

MIAMI-DADE COUNTY PERFORMANCE TEST REPORT

Report No.: B1028.01-401-18

Rendered to:

CORAL ARCHITECTURAL PRODUCTS
Tuscaloosa, Alabama

PRODUCT TYPE: Aluminum Storefront
SERIES/MODEL: FL500

This report contains in its entirety:

Cover Page: 1 page
Report Body: 12 pages
Sketches: 2 pages
Photographs: 7 pages
Drawings: 7 pages

Test Dates: 06/30/11
Through: 07/08/11
Report Date: 01/03/12
Test Record Retention End Date: 07/08/21
Miami-Dade County Notification No.: ATIFL 11003

1.0 Report Issued To: Coral Architectural Products
3010 Rice Mine Road
Tuscaloosa, Alabama 35406

2.0 Test Laboratory: Architectural Testing, Inc.
2250 Massaro Boulevard
Tampa, Florida 33619
813-628-4300

3.0 Project Summary:

3.1 Product Type: Aluminum Storefront

3.2 Series/Model: FL500

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The samples were tested per Florida Building Code, Test Protocols for High Velocity Hurricane Zone, Protocols TAS 201-94, TAS 202-94 and TAS 203-94. The three samples tested met the performance requirements set forth in the protocols for a ± 70.0 psf *Design Pressure* rating.

3.4 Miami-Dade County Notification No.: ATIFL 11003

3.5 Test Dates: 06/30/2011 - 07/08/2011

3.6 Test Location: Architectural Testing, Inc. test facility in Tampa, Florida.

3.7 Test Sample Source: The test specimens were provided by the client. Representative samples of the test specimens will be retained by Architectural Testing for a minimum of ten years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix C. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Grant McAllister	Coral Architectural Products
William Smith, Sr.	Coral Architectural Products
Shawn G. Collins, P.E.	Architectural Testing, Inc.
John C. McClane	Architectural Testing, Inc.
Don Beltz	Architectural Testing, Inc.
Jack Hook	Architectural Testing, Inc.

4.0 Test Specification(s):

TAS 201-94, *Impact Test Procedures.*

TAS 202-94, *Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading.*

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 150.0 ft ²	Width (inches)	Height (inches)
Overall size	180	120

5.2 Frame Construction:

Frame Member	Material	Description
Head	Extruded aluminum	Reference Drawing No. FL500_04, Sheet No. 7
Sill	Extruded aluminum	Reference Drawing No. FL500_04, Sheet No. 7
Vertical mullion	Extruded aluminum	Reference Drawing No. FL500_04, Sheet No. 7
Horizontal mullion	Extruded aluminum	Reference Drawing No. FL500_04, Sheet No. 7
Jambs	Extruded aluminum	Reference Drawing No. FL500_04, Sheet No. 7

	Joinery Type	Detail
All corners	Mechanical	The corners were butt joints, sealed with 1/2" x 1/8" butyl sealant tape on the interior side only, and secured to adjoining members with two hex washer head 1/4-20 x 1" machine screws.
Horizontal mullions	Mechanical	The horizontal members were butt joints, sealed with 1/2" x 1/8" butyl sealant tape on the interior side only, and secured to adjoining members with three hex washer head 1/4-20 x 1" machine screws.

5.0 Test Specimen Description: (Continued)

5.3 Weatherstripping:

Description	Quantity	Location
Interior glazing gasket	1 Row	All four sides of glazing pocket
Exterior glazing gasket	1Row	All four sides of glazing pocket

5.4 Glazing:

Glass Type	Glazing	Glazing Method
Monolithic	9/16" laminated glass 1/4" heat strengthened - 0.090" SentryGlas Plus® - 1/4" heat strengthened	Prior to and after setting the glass, Dow 995 sealant was applied to the corners of the EPDM gaskets. The glazing was set from the exterior onto two setting blocks against an EPDM interior gasket and secured using an exterior EPDM drive-in gasket.

Location	Quantity	Daylight Opening	Glass Bite
Upper lite	3	56-5/8" x 16-3/8"	5/8"
Lower lite	3	56-5/8" x 96"	5/8"

5.5 Drainage:

Drainage Method	Size	Quantity	Location
Sub-sill flashing	180"	1	Rough opening at sill
End dam	3/4" x 2-5/8" x 5-1/4"	2	One at each end of sill flashing
Water diverter	1-11/32"	6	One at each end of horizontal mullion

5.6 Hardware: No hardware was utilized.

5.0 Test Specimen Description: (Continued)

5.7 Reinforcement:

Drawing Number	Location	Material
FL500_04, Sheet No. 7	Vertical mullions	1/4" x 1- 3/8" x 4-5/8" Steel U-channel which was secured in place using a #10-24 x 5/8" hex head sheet metal screw.

6.0 Installation:

The specimen was installed into a C8 steel channel buck. The rough opening allowed for a 1/2" shim space at the top, underneath the sub-sill flashing, and at the jambs. The exterior and interior perimeters of the storefront were sealed with Dow 795.

Location	Anchor Description	Anchor Location
Head / Sill	3/8" x 1-1/2" hex bolt with lock washer and nut	Two bolts each side of vertical mullion; first bolt 1-3/4" from edge with 2-1/4" spacing between second bolt. One bolt 3" from jamb corners. All fasteners at sill were cap-sealed with sealant.
Jambs	#1/4-20 x 2-1/2" self-drilling hex washer head sheet metal screw	1-1/2" above and below midpoint.
Sub-sill	#12 x 1-1/2" flat head Philips TEKS screw	One each at 24" from each end and one each at midpoint.

7.0 Test Results: The temperature during testing was 82°F. The results are tabulated as follows:

Protocol TAS 202-94, Static Air Pressure Tests

Test Units #1, #2, #3

Design Pressure: ±70.0 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	0.01 cfm/ft ²
Air Infiltration at 6.24 psf (50 mph)	0.02 cfm/ft ²

	Indicator Reading (inches)					
	#1	#2	#3	#4	#5	#6
Structural Loads 50% of Test Pressure (+52.5 psf)						
Maximum Deflection	0.21	0.54	0.08	0.43	0.49	0.46
Permanent Set	0.01	0.01	0.01	0.01	0.01	0.01
Design Pressure (+70.0psf)						
Maximum Deflection	0.28	0.69	0.11	0.57	0.64	0.58
Permanent Set	0.01	0.01	0.01	0.01	0.01	0.01
50% of Test Pressure (-52.5 psf)						
Maximum Deflection	0.46	0.86	0.33	0.57	0.65	0.65
Permanent Set	0.10	0.12	0.10	0.09	0.10	0.11
Design Pressure (-70.0psf)						
Maximum Deflection	0.71	1.00	0.32	0.57	0.79	0.75
Permanent Set	0.06	0.06	0.04	0.05	0.06	0.05
Water Infiltration 15% Positive Design Pressure (+15.04 psf)	No Penetration					
Test Pressure (+105.0 psf)						
Maximum Deflection	0.86	1.05	0.18	0.39	0.94	0.90
Permanent Set	0.13	0.11	0.07	0.10	0.12	0.12
Test Pressure (-105.0psf)						
Maximum Deflection	0.93	1.22	0.38	0.43	0.93	0.80
Permanent Set	0.09	0.05	0.06	0.07	0.08	0.07

Note: See Architectural Testing Sketch #1 for indicator locations.

