

**TEST REPORT**

**Report No.:** C5556.01-550-44

**Rendered to:**

CARDINAL COMMERCIAL PRODUCTS  
Louisville, Kentucky

**PRODUCT TYPE:** Doors - XX (Butt Hinges)  
**SERIES/MODEL:** Series 200N – 7284N – J3

**This report contains in its entirety:**

**Cover Page:** 1 page  
**Report Body:** 6 pages  
**Photographs:** 1 pages  
**Drawings:** 10 pages

**Test Dates:** 02/25/13

**Through:** 02/25/13

**Report Date:** 03/25/13

**Test Record Retention End Date:** 03/25/17

**1.0 Report Issued To:** Cardinal Commercial Products  
4795 Shepherdsville Road  
Louisville, Kentucky 40218  
(502) 969-4059

**2.0 Test Laboratory:** Architectural Testing, Inc.  
1701 Westfork Drive, Suite 105-106  
Lithia Springs, Georgia 30122  
(770) 941-6916

**3.0 Project Summary:**

**3.1 Product Type:** Doors – XX (Butt Hinges)

**3.2 Series/Model:** Series 200N – 7284N – J3

**3.3 Compliance Statement:** Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.

**3.4 Test Date:** 2/25/13

**3.5 Test Record Retention End Date:** All test records for this report will be retained until 3/25/17.

**3.6 Test Location:** Architectural Testing, Inc. test facility in Lithia Springs, Georgia.

**3.7 Test Sample Source:** The test specimen was provided by the client. Representative samples of the test specimen will be retained by Architectural Testing for a minimum of four 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 specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

**3.9 List of Official Observers:**

<u>Name</u>	<u>Company</u>
J.D. Williams	Aluminum Fronts, LLC
Paul Stratford	Cardinal Commercial Products
Joel Ivey	Architectural Testing, Inc.
Kevin Gardner	Architectural Testing, Inc.

#### 4.0 Test Method(s):

ASTM E 283-04, *Test Method for Determining Rate of Airflow Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.*

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

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

AAMA 1304-02, *Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems*

#### 5.0 Test Specimen Description:

##### 5.1 Product Sizes:

Overall Area: 4.17 m <sup>2</sup> (44.96 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1918	75.5	2178	85.75
Door Panels	910	35.81	2113	83.18

##### 5.2 Frame Construction:

Frame Member	Material	Part #
Head	5050-H34 Aluminum	CF450-31
Jambs	5050-H34 Aluminum	CF450-30
Threshold	5050-H34 Aluminum	T450
Pocket Filler	5050-H34 Aluminum	CF450-16
Filler Plate	5050-H34 Aluminum	CF450-17
Door Frame Stop	5050-H34 Aluminum	CF200-7
Panic Stop	5050-H34 Aluminum	CF200-6-1

	Joinery Type	Detail
Head/Jambs	Butt/Mechanical	Mechanically fastened through screw splines with three (3) #12 x 1" PH SQ Drive (Part # AF12-4)
Sill/Jambs	Butt/Mechanical	Mechanically fastened to each other using threshold clip (Part # CDH-24) and two (2) #12-24 x 1/2" FHPUC MS per side.

### 5.3 Door Construction:

Frame Member	Material	Part #
Door Top Rail	5050-H34 Aluminum	CD225
Door Bottom Rail	5050-H34 Aluminum	CD400
Door In-Active Stile	5050-H34 Aluminum	CD205
Door Active Stile	5050-H34 Aluminum	CD204
Door Hinge Stile	5050-H34 Aluminum	CD203
Adjustable Astragal	5050-H34 Aluminum	CD202
Door Sweep	5050-H34 Aluminum	CD100-8
Door Glazing Bead	5050-H34 Aluminum	CD100-1

	Joinery Type	Detail
All corners	Butt/Mechanical	As shown on sheet 5 and 6 of attached drawings.

