Quality Accuracy Assurance
Fenestration Testing Laboratory, Inc.
8148 N.W. 74th Avenue Medley, FL 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 (888) 819-7877
e-mail: clientservices@ftl-inc.com www.ftl-inc.com

Report Date:	9/24/2015
Test Date:	8/28/2015
Expiration Date:	8/28/2019
Lab Number:	8662
Project Number:	15-5995
Revision Number:	0

THERMAL PERFORMANCE TEST REPORT

Manufacture: Coral Architectural Products

Address: 7704B Industrial Lane
Tampa, Florida 33637

Specifications: ANSI/*NFRC 102-2014:* Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.

PRODUCT DESCRIPTION

Model Designation:	Series: FL550T Impact Flush Glaze Store Front
Operating Type:	GWWW
Overall Size:	2000mm (79") by 2000mm (79") high
NFRC Standard Size:	2000mm (79") by 2000mm (79") high

Frame Construction	
Frame Material, Color and Finish:	(AT) Painted gray aluminum alloy thermally broken

Glazing Description	
Layer 1:	1/4" clear glass **(Sungate 500 on surface #2)
Gap:	1/2" gap using a Super Spacer
Layer 2:	1/4" clear-0.060 SGP-1/4" clear

***as per manufacture*

Glazing Method	
Interior Condition:	EPDM
Exterior Condition:	EPDM

Gas Type	**Filling Technique**	**Gas Fill Percentage**
None	None	None

***as per manufacture*

Daylight Opening	
Left and Right Sections	35 3/4" by 73 3/8" high

Weather Stripping		
Quantity	**Description**	**Location**
None	None	None

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Hardware		
Quantity	**Description**	**Location**
None	None	None

Weep Holes		
Quantity	**Description**	**Location**
None	None	None

Reinforcement	
Material	**Location**
None	None

Dividers/Grids		
Grid Size	**Material**	**Grid Pattern**
None	None	None

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Measured Test Data

Heat Flows

1.	Total Measured Input into Metering Box (Qtotal)	1430.64 Btu/hr
2.	Surround Panel Heat Flow (Qsp)	173.66 Btu/hr
3.	Surround Panel Thickness	5.0 inches
4.	Surround Panel Conductance	0.04 Btu/hr·ft²·F
5.	Metering Box Wall Heat Flow (Qmb) and Flanking Heat Flow (Qfl)	-1.73 Btu/hr
6.	EMF vs Heat Flow Equation (equivalent information)	-7.30x35.61
7.	Net Specimen Heat Loss (Qs)	1258.71 Btu/hr

Areas

1.	Test Specimen Projected Area (As)	43.34 ft²
2.	Test Specimen Interior Total (3-D) Surface Area (Aint)	47.28 ft²
3.	Test Specimen Exterior Total (3-D) Surface Area (Aext)	47.97 ft²
4.	Metering Box Opening Area (Amb)	103.79 ft²
5.	Metering Box Baffle Area (Ab1)	92.91 ft²
6.	Surround Panel Interior Exposed Area (Asp)	60.44 ft²

Test Conditions

1.	Average Metering Room Air Temperature	69.80 F
2.	Average Cold Side Air Temperature	-0.31 F
3.	Average Guard/Environmental Air Temperature	72.98 F
4.	Metering Room Average Relative Humidity	11.1 %
5.	Measured Cold Side Wind Velocity (Perpendicular Flow)	11.8 mph
6.	Measured Static Pressure Difference Across Test Specimen	0.0 psf

Surface Temperature Data

1.	Warm side surround panel	65.98 F
2.	Cold side surround panel	0.98 F

Results

1.	Thermal Transmittance of Test Specimen (Us)	0.41 Btu/hr·ft²·F
2.	Standardized Thermal Transmittance of Test Specimen (Ust)	0.39 Btu/hr·ft²·F

