

**ASTM E 1886 and ASTM E 1996
TEST REPORT**

Rendered to:

CORAL ARCHITECTURAL PRODUCTS

SERIES/MODEL: PW 256 with Door Openings

PRODUCT TYPE: Aluminum Impact Resistant Curtain Wall System Door Openings

This report contains in its entirety:

Cover Page: 1 page
Report Body: 8 pages
Test Equipment: 1 page
Sketches: 2 pages
Drawings: 16 pages

Report No.: 85743.01-401-44
Test Dates: 12/17/08
Through: 06/10/09
Report Date: 12/07/09
Expiration Date: 06/10/13

ASTM E 1886 and ASTM E 1996 TEST REPORT

Rendered to:

CORAL ARCHITECTURAL PRODUCTS
3010 Rice Mine Road
Tuscaloosa, Alabama 35406

Report No.: 85743.01-401-44
Test Dates: 12/17/08
Through: 06/10/09
Report Date: 12/07/09
Expiration Date: 06/10/13

Project Summary: Architectural Testing, Inc. was contracted by Coral Architectural Products to perform testing on one Series/Model PW 256, aluminum impact resistant curtain wall system with door openings. The samples tested met the performance requirements set forth in the referenced test procedures for a ± 3828 Pa (± 80.0 psf) Design Pressure with missile impacts corresponding to Missile Level D and Wind Zone 4. Test specimen description and results are reported herein. The samples were provided by the client.

Test Procedures: The test specimens were evaluated in accordance with the following:

ASTM E 1886-05, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.

ASTM E 1996-05, Standard Specification for Performance of Exterior Windows, Glazed Curtain Walls, Doors and Storm Shutters Impacted by Wind Borne Debris in Hurricanes.

Test Specimen Description:

Series/Model: PW 256 with Door Openings

Product Type: Aluminum Impact Resistant Curtain Wall System with Entrance Door

Overall Size: 3531 mm (139") wide by 3810 mm (150") high

Door Leaf Size (2): 908 mm (35-3/4") wide by 2419 mm (95-1/4") high

Door Leaf Daylight Opening Size (2): 667 mm (26-1/4") wide by 2076 mm (81-3/4") high

Test Specimen Description: (Continued)

Fixed Daylight Opening Above Door Size: 1880 mm (74") wide by 1200 mm (47-1/4") high

Top Right Fixed Daylight Opening Size: 1461 mm (57-1/2") wide by 1200 mm (47-1/4") high

Lower Right Fixed Daylight Opening Size: 1461 mm (57-1/2") wide by 2407 mm (94-3/4") high

Finish: All aluminum was mill finished.

Glazing Details: The fixed lites utilized a 9/16" thick glazing fabricated from two sheets of 1/4" heat strengthened glass separated by 0.075" Vanceva interlayer. The lites were exterior glazed onto a Dow 995 silicone bedding and secured in place with aluminum pressure plates. The fixed lites of glass utilized a 3/4" glazing bite. Aluminum mull caps were added to the exterior.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.270" backed by 1/4" hollow vinyl bulb gasket	1 Row	Perimeter of the door frame stop
0.115" by 7/16" kerf-mounted woven weatherstrip	2 Rows	Length of the active door leaf

Frame Construction: The frame was constructed of extruded aluminum. The corners were coped, butted, sealed and secured with three #14 x 1" hex head screws located through the jambs into the head and sill screw boss.

Door Panel: Door panel Series 381 was only utilized as a filler for the frame. A 2" x 2" x 1/4" by 2' long aluminum angle was utilized at the top and bottom of the door frame to secure the doors in place to the frame and threshold.

Test Specimen Description: (Continued)

Screen Construction: No screen was utilized.

Hardware: No hardware was utilized.

Drainage: No drainage was utilized.

Reinforcement: The intermediate vertical mullion utilized a full-height 4-1/2" x 1-7/8" x 1/4" steel "C" channel with a 3-3/4" wide by 3/4" thick flat bar welded to the "C" channel. It was secured with #8 x 3" bolts through the aluminum mullion located 1" from head, sill and horizontal mullion.

Installation: The system was secured to an 8" steel "C" channel. The door to jamb was secured to the channel with 1/2"-13 x 4-1/2" bolts located 2-1/2", 45-1/2", 50-1/2", 67-1/2" and 98-1/2" from the bottom. The head utilized 1/2"-13 x 2" bolts 6" from each end and 4" each side of the vertical mullion. The sill utilized two 1/2"-13 x 2" bolts located 6" from the jamb and 6" from the vertical mullion.

Test Results: The following results have been recorded:

ASTM E 1886, *Large Missile Impact*

Conditioning Temperature: 26.6°C (80°F)

Missile Weight: 3433.8 g (9.2 lbs)

Missile Length: 2.4 m (8' 0")

Muzzle Distance from Test Specimen: 5.18 m (17' 0")

Test Unit #1

Impact #1: Missile Velocity: 15.4 m/s (50.4 fps); orientation within $\pm 5^\circ$ of vertical

Impact Area: Center of the vertical mullion

Observations: Missile hit target area, dented the aluminum mullion cap with no other damage.

Results: Pass

Impact #2: Missile Velocity: 15.5 m/s (50.8 fps); orientation within $\pm 5^\circ$ of vertical

Impact Area: Center of the horizontal mullion above the double door assembly.

Observations: Missile hit target area, dented the aluminum mullion cap and fractured the fixed lite above, with no other damage.

Results: Pass

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

Test Results: (Continued)

ASTM E 1886, Air Pressure Cycling

Test Unit #1

Design Pressure: ±3828 Pa (±80.0 psf)

POSITIVE PRESSURE

Pressure Range Pa (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator mm (inch)					
			#1	#2	#3	#4	#5	#6
766 to 1914 (16 to 40)	3500	3.00	4.82 (0.19)	14.99 (0.59)	14.48 (0.57)	7.87 (0.31)	15.24 (0.60)	8.63 (0.34)
0 to 2297 (0 to 48)	300	5.64	5.84 (0.23)	16.51 (0.65)	18.03 (0.71)	9.14 (0.36)	18.80 (0.74)	9.40 (0.37)
1914 to 3062 (40 to 64)	600	2.87	6.86 (0.27)	20.07 (0.79)	21.84 (0.86)	10.67 (0.42)	22.10 (0.87)	10.67 (0.42)
1149 to 3828 (24 to 80)	100	5.49	8.13 (0.32)	24.38 (0.96)	26.16 (1.03)	12.95 (0.51)	26.42 (1.04)	11.94 (0.47)
			Permanent Set					
			3.30 (0.13)	6.60 (0.26)	8.13 (0.32)	7.11 (0.28)	8.13 (0.32)	9.40 (0.37)

NEGATIVE PRESSURE

Pressure Range Pa (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator mm (inch)					
			#1	#2	#3	#4	#5	#6
1149 to 3828 (24 to 80)	50	7.76	25.15 (0.99)	18.80 (0.74)	5.08 (0.20)	9.65 (0.38)	24.89 (0.98)	9.65 (0.38)
1914 to 3062 (40 to 64)	1050	3.74	21.08 (0.83)	15.75 (0.62)	4.57 (0.18)	7.87 (0.31)	21.08 (0.83)	9.40 (0.37)
0 to 2297 (0 to 48)	50	5.63	12.45 (0.49)	8.89 (0.35)	2.29 (0.09)	4.32 (0.17)	12.19 (0.48)	2.29 (0.09)
766 to 1914 (16 to 40)	3350	3.66	8.64 (0.34)	5.84 (0.23)	1.27 (0.05)	2.29 (0.09)	7.87 (0.31)	1.52 (0.06)
			Permanent Set					
			2.54 (0.10)	1.02 (0.04)	0.25 (0.01)	1.02 (0.04)	2.03 (0.08)	0.51 (0.02)

Observations: No additional damage was observed.

Result: Pass

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

General Note: Upon completion of testing, the specimens met the requirements of Section 7 of ASTM E 1996.

Test Equipment: (See Appendix A)

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

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.

Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein.

List of Official Observers:

<u>Name</u>	<u>Company</u>
William Smith Sr.	Impact Glazing Consultants
William Smith Jr.	Impact Glazing Consultants
Jack Hook	Architectural Testing, Inc.
Scott Parker	Architectural Testing, Inc.
Don Beltz	Architectural Testing, Inc.
John McClane	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. 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.