7.0 Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.20 lbs
Missile Length: 8' 0"
Muzzle Distance from Test Specimen: 17' 0"

Test Unit #1:

Impact #1: Missile Velocity: 50.3 fps	
Impact Area:	Center midspan of glazing
Observations:	Missile hit target area, fractured glass; no tears
Results:	Pass

Impact #2: Missile Velocity: 50.3 fps	
Impact Area:	Upper right corner of glazing
Observations:	Missile hit target area, no tears; EPDM gasket pulled out of glazing pocket
Results:	Pass

Test Unit #2:

Impact #1: Missile Velocity: 50.3 fps	
Impact Area:	Lower left corner of glazing
Observations:	Missile hit target area, fractured glass; no tears
Results:	Pass

Impact #2: Missile Velocity: 49.9 fps	
Impact Area:	Center midspan of glass
Observations:	Missile hit target area, no tears
Results:	Pass

Note: See Architectural Testing Sketch #2 for impact locations.

7.0 Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.25 lbs
Missile Length: 8' 0"
Muzzle Distance from Test Specimen: 17' 0"

Test Unit #3:

Impact #1: Missile Velocity: 50.4 fps	
Impact Area:	Upper right corner of glazing
Observations:	Missile hit target area, fractured lite; no tears
Results:	Pass

Impact #2: Missile Velocity: 50.1 fps	
Impact Area:	Midspan of vertical mullion (Specimens #2 and #3)
Observations:	Missile hit target area, dented aluminum
Results:	Pass

Impact #3: Missile Velocity: 50.1 fps	
Impact Area:	Midspan of vertical mullion (over Specimen #2)
Observations:	Missile hit target area, dented aluminum
Results:	Pass

Impact #4: Missile Velocity: 50.3 fps	
Impact Area:	Center midspan of glazing
Observations:	Missile hit target area, no tears
Results:	Pass

Note: See Architectural Testing Sketch #2 for impact locations.

7.0 Test Results: (Continued)

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Test Units #1, #2, #3

Design Pressure: ±70.0 psf

POSITIVE PRESSURE

Pressure Range psf	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)					
			#1	#2	#3	#4	#5	#6
14.0 to 35.0	3500	3.98	0.31	0.51	0.11	0.23	0.40	0.45
0 to 42.0	300	5.64	0.34	0.54	0.13	0.25	0.43	0.49
35.0 to 56.0	600	3.73	0.47	0.65	0.15	0.31	0.55	0.59
21.0 to 70.0	100	6.00	0.59	0.76	0.17	0.34	0.67	0.68
			Permanent Set (inches)					
			0.09	0.17	0.09	0.13	0.11	0.15

NEGATIVE PRESSURE

Pressure Range psf	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)					
			#1	#2	#3	#4	#5	#6
21.0 to 70.0	50	4.38	0.56	0.96	0.40	0.46	0.68	0.67
35.0 to 56.0	1050	3.46	0.46	0.81	0.33	0.37	0.56	0.53
0 to 42.0	50	5.90	0.33	0.62	0.23	0.29	0.41	0.39
14.0 to 35.0	3350	2.98	0.29	0.57	0.21	0.25	0.37	0.36
			Permanent Set (inches)					
			0.04	0.11	0.06	0.03	0.06	0.05

Observations: With 57 cycles remaining in the positive 30% to 100% range, specimen #1 the upper right corner of the glass pulled out of the glazing pocket. Specimen#1 was boarded up and testing continued through the rest of the cycling program with Specimens #2 and #3. No additional damage or deglazing was observed.

Result: Pass (Test Units #2 and #3)

Note: See Architectural Testing Sketch #1 for indicator locations. Test Specimens #1, #2, and #3 were cycled in a common chamber.

7.0 Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.20 lbs
Missile Length: 7' 9-1/2"
Muzzle Distance from Test Specimen: 17' 0"

Test Unit #R-1: (Retest 07/08/2011)

Impact #1: Missile Velocity: 49.4 fps	
Impact Area:	Center midspan of glazing
Observations:	Missile hit target area, fractured lite; no tears
Results:	Pass

Impact #2: Missile Velocity: 49.3 fps	
Impact Area:	Upper right corner of glazing
Observations:	Missile hit target area, fractured lite; no tears
Results:	Pass

7.0 Test Results: (Continued)

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Test Unit #R-1

Design Pressure: ±70.0 psf

POSITIVE PRESSURE

Pressure Range psf	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)					
			#1	#2	#3	#4	#5	#6
14.0 to 35.0	3500	3.54	0.12	0.32	0.06	0.28	0.32	0.30
0 to 42.0	300	4.84	0.14	0.37	0.08	0.32	0.37	0.35
35.0 to 56.0	600	4.27	0.23	0.51	0.12	0.44	0.51	0.49
21.0 to 70.0	100	6.61	0.26	0.59	0.15	0.54	0.60	0.56
			Permanent Set (inches)					
			0.09	0.09	0.08	0.10	0.10	0.09

NEGATIVE PRESSURE

Pressure Range psf	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)					
			#1	#2	#3	#4	#5	#6
21.0 to 70.0	50	5.09	0.49	0.86	0.31	0.61	0.72	0.67
35.0 to 56.0	1050	3.51	0.44	0.76	0.27	0.54	0.62	0.58
0 to 42.0	50	5.48	0.36	0.62	0.22	0.44	0.51	0.47
14.0 to 35.0	3350	3.01	0.32	0.52	0.17	0.39	0.43	0.40
			Permanent Set (inches)					
			0.11	0.13	0.04	0.15	0.11	0.11

Observations: *No additional damage or deglazing was observed.*

Result: Pass

Note: *See Architectural Testing Sketch #1 for indicator locations.*

8.0 Test Equipment:

Cannon: Constructed from steel piping utilizing compressed air to propel the missile

Missile: 2x4 Southern Pine

Timing Device: Electronic Beam Type

Cycling Mechanism: Computer controlled centrifugal blower with electronic pressure measuring device

Deflection Measuring Device: Linear transducers

9.0 Laboratory Compliance Statements: The following are provided as required by the protocols for the testing reported herein.

Upon completion of testing, specimens tested for TAS 201-94 met the requirements of Section 1626 of the Florida Building Code, Building (2007).

Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code, Building (2007).

Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1626 of the Florida Building Code, Building (2007).

Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made. 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 so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Jack R. Hook
Technician

Shawn G. Collins, P.E.
Manager - Regional Operations

JRH:ck/cmd

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

- Appendix-A: Sketches (2)
- Appendix-B: Photographs (7)
- Appendix-C: Drawings (7)



Architectural Testing

Test Report No.: B1028.01-401-18
Report Date: 01/03/12
Test Record Retention End Date: 07/08/21

Appendix A

Sketches

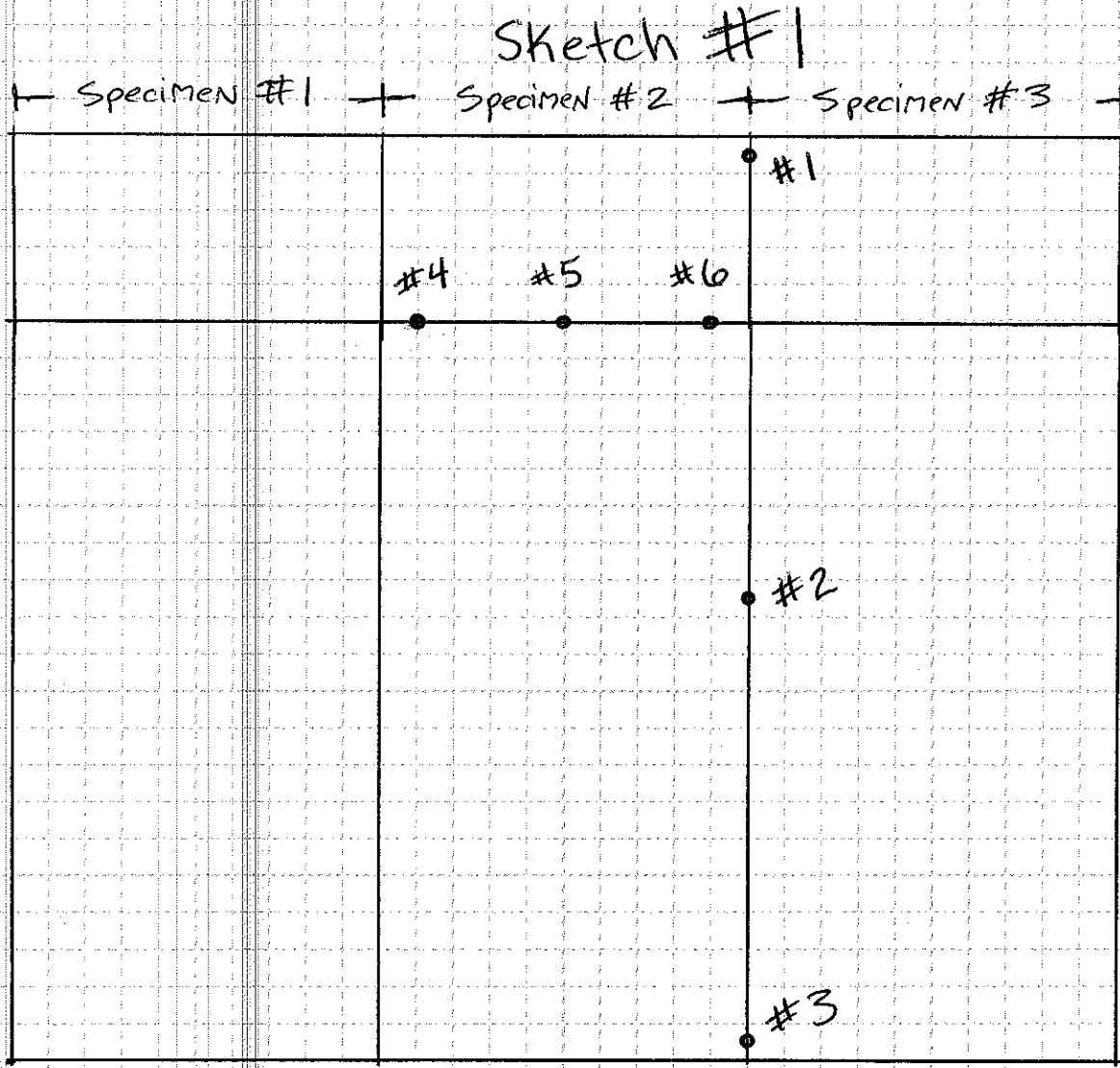


Architectural
Testing

DATE: 1/3/12
BY: JACK R HOOK

PROJECT NO. 151028.01-41-16SHEET 1 OF 2
PROJECT NAME: FL 500 (Dry Glazed)