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Calculated Test Data

CTS Method

1.	Emittance of Glass (e_1)	0.84
2.	Warm Side Baffle Emittance (eb1)	0.92
3.	Equivalent Warm Side Surface Temperature	49.34 F
4.	Equivalent Cold Side Surface Temperature	5.40 F
5.	Warm Side Baffle Surface Temperature	68.21 F
6.	Measured Warm Side Surface Conductance (hh)	1.42 Btu/hr·ft²·F
7.	Measured Cold Side Surface Conductance (hc)	5.09 Btu/hr·ft²·F
8.	Test Specimen Thermal Conductance (Cs)	0.66 Btu/hr·ft²·F
9.	Convection Coefficient(Kc)	0.34 Btu/(hr·ft²·F$^{1.25}$)
10.	Radiative Test Specimen (Qr1)	611.02 Btu/hr
11.	Conductive Test Specimen Heat Flow (Qc1)	647.68 Btu/hr
12.	Radiative Heat Flux of Test Specimen (qr1)	14.10 Btu/hr·ft²·F
13.	Convective Heat Flux of Test Specimen (qc1)	14.94 Btu/hr·ft²·F
14.	Standardized Warm Side Surface Conductance (hsth)	1.20 Btu/hr·ft²·F
15.	Standardized Cold Side Surface Conductance (hstc)	5.28 Btu/hr·ft²·F
16.	Standardized Thermal Transmittance (Ust)	0.39 Btu/hr·ft²·F

Test Duration

1. The environmental systems were started at 08:15 hours, on 8/27/2015.
2. The test parameters were considered stable for two consecutive four hour test periods from 00:15 hours, on 8/28/2015 to 08:15 hours, on 8/28/2015.
3. The thermal performance test results were derived from 04:15 hours, on 8/28/2015 to 08:15 hours, on 8/28/2015.

The reported Standardized Thermal Transmittance (Ust) was determined using CTS method per Section 8.2 (A) of NFRC 102.

Glazing Deflection (in.)	Left Section	Right Section
Gap width upon receipt of sample in laboratory	1/2"	1/2"
Gap width at laboratory ambient condition on day of testing	1/2"	1/2"
Center of gap at conclusion of test	7/16"	7/16"

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Remarks

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

The calibration of Fenestration Testing Laboratory's "thermal test chamber" was conducted in June 2015.

"Ratings included in this report are for submittal to an NFRC-licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes."

The test sample was installed in a vertical orientation; the exterior of the specimen was exposed to the cold side. The direction of heat was from the interior (warm side) to the exterior (cold side) of the specimen.

Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Test results obtained represent the actual value of the tested specimens and do not constitute opinion, endorsement or certification by this laboratory.

This test report is considered the exclusive property of the client named herein and is applicable to the sample tested. This report may not be reproduced without the approval of Fenestration Testing Laboratory, Inc and if so must be in full.

Rounding of numerical values are per NFRC 601, NFRC Unit and Measurement Policy.

Testing was conducted in full compliance with NFRC requirements.

As per the client, the sample described in this test report was a production line for initial certification.

An estimate of the measurement of uncertainty for these results is available upon request.

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Revision History Table			
Revision	Description	Author	Effective Date
0	Initial Release	Jose Sanchez	9/24/2015

FENESTRATION TESTING LABORATORY, INC.

Jose Sanchez

Jose Sanchez
Test Performed by

Jose Sanchez

Digitally signed by Jose Sanchez
DN: cn=Jose Sanchez, o=Fenestration Testing Lab, ou, email=jose@fenlab.com, c=US
Date: 2015.11.24 06:06:54 -05'00'

Jose Sanchez
Person - in- Responsible- Charge

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APPENDIX

Fenestration Product Drawings and Bill of Material

FL550T AAMA 507
NFRC CMAST SUBMITTAL
DRAWINGS

INDEX TO DRAWINGS	
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

Tested Sample complies with this detail except where noted
Laboratory Report Number: 8662
Date: 11/24/2015
Initials: JS