John C. McClane
Laboratory Manager

Joseph A. Reed, P.E.
Director - Engineering and Product Testing

JCM:ck/cmd

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

- Appendix-A: Test Equipment (1)
- Appendix-B: Sketches (2)
- Appendix-C: Drawings (16)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	12/07/09	N/A	Original report issue

Appendix A
Test Equipment

Instrument	Manufacturer	Asset #
Transducer	Celesco	004284
Transducer	Celesco	005428
Transducer	Celesco	004280
Transducer	Celesco	004285
Transducer	Celesco	005427
Transducer	Celesco	004282
Control panel	Architectural Testing, Inc.	004821
Cannon	Architectural Testing Inc.	004273
Temperature/ Barometer	Davis Instrument	004330

Appendix B

Sketches



Architectural
Testing

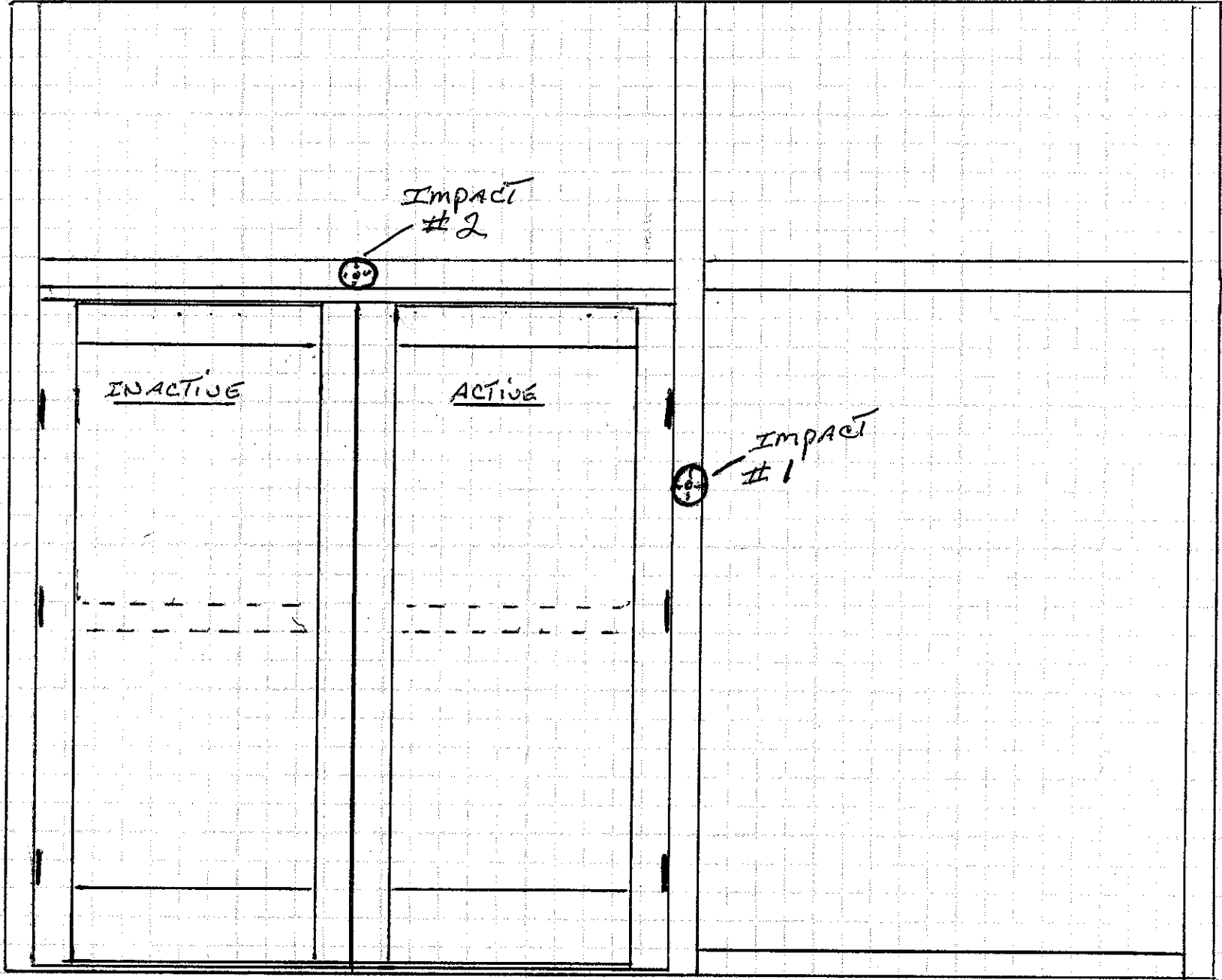
DATE 6/15/09

BY: JCM

PROJECT NO. 85743.01 SHEET 1 OF 2

PROJECT NAME: CORAL ARCHITECTURAL PAD

IMPACT LOCATIONS





Architectural
Testing

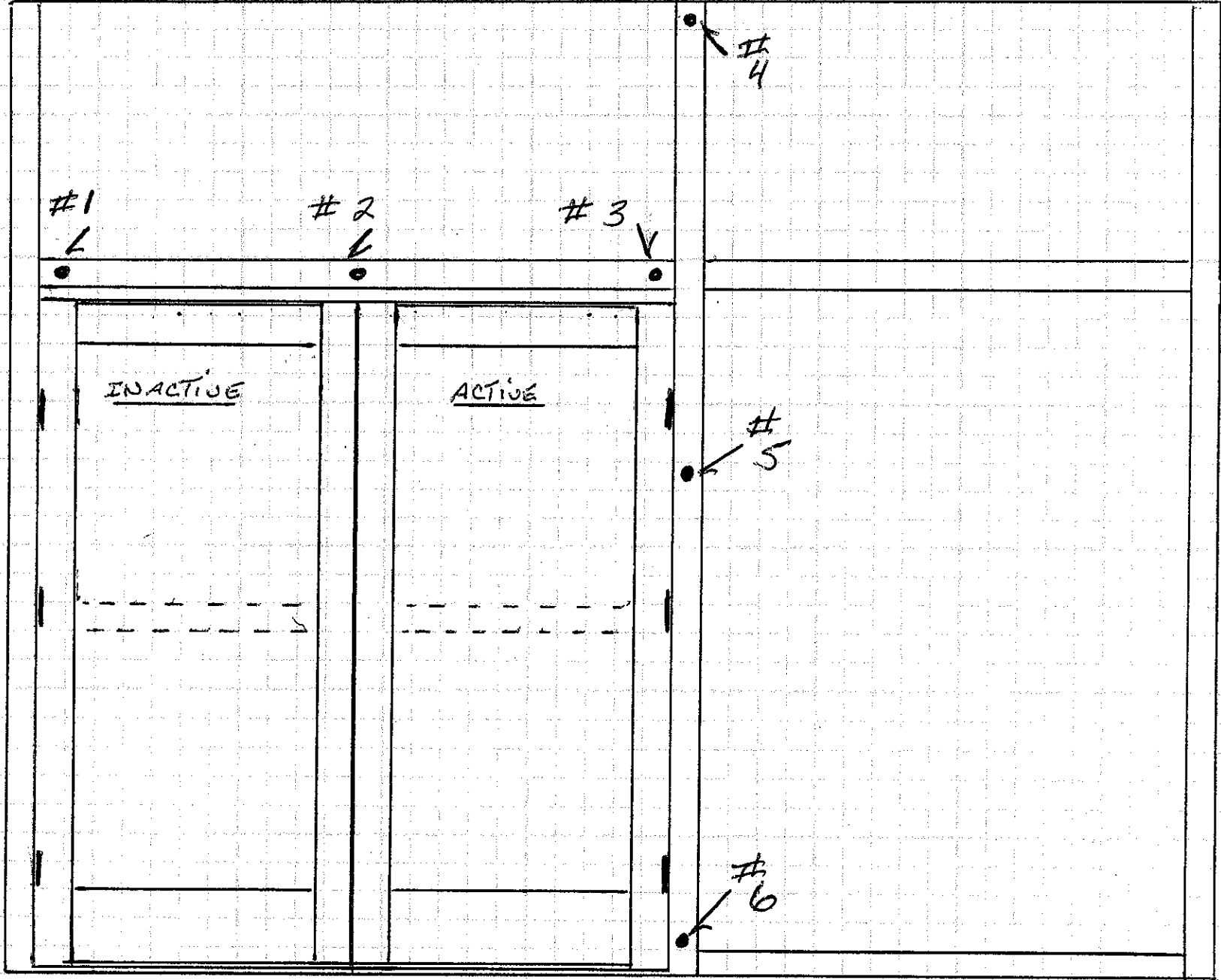
DATE 6/15/09

BY: JCM

PROJECT NO. 85743.01 SHEET 2 OF 2

PROJECT NAME: CORAL ARCHITECTURAL POND

Indicator Locations



Appendix C
Drawings

TEST REPORT DRAWINGS PW256 IMPACT-RESISTANT CURTAIN WALL SYSTEM

FOR USE IN HURRICANE ZONES REQUIRING
LARGE MISSILE IMPACT PROTECTION

INDEX TO DRAWINGS	
1	INDEX TO DRAWINGS AND NOTES
2	FRAMING ELEVATION - E1 CAPTURED AND B.G. MULLIONS WITH STEEL -LONG SPAN-
3	FRAMING ELEVATION - E2 CAPTURED MULLION WITHOUT STEEL -SHORT SPAN-
4	FRAMING ELEVATION - E3 B.G. MULLION WITHOUT STEEL -SHORT SPAN-
5	FRAMING ELEVATION - E4 CAPTURED MULLION WITH STEEL -LONG SPAN- SMALL MISSILE
6	FRAMING ELEVATION FOR DOORS - E5 CAPTURED MULLION WITH STEEL -LONG SPAN-
