### 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 8/28/2019 **Expiration Date:** 8645 Lab. Number: Project Number: 15-5995 **Revision Number:** 0

### **Condensation Performance Test Report**

Manufacture: Coral Architectural Products

Address: 7704B Industrial Lane

Tampa, Florida 33637

Specifications: AAMA 1503-2009: Voluntary Test Method for Thermal Transmittance and Condensation

Resistance of Windows, Doors and Glazed Wall Sections

### **Product Description**

| Model Designation: | Series: FL550T Impact Flush Glaze Store Front |  |
|--------------------|---|--|
| Overall Size:      | 2000mm (79") by 2000mm (79") high             |  |

|                                   | Frame Construction                           |
|-----------------------------------|--|
| Frame Material, Color and Finish: | 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                |  |

<sup>\*\*</sup>as per manufacture

| Glazing Method      |      |  |
|---------------------|------|--|
| Interior Condition: | EPDM |  |
| Exterior Condition: | EPDM |  |

| Gas Type | Filling Technique | Gas Fill Percentage |
|----------|-------------------|---------------------|
| None     | None              | None                |

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

| Weathers-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 and Calculated Test Data**

### **Condensation Resistance Factor (CRF):**

| Warm side ambient air temperature (T <sub>h):</sub>  | 69.80 F                        |
|--|--------------------------------|
| Cold side ambient air temperature (T <sub>c)</sub>   | -0.31 F                        |
| Average of pre-specified frame temperature (FT <sub>p</sub> )                                  | 41.8 F                         |
| Average of roving thermocouples (FT <sub>r</sub> )   | 34.4 F                         |
| Calculated Weighting Factor  |                                |
| Frame Temperature (FT)   | 41.1 F                         |
| Glass Temperature (GT)   | 47.5 F                         |
| Condensation Resistance Factor of glass (CRF <sub>G</sub> )                                    | 68                             |
| Condensation Resistance Factor of frame (CRF <sub>f</sub> )                                    | 59                             |
| Thermal Transmittance (U <sub>c</sub> ):   |                                |
| Nominal sample Area  | 43.34 ft <sup>2</sup>          |
| Total measured input to calorimeter  | 1430.64 Btu/hr                 |
| Calorimeter correction   | 171.93 Btu/hr                  |
| Net specimen   | 1287.65 Btu/hr                 |
| Thermal Transmittance (U <sub>c</sub> )  | 0.41 Btu/hr·ft <sup>2</sup> ·F |
| Static pressure difference across test sample 15 mph dynamic perpendicular wind at exterior(P) | 0.00 psf                       |



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### **Temperature Data**

|       |          |                           | •    |  |
|-------|----------|---------------------------|------|--|
| Indiv | idual A  | erage pre-specified Fran  | ne   |  |
| 1     | 37.1     |                           |      |  |
| 2     | 37.2     |                           |      |  |
| 3     | 37.1     |                           |      |  |
| 4     | 46.7     |                           |      |  |
| 5     | 46.1     |                           |      |  |
| 6     | 47.8     |                           |      |  |
| 7     | 45.5     |                           |      |  |
| 8     | 45.6     |                           |      |  |
| 9     | 42.2     |                           |      |  |
| 10    | 43.5     |                           |      |  |
| 11    | 39.8     |                           |      |  |
| 12    | 38.4     |                           |      |  |
| 13    | 45.1     |                           |      |  |
| 14    | 37.4     |                           |      |  |
| FTp   | 42.1     |                           |      |  |
|       |          |                           | 1111 |  |
| Indiv | /idual A | verage pre-specified Glas | S    |  |
| 15    | 38.1     |                           |      |  |
| 16    | 51.7     |                           |      |  |
| 17    | Г1 Г     |                           |      |  |

| 15 | 38.1 |
|----|------|
| 16 | 51.7 |
| 17 | 51.5 |
| 18 | 50.4 |
| 19 | 51.6 |
| 20 | 41.9 |
| GT | 47.5 |

| Indiv           | idual A | verage Frame Cold Point (Roving) |
|-----------------|---------|----------------------------------|
| 21              | 32.1    |                                  |
| 22              | 34.2    |                                  |
| 23              | 35.6    |                                  |
| 24              | 35.7    |                                  |
| FT <sub>r</sub> | 34.4    |                                  |

