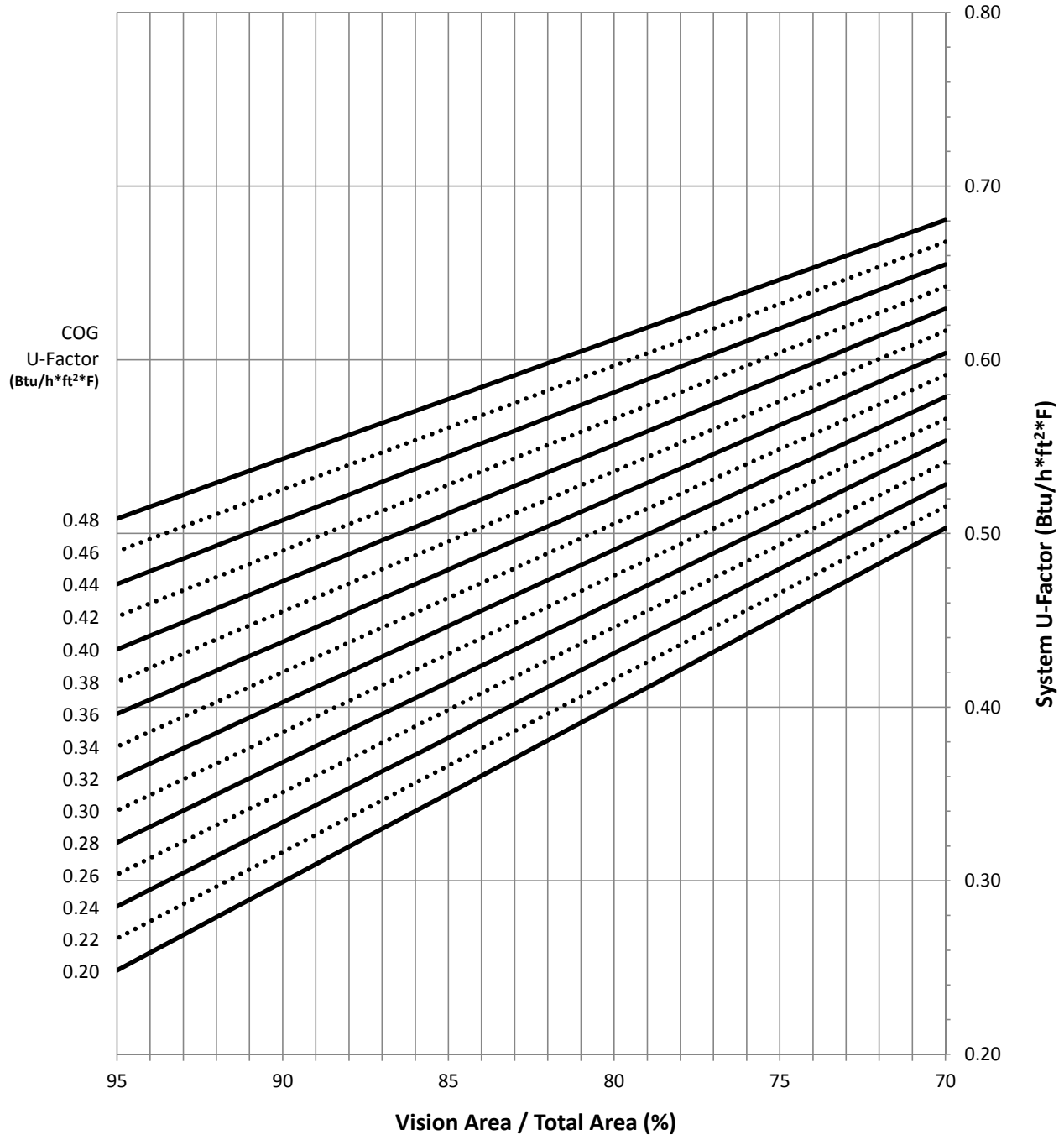
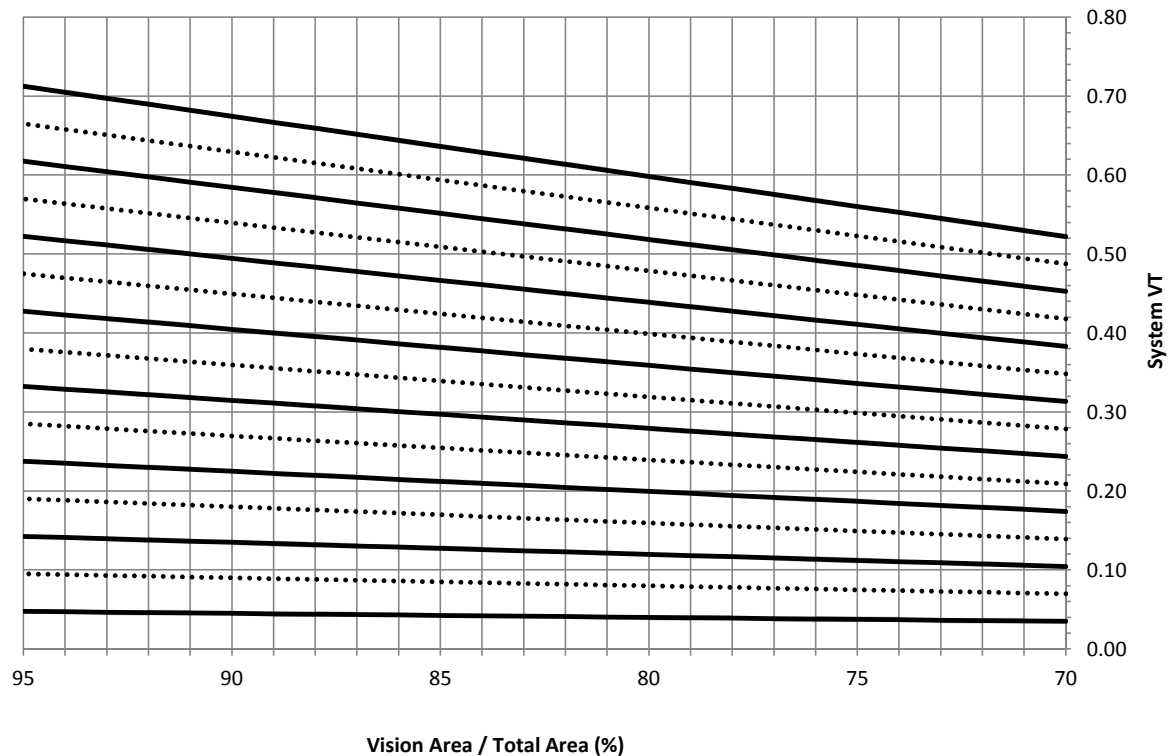
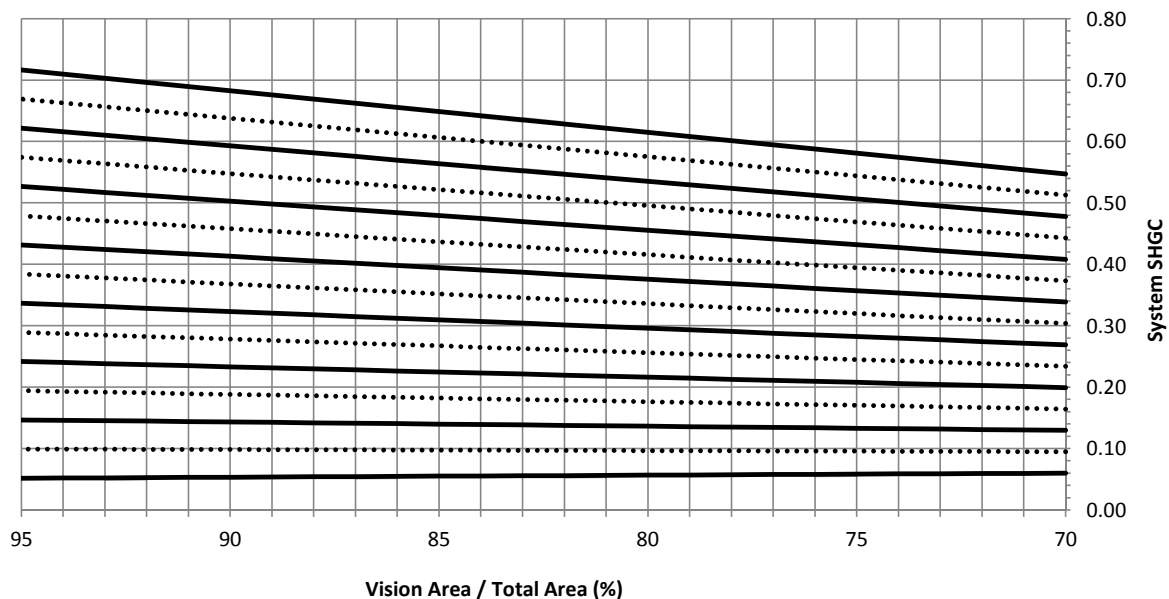