7	FRAMING ELEVATION - E6 CAPTURED MULLION WITH STEEL - LONG SPAN- LARGE MISSILE
8	FRAMING DETAILS
9	FRAMING DETAILS
10	FRAMING DETAILS
11	DOOR AND FRAMING DETAILS
12	DOOR AND FRAMING DETAILS
13	FRAMING DETAILS
14	BILL OF MATERIALS
15	BILL OF MATERIALS AND GLAZING SCHEDULE
16	DIE DRAWINGS

ABBREVIATIONS:

D.L.O. = DAY LIGHT OPENING
D.O.H. = DOOR OPENING HEIGHT
D.O.W. = DOOR OPENING WIDTH
ELEVS = ELEVATIONS
EXT. = EXTERIOR
INT. = INTERIOR
MAX. = MAXIMUM
MIN. = MINIMUM
OPP. = OPPOSITE
TYP. = TYPICAL



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 85743.01
Date 2/1/09 Tech JCM

REV	BY	DATE	DESCRIPTION

Coral
Architectural Products
3716 RICE SPRING ROAD, TUSCALOOSA, AL 35605
PHONE: 800.727.7737 FAX: 800.250.1328

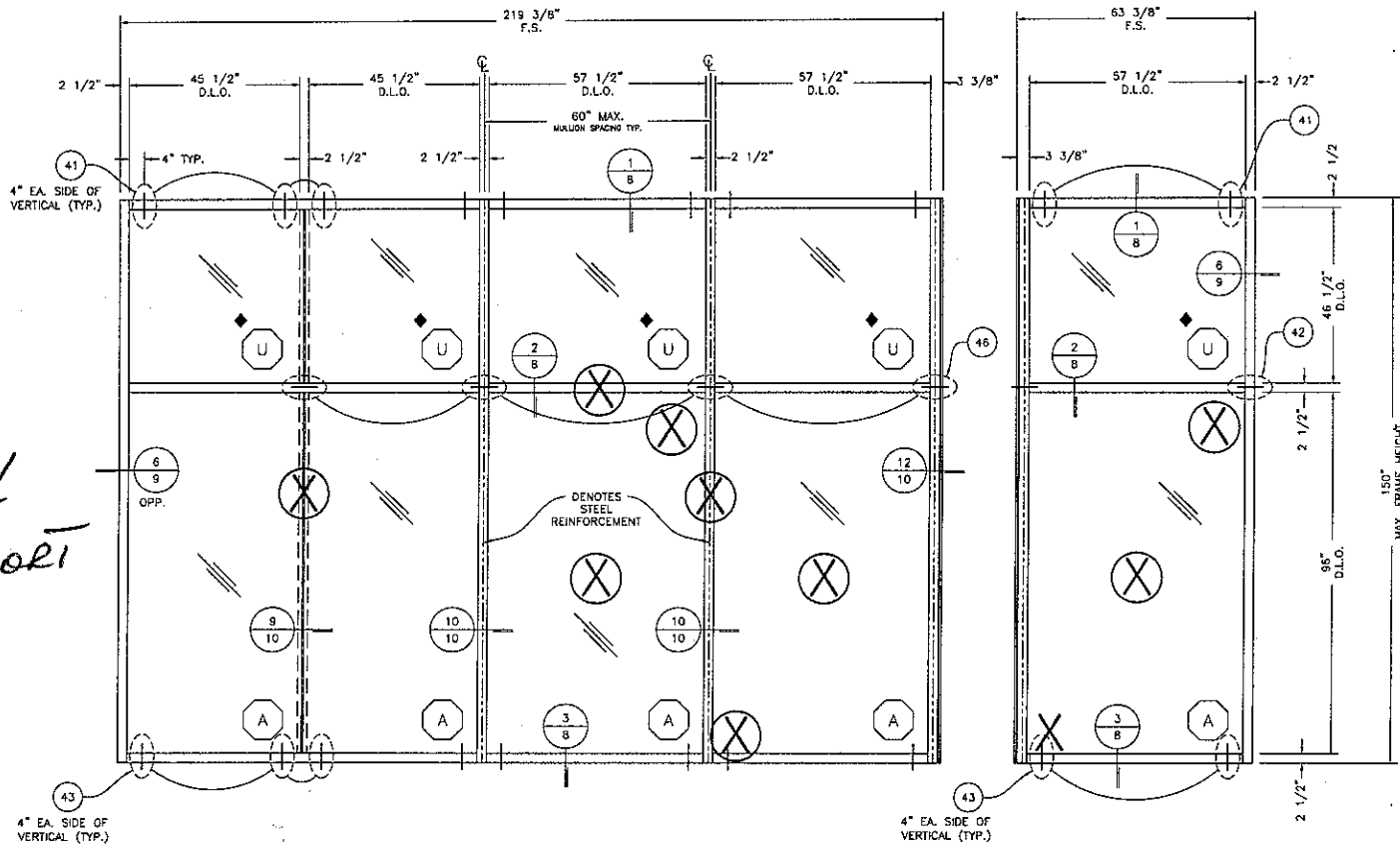
TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM

INDEX TO DRAWINGS AND NOTES

DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.	TEST		
DRAWING NO.	PW256_01		
SHEET	1 OF 16		

SPECIMEN #E1	
TEST METHOD	TEST CONDITIONS
AIR INFILTRATION TEST (ASTM E283 AND TAS 202)	1.57 PSF & 6.24 PSF
WATER INFILTRATION TEST (ASTM E331 AND TAS 202)	20.00 PSF
UNIFORM STATIC LOAD TEST (ASTM E330 AND TAS 202)	+/- 80 PSF DESIGN PRESSURE
LARGE MISSILE IMPACT TEST (ASTM E1886/E1998 AND TAS 201)	9-LB 40Z, 2x4 (@ 50FT/SEC)
CYCLIC LOAD TEST (ASTM E1996 AND TAS 203)	+/- 80 PSF DESIGN PRESSURE

*NOT USED
REFER TO REPORT
85731.01*



ELEVATION E1
CAPTURED & B.G. MULLIONS -LONG SPAN-
WITH SR150 & 1/2\"x 3-3/4\" BAR
STEEL REINFORCEMENT

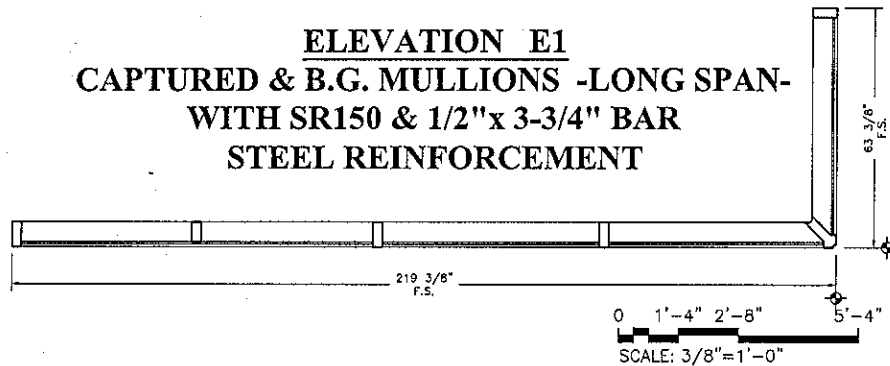
STEEL BUCK FRAME

TESTING:
 AIR, WATER, STATIC, IMPACT, AND CYCLE

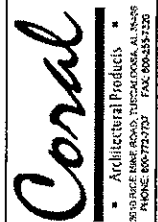
MAX. ALLOWABLE DEFLECTION (L/180)= 0.833

