

MANUFACTURER'S IDENTIFICATION

- 1.0 **NAME OF APPLICANT:** CORAL ARCHITECTURAL PRODUCTS
 3010 Rice Mine Road
 Tuscaloosa, Alabama 35406
 (800) 772-7737
- 2.0 **CONTACT PERSON:** J.D. Williams
- 3.0 **TEST NOTIFICATION #:** N/A
- 4.0 **HTL LAB CERTIFICATION:** Miami-Dade County (03-0507.09); Florida Building Code (TST1527);
 AAMA; WDMA; Keystone Certifications

PRODUCT IDENTIFICATION

- 5.0 **Product Type:** Aluminum Glazed Wall Section
- 6.0 **Model Number:** Front Line FL300 Framing System
- 7.0 **Performance Class:**

Specimen #	Design Pressure
1 (Coral Elevation E1)	+ 60 / - 53.3 psf
2 (Coral Elevation E2)	+ 30 / - 40 psf
- 8.0 **Overall Sample Size:**

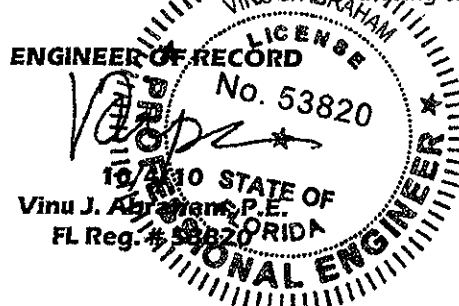
Specimen #	Size
1 (Coral Elevation E1)	146" (w) x 120" (h)
2 (Coral Elevation E2)	146" (w) x 96" (h)
- 9.0 **Configuration:** Both test units consisted of three (3) bays. See Coral drawings "FL300-02", sheets 2 and 3 of 7 for an elevation of these test units.
- 10.0 **Drawing:** This report is incomplete if not accompanied by CORAL Drawing "FL300-02" and accompanying sheets bearing the raised seal of Hurricane Test Laboratory, LLC.
- 11.0 **Sample Source and Test Location:** Sample provided by CORAL ARCHITECTURAL PRODUCTS.

PRODUCT DESCRIPTION

- 12.0 **Frame Assembly:** The frame used in this sample was fabricated using the following aluminum extrusions:

Description	Part #
Standard Vertical Mullion	FL315
Open Back Mullion Filler	FL305
Horizontal Mullion	FL306
Glass Stops	FL303
Head/Wall Jamb	FL301
Sill/Head	FL302
Sub Sill Flashing	FL319

The following procedures (typical) were utilized when assembling this individual frame:
Frame Corner Construction: At each frame corner, the vertical frame members ran through while the horizontal frame member was butted and mechanically fastened using two (2), #14 x 1" HHSTS per corner.





Additional Reinforcement: Specimen # 1 (Elevation E1), has steel reinforcing (Part # SR101) inside both vertical mullions. The steel reinforcing is attached to the vertical mullions using #12 -24 x 3/8" UCPFH located 12" o.c.

Frame Joint Sealant: Each frame joint was sealed using a bead of Dow Corning 795 Silicone Sealant.

13.0 Glazing:

13.1 Glazing Material: The glazing material used in this sample was 1" insulated glass with the following components:

- 1/4" tempered glass
- 1/2" air space
- 1/4" tempered glass

13.2 Glazing Method: Each glass lite used in this sample was glazed using the following (typical) procedures:

Interior/Exterior Side: Using continuous strips of an extruded EPDM gasket (Part #NG1). Each corner of the gasket is sealed using a bead of Dow Corning 995 Structural Silicone Sealant in both directions of the gasket.

13.3 Daylight Opening:

Specimen # 1 (Elevation E1)		
Qty.	Daylight Opening	Glass Bite
3	46" (w) x 42" (h)	7/16"
3	46" (w) x 72" (h)	
Specimen # 2 (Elevation E2)		
1	46" (w) x 65-3/8" (h)	7/16"
1	46" (w) x 24-5/8" (h)	
2	46" (w) x 92" (h)	

14.0 Sealant's Used:

Location	Sealant
Perimeter Sealant	Dow Corning 795 Silicone Sealant
Frame Joint Sealant	

INSTALLATION

15.0 Following is a description of how this sample was installed in the test buck when viewed from the exterior side:

Location	Anchor Description & Schedule
Frame Head and Sill.	The frame head and sill are attached to the opening using 1/4" x 1-1/4" HHW Tek Screws located 2" from the ends and 2" on each side of the vertical mullions.