Coral Architectural Products



• = Indicator Location



Architectural
Testing

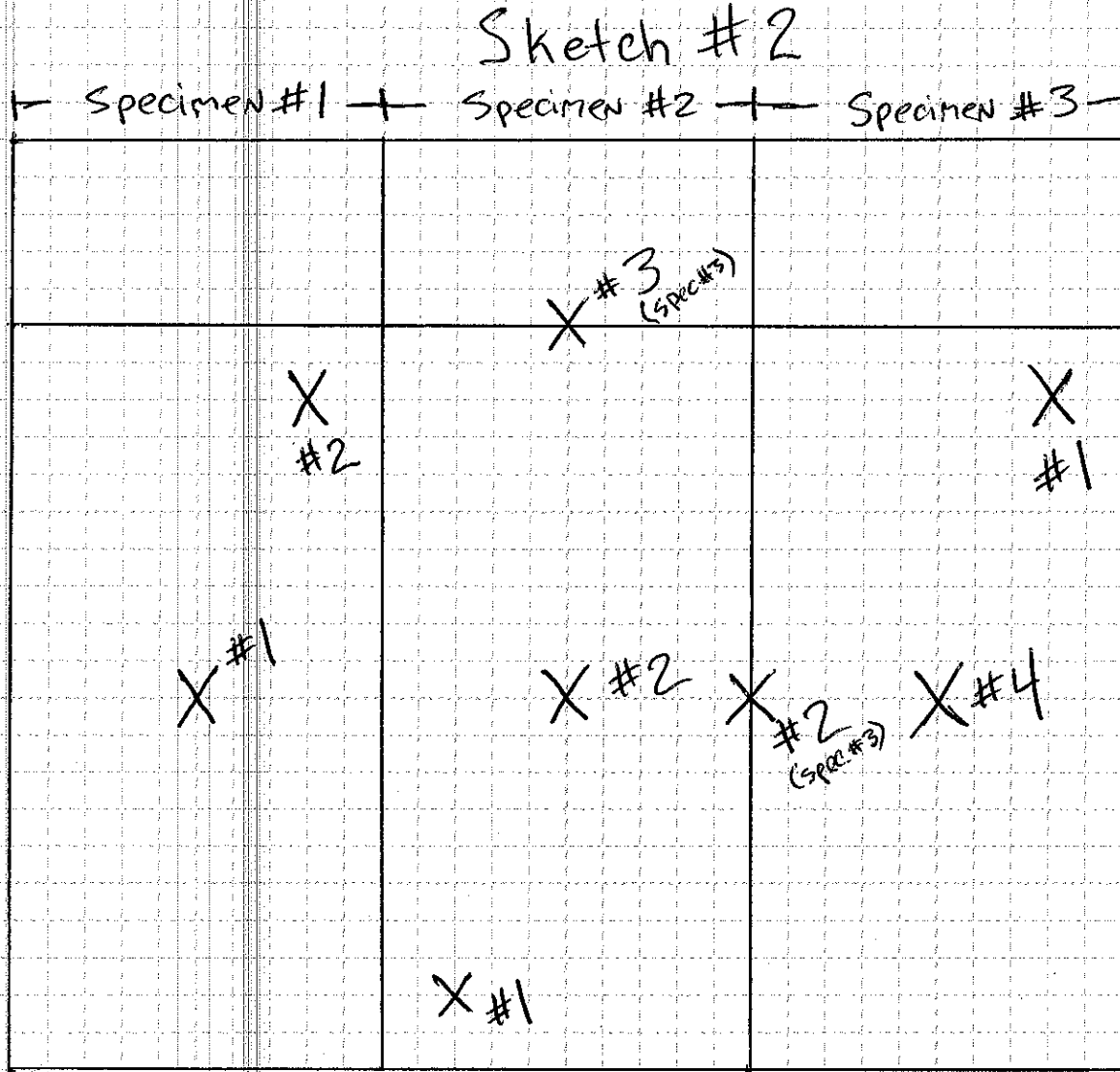
DATE: 1/3/12

BY: JACK R HOOK

PROJECT NO. B1026 of 1 of 1 SHEET 2 OF 2

PROJECT NAME: FL-500 (Dry Glazed)

Coral Architectural Products



X = IMPACT LOCATION



Architectural Testing

Test Report No.: B1028.01-401-18
Report Date: 01/03/12
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Appendix B

Photographs



Photo No. 1
Specimens #1, #2 and #3
Overall view of test specimens



Photo No. 2
Specimen #1
Typical corner detail at exterior



Photo No. 3
Specimens #1 and #2
Typical mullion detail at exterior



Photo No. 4
Specimens #2 and #3
Water accumulating in corners near glazing pocket during 15.04 psf water test



Photo No. 5
Specimens #1, #2, #3
Exterior view during TAS 203 cyclic loading; Specimen #1 at far left experienced a failure



Photo No. 6
Specimen #1
Failure of glazing at upper right corner of specimen during TAS 203 positive loading



Photo No. 7
Specimen #1
Close-up of corner failure; glazing was pulled from glazing pocket



Photo No. 8
Specimens #1, #2, #3
Wood bracing was used on Specimen #1 in order to continue cyclic testing on Specimens #2 and #3



Photo No. 9

Specimens #R-1, #2, #3

The glazing in Specimen #1 was removed and replaced; wood bracing was used on Specimen #2 to prevent failure and restart impact and cyclic procedures on Specimen #R-1 at far left.



Photo No. 10

Specimen #R-1

Impact at center midspan



Photo No. 11
Specimen #R-1
Impact at upper right corner



Photo No. 12
Specimens #1, #2, #3
Installation of Sub-sill



Photo No. 13
Specimens #1, #2, #3
Typical corner detail at sub-sill



Architectural Testing

Test Report No.: B1028.01-401-18
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Appendix C

Drawings

PRODUCT APPROVAL SUBMITTAL FL500 FRAMING SYSTEM WITH DRY GLAZE GASKETS FOR USE IN HURRICANE ZONES REQUIRING LARGE MISSILE IMPACT PROTECTION

GENERAL NOTES:

TEST STANDARDS
 AIR-TAS202
 WATER-TAS202
 STATIC-TAS202
 IMPACT-TAS201
 CYCLIC-TAS203

DESIGN PRESSURE VARIES
 REF. SHEETS 2-6 OF 16

WATER INFILTRATION: 15 PSF

AIR INFILTRATION: 6.24 PSF

TYPICAL GLASS BITE IS 9/16" UNLESS OTHERWISE NOTED.

1/2" MAXIMUM SHIM SPACE @ PERIMETER UNLESS OTHERWISE NOTED

ALL ALUMINUM EXTRUSIONS SHALL BE MADE FROM 6063-T6 ALLOY AND TEMPER.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH FLORIDA BUILDING CODE ~~SECTION~~ 2007 INCLUDING HIGH VELOCITY HURRICANE ZONES. ~~Ed. 7-0-11~~

MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME IN CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2004 FLORIDA BUILDING CODE SECTION 2003.8.4

ABBREVIATIONS:

D.L.O. = DAY LIGHT OPENING
 C.O.C. = CONCEALED OVERHEAD CLOSER
 TYP. = TYPICAL
 D.O.W. = DOOR OPENING WIDTH
 D.O.H. = DOOR OPENING HEIGHT
 S.A.C. = SURFACE APPLIED CLOSER

DEFINITIONS: DICTIONARY OF ARCHITECTURE & CONSTRUCTION-2ND EDITION

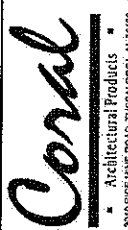
1. SIDE LIGHT - A FRAMED AREA OF FIXED GLASS ALONGSIDE A DOOR
 2. TRANSOM FRAME - A DOORFRAME WITH A TRANSOM BAR AND GLASS ABOVE THE DOOR


SHEET 1	INDEX TO DRAWINGS AND NOTES
SHEET 2	TYPICAL ELEVATION LIGHT ALUM. MULLION WITH STEEL-LONG SPAN
SHEET 3	GLAZING SCHEDULE
SHEET 4	FRAMING DETAILS
SHEET 5	FRAMING DETAILS
SHEET 6	BILL OF MATERIALS FOR FRAMING AND ACCESSORIES
SHEET 7	DIE DRAWINGS