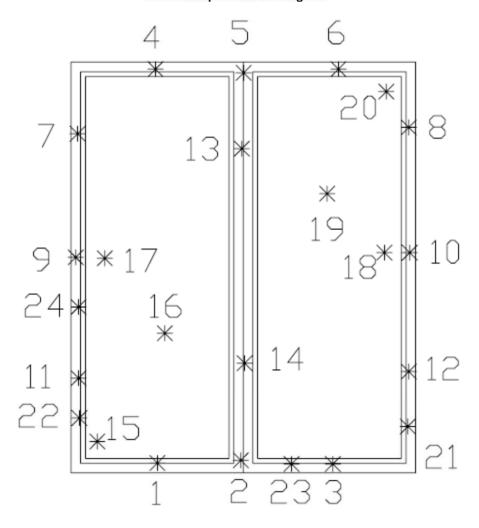


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### **Thermocouple Location Diagram**





## Fenestration Testing Laboratory, Inc.

Report Date: 9/24/2015
Test Date: 8/28/2015
Expiration Date: 8/28/2019
Lab. Number: 8645
Project Number: 15-5995
Revision Number: 0

### **Test Duration**

- 1. The environmental systems were started at 08:15 hours on 8/27/2015.
- 2. The test parameters were considered stable from 04:15 hours on 8/28/2015 to 08:15 hours on 8/28/2015.

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

### 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.

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.

The sample was sealed with silicone on the interior and tested per Section 9.3.4 for air infiltration. The testing described in this test report was conducted in accordance with AAMA 1503 requirements.

|          | Revision Hist               |        |                |  |  |  |
|----------|-----------------------------|--------|----------------|--|--|--|
| Revision | Description                 | Author | Effective Date |  |  |  |
| 0        | 0 Initial Release Jose Sand |        | 9/24/2015      |  |  |  |

### FENESTRATION TESTING LABORATORY, INC.

Jose Sanchez
Jose Sanchez

**Test Performed by** 

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

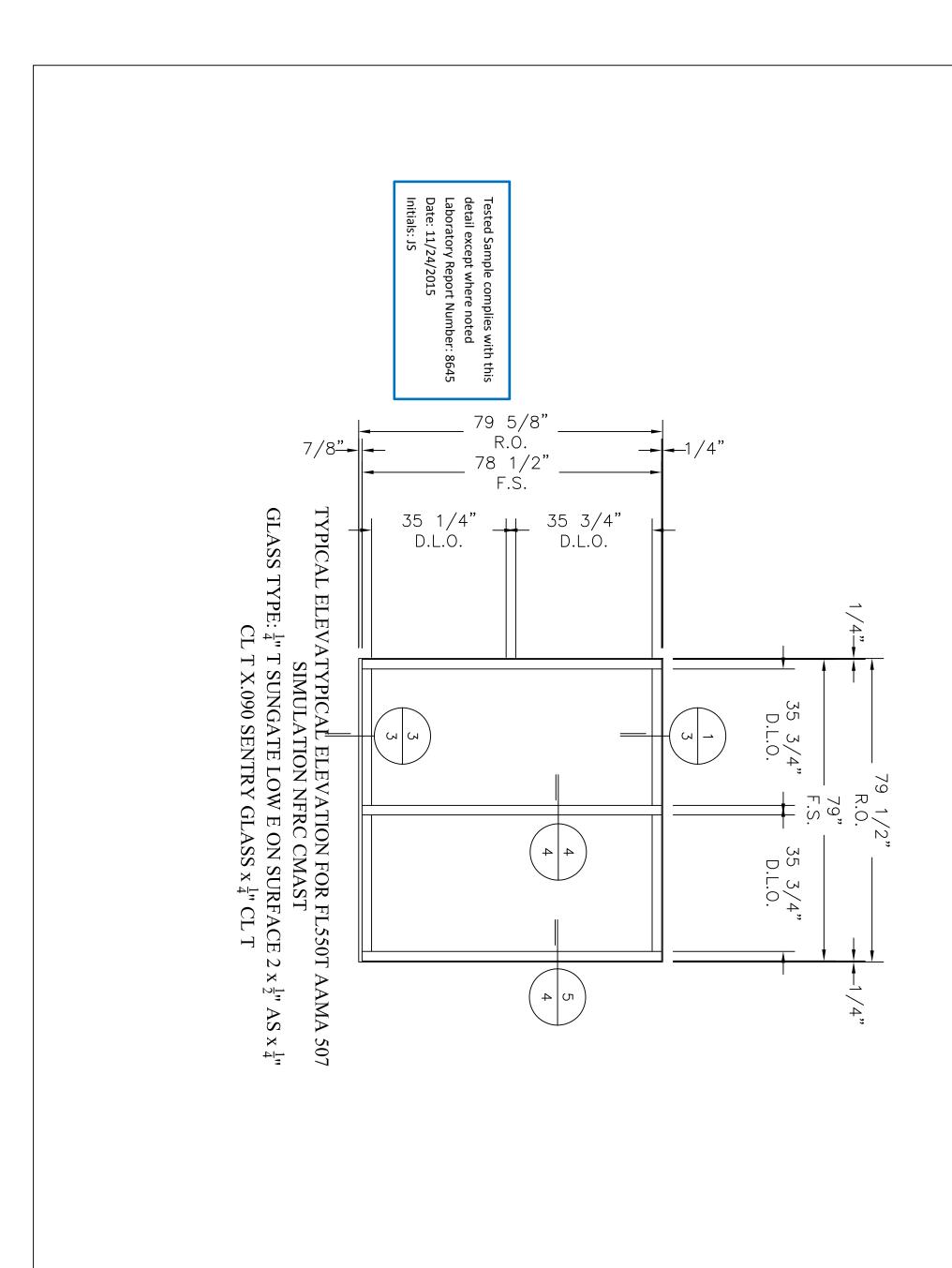
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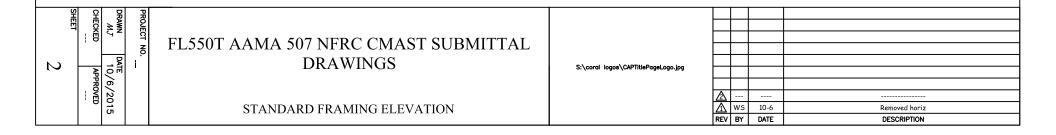
detail except where noted Tested Sample complies with this