NOTE: There is a 1/4" shim space used around the perimeter of this test sample at the head, sill, and jamb locations.

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10/4/10

Vinu J. Abraham, P.E.
FL Reg. # 53820



TEST RESULTS

16.0 SUMMARY OF RESULTS:

Specimen # 1 (Elevation E1)			
Test Method	Test Conditions	Measured	Allowed
Air Infiltration Test (ASTM E283)	1.57 psf	0.006 cfm/ft ²	0.06 cfm/ft ²
	6.24 psf	0.017 cfm/ft ²	0.06 cfm/ft ²
Water Infiltration Test (ASTM E331)	15 psf	PASSED per ASTM E331	
Uniform Load Deflection Test (ASTM E330)	+ 60 psf	Deflection	
		Vertical Mullion	
		0.65"	0.68"
	Horizontal Mullion		
	0.10"		0.27"
	- 53.3 psf	Vertical Mullion	
0.60"		0.68"	
Horizontal Mullion			
0.12"		0.27"	
Uniform Load Structural Test (ASTM E330)	+ 90 psf	Permanent Set	
		Vertical Mullion	
		0.10"	0.24"
	Horizontal Mullion		
	0.02"		0.09"
	- 79.95 psf	Vertical Mullion	
0.13"		0.24"	
Horizontal Mullion			
0.05"		0.09"	

- **PLEASE NOTE THAT NO OTHER MEMBERS DEFLECTED MORE THAN THE ALLOWABLE DEFLECTIONS AT OTHER LOCATIONS ON THE TEST UNIT.**
- **THESE TESTS WERE COMPLETED ON 8/29/05**

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Specimen # 2 (Elevation E2)			
Test Method	Test Conditions	Measured	Allowed
Air Infiltration Test (ASTM E283)	1.57 psf	0.007 cfm/ft ²	0.06 cfm/ft ²
	6.24 psf	0.012 cfm/ft ²	0.06 cfm/ft ²
Water Infiltration Test (ASTM E331)	10 psf	PASSED per ASTM E331	
Uniform Load Deflection Test (ASTM E330)	+ 30 psf	Deflection	
		Vertical Mullion	
		0.39"	0.54"
	Horizontal Mullion		
	0.15"		0.27"
	- 40 psf	Vertical Mullion	
0.48"		0.54"	
Horizontal Mullion			
0.19"		0.27"	
Uniform Load Structural Test (ASTM E330)	+ 45 psf	Permanent Set	
		Vertical Mullion	
		0.01"	0.19"
	Horizontal Mullion		
	0.02"		0.09"
	- 60 psf	Vertical Mullion	
0.09"		0.19"	
Horizontal Mullion			
0.04"		0.09"	

- **PLEASE NOTE THAT NO OTHER MEMBERS DEFLECTED MORE THAN THE ALLOWABLE DEFLECTIONS AT OTHER LOCATIONS ON THE TEST UNIT.**
- **THESE TESTS WERE COMPLETED ON 8/11/05**

MISCELLANEOUS INFORMATION

17.0 CERTIFICATION & DISCLAIMER STATEMENT:

All tests performed on this test specimen were conducted in accordance with the specifications of the applicable codes, standards & test methods listed below by the Hurricane Test Laboratory, LLC located at 6655 Garden Road, Riviera Beach, FL 33404. HTL does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products tested at HTL. HTL is not owned, operated or controlled by any company manufacturing or distributing

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FL Reg. # 53820



products it tests. This report is only intended for the use of the entity named in section 1.0 of this report. Detailed assembly drawings showing wall thickness of all members, corner construction and hardware applications are on file and have been compared to the test specimen submitted. A copy of this test report along with representative sections of the test specimen will be retained at HTL for a period of four (4) years. All results obtained apply only to the specimen tested and they do indicate compliance with the performance requirements of the test methods and specifications listed in the following section. Please note that a copy of this report will be forwarded to the AAMA Validator if requested and that this report does not constitute AAMA certification of this product, which may only be granted by the AAMA Validator.