DESIGN PRESSURE = +/- 80 PSF

- = LARGE MISSILE IMPACT LOCATIONS
- = INFILL ONLY (DO NOT IMPACT)



0 1'-4\" 2'-8\" 5'-4\"
 SCALE: 3/8\"=1'-0\"

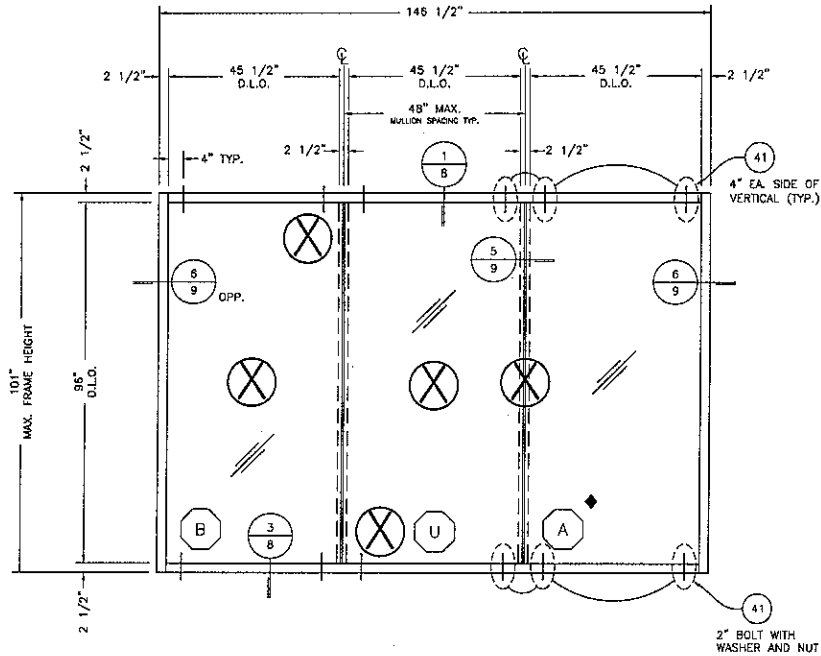


TEST REPORT DRAWINGS
 PW256 IMPACT-RESISTANT
 CURTAIN WALL SYSTEM
 FRAMING ELEVATION

DATE	4/14/2009
DRAWN DCW	CHECKED DCW
PROJECT NO.	TEST
DRAWING NO.	PW256 01
SHEET	2 OF 16

NOT USED

SPECIMEN #E3	
TEST METHOD	TEST CONDITIONS
UNIFORM STATIC LOAD TEST (ASTM E330 AND TAS 202)	+/- 65 PSF DESIGN PRESSURE
LARGE MISSILE IMPACT TEST (ASTM E1865/E1996 AND TAS 201)	9-LB 40Z, 2x4 @ 50FT/SEC
CYCLIC LOAD TEST (ASTM E1996 AND TAS 203)	+/- 65 PSF DESIGN PRESSURE



ELEVATION E3
B.G. MULLION -SHORT SPAN-
WITHOUT REINFORCEMENT

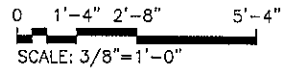
STEEL BUCK FRAME

TESTING:
 STATIC, IMPACT, AND CYCLE

MAX. ALLOWABLE DEFLECTION (L/180)= 0.561

DESIGN PRESSURE = +/- 65 PSF

- = LARGE MISSILE IMPACT LOCATIONS
- = INFILL ONLY (DO NOT IMPACT)



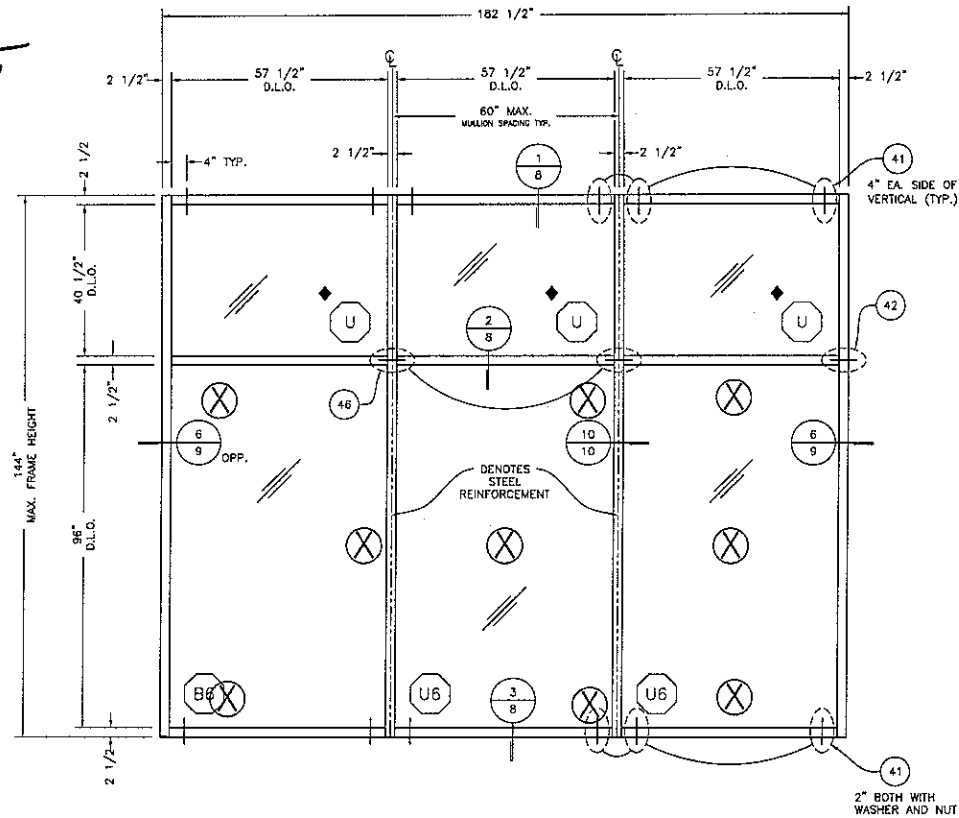
Coral
 Architectural Products
 3075 SAUCE MARSH ROAD, THE WOODBRIDGE, FL 34986
 PHONE: 888-234-7339 FAX: 888-234-7330

TEST REPORT DRAWINGS
 PW256 IMPACT-RESISTANT
 CURTAIN WALL SYSTEM
 FRAMING ELEVATION

DATE	4/14/2009	
DRAWN	CHECKED	APPROVED
bcw	bcw	bcw
PROJECT NO.	TEST	
DRAWING NO.	PW256 01	
SHEET	4 OF 16	

NOT USED
REFER TO REPORT
85742.01

SPECIMEN #E4	
TEST METHOD	TEST CONDITIONS
SMALL MISSILE IMPACT TEST (ASTM E1886/E1996 AND TAS 201)	10 BALL BEARINGS @ 130 FT/SEC
CYCLIC LOAD TEST (ASTM E1996 AND TAS 203)	±80 PSF DESIGN PRESSURE



**ELEVATION E4 - SMALL MISSILE
CAPTURED MULLION -LONG SPAN-
WITH SR150 & 1/2"X 3-3/4" BAR
STEEL REINFORCEMENT**

STEEL BUCK FRAME

TESTING:
IMPACT, AND CYCLE

MAX. ALLOWABLE DEFLECTION (L/180)= 0.833

DESIGN PRESSURE = +/-80 PSF

⊗ = SMALL MISSILE IMPACT LOCATIONS

◆ = INFILL ONLY (DO NOT IMPACT)