- 1.0 Product Manufacturer:** Coral Architectural Products
3010 Rice Mine Road
Tuscaloosa, AL 35406
- 2.0 Product Model:** FL550T Storefront
- 3.0 Operator Type:** Glazed Wall Window Wall O-O
- 4.0 Simulations Performed:** Thermal simulations were performed in accordance with AAMA 507-07, *Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings*, using NFRC-approved simulation programs WINDOW6.3 and THERM6.3, and current versions of NFRC 100-2010 and NFRC 200-2010.
- 5.0 Framing Type:** Painted thermally broken aluminum (AT) all members. Due to proximity of walls of mullion and filler, verticals modeled with thermally improved (AU) interior boundary condition.
- 6.0 Sash Type:** N/A
- 7.0 Grilles:** N/A
- 8.0 Weatherstripping:** N/A
- 9.0 Hardware:** N/A
- 10.0 Edge-of-Glass Construction:** Glazed in pockets with interior and exterior EPDM gaskets.
- 11.0 I.G. Spacer Type:** Generic aluminum box spacer, with 0.01" PIB primary seals between spacer and glass, and .181" depth silicone secondary sealant, was utilized for all simulations.
- 12.0 Grouping:** N/A
- 13.0 Simulation Software:** Simulations were performed using NFRC-approved simulation programs WINDOW6.3 and THERM6.3, in accordance with current versions of NFRC 100-2010, NFRC 200-2010, and NFRC 500-2010.
- 14.0 Drawings:** This report is incomplete if not accompanied by component and assembly drawings of the indicated product, provided by Coral, totaling 6 pages, bearing the initialed stamp of Turner Engineering & Consulting, Inc.
- 15.0 Simulation Results:** Please see the following charts and tables.