18.0 APPLICABLE CODES, STANDARDS & TEST METHODS:

ASTM E283-04 - Standard Test Method For Determining The Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences.

ASTM E330-02 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

ASTM E331-00 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

AAMA 501-05 - Methods of Tests for Exterior Walls.

19.0 LIST OF OFFICIAL OBSERVERS:

Vinu J. Abraham, P.E. - HTL, General Manager

José E. Colón, E.I. - HTL, Operations Manager

J.D. Williams - CORAL ARCHITECTURAL PRODUCTS

Bill Smith, Jr. - CORAL ARCHITECTURAL PRODUCTS

Scott Dooley - CORAL ARCHITECTURAL PRODUCTS

Grant McAllister - CORAL ARCHITECTURAL PRODCUTS

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DRAWINGS

HTL TEST FL300 FRAMING SYSTEM

- INDEX TO DRAWINGS
- 1 INDEX TO DRAWINGS & NOTES
 - 2 FRAMING ELEVATION
 - 3 FRAMING ELEVATION
 - 4 FRAMING DETAILS
 - 5 FRAMING DETAILS
 - 6 GLASS SCHEDULE
 - 7 BILL OF MATERIALS

Hambleton Test Laboratory, LLC

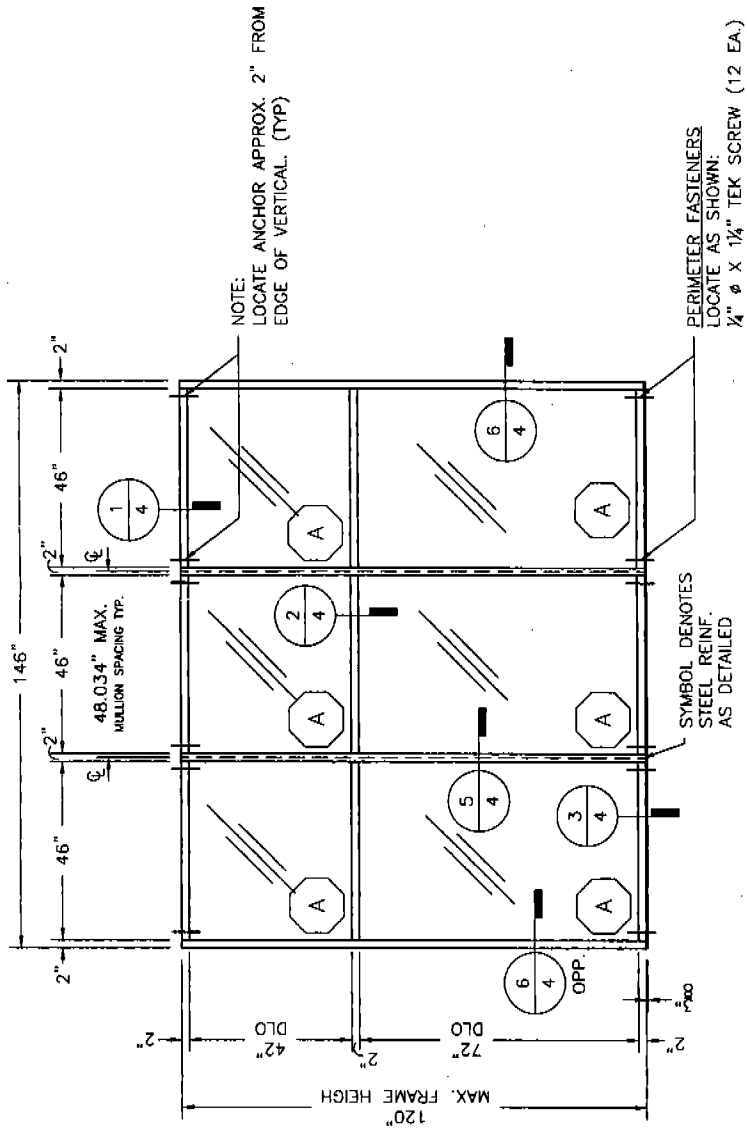


ATTENDED UNLESS
OTHERWISE NOTED
Date: 09-10-10
Add: 9102-5681-02

Corral
ARCHITECTURAL PRODUCTS
3010 RICE MINE ROAD
TUSCALOOSA, AL 35406
800-772-7737 FAX: 800-255-7320

HTL TEST
FL300 FRAMING SYSTEM
INDEX TO DRAWINGS &
NOTES

PROJECT NO.	
DRAWN	DATE
SCC	9/12/2005
SCALE	
MTS	
DRAWING NO.	FL300-2
SHEET	



- NOTES:**
1. DESIGN PRESSURE = +60/-53.3 PSF
 2. AIR TEST AT 6.24 PSF
 3. WATER TEST AT 15 PSF
 4. MAXIMUM DEFLECTION = L/175 OR .686"