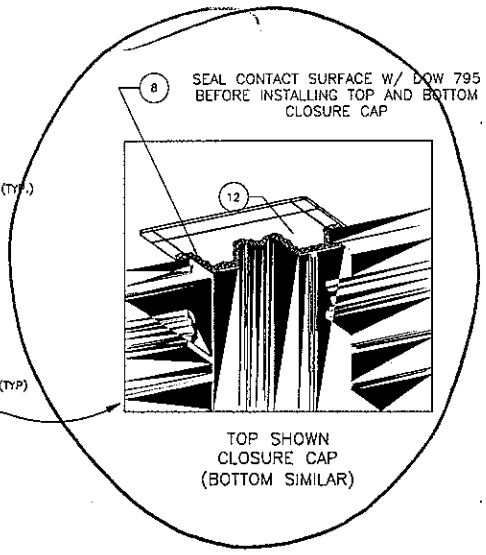
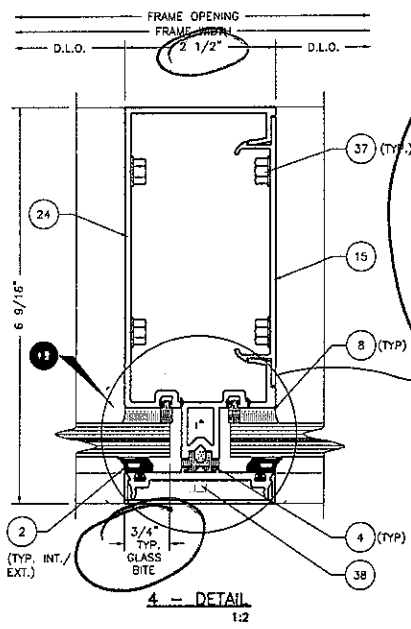
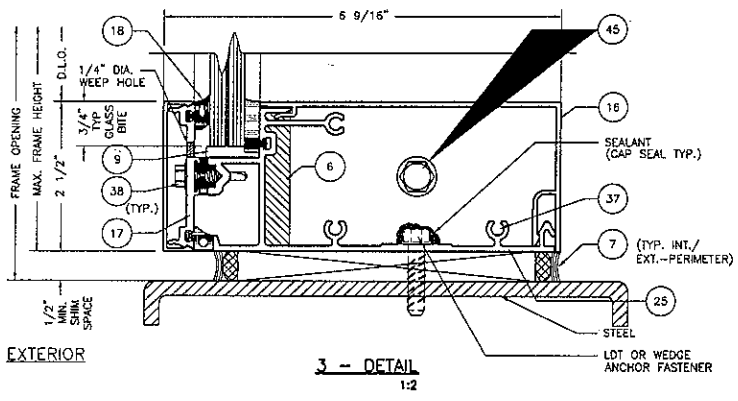
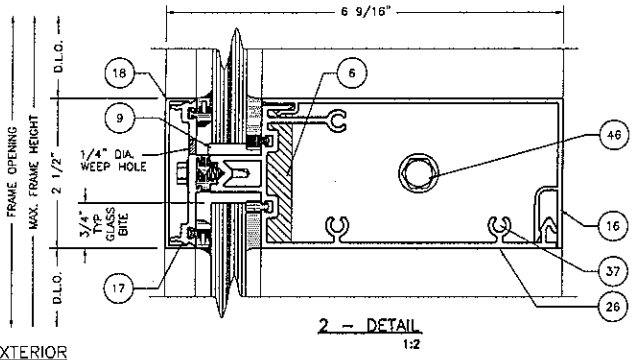
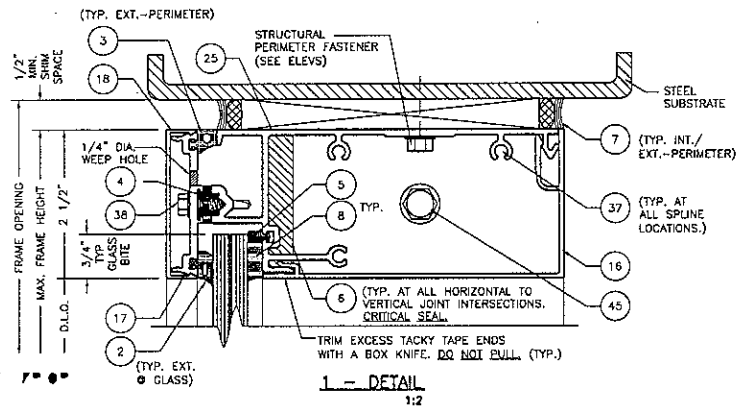
0 1'-4" 2'-8" 5'-4"
SCALE: 3/8"=1'-0"

NO.	DESCRIPTION	REV	BY	DATE

Coral
Architectural Products
3010 ARCHER ROAD, SUITE 100
PHOENIX, AZ 85027-3727 FAX: 602-944-2091

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
FRAMING ELEVATION

DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.			
DRAWING NO.	PW256_01		
SHEET	5 OF 16		



Test sample complies with these details.
Deviations are noted.

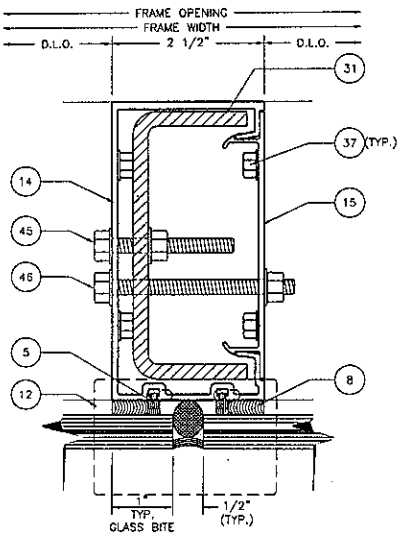
Report# 85743.01
Date 2/1/09 Tech JCM

NO.	DESCRIPTION	DATE	BY	REV.

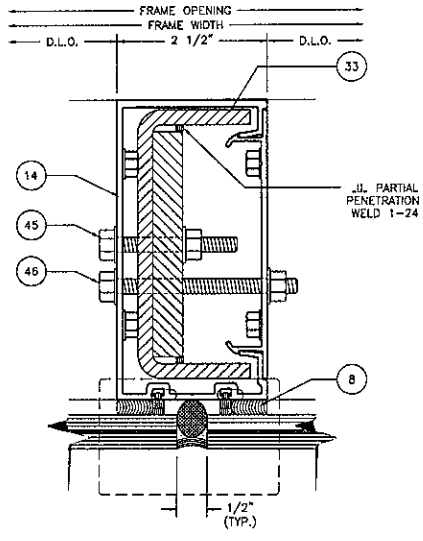
Coral
Architectural Products
15000 W. 10th Street, Suite 100
Phoenix, AZ 85042
Tel: 602-998-0881

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
FRAMING DETAILS

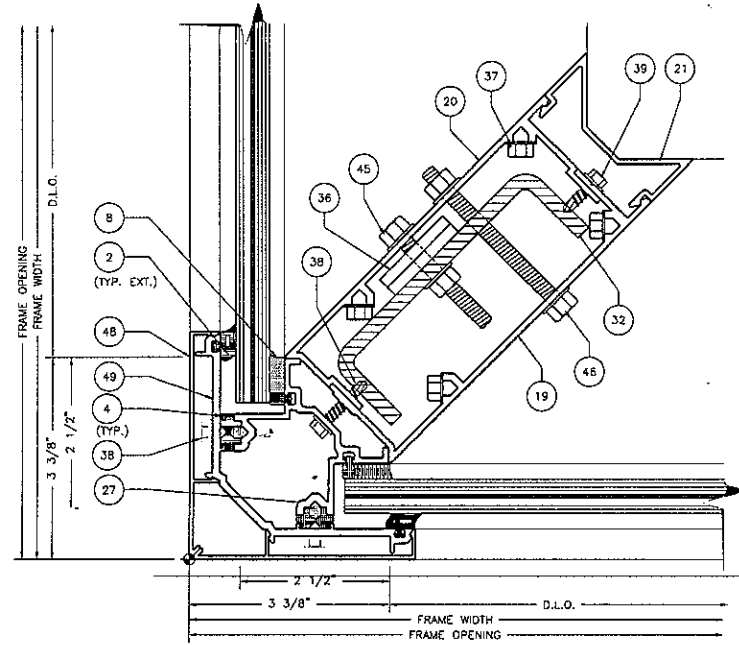
DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.			
DRAWING NO.	PW256_01		
SHEET	8 OF 16		