System U-Factor vs. Percentage of Vision Area





Size-Specific U-Factor (Btu/h-ft²-F) Matrix: NFRC Standard Size (78.740" x 78.740")

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	0.51
6	0.38	0.49
7	0.36	0.48
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:
NFRC Standard Size (78.740" x 78.740")

Center-of-Glass SHGC	Overall SHGC
0.75	0.65
0.70	0.61
0.65	0.57
0.60	0.52
0.55	0.48
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.10
0.05	0.05

Size-Specific VT Matrix:
NFRC Standard Size (78.740" x 78.740")

Center-of-Glass VT	Overall VT
0.75	0.64
0.70	0.60
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	0.21
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

Glazing Option	NFRC COG U-Factor (Btu/h-ft2-F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft2-F)	Edge U-Factor (Btu/h-ft2-F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (85.2% Vision Area)	95% Vision Area
							36.692" x 36.692"	78.740" x 78.740"	239.535" x 239.535"
1	0.48	44.0	L Head	2.7546	0.8579	0.4946	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.5046	1.3279	0.4965	0.4813	0.4678	0.4743
			L Sill	3.3789	1.0243	0.4946	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.7546	0.8579	0.4946	0.68	0.57	0.51
			R Jamb	1.5046	1.3214	0.4888			
			R Sill	3.3789	1.0243	0.4946			
			Int. Vert.	3.0092	1.3247	0.4926			
2	0.46	45.0	L Head	2.7546	0.8570	0.4802	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.5046	1.3265	0.4822	0.4612	0.4487	0.4541
			L Sill	3.3789	1.0238	0.4804	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.7546	0.8570	0.4802	0.67	0.55	0.49
			R Jamb	1.5046	1.3201	0.4744			
			R Sill	3.3789	1.0238	0.4804			
			Int. Vert.	3.0092	1.3233	0.4783			
3	0.44	46.1	L Head	2.7546	0.8558	0.4653	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.5046	1.3246	0.4674	0.4411	0.4298	0.4341
			L Sill	3.3789	1.0232	0.4658	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.7546	0.8558	0.4653	0.65	0.54	0.47
			R Jamb	1.5046	1.3184	0.4597			
			R Sill	3.3789	1.0232	0.4658			
			Int. Vert.	3.0092	1.3215	0.4635			
4	0.42	47.1	L Head	2.7546	0.8546	0.4505	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.5046	1.3228	0.4527	0.4210	0.4107	0.4140
			L Sill	3.3789	1.0226	0.4512	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.7546	0.8546	0.4505	0.64	0.52	0.45
			R Jamb	1.5046	1.3167	0.4450			
			R Sill	3.3789	1.0226	0.4512			
			Int. Vert.	3.0092	1.3197	0.4488			
5	0.40	48.1	L Head	2.7546	0.8535	0.4358	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.5046	1.3210	0.4381	0.4009	0.3914	0.3939
			L Sill	3.3789	1.0220	0.4368	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.7546	0.8535	0.4358	0.63	0.51	0.43
			R Jamb	1.5046	1.3150	0.4303			
			R Sill	3.3789	1.0220	0.4368			
			Int. Vert.	3.0092	1.3180	0.4342			

* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

Glazing Option	NFRC COG U-Factor (Btu/h-ft ² -F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft ² -F)	Edge U-Factor (Btu/h-ft ² -F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (85.2% Vision Area)	95% Vision Area
							36.692" x 36.692"	78.740" x 78.740"	239.535" x 239.535"
6	0.38	49.2	L Head	2.7546	0.8523	0.4212	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3193	0.4235	0.3808	0.3724	0.3741
			L Sill	3.3789	1.0214	0.4224	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8523	0.4212	0.62	0.49	0.41
			R Jamb	1.5046	1.3135	0.4158			
			R Sill	3.3789	1.0214	0.4224			
			Int. Vert.	3.0092	1.3164	0.4197			
7	0.36	50.2	L Head	2.7546	0.8512	0.4066	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3176	0.4091	0.3607	0.3532	0.3542
			L Sill	3.3789	1.0209	0.4081	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8512	0.4066	0.60	0.48	0.40
			R Jamb	1.5046	1.3119	0.4013			
			R Sill	3.3789	1.0209	0.4081			
			Int. Vert.	3.0092	1.3147	0.4052			
8	0.34	51.3	L Head	2.7546	0.8501	0.3921	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3159	0.3947	0.3407	0.3338	0.3342
			L Sill	3.3789	1.0204	0.3938	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8501	0.3921	0.59	0.46	0.38
			R Jamb	1.5046	1.3104	0.3869			
			R Sill	3.3789	1.0204	0.3938			
			Int. Vert.	3.0092	1.3131	0.3908			
9	0.32	52.3	L Head	2.7546	0.8491	0.3777	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3144	0.3803	0.3206	0.3145	0.3144
			L Sill	3.3789	1.0199	0.3797	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8491	0.3777	0.58	0.44	0.36
			R Jamb	1.5046	1.3089	0.3726			
			R Sill	3.3789	1.0199	0.3797			
			Int. Vert.	3.0092	1.3117	0.3764			
10	0.30	53.4	L Head	2.7546	0.8480	0.3634	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3128	0.3661	0.3005	0.2953	0.2948
			L Sill	3.3789	1.0194	0.3655	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8480	0.3634	0.57	0.43	0.34
			R Jamb	1.5046	1.3075	0.3583			
			R Sill	3.3789	1.0194	0.3655			
			Int. Vert.	3.0092	1.3101	0.3622			

* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

Glazing Option	NFRC COG U-Factor (Btu/h-ft ² -F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft ² -F)	Edge U-Factor (Btu/h-ft ² -F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (85.2% Vision Area)	95% Vision Area
							36.692" x 36.692"	78.740" x 78.740"	239.535" x 239.535"
11	0.28	54.4	L Head	2.7546	0.8470	0.3491	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3113	0.3519	0.2804	0.2759	0.2751
			L Sill	3.3789	1.0189	0.3515	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8470	0.3491	0.55	0.41	0.32
			R Jamb	1.5046	1.3061	0.3441			
			R Sill	3.3789	1.0189	0.3515			
			Int. Vert.	3.0092	1.3087	0.3480			
12	0.26	55.5	L Head	2.7546	0.8460	0.3348	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3098	0.3377	0.2604	0.2565	0.2554
			L Sill	3.3789	1.0184	0.3374	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8460	0.3348	0.54	0.40	0.30
			R Jamb	1.5046	1.3047	0.3299			
			R Sill	3.3789	1.0184	0.3374			
			Int. Vert.	3.0092	1.3073	0.3338			
13	0.24	56.5	L Head	2.7546	0.8451	0.3207	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3083	0.3236	0.2403	0.2370	0.2357
			L Sill	3.3789	1.0180	0.3235	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8451	0.3207	0.53	0.38	0.29
			R Jamb	1.5046	1.3034	0.3158			
			R Sill	3.3789	1.0180	0.3235			
			Int. Vert.	3.0092	1.3059	0.3197			
14	0.22	57.6	L Head	2.7546	0.8405	0.3061	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3069	0.3095	0.2203	0.2175	0.2161
			L Sill	3.3789	1.0175	0.3095	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8405	0.3061	0.52	0.37	0.27
			R Jamb	1.5046	1.3021	0.3017			
			R Sill	3.3789	1.0175	0.3095			
			Int. Vert.	3.0092	1.3045	0.3056			
15	0.20	58.7	L Head	2.7546	0.8395	0.2919	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.5046	1.3056	0.2954	0.2002	0.1979	0.1965
			L Sill	3.3789	1.0171	0.2956	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.7546	0.8395	0.2919	0.50	0.35	0.25
			R Jamb	1.5046	1.3009	0.2876			
			R Sill	3.3789	1.0171	0.2956			
			Int. Vert.	3.0092	1.3033	0.2915			