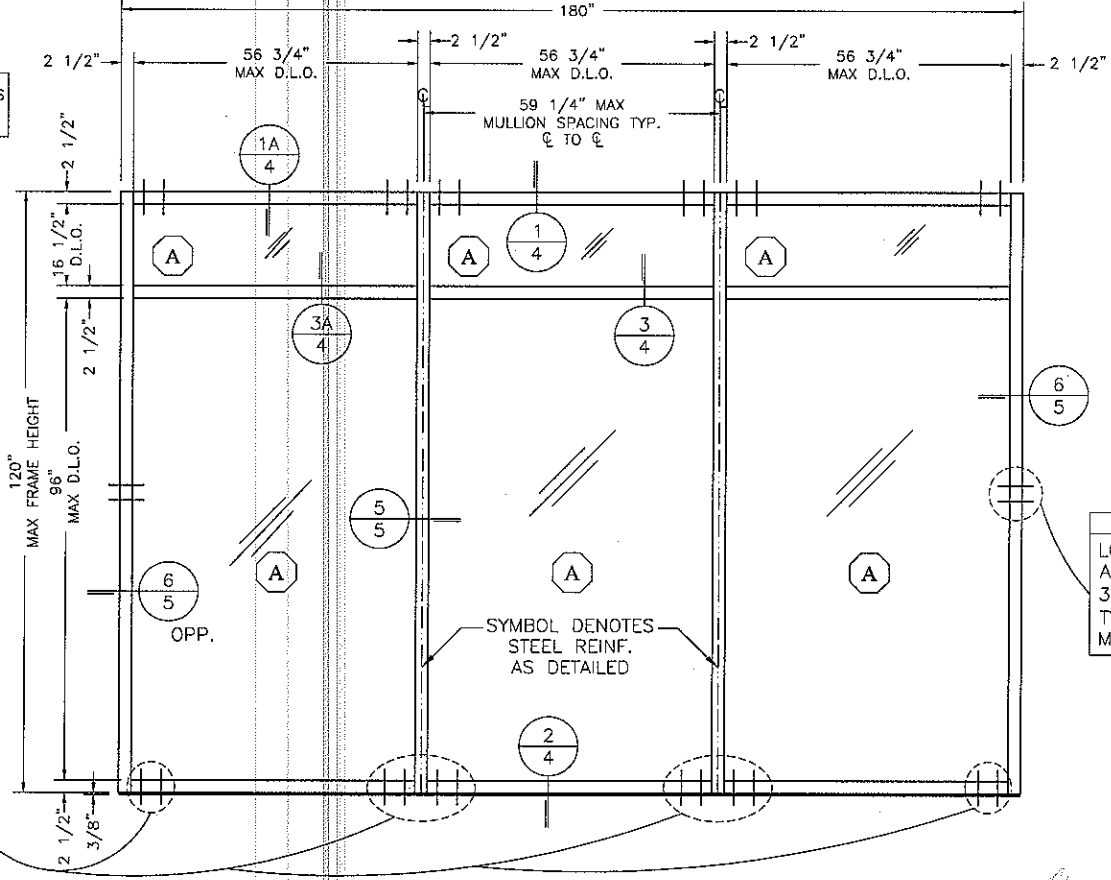


Architectural Testing
 Test sample complies with these details.
 Deviations are noted.

Report# B1028.01-401-18
 Date 12/29/11 To JKH

 <p style="font-size: 8px;">300 ROEBUCK ROAD, MUSCATON, AL 35698 PHONE: 800-772-7737 FAX: 205-255-7230</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 8px;"> PRODUCT TEST DRAWINGS FL500 WINDOW WALL SYSTEM PROTOCOLS: PA201/202/203 INDEX TO DRAWINGS AND NOTES </p>												
<p style="font-size: 8px;">DATE: 7/12/2011</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">DRAWN: PCH</td> <td style="font-size: 8px;">CHECKED: JDW</td> <td style="font-size: 8px;">APPROVED: JDW</td> </tr> <tr> <td colspan="3" style="font-size: 8px;">PROJECT NO.</td> </tr> <tr> <td colspan="3" style="font-size: 8px;">DRAWING NO. FL500_04</td> </tr> <tr> <td colspan="3" style="font-size: 8px;">SHEET 1 OF 7</td> </tr> </table>		DRAWN: PCH	CHECKED: JDW	APPROVED: JDW	PROJECT NO.			DRAWING NO. FL500_04			SHEET 1 OF 7		
DRAWN: PCH	CHECKED: JDW	APPROVED: JDW											
PROJECT NO.													
DRAWING NO. FL500_04													
SHEET 1 OF 7													

LEGEND
 EACH LINE REPRESENTS ONE FASTENER



SILL/HEAD @ STEEL SUBSTRATE
 3/8" -16 x 1-1/2" HWH TYPE "F" TCS TYP. @STEEL. LOCATE FIRST ANCHOR 2" FROM EDGE OF MULLION AND ADDITIONAL FASTENERS @ 2" MIN SPACING BETWEEN ANCHORS

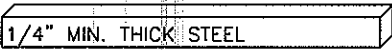
STEEL SUBSTRATE
 LOCATE (1) EA. 1-1/2" ABOVE AND BELOW MIDPOINT: 3/8" -16 x 1-1/2" HWH TYPE "F" TCS TYP. @STEEL 2" MIN. SPACING BETWEEN ANCHORS

TYPICAL ELEVATION LIGHT ALUM. MULLION WITH STEEL REINFORCEMENT-LONG SPAN

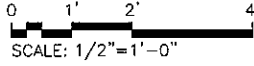
DESIGN PRESSURE = +70/-70 PSF

WATER TEST AT 15 PSF

AIR @ 6.24 P.S.F.



- NOTES:
1. GLASS SIZE=D.L.O. + 1-1/8"
 2. HORIZONTAL MULLION (DETAIL 3/8 OR 3A/8) IS OPTIONAL IN ANY BAY
 3. HEAD (DETAIL 1/8 OR 1A/8) IS OPTIONAL IN ANY BAY



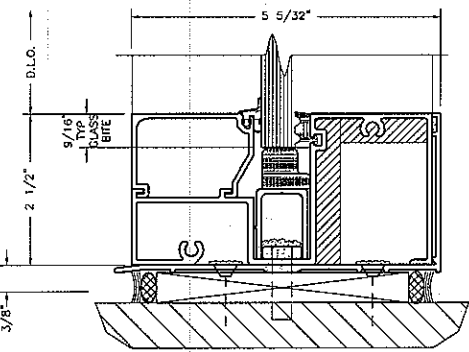
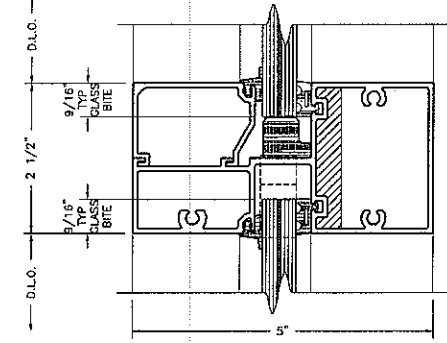
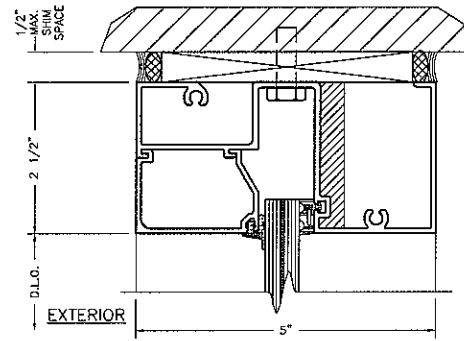
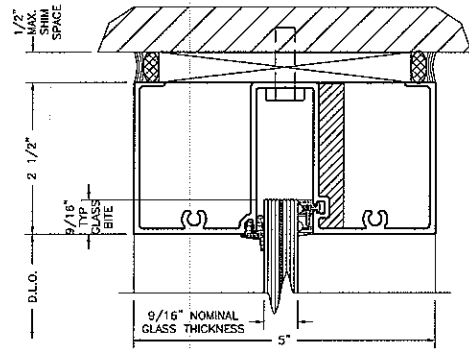
Test sample complies with these details. Deviations are noted.