7 - DETAIL
1:2

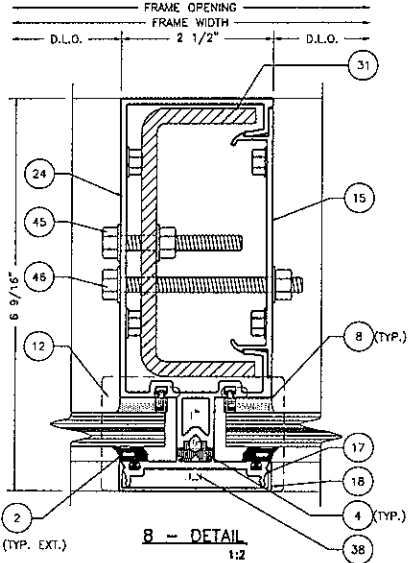


9 - DETAIL
1:2

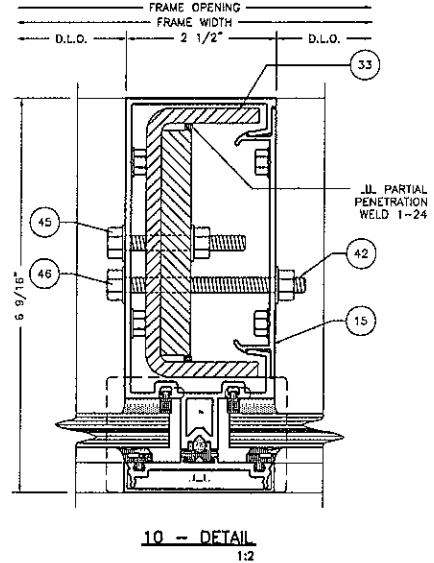


12 - DETAIL
1:2

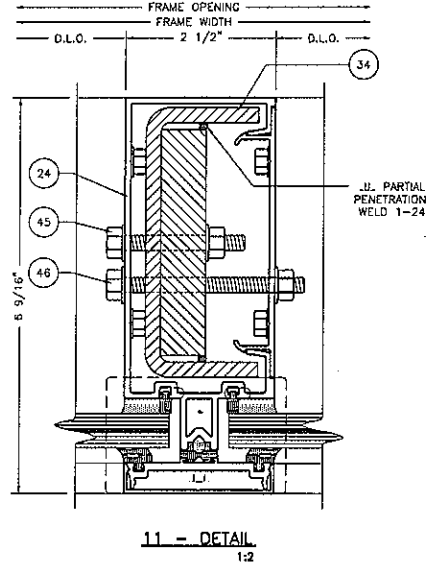
REFER TO
REPORT 85731.01



8 - DETAIL
1:2



10 - DETAIL
1:2



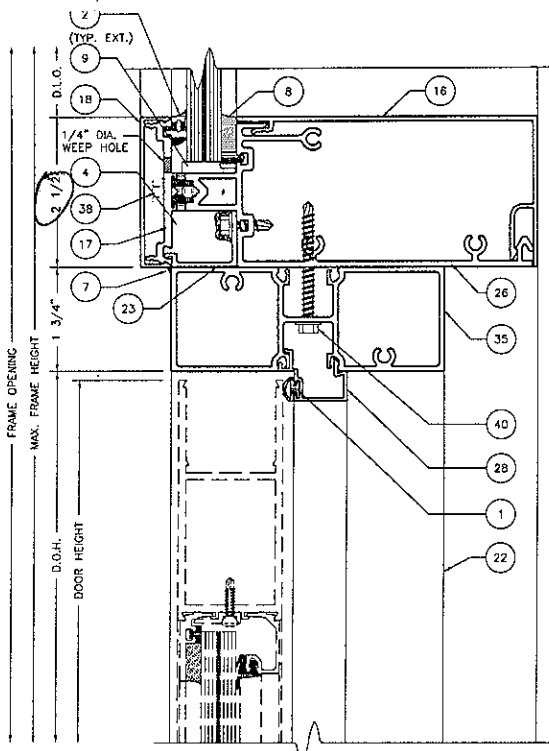
11 - DETAIL
1:2

NO.	DATE	REV.	BY	DESCRIPTION

Coral
Architectural Products Inc.
300 PACE WINE ROAD, TUSCALOOSA, AL 35408
PHONE: 800-779-7277 FAX: 800-449-0811

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
FRAMING DETAILS

DATE	4/14/2009
DRAWN	DCW
CHECKED	DCW
APPROVED	DCW
PROJECT NO.	
DRAWING NO.	PW256_01
SHEET	10 OF 16

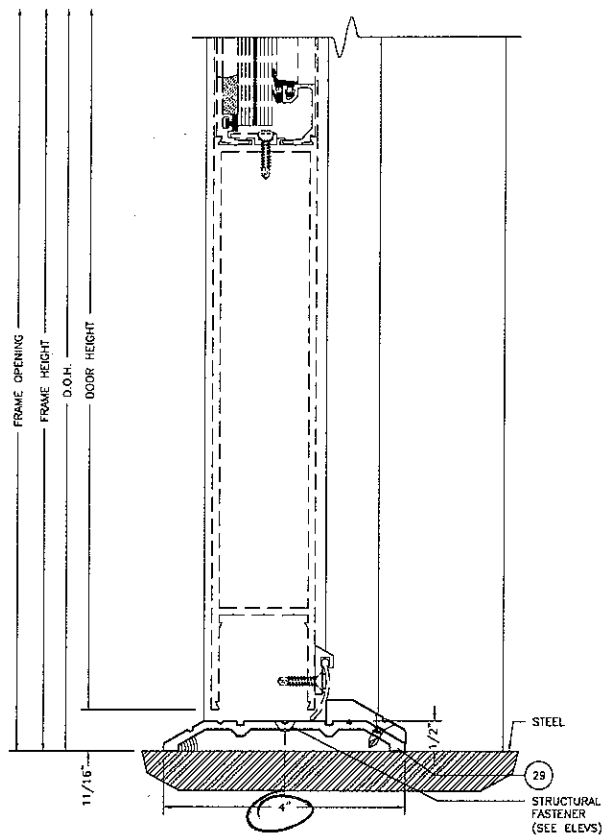


13 - DETAIL
1/2



Test sample complies with these details.
Deviations are noted.

Report# 85743.01
Date 2/1/09 Tech JCM



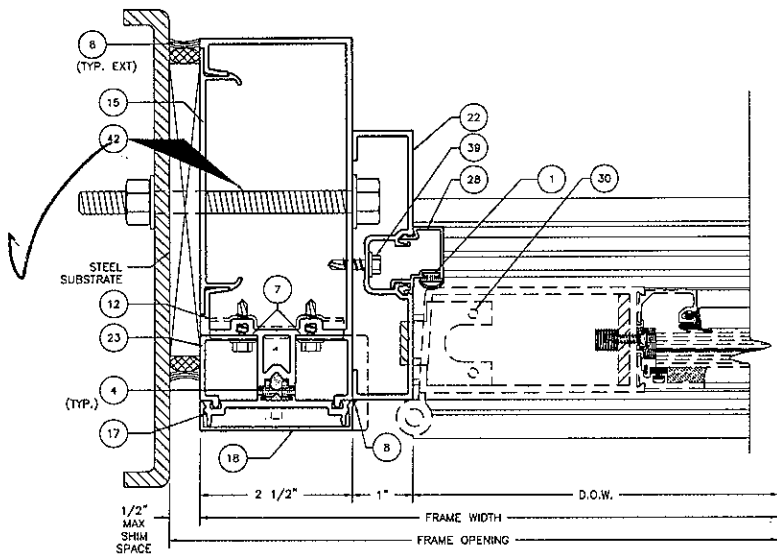
14 - DETAIL
1/2

REV	DATE	DESCRIPTION

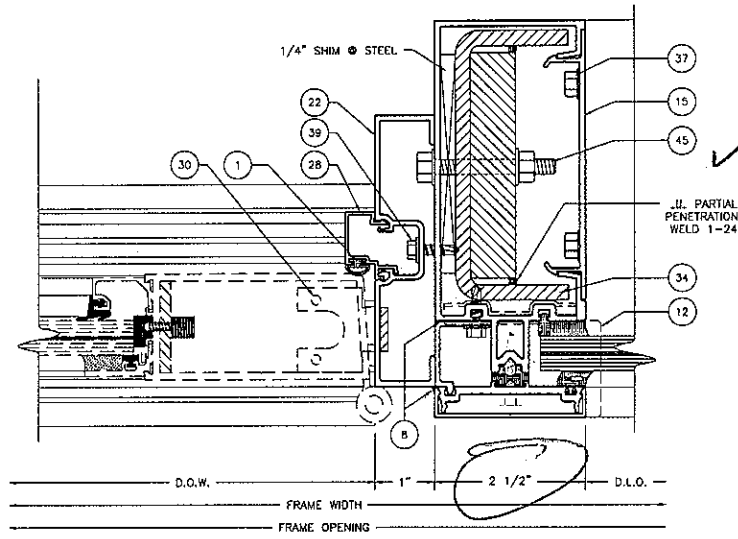
Coral
Architectural Products
4100 SACRED HEART BLVD. PALM BEACH, FL 33480
PHONE: 561-775-7777 FAX: 561-775-6201