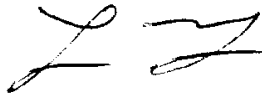
* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

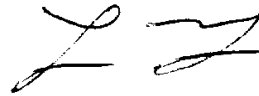
16.0 Compliance and Disclaimer Statements: This report shall not be reproduced, except in full, without the approval of TE&C. This report relates only to the fenestration products simulated. All rounding was performed per NFRC 601, NFRC Unit and Measurement Policy. The results obtained from this report are for controlled simulation conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. All simulations performed in this report were conducted in full compliance with all NFRC requirements by Turner Engineering & Consulting, Inc. TE&C does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products simulated or tested at TE&C. TE&C is not owned, operated or controlled by any company manufacturing or distributing products it simulates or tests. This report is only intended for the use of the entity named in section 1.0 of this report. A copy of this report will be retained at TE&C for a period of five (5) years.

17.0 Simulator: Lucas A. Turner, P.E.

18.0 Simulator in Responsible Charge: Lucas A. Turner, P.E., attests to the technical accuracy and content of this report.



Simulator Signature



Simulator in Responsible Charge Signature

Drawing Appendix

**Following drawings and data provided
by Client, totaling 6 pages**

FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

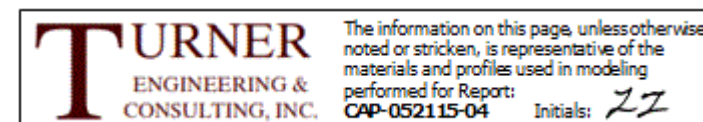
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1	INDEX TO DRAWINGS AND NOTES
2	STANDARD FRAMING ELEVATION
3	STANDARD FRAMING DETAILS
4	STANDARD FRAMING DETAILS
5	BILL OF MATERIALS
6	DIE DRAWINGS

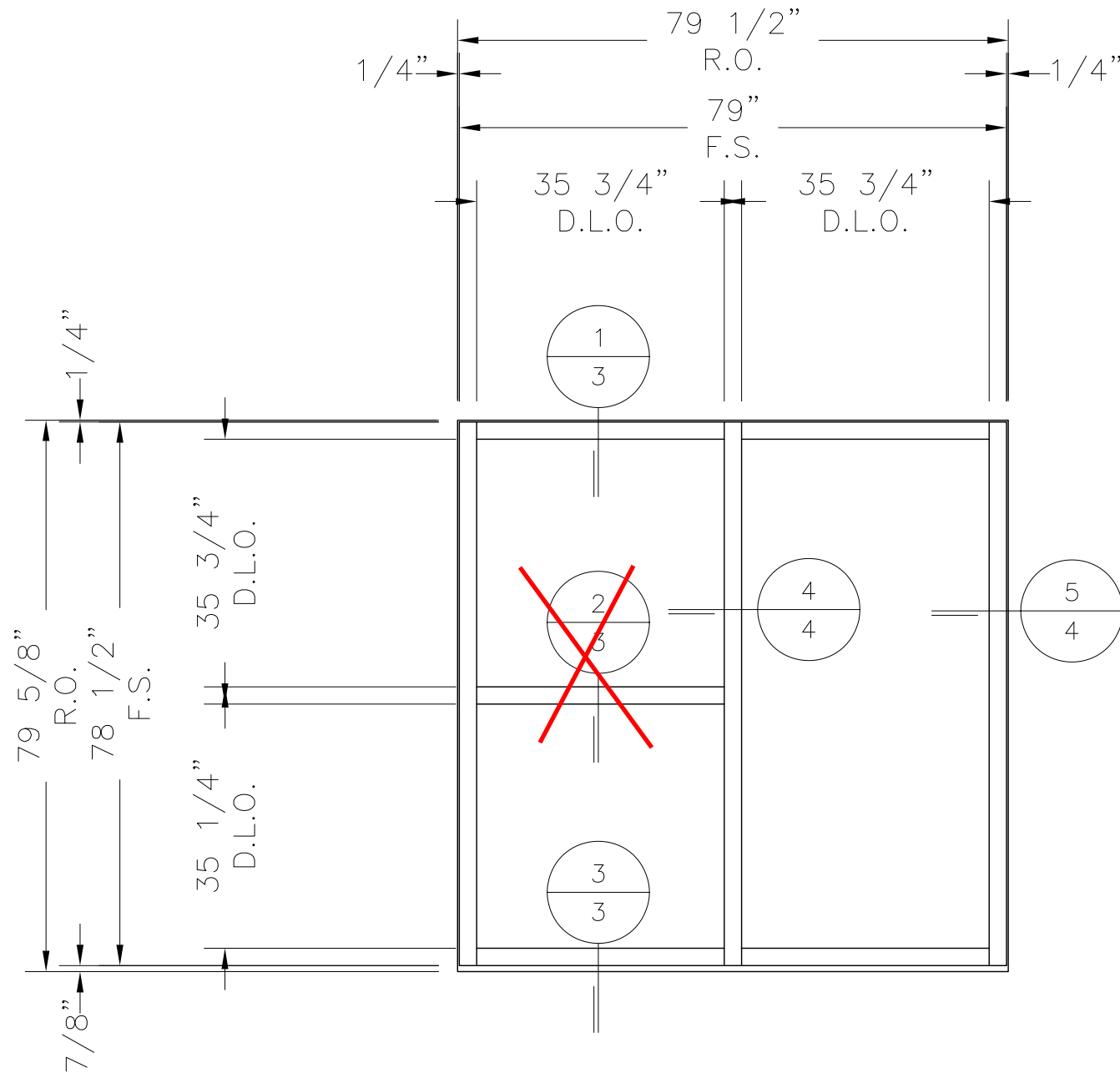
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FL550T AAMA 507 NFRC CMAST SUBMITTAL
DRAWINGS