Report# B1028.01-401-18
 Date 12/29/11 Tech JRH

NOTICE OF ACCEPTANCE

ARCHITECTURAL PRODUCTS	
3910 RICHIE ROAD, TUSCALOOSA, AL 35408	
PHONE: 800-772-7737 FAX: 205-285-7230	
DATE	7/12/2011
DRAWN	UNCHECKED
FCH	JDW
APPROVED	JDW
PROJECT NO.	
DRAWING NO.	FL500 04
SHEET	2 OF 7

PRODUCT APPROVAL DRAWINGS
 FL500 WINDOW WALL SYSTEM
 PROTOCOLS: PA201/202/203
 FRAMING ELEVATIONS



GLASS TYPE	DESCRIPTION	MANUFACTURER	MAXIMUM DLO (INCHES)	MAX. SQ. FT.
A	9/16" LAMINATED -1/4" H.S. -.090 SENTRY GLASS PLUS	DUPONT	56.5 X 96	37.67

TYPICAL GLASS SIZE = DLO + 1-1/8"

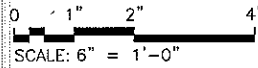
NOTE: THE INTERIOR IS ON THE RIGHT OF VERTICAL SECTION CUTS UNLESS OTHERWISE NOTED



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1028.01-401-18
Date 12/29/11 Tech JRH



NO.	DATE	BY	DESCRIPTION

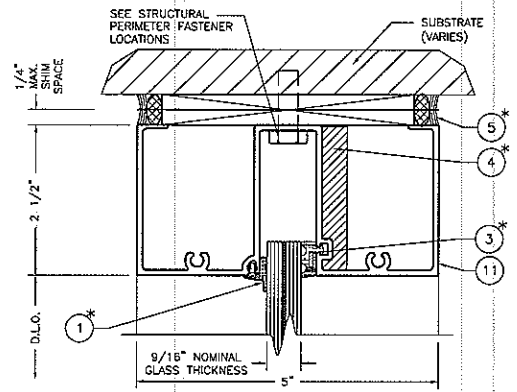
Corral
Architectural Products
3010 FIVE MILE ROAD, TUSCALOOSA, AL 35496
PHONE 904-727-7727 FAX 904-445-8201

PRODUCT APPROVAL DRAWINGS
FL500 WINDOW WALL SYSTEM
PROTOCOLS: PA201/202/203

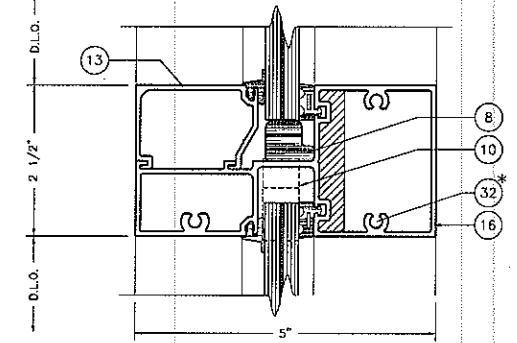
GLAZING SCHEDULE

NOTICE OF ACCEPTANCE

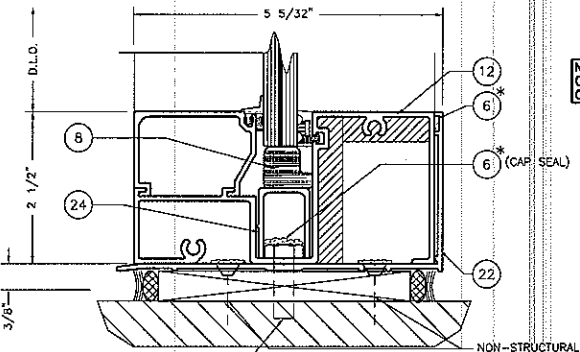
DATE	7/12/2011		
DRAWN	CHECKED	APPROVED	
KLL	JDW	JDW	
PROJECT NO.			
DRAWING NO.	FL500 04		
SHEET	3 OF 7		



1 - HEAD



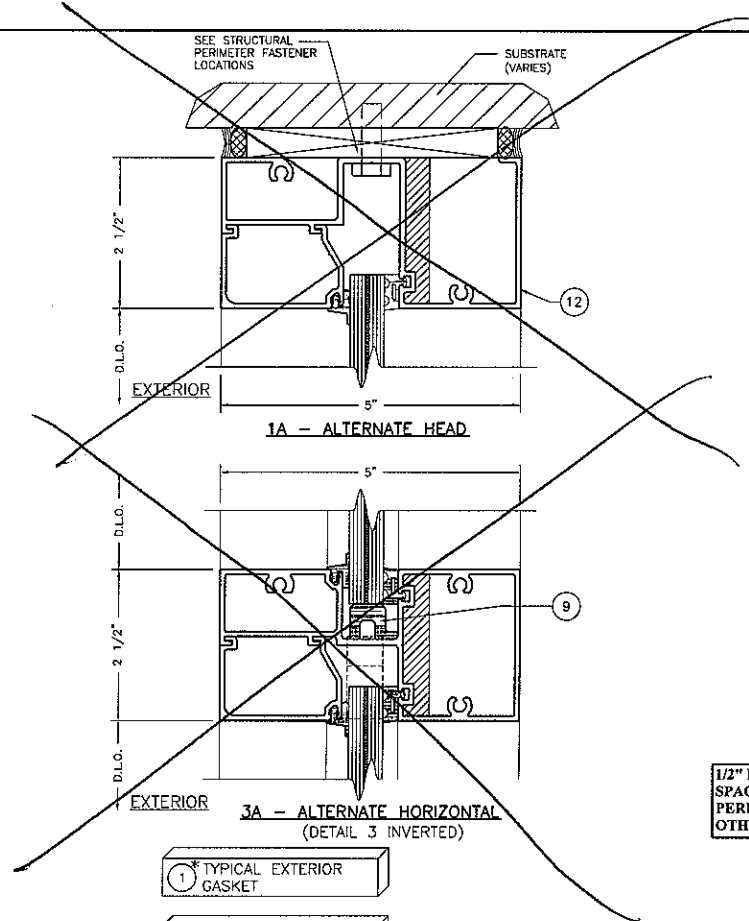
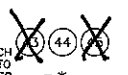
3 - HORIZONTAL



2 - SILL

SEE STRUCTURAL PERIMETER FASTENER LOCATIONS

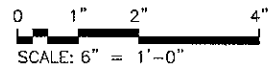
NON-STRUCTURAL FASTENERS LOCATE 1 EACH @ 24" FROM EACH END AND 11 EACH @ 140" POINT TO SECURE FLASHING UNTIL PERIMETER FASTENERS ARE INSTALLED. (CAP SEAL) 6



1A - ALTERNATE HEAD

3A - ALTERNATE HORIZONTAL (DETAIL 3 INVERTED)

1/2" MAXIMUM SHIM SPACE TYPICAL AT PERIMETER UNLESS OTHERWISE NOTED



- 1 * TYPICAL EXTERIOR GASKET
- 3 * TYPICAL INTERIOR GASKET
- 4 * TYPICAL @ ALL JOINT INTERSECTIONS
- 5 * TYPICAL PERIMETER SEALANT
- 6 * TYPICAL INTERIOR SEALANT
- 10 * TYPICAL @ EACH END OF INTERM. HORIZ.
- 32 * TYPICAL @ ALL SPLINES



Architectural Testing

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Deviations are noted.