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
DOOR AND FRAMING DETAILS

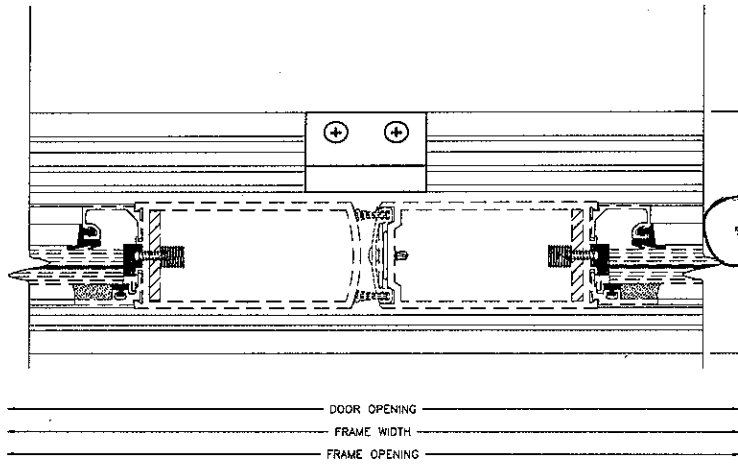
DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.			
DRAWING NO.	PW256 01		
SHEET	11 OF 16		



15 - DETAIL
1:2



17 - DETAIL
1:2



16 - DETAIL
1:2



Architectural Testing

Test sample complies with these details.
Deviations are noted.

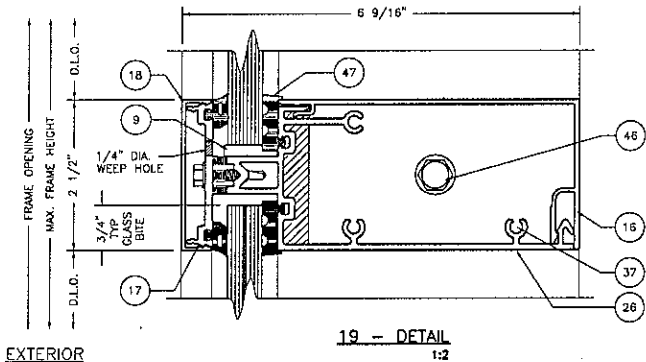
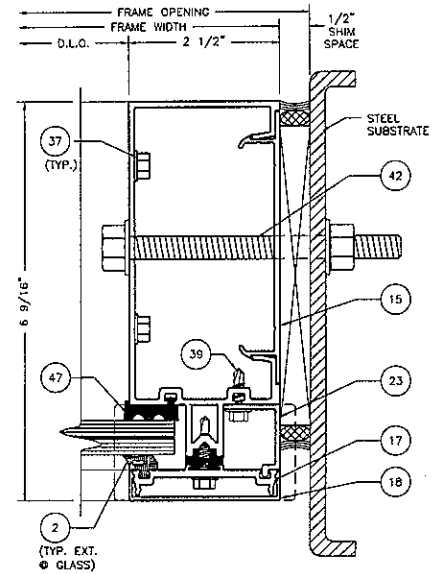
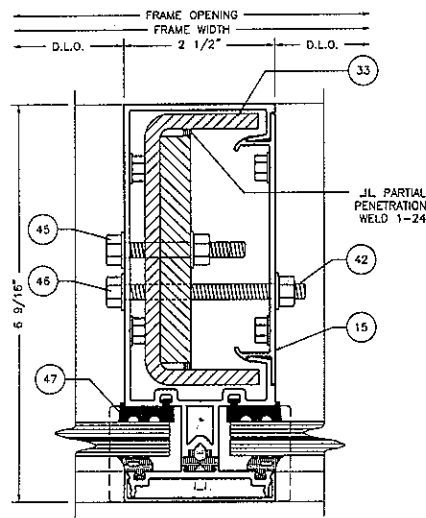
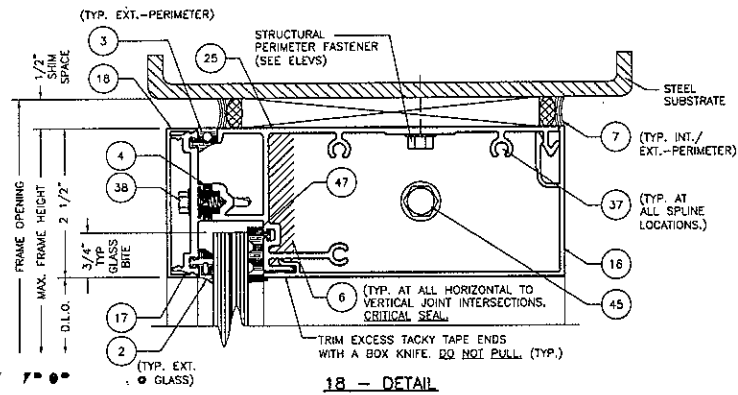
Report# 85743.01
Date _____ Tech Jcm

REV	BY	DATE	DESCRIPTION

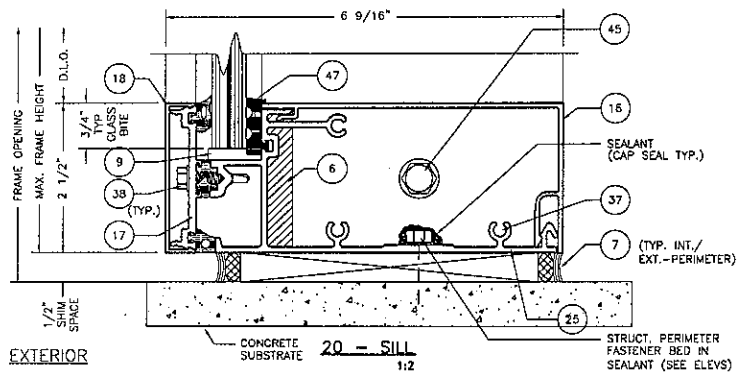
Coral
Architectural Products
1510 S. GARDEN AVENUE, SUITE 100
PHOENIX, AZ 85018
TEL: 602-943-6261

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
DOOR AND FRAMING DETAILS

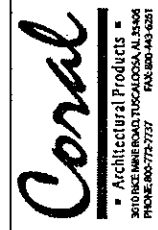
DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.			
DRAWING NO.	PW256_01		
SHEET	12 OF 16		



NOT USED.



NO.	DATE	BY	CHKD.	DESCRIPTION



TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM

FRAMING DETAILS

DATE	4/14/2009
DRAWN	DCW
CHECKED	DCW
APPROVED	DCW
PROJECT NO.	