INDEX TO DRAWINGS AND NOTES

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SHEET 1	





TYPICAL ELEVATION FOR FL550 AAMA 507
SIMULATION NFRC CMAST

TURNER

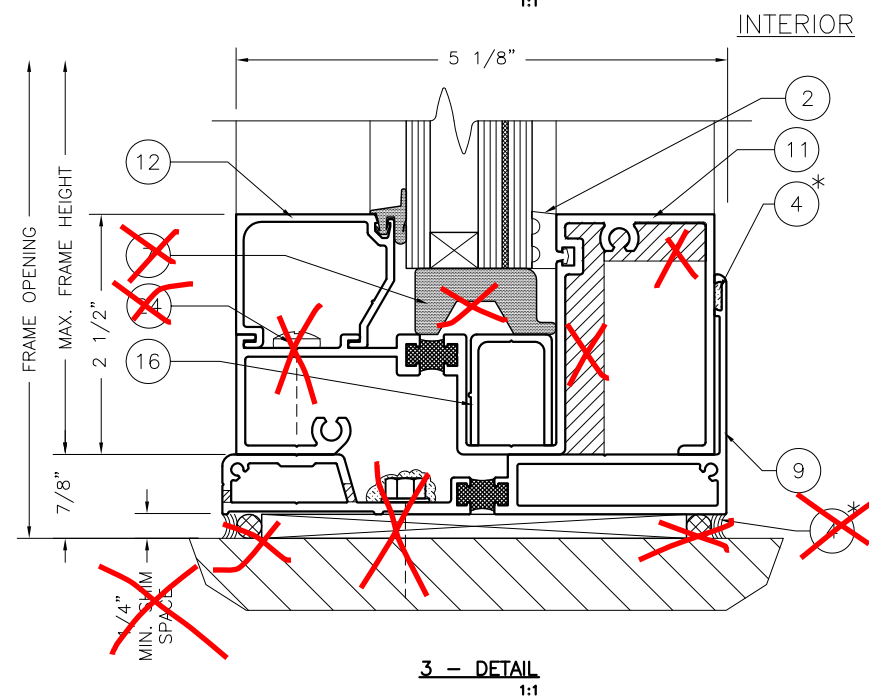
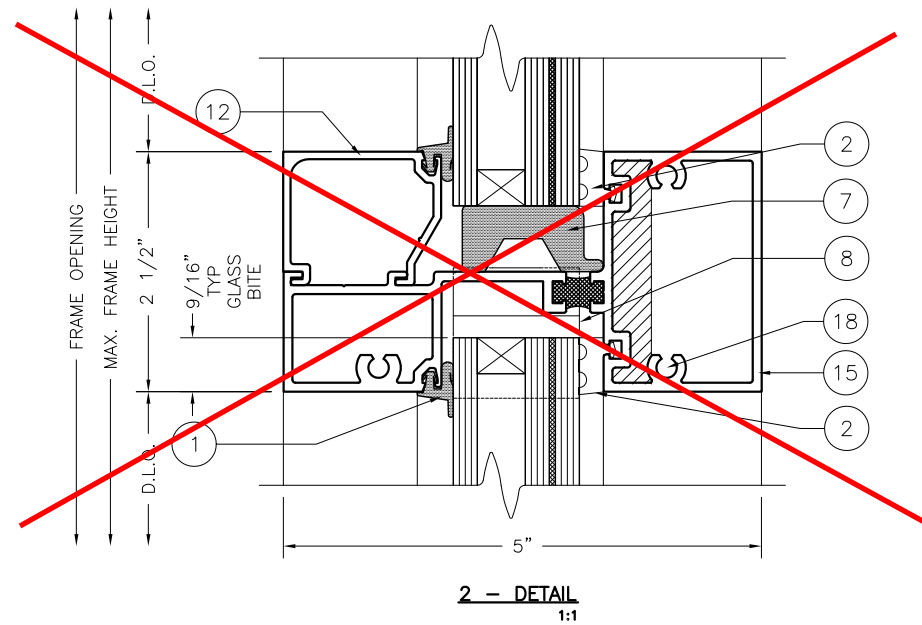
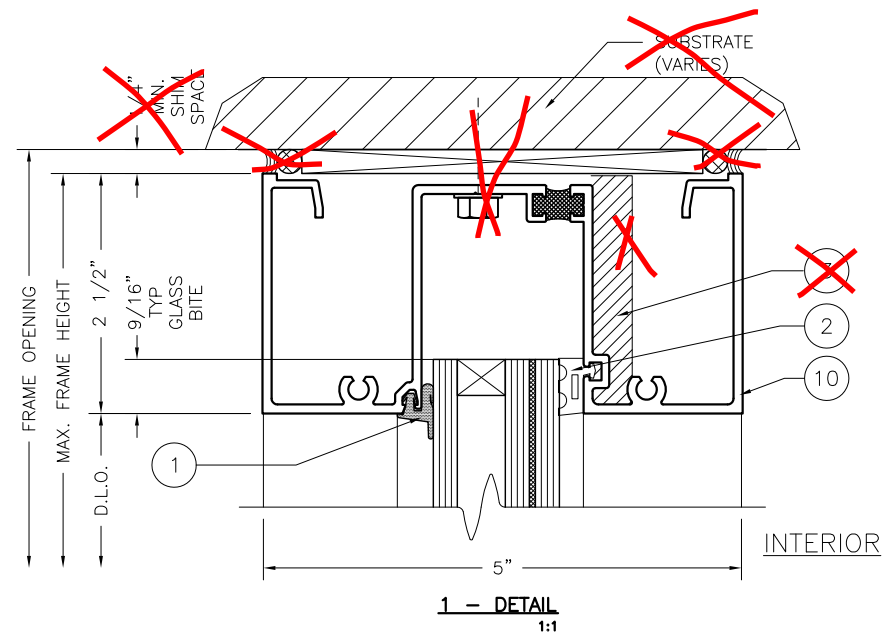
ENGINEERING & CONSULTING, INC.