E1
TYPICAL ELEVATION
STANDARD ALUMINUM MULLION WITH STEEL - LONG SPAN
EXTERIOR GLAZED

Harsco Test Laboratory, LLC

 AS TESTED UNLESS OTHERWISE NOTED
 Date: 01/10/05
 Job: 1102-0101-05


Coral
 ARCHITECTURAL PRODUCTS
 3010 RICE MINE ROAD
 TUSCALOOSA, AL 35406
 800-772-7737 FAX: 800-255-7320

HTL TEST
 FL300 FRAMING SYSTEM
 FRAMING ELEVATION

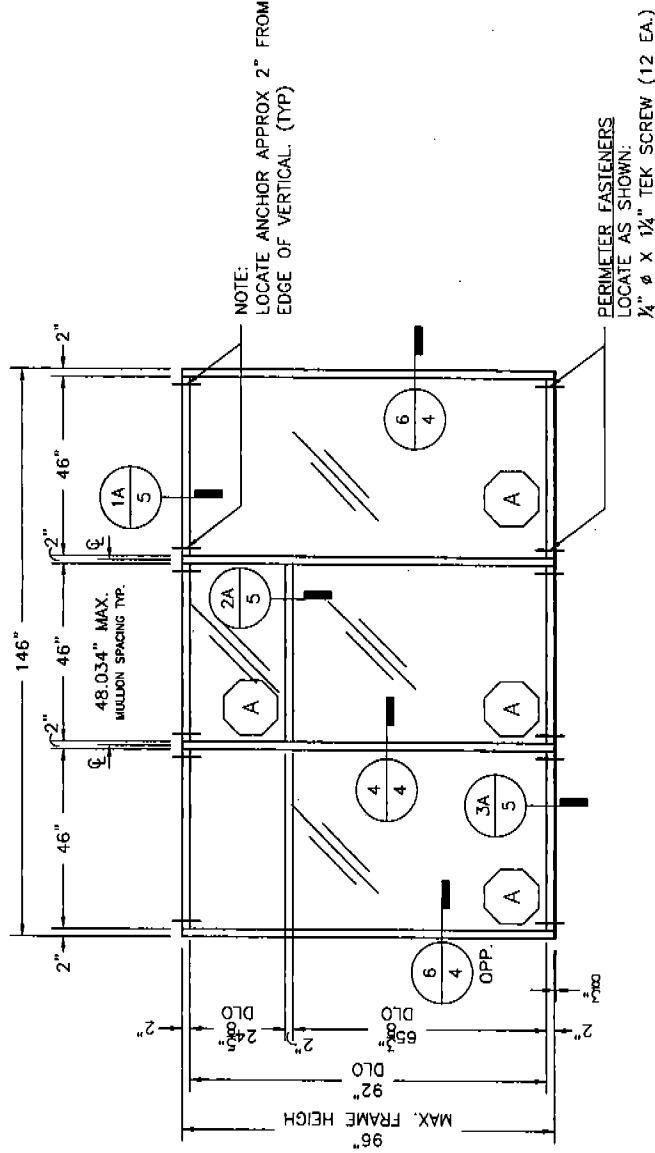
PROJECT NO.	