Report# B1028.01-401-18
Date 12/29/11 Tech JRH

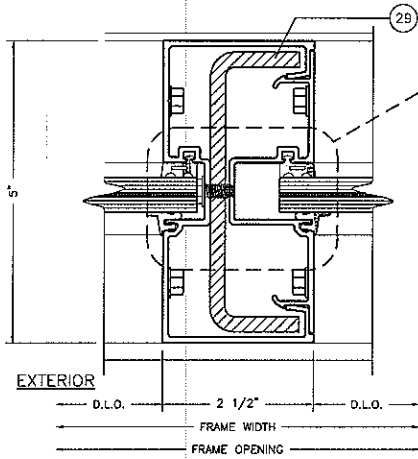
NOTICE OF ACCEPTANCE

DATE		7/12/2011	
DRAWN	CHECKED	APPROVED	
ALZ	WS	WS	
PROJECT NO.			
DRAWING NO.			
FL500 04			
SHEET			
4 OF 7			

Coral
Architectural Products
3940 RICE WANE ROAD, TUSCALOOSA, AL 35408
PHONE: 800-772-7737 FAX: 205-285-1330

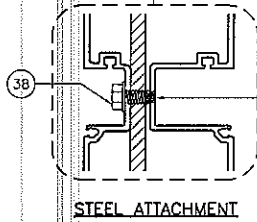
PRODUCT APPROVAL DRAWINGS
FL500 WINDOW WALL SYSTEM
PROTOCOLS: PA201/202/203

FRAMING DETAILS



5 - LIGHT INTERM. VERTICAL WITH STEEL

HORIZONTAL SECTION CUTS ARE AS VIEWED FROM THE EXTERIOR UNLESS OTHERWISE NOTED

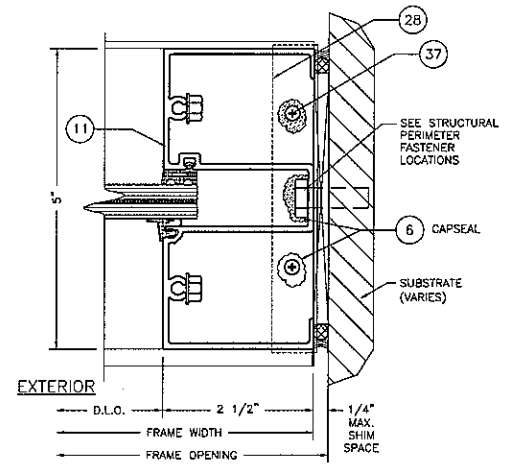


STEEL ATTACHMENT

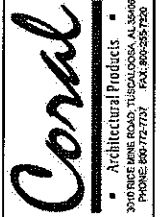
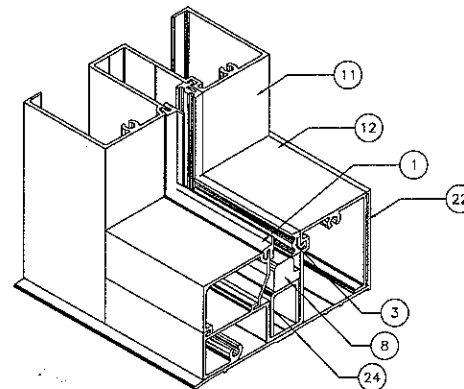
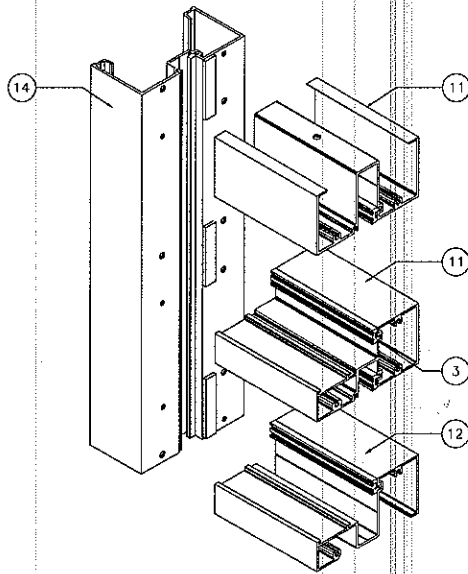
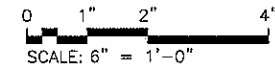
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1028.01-401-18
Date 12/29/11 Tech JRH