REV	BY	DATE	DESCRIPTION
1	---	----	----------
2	---	----	----------

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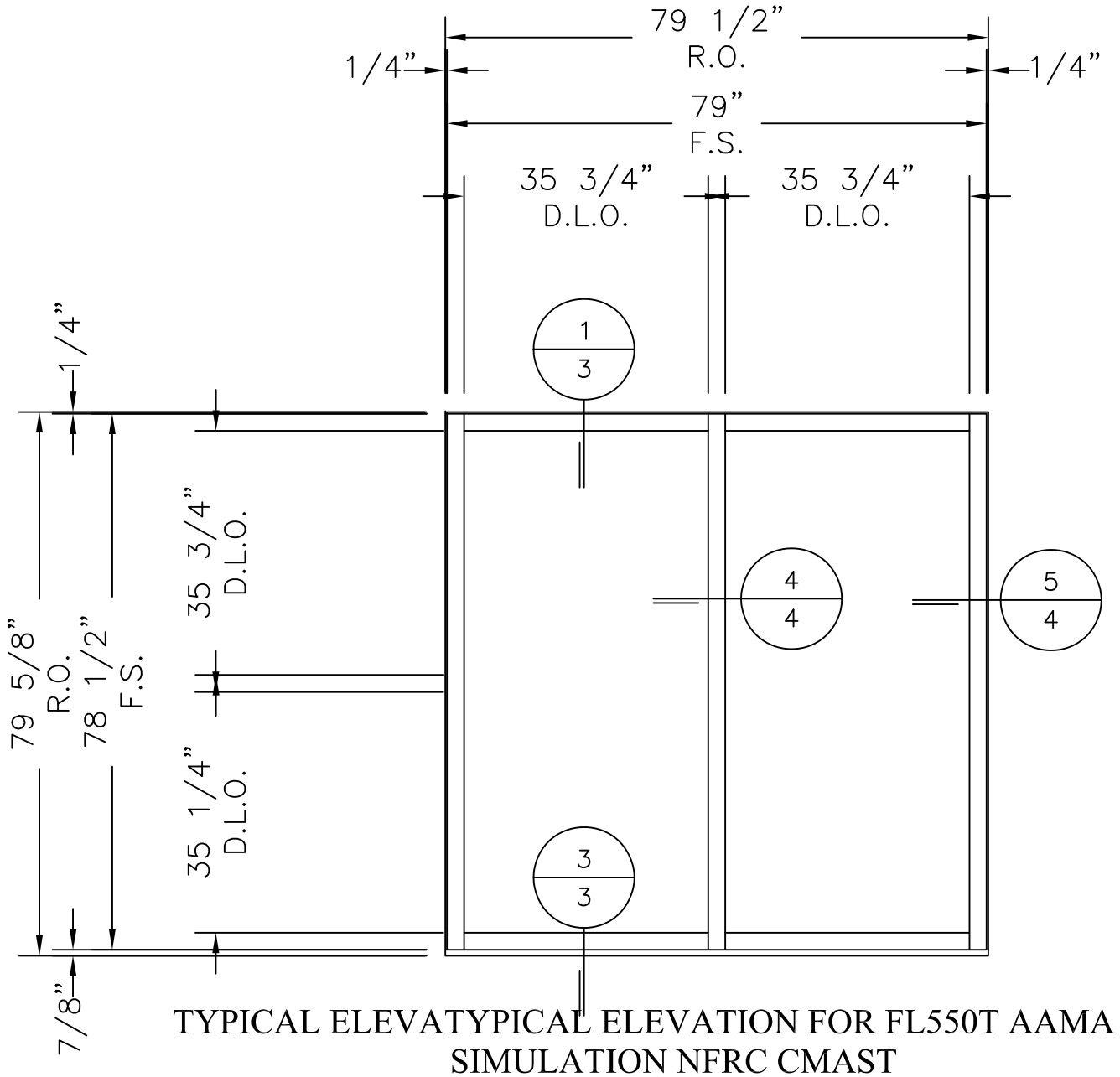
FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

INDEX TO DRAWINGS AND NOTES

PROJECT NO. --

DRAWN	DATE
MJ	2/20/2014
CHECKED	APPROVED
---	---

SHEET 1



TYPICAL ELEVATYPICAL ELEVATION FOR FL550T AAMA 507
SIMULATION NFRC CMAST
GLASS TYPE: $\frac{1}{4}$" T SUNGATE LOW E ON SURFACE 2 x $\frac{1}{2}$" AS x $\frac{1}{4}$"
CL T X.090 SENTRY GLASS x $\frac{1}{4}$" CL T

Tested Sample complies with this detail except where noted
Laboratory Report Number: 8662
Date: 11/24/2015
Initials: JS