DRAWINGS FOR
FLORIDA
PRODUCT APPROVAL

DRAWING NO.
PW256_01
SHEET
13 OF 16

BILL OF MATERIALS

ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
31	SR150	REINFORCEMENT CHANNEL	4.500 X 1.875 X 0.250	A36 STEEL	VARIES	STEEL REINFORCEMENT FOR (14) AND (24)
32	SR504	REINFORCEMENT CHANNEL	4.562 X 1.250 X 0.250	A36 STEEL	VARIES	STEEL REINFORCEMENT FOR (14) AND (24)
33		SR150 WITH REINFORCEMENT BAR	3.750 X 0.500	A36 STEEL	VARIES	STEEL REINFORCEMENT FOR (14) AND (24)
34		SR150 WITH REINFORCEMENT BAR	3.750 X 0.750	A36 STEEL	VARIES	STEEL REINFORCEMENT FOR (14) AND (24)
35	FL207	DOOR HEADER	1.750 X 4.500 X 0.085	6063-T6 ALUMINUM	CORAL INDUSTRIES, INC.	
36	AS13	SQUARE NUT	1.475 X 1.475 X .180	STEEL	VARIES	
37	AS16	FASTENER	#14 X 1" HHSTS	STEEL	VARIES	TYP. SPLINE SCREW
38	AS19	FASTENER	#12 X 1" HWH SELF DRILL	STEEL	VARIES	
39	AS25	FASTENER	#12 X 3/4" HWH SELF DRILL	STEEL	VARIES	
40	AS37	FASTENER	#12 X 2" HWH SELF DRILL	STEEL	VARIES	
41	FASTENER	PERIMETER ANCHOR TO STEEL SUBSTRATE	1/2"-13 X 2" BOLT WITH WASHER AND NUT	STEEL	VARIES	
42	FASTENER	PERIMETER ANCHOR TO STEEL SUBSTRATE	1/2"-13 X 4-1/2" BOLT WITH WASHER AND NUT	STEEL	VARIES	
43	FASTENER	PERIMETER ANCHOR TO CONCRETE SUBSTRATE	1/2" LDT OR WEDGE ANCHOR	STEEL	VARIES	
44	FASTENER	PERIMETER ANCHOR TO STEEL SUBSTRATE	#12 X 1-1/2" PFH SELF DRILL	STEEL	VARIES	
45	FASTENER	STEEL REINFORCEMENT ATTACHMENT	1/4-20 X 2" BOLT WITH WASHER AND NUT	STEEL	VARIES	
46	FASTENER	THROUGH BOLT	1/4-20 X 3" BOLT WITH WASHER AND NUT	STEEL	VARIES	USED @ HORIZONTALS
47	NG16	DRY GLAZE INTERIOR SPACER GASKET	0.260 SPACE	EPDM	VARIES	
48	PW158	CORNER FACE COVER	3.752 X .500 X .062	6063-T6 ALUM	CORAL INDUSTRIES, INC.	
49	PW154	CORNER PRESSURE BAR	3.637 X 3.637 X .125	6063-T6 ALUM	CORAL INDUSTRIES, INC.	

GLAZING SCHEDULE

GLASS MARK	GLASS DESCRIPTION	MANUFACTURER	MAXIMUM D.L.O. SIZE (INCHES)	SQUARE FEET	MAXIMUM DESIGN PRESSURE (PSF)
A	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A 0.075 VENCEVA INTERLAYER	SOLUTIA	57-1/2" X 96"	38.3	± 80
B	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A 0.090 SOLUTIA SAFLEX PVB INTERLAYER	SOLUTIA	45-1/2" X 96"	30.3	± 65
B6	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A 0.060 SOLUTIA SAFLEX PVB INTERLAYER	SOLUTIA	57-1/2" X 96"	38.3	± 80
D	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A SGP (SENTRY GLASS PLUS) INTERLAYER	DUPONT	57-1/2" X 96"	38.3	± 65
U	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A 0.120 UVEKOL TYPE "S" INTERLAYER	CORAL INDUSTRIES, INC.	45-1/2" X 96"	30.3	± 65
U6	9/16" OVERALL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS AND A 0.060 UVEKOL TYPE "S" INTERLAYER	CORAL INDUSTRIES, INC.	57-1/2" X 96"	38.3	± 80



Architectural Testing

Test sample complies with these data. Deviations are noted.

Report # 85743.01

Date 2/1/09

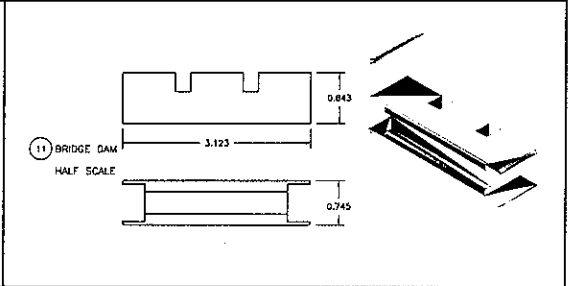
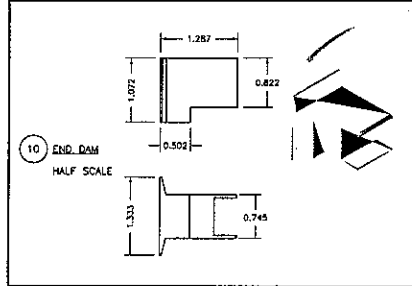
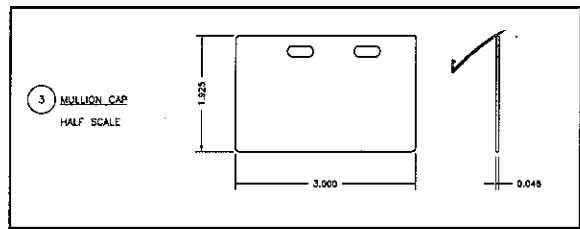
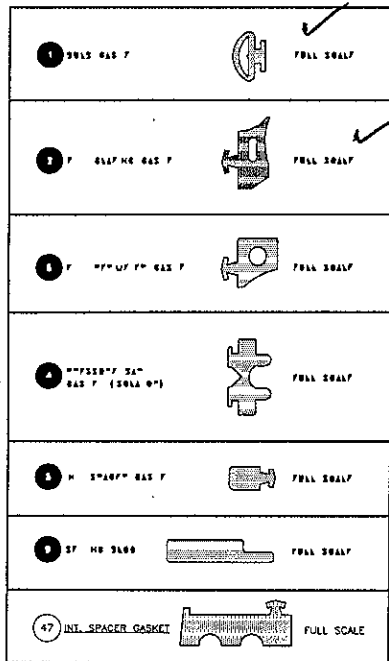
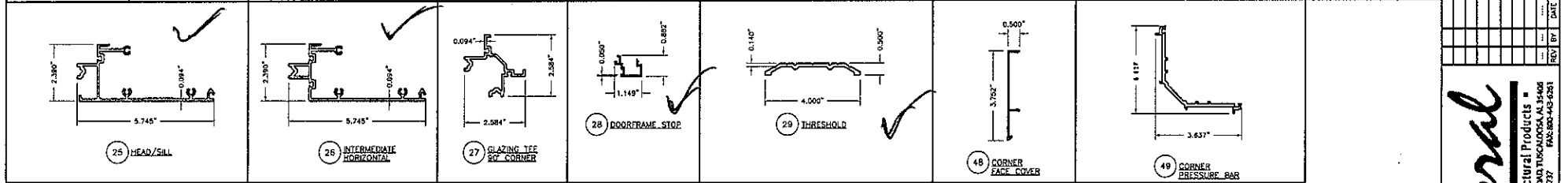
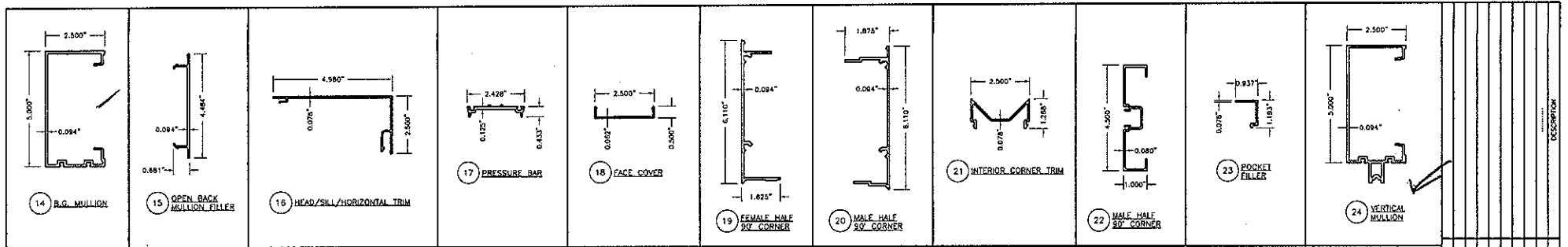
Tech JCM

CORAL INDUSTRIES, INC.
 10000 W. 10TH AVENUE
 DENVER, CO 80202
 PHONE: 303-752-7377
 FAX: 303-752-7377

TEST REPORT DRAWINGS
 PW256 IMPACT-RESISTANT
 CURTAIN WALL SYSTEM
 BILL OF MATERIALS AND GLAZING
 SCHEDULE

DATE 4/14/2009

DRAWN DCW	CHECKED DCW	APPROVED DCW
PROJECT NO.		
DRAWING NO. PW256_01		
SHEET 15 OF 16		



Test sample complies with these details.
Deviations are noted.

Report# 85743.01
Date 7/1/09 Tech JCM

Coral
Architectural Products
3010 RESEARCH PARK TUCKER, GA 30084
PHONE: 800-772-7377

TEST REPORT DRAWINGS
PW256 IMPACT-RESISTANT
CURTAIN WALL SYSTEM
DIE DRAWINGS

DATE	4/14/2009		
DRAWN	CHECKED	APPROVED	
DCW	DCW	DCW	
PROJECT NO.			
DRAWING NO.			
PW256_01			
SHEET			
16 OF 16			