DRAWN / DATE	9/20/2005
SCALE	1:1
DRAWING NO.	FL300-2
SHEET	5 OF 7

PROJECT NO.	
DATE	9/21/2005
BY	
SCALE	1:1
DRAWING NO.	FL300-2
SHEET	1 of 7

Hurricane Test Laboratory, LLC



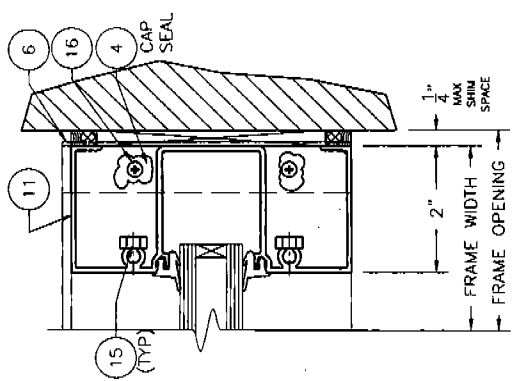
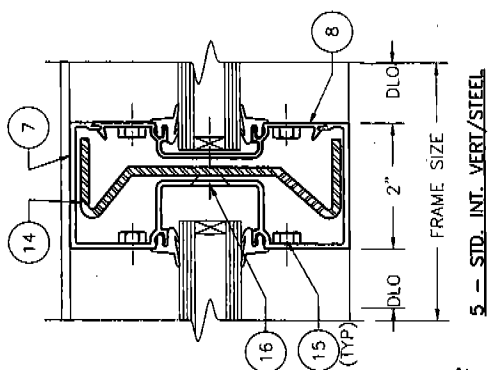
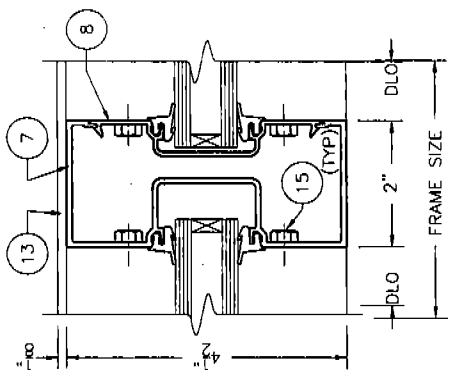
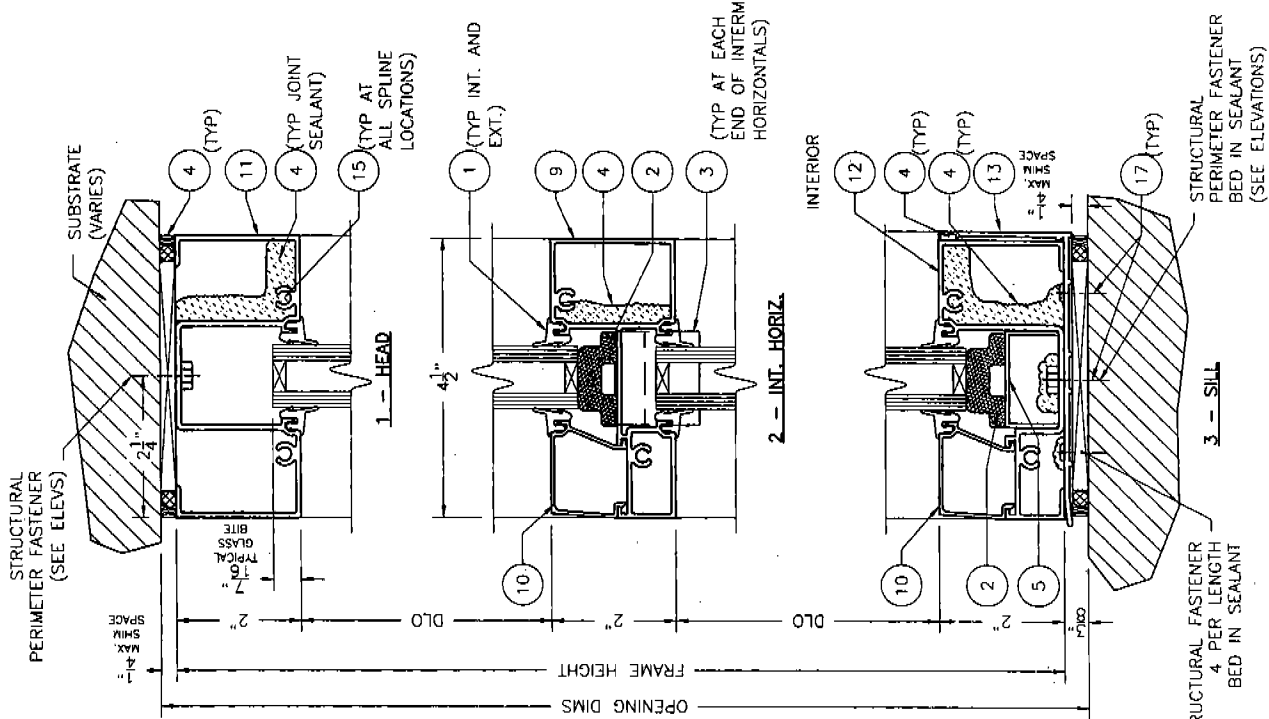
AS TESTED UNLESS OTHERWISE NOTED
 Date: 10/3/05
 Job#: 0402-0401-05