REV	BY	DATE	DESCRIPTION
2	WS	10-6	Removed horiz
1	---	---	---

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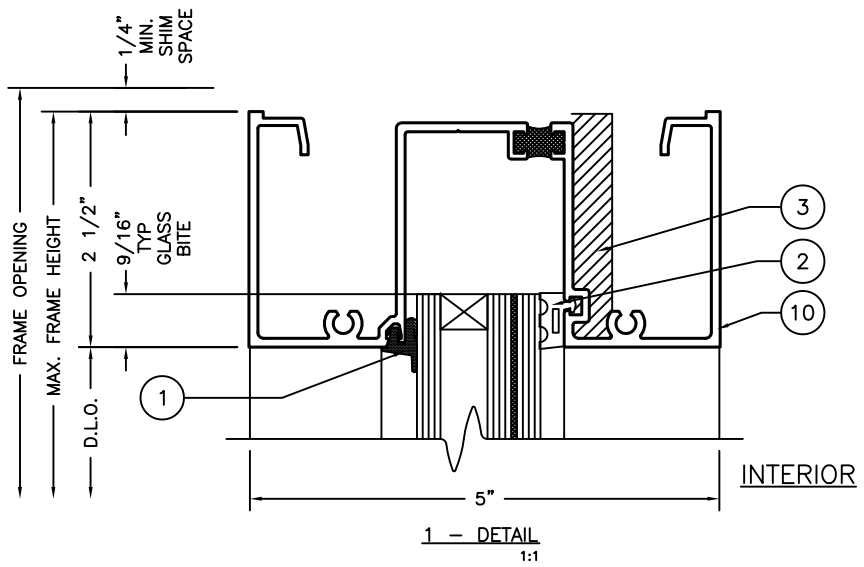
FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

STANDARD FRAMING ELEVATION

PROJECT NO. --

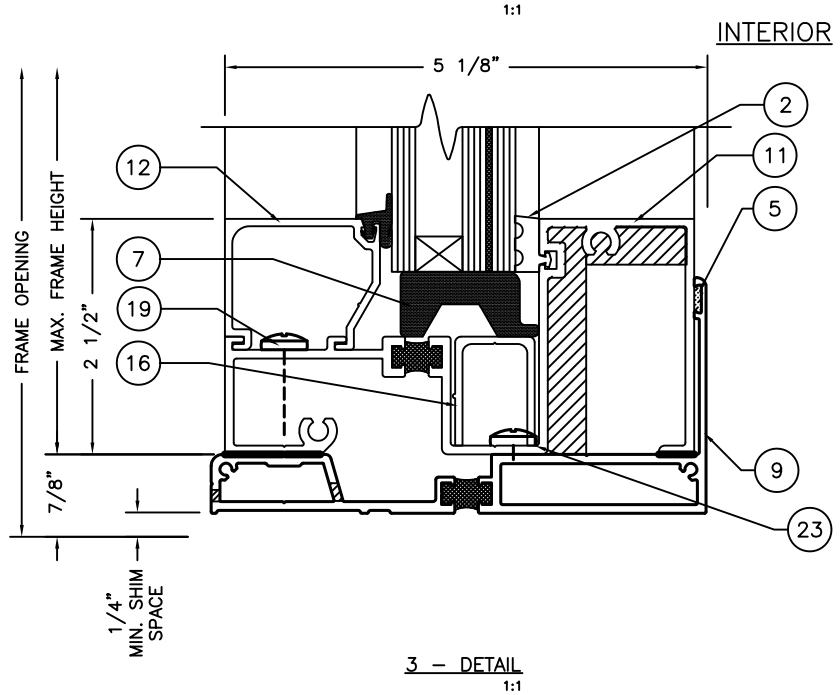
DRAWN	DATE
MJ	10/6/2015
CHECKED	APPROVED
---	---

SHEET 2



1 – DETAIL
1:1

Tested Sample complies with this detail except where noted
Laboratory Report Number: 8662
Date: 11/24/2015
Initials: JS