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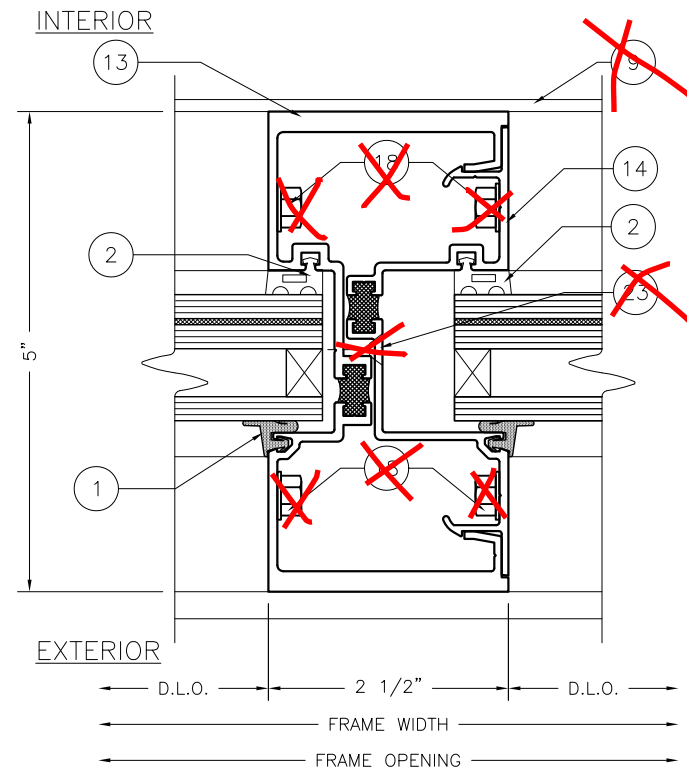
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FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS		STANDARD FRAMING ELEVATION		Coral Architectural Products ■ 3010 RICE MINE ROAD, TUSCALOOSA, AL 35406 PHONE: 800-772-7737 FAX: 205-443-6261	
REV	BY	DATE	DESCRIPTION		