E2
TYPICAL ELEVATION
-STANDARD ALUMINUM MULLION
INTERIOR GLAZED

- NOTES:
1. DESIGN PRESSURE = +30/-40 PSF
 2. AIR TEST AT 6.24 PSF
 3. WATER TEST AT 10 PSF
 4. MAXIMUM DEFLECTION = L/175 OR .549"

PROJECT NO.	
DRAWN	DATE
SCC	9/12/2005
SCALE	1:2
DRAWING NO.	FL300-2
SHEET	4 OF 7



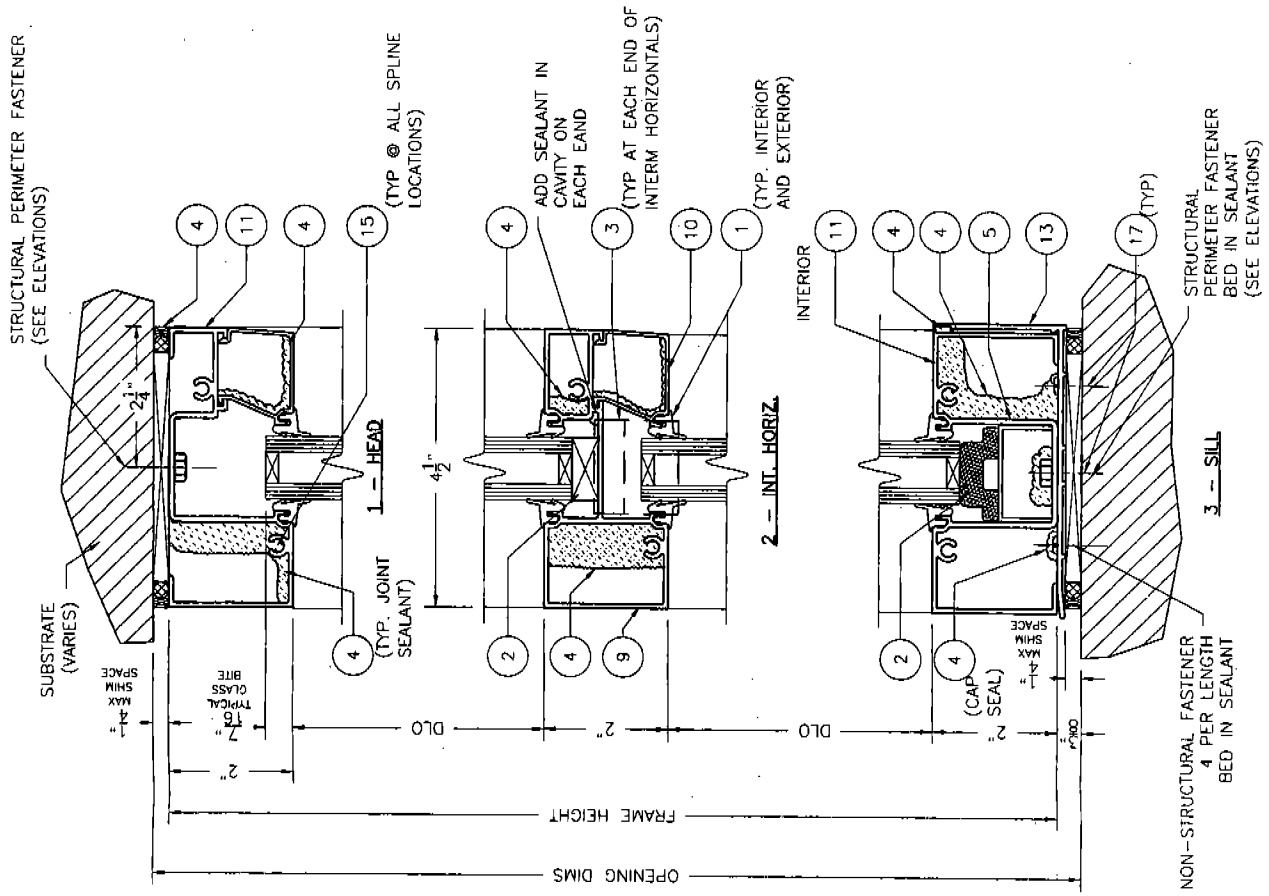
Huttmann Test Laboratory, LLC

 AS TESTED UNLESS OTHERWISE NOTED
 Date: 10/3/05