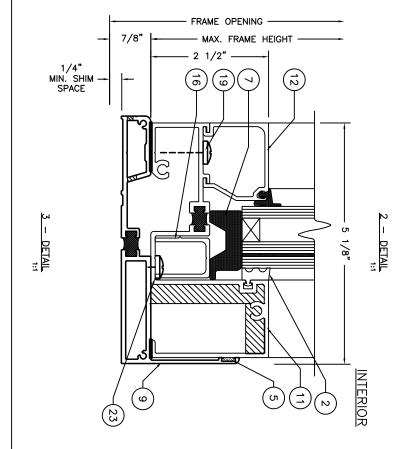
Laboratory Report Number: 8645

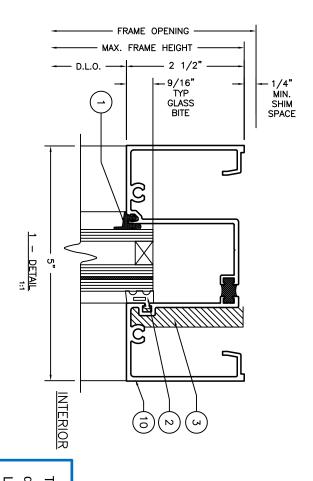
Date: 11/24/2015

| PROJECT NO | FL550T AAMA 507 NFRC CMAST SUBMITTAL<br>DRAWINGS |                                     |                             |            |          |             |
|------------|--|-------------------------------------|-----------------------------|------------|----------|-------------|
| APPROVED   | INDEX TO DRAWINGS AND NOTES                      | S:\coral logos\CAPTitlePageLogo.jpg | <u>A</u><br><u>A</u><br>REV | <br><br>BY | <br>DATE | DESCRIPTION |