2 – DETAIL
1:1

3 – DETAIL
1:1

REV	BY	DATE	DESCRIPTION
---	WS	07-OCT-15	FIXED DETAILS ADDED CALL OUT FOR SCREWS

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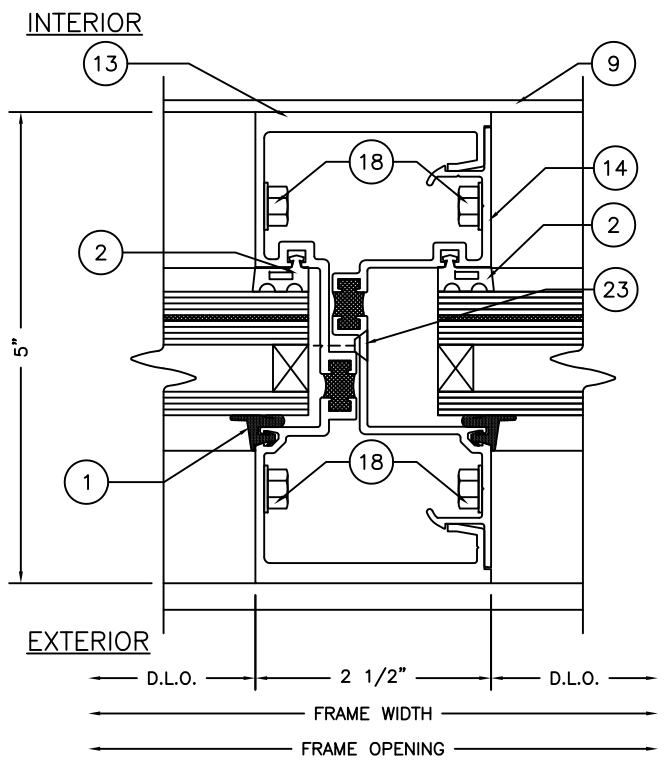
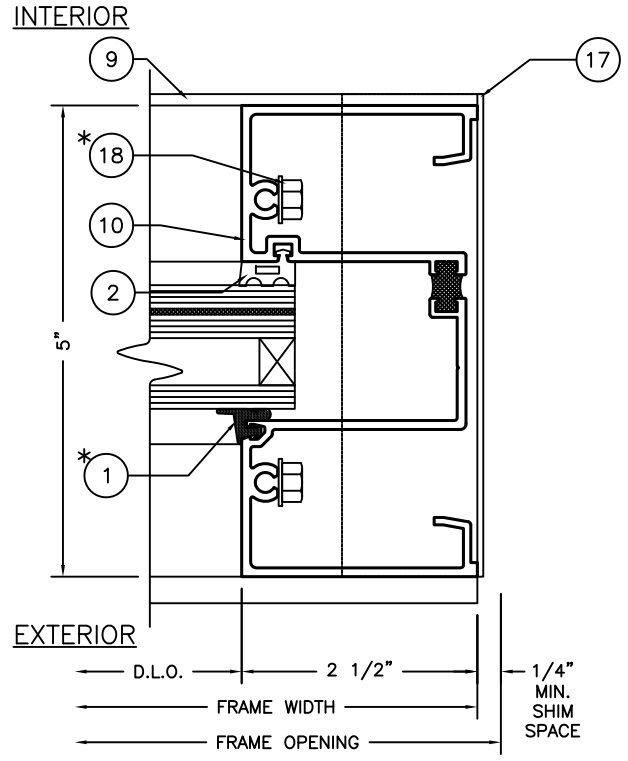
FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

STANDARD FRAMING DETAILS

PROJECT NO.	---
DRAWN	DATE
MJ	10/7/2015
CHECKED	APPROVED
---	---
SHEET	
3	



4 – DETAIL
1:1



5 – DETAIL
1:1

Tested Sample complies with this detail except where noted
Laboratory Report Number: 8662
Date: 11/24/2015
Initials: JS

REV	BY	DATE	DESCRIPTION
2	WS	07-OCT-15	REMOVED SUBSTRATES
1	---	---	---

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FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

STANDARD FRAMING DETAILS

PROJECT NO. --

DRAWN	DATE
MJ	2/20/2014
CHECKED	APPROVED
---	---

SHEET
4

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	FL515-1	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	MISC	FASTENER	#12 X 1½" PHPSMS	S. STEEL	VARIES	ANCHOR
20	AS21	FASTENER	#6 X 1/4" PPH	STEEL	VARIES	ANCHOR(17) (ED519-1) TO(9)(FL539T)
23	MISC	FASTENER	#12 X 1/2" PHPSMS	S. STEEL	VARIES	ANCHOR

Tested Sample complies with this detail except where noted
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Date: 11/24/2015
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REV	BY	DATE	DESCRIPTION
2	---	---	---
1	---	---	---

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FL550T AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

BILL OF MATERIALS

PROJECT NO. --
DRAWN MJ
DATE 2/20/2014
CHECKED ---
APPROVED ---
SHEET 5