 John [signature]

Coral
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TUSCALOOSA, AL 35406
800-772-7737 FAX: 800-255-7320

HTL TEST
FL300 FRAMING SYSTEM
FRAMING DETAILS

PROJECT NO.	
DRAWN DATE	9/12/2006
SCALE	1:2
DRAWING NO.	FL300-2
SHEET	5 OF 7



Hurricane Test Laboratory, LLC

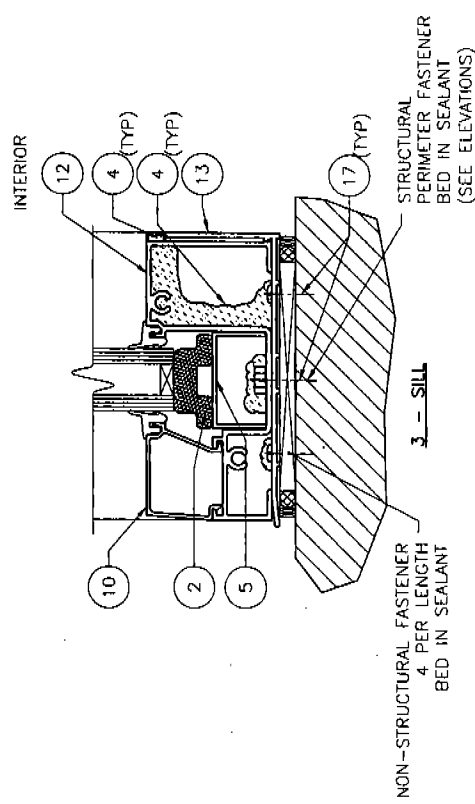
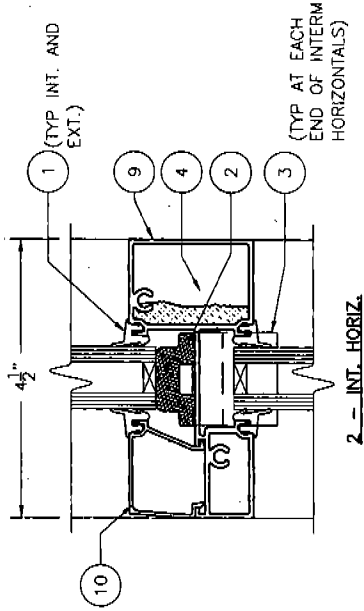
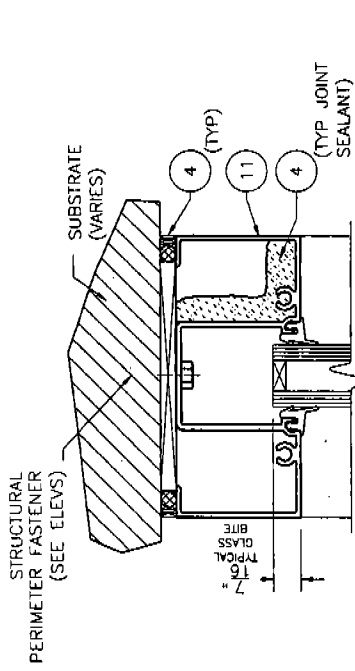