6 - WALL JAMB



PRODUCT APPROVAL DRAWINGS
FL500 WINDOW WALL SYSTEM
PROTOCOLS: PA201/202/203
FRAMING DETAILS

NOTICE OF ACCEPTANCE

DATE	7/13/2011	
DRAWN	CHECKED	APPROVED
PCH	JDW	JDW
PROJECT NO.		
DRAWING NO.	FL500_04	
SHEET	5 OF 7	

BILL OF MATERIALS

ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG1	EXTERIOR GLAZING GASKET	0.120 SPACE	EPDM	VARIES	
2	NOT USED					
3	NG15	INTERIOR GLAZING GASKET	0.594 X 0.280 X VARIES	EPDM	VARIES	MEETS A57M C-864
4	SM5601	JOINT SEALANT TAPE	0.500 X 0.125 X VARIES	BUTYL	SCHNEC-MOOREHEAD	
5	795	SILICONE - PERIMETER SEALANT	FILL SPACE	SILICONE	DOW CORNING	USED @ PERIMETER
6	995	SILICONE - GLASS TO METAL	FILL SPACE	SILICONE	DOW CORNING	GLASS TO METAL AND INTERNAL
7	NOT USED					
8	SB13	SETTING BLOCK @ SILL & HORIZONTAL	0.313 X 1.250 X 4.000	EPDM	VARIES	2 PER LITE
9	SB20	SETTING BLOCK @ INVERTED HORIZONTAL	0.800 X 0.548 X 4.000	EPDM	VARIES	2 PER LITE
10	WD200-1	WATER DIVERTER	1.358 X 0.594 X 0.050	INJECTION MOLDED PLASTIC	CORAL INDUSTRIES, INC.	@ EACH END OF INTERM. HORIZONTAL
11	FL501	HEAD OR WALL JAMB	2.500 X 5.000 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
12	FL502	SILL OR HEAD	2.500 X 4.980 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
13	FL503	GLASS STOP	1.250 X 2.021 X 0.078	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
14	FL504	STD. VERTICAL MULLION/DOORJAMB	2.500 X 5.000 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
15	FL505	OPEN BACK MULLION FILLER	0.681 X 4.670 X 0.080	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
16	FL506	INTERMEDIATE HORIZONTAL	2.500 X 4.980 X 0.094	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
17	NOT USED					
18	NOT USED					
19	NOT USED					
20	NOT USED					
21	NOT USED					
22	FL519	SUBSILL FLASHING	2.620 X 5.402 X 0.084	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
23	NOT USED					
24	CS500-1	SETTING CHAIR	1.156 X 0.844 X 0.078	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
25	NOT USED					
26	NOT USED					
27	NOT USED					
28	ED519-1	SILL FLASHING END DAM	2.620 X 0.75 X 5.25 2.600 X 1.000 X 0.084	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
29	SR504	STEEL REINFORCEMENT	4.560 X 1.250 X 0.250 4.124 X 1.275 X 0.250	A36 STEEL	VARIES	STEEL REINFORCEMENT FOR (14)
30	NOT USED					
31	NOT USED					
32	AS16	FASTENER	#14 X 1 HH5TS	STEEL	VARIES	TYP. SPLINE SCREW VERTICAL/HORIZONTAL JOINTS
33	AS18	FASTENER	#10 X 1-1/4" FHP	S. STEEL	VARIES	ATTACH (7) TO (14) / ATTACH (8) TO (14)
34	AS30	FASTENER	#10-16 X 1/2" FHP	STEEL	VARIES	ATTACH (8) TO (14)
35	AS24	FASTENER	#10-24 X 3/8" FHP	STEEL	VARIES	ATTACH (1) TO (14) AND (10)
36	AS26	FASTENER	#12 X 3/4" HWH	STEEL	VARIES	ATTACH (1) TO (14)
37	AS31	FASTENER	#6 X 3/8" PPH #10 3/8" FHP	S. STEEL	VARIES	ATTACH (28) TO (22)
38	AS38	FASTENER	#10-24 X 3/8" HWH 3/8" RH SMS	STEEL	VARIES	ATTACH (28) TO (14)
39	AS39	FASTENER	#16 X 1-5/4" FHP-3.6	S. STEEL	VARIES	ATTACH (7) TO (17) / ATTACH (8) TO (14)
43	NOT USED					
44		FASTENER FOR ANCHORING (2) TO STEEL SUBSTRATE	#12 X 1-1/2" FHP TEK	STEEL	VARIES	NON-STRUCTURAL

NOT USED

NOT USED
NOT USED
NOT USED

NOT USED



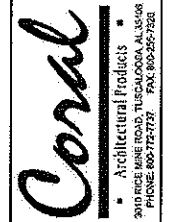
Test sample complies with these details.
Deviations are noted.

Report# B1028.01-401-18

Date 12/29/11 Tech JRH

NOTICE OF ACCEPTANCE

DATE	7/13/2011	
DRWN	CHEKCD	APPROVD
PCH	JDW	JDW
PROJECT NO.		
DRAWING NO.	FL500_04	
SHEET	6 OF 7	



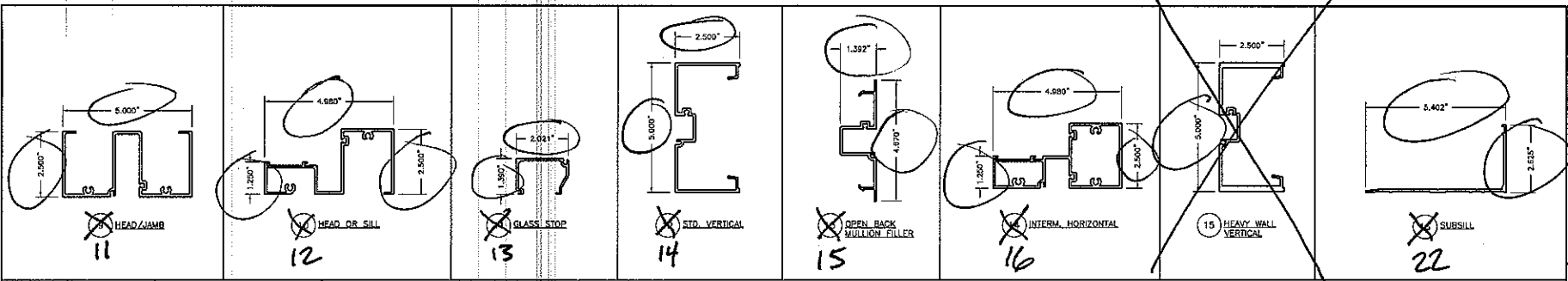
PRODUCT APPROVAL DRAWINGS
FL500 WINDOW WALL SYSTEM

BILL OF MATERIALS

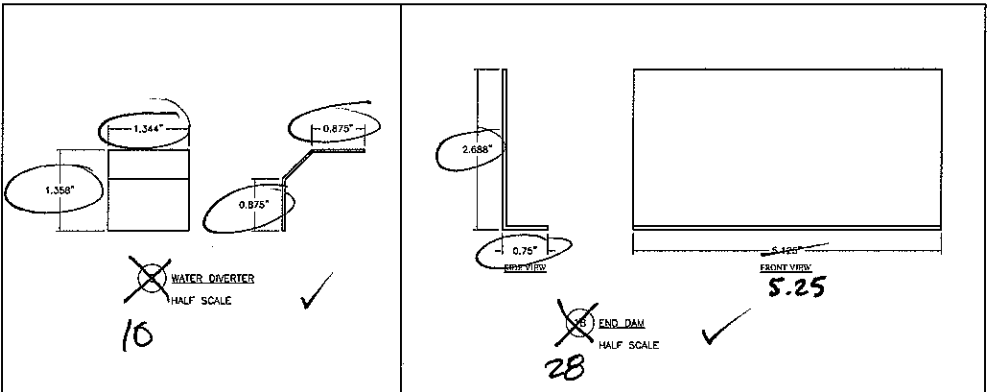
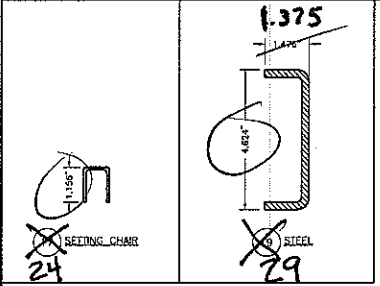
DESCRIPTION

REV

DATE



NOT USED



1	EXT. GLAZING GASKET		FULL SCALE	✓
3	INT. GLAZING GASKET		FULL SCALE	✓
8	SETTING BLOCK			✓
7	INT. SPACER GASKET			✓

NOT USED



Test sample complies with these details.
Deviations are noted.
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Date 12/29/11 Tech JRH

NOTICE OF ACCEPTANCE

REV	BY	DATE	DESCRIPTION

Corral
Architectural Products
2010 RICE WINE ROAD, TUCULOCOSCA, N.J. 08466
PHONE: 609-773-7757 FAX: 609-443-6291

PRODUCT APPROVAL DRAWINGS
FL550 WINDOW WALL SYSTEM
PROTOCOLS: PA201,202,203
DIE DRAWINGS

DATE	7/12/2011	
DRAWN	CHECKED	APPROVED
ALL	W/S	W/S
PROJECT NO.		
DRAWING NO.	FL500_04	
SHEET	7 OF 7	