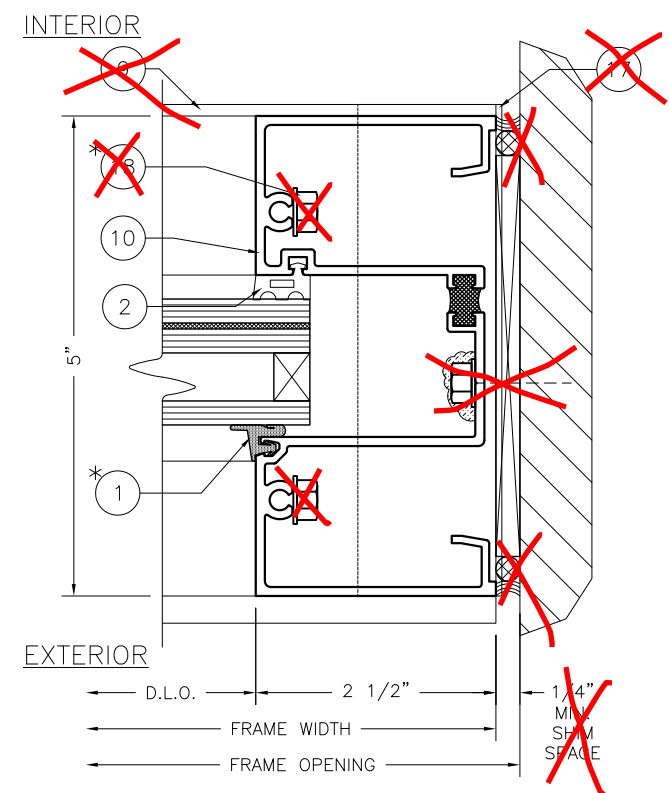


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FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

STANDARD FRAMING DETAILS

Coral

Architectural Products

3010 RICE MINE ROAD, TUSCALOOSA, AL 35406

PHONE: 205-772-7737 FAX: 205-443-6261

REV

BY

DATE

DESCRIPTION

BILL OF MATERIALS						
ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG1	EXTERIOR GLAZING GASKET	0.120 SPACE	EPDM	VARIES	
2	NG15	INTERIOR SPACER GASKET	0.250 SPACE	EPDM	VARIES	
3	SM5601	JOINT SEALANT TAPE	0.500 X 0.125 X VARIES	BUTYL	SCHNEE-MOOREHEAD	
5	995	SILICONE - GLASS TO METAL	FILL SPACE	SILICONE	DOW CORNING	GLASS TO METAL AND INTERNAL
6	FL315-1	FLAT FILLER	0.681 X 4.658 X 0.070	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
7	SB15	SETTING BLOCK @ SILL & HORIZONTAL	0.687 X 1.468 X 4.000	EPDM	VARIES	2 PER LITE
8	WD300-1	WATER DIVERTER	1.358 X 1.344 X 4.000	INJECTION MOLDED PLASTIC	CORAL INDUSTRIES, INC.	@ EACH END OF HORIZONTAL
9	FL539T	SUBSILL FLASHING	2.620 X 5.402 X 0.084	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
10	FL571T	HEAD OR WALL JAMB	2.500 X 5.000 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
11	FL572T	SILL OR HEAD	2.500 X 4.980 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
12	FL553	GLASS STOP	1.250 X 1.646 X 0.078	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
13	FL574T	STD. VERTICAL MULLION	2.500 X 5.000 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
14	FL575T	OPEN BACK MULLION FILLER	0.681 X 4.670 X 0.080	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
15	FL576T	INTERMEDIATE HORIZONTAL	2.500 X 4.980 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
16	CS500-1	SETTING CHAIR	1.156 X 0.844 X 0.078	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
17	ED519-1	SILL FLASHING END DAM	2.500 X 1.000 X 0.062	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
18	AS16	FASTENER	#14 X 1" HHSTS	STEEL	VARIES	TYP. SPLINE SCREW VERTICAL/HORIZONTAL JOINTS
19	NOT USED					
20	AS21	FASTENER	#6 X 1/4" PPH	STEEL	VARIES	ANCHOR ⁽¹⁷⁾ (ED519-1) TO ⁽⁹⁾ (FL539T)
23	AS29	FASTENER	#8 X 2" FHPUC	S. STEEL	VARIES	ANCHOR ⁽¹⁴⁾ FL575T TO ⁽¹³⁾ FL574T COUNTER SINK AND BREAK OFF

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FL550T AAMA 507 NFRC CMAST SUBMITTAL
DRAWINGS

BILL OF MATERIALS

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