AS TESTED UNLESS OTHERWISE NOTED

Date 10/3/05
Job# 10102-380-05

GLASS SCHEDULE				
GLASS MARK SYMBOL	GLASS TYPE	MANUFACTURER	MAXIMUM DLO SIZE	MAXIMUM SQUARE FEET
A	3/4" TEMPERED OUTER SURFACE, 1/2" AIR SPACE, 3/4" TEMPERED INNER SURFACE	VARIES	46 X 92	29.4

OPTIONS AND LIMITATIONS				
DESIGN PRESSURE PSF	INTERM VERTICAL MULLION	MAX SPAN MULLION LENGTH	MAX SPAN CL TO CL	QUALIFIED GLASS TYPE
±40	W/O STEEL	96"	48"	A
+60/-60	W/SR101 STL	120"	48"	A



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HTL TEST
 FL300 FRAMING SYSTEM
 GLASS SCHEDULE

PROJECT NO.
 DRAWN DATE 07/12/2005
 SCALE 1:2
 DRAWING NO. FL300-2
 SHEET 6 OF 7

Hurricane Test Laboratory, LLC



AS TESTED UNLESS OTHERWISE NOTED

Date: 06/13/06
 Job #: 0482-0101-05

BILL OF MATERIALS

ITEM NO.	PART #	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG1	GLAZING GASKET EXTERIOR/INTERIOR	.197 SPACE	EPDM	VARIES	
2	SB3	SETTING BLOCK AT INTERM. HORI/SILL	.625 X 4.00 X 1.50	EPDM	VARIES	4" LONG
3	WD300-1	WATER DEFLECTOR	1.358 X 1.500 X .040	RIGID PVC	CORAL	LOCATE ONE AT EACH END OF EACH ITEM #9
4	795	PERIMETER/INTERNAL SEALANT	FILL SPACE	SILICONE	DOW CORNING	
5	CS101-1	SETTING CHAIR	.853 X 1.544 X 4.00	6063-T6 ALUMINUM	CORAL	
6	ED319-1	END DAM	.750 X 2.188 X .062	6063-T6 ALUMINUM	CORAL	FABRICATED LENGTH = 4.625
7	FL315	STANDARD VERTICAL MULLION	2.000 X 4.5 X .080	6063-T6 ALUMINUM	CORAL	
8	FL305	OPEN BACK MULLION FILLER - SHALLOW	.562 X 3.750 X .062	6063-T6 ALUMINUM	CORAL	
9	FL306	HORIZONTAL MULLION	2.00 X 4.5 X .070	6063-T6 ALUMINUM	CORAL	
10	FL303	GLASS STOP	1.207 X 1.543 X .050	6063-T6 ALUMINUM	CORAL	
11	FL301	HEAD/WALL JAMB	2.00 X 4.460 X .070	6063-T6 ALUMINUM	CORAL	
12	FL302	SILL/HEAD	2.00 X 4.460 X .070	6063-T6 ALUMINUM	CORAL	
13	FL319	SUBSILL FLASHING	2.125 X 4.714 X .078	6063-T6 ALUMINUM	CORAL	
14	SR101	10 GA. FORMED STL. REINFORCING	1.25 X 4.18 X .119	A36 STEEL	VARIES	
15	AS16	SPLINE ASSEMBLY SCREW	#14 X 1" HHSTS	STEEL	VARIES	TYPICAL SPLINE SCREW
16	AS23	ATTACH SR101 STL TO MULLIONS @ 12" OC	#12 - 24 X 3/8" UCPFH	STEEL	VARIES	ATTACH @ 12" ON CENTER
17	FASTENER	FOR ATTACHING SUB-SILL FLASHING TO STEEL SUBSTRATE	3/8" X 1" PHSMS	STEEL	VARIES	

Merichem Test Laboratory, LLC



AS TESTED UNLESS OTHERWISE NOTED

Date: 10/3/05
Job: 0602-0801-05

PROJECT NO.

DRAWN DATE

SCALE 9/12/2005

SCALE NTS

DRAWING NO. FL300-2

SHEET 7 OF 7

HTL TEST
FL300 FRAMING SYSTEM
BILL OF MATERIALS

Coral
ARCHITECTURAL PRODUCTS
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