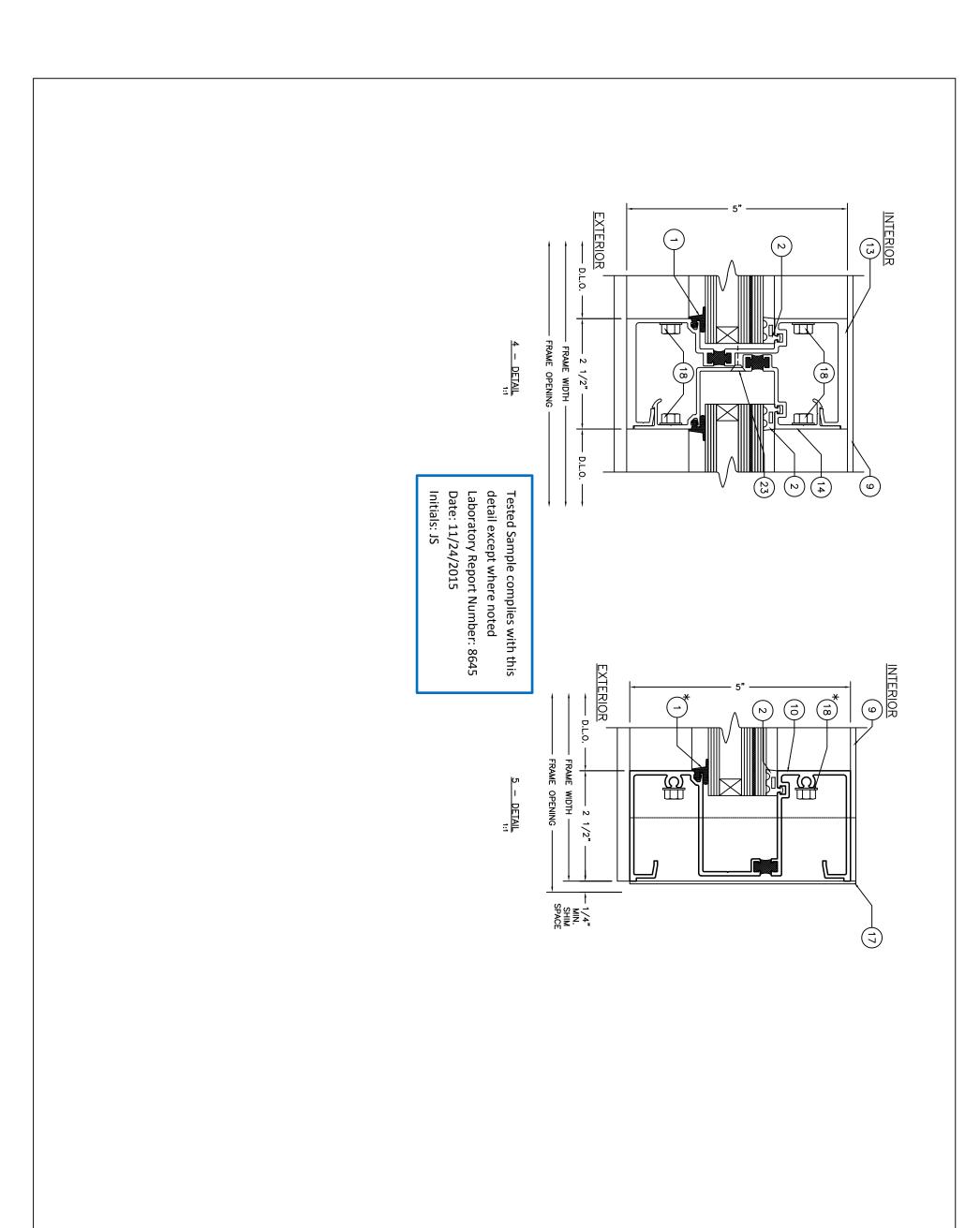






Tested Sample complies with this detail except where noted Laboratory Report Number: 8645 Date: 11/24/2015 Initials: JS

|   | 위 위 위 광                                     |   |                                     |     | _  |           |   |
|---|---|---|-------------------------------------|-----|----|-----------|---|
|   | RAWN NJ                                     | EL CCOTT A ANA COTTUED O COMA OTT CLIDAMETTAL |                                     |     |    |           |   |
|   | [ 명] 기   의                                  | FL550T AAMA 507 NFRC CMAST SUBMITTAL          |                                     |     |    |           |   |
|   | <u>                                    </u> | DRAWINGS                                      |                                     |     |    |           |   |
| ယ | 10 PATE I                                   | DRAWINGS                                      | S:\coral logos\CAPTitlePageLogo.jpg |     | _  |           |   |
|   | E<br>0/7/20<br>APPROVED                     |   |                                     |     |    |           |   |
|   |   |   |                                     | L.  | _  |           |   |
|   |   |   |                                     | Æ   |    |           | *************************************** |
|   | 15  | STANDARD FRAMING DETAILS                      |                                     | _   | -  | 07-OCT-15 | FIXED DETAILS ADDED CALL OUT FOR SCREWS |
|   |   |   |                                     | REV | BY | DATE      | DESCRIPTION                             |



| 4 | PROJECT NO.  | FL550T AAMA 507 NFRC CMAST SUBMITTAL<br>DRAWINGS | S:\coral logos\CAPTitlePageLogo.jpg |   |                                       |                                 |
|---|--------------|--|-------------------------------------|---|---------------------------------------|---------------------------------|
|   | /2014<br>WED | STANDARD FRAMING DETAILS                         |                                     | _ | <br>07- <i>OC</i> T-15<br><b>DATE</b> | REMOVED SUBSTRATES  DESCRIPTION |

| ANCHOR                                      | VARIES                 | S. STEEL                 | #12 X 1/2" PHPSMS      | FASTENER                          | MISC    | 23           |
|---|------------------------|--------------------------|------------------------|-----------------------------------|---------|--------------|
| ANCHOR(7) (ED519-1) TO(9(FL539T)            | VARIES                 | STEEL                    | #6 X 1/4" PPH          | FASTENER                          | AS21    | 20           |
| ANCHOR                                      | VARIES                 | S. STEEL                 | #12 X 1½" PHPSMS       | FASTENER                          | MISC    | 19           |
| TYP. SPLINE SCREW VERTICAL/HORIZONTAL JOIN' | VARIES                 | STEEL                    | #14 X 1" HHSTS         | FASTENER                          | AS16    | 18           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.500 X 1.000 X 0.062  | SILL FLASHING END DAM             | ED519-1 | 17           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 1.156 X 0.844 X 0.078  | SETTING CHAIR                     | CS500-1 | 16           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.500 X 4.980 X 0.094  | INTERMEDIATE HORIZONTAL           | FL576T  | 15           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 0.681 X 4.670 X 0.080  | OPEN BACK MULLION FILLER          | FL575T  | 14           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.500 X 5.000 X 0.094  | STD. VERTICAL MULLION             | FL574T  | 13           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 1.250 X 1.646 X 0.078  | GLASS STOP                        | FL553   | 12           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.500 X 4.980 X 0.094  | SILL OR HEAD                      | FL572T  | 1            |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.500 X 5.000 X 0.094  | HEAD OR WALL JAMB                 | FL571T  | 10           |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 2.620 X 5.402 X 0.084  | SUBSILL FLASHING                  | FL539T  | 9            |
| @ EACH END OF HORIZONTAL                    | CORAL INDUSTRIES, INC. | INJECTION MOLDED PLASTIC | 1.358 X 1.344 X 4.000  | WATER DIVERTER                    | WD300-1 | œ            |
| 2 PER LITE                                  | VARIES                 | EPDM                     | 0.687 X 1.468 X 4.000  | SETTING BLOCK @ SILL & HORIZONTAL | SB15    | 7            |
|   | CORAL INDUSTRIES, INC. | 6063-T6 ALUMINUM         | 0.681 X 4.658 X 0.070  | FLAT FILLER                       | FL515-1 | <b>б</b>     |
| GLASS TO METAL AND INTERNAL                 | DOW CORNING            | SILICONE                 | FILL SPACE             | SILICONE — GLASS TO METAL         | 995     | <sub>5</sub> |
|   | SCHNEE-MOOREHEAD       | BUTYL                    | 0.500 X 0.125 X VARIES | JOINT SEALANT TAPE                | SM5601  | 3            |
|   | VARIES                 | EPDM                     | 0.250 SPACE            | INTERIOR SPACER GASKET            | NG15    | 2            |
|   | VARIES                 | EPDM                     | 0.120 SPACE            | EXTERIOR GLAZING GASKET           | NG1     | 1            |
| NOTES                                       | MANUFACTURER           | MATERIAL                 | DIMENSIONS             | DESCRIPTION                       | P/N     | ITEM NO.     |
|   |                        | F MATERIALS              | BILL OF                |                                   |         |              |

Tested Sample complies with this detail except where noted Laboratory Report Number: 8645 Date: 11/24/2015 Initials: JS

|   | 윑 오 종         | 의 공 |                                      |                                     |                      |    |      |             |
|---|---------------|-----|--------------------------------------|-------------------------------------|----------------------|----|------|-------------|
|   |               |     |                                      |                                     |                      |    |      |             |
|   |               | ] 의 | FL550T AAMA 507 NFRC CMAST SUBMITTAL |                                     |                      |    |      |             |
|   |               |     | DRAWINGS                             |                                     |                      |    |      |             |
| ( | <b>7</b>      |     | DIAWINGS                             | S:\coral logos\CAPTitlePageLogo.jpg |                      |    |      |             |
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|   | )/201<br>OVED |     |                                      |                                     | A                    |    |      |             |
|   | 1. 815        |     | BILL OF MATERIALS                    |                                     | $\overline{\Lambda}$ |    |      |             |
|   | -             | 1 1 |                                      |                                     | REV                  | BY | DATE | DESCRIPTION |