### 5.4 Weatherstripping:

Description	Location
Bulb Gasket CF200-7 (Part # GSK-5)	Head/Jambs door frame stop
Door Sweep Weathering (Part # GSK-6)	Door Sweeps
Weathering (Part # WP-1)	Adjustable Astragal

**5.5 Glazing:** *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

Glass Type	Glazing	Glazing Method
Monolithic	1/4" Tempered Glass	Interior/Exterior glazed with Bulb Gasket CD-100 (Part # GSK-4) and Door Glazing Bead (Part # CD100-1)

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Door Panels	2	775 (w) x 1930 (h)	30.5 (w) x 76 (h)	9/32"

**5.6 Drainage:** No drainage was utilized.

**5.7 Hardware:**

Description	Part #	Quantity	Location
Hager Butt Hinges	CDH-12	6	Frame Jambs and Door Hinge Stiles (please reference sheet 2 and 4 of attached drawings for location and attachment information)
Cardinal Pull Handle	CPH-1	2	Exterior of Door Panels
Cardinal Push Par	CPB-1-36	2	Interior of Door Panels
SWIC Cyclinder	CDH-4-1	1	Active Door Panel Lock Stile
SWIC Thumb Turn	CDH-47	1	Active Door Panel Lock Stile
SWIC Lock	CDH-32-3PT	1	Active Door Panel Lock Stile
Cardinal Flush Bolt	CDH-53	2	In-Active Door Panel Lock Stile
Cardinal 3-Point Lock	CDH-37	1	Active Panel Lock Stile
Kelly Tools Hinge Back-Up Plates	CDH-17	12	Frame Jambs and Door Hinge Stiles (please reference sheet 2 and 4 of attached drawings for location and attachment information)

**5.8 Reinforcement:** No reinforcement was utilized.

**6.0 Installation:**

The specimen was installed into a steel channel buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with Dow Corning 795 silicone sealant.

Location	Anchor Description	Anchor Location
Sill/Threshold	#12 x 2-1/2" Tek 3 FHP	4" from the ends and 6" on either side of center
Jambs	1/4"-20 x 2-1/2" HH with washer and nut	3", 42", and 81" from sill
Head	1/4"-20 x 2-1/2" HH with washer and nut	3/4" on either side of center



**7.0 Test Results:** The temperature during testing was 18.8°C (66°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
<b>Air Leakage,</b> per ASTM E 283 at 75 Pa (1.6 psf)	2.24 L/s/m <sup>2</sup> (0.447 cfm/ft <sup>2</sup> )	5.0 L/s/m <sup>2</sup> (1.0 cfm/ft <sup>2</sup> ) max.	
<b>Uniform Load Deflection (1/2 test load)</b> per ASTM E 330 taken at geometric center of doors +1.44 kPa (+30 psf) -1.44 kPa (-30 psf)	Deflection 15.75 mm (0.62") 11.18 mm (0.44")	n/a	1, 2
<b>Uniform Load Deflection (1/2 Test Load)</b> per ASTM E 330 taken at bottom rail of active panel +1.44 kPa (+30 psf) -1.44 kPa (-30 psf)	Deflection 0.25 mm (0.01") 0.51 mm (0.02")	n/a	1, 2
<b>Uniform Load Deflection (Design Load)</b> per ASTM E 330 taken at geometric center of doors +1.92 kPa (+40 psf) -1.92 kPa (-40 psf)	Deflection 20.32 mm (0.80") 16.00 mm (0.63")	n/a	1, 2
<b>Uniform Load Deflection (Design Load)</b> per ASTM E 330 taken at bottom rail of active panel +1.92 kPa (+40 psf) -1.92 kPa (-40 psf)	Deflection 0.51 mm (0.02") 0.76 mm (0.03")	n/a	1, 2
<b>Uniform Load Structural (Test Load)</b> per ASTM E 330 taken at geometric center of doors +2.87 kPa (+60 psf) -2.87 kPa (-60 psf)	Permanent Set 7.11 mm (0.28") 5.59 mm (0.22")	Permanent Set 8.38 mm (0.33") max. 8.38 mm (0.33") max.	1, 2
<b>Uniform Load Structural (Test Load)</b> per ASTM E 330 taken at bottom rail of active panel +2.87 kPa (+60 psf) -2.87 kPa (-60 psf)	Permanent Set 0.25 mm (0.01") 0.51 mm (0.02")	Permanent Set 3.56 mm (0.14") max. 3.56 mm (0.14") max.	1, 2



Title of Test	Results	Allowed	Note
Forced Entry Resistance, per AAMA 1304	Pass	No entry	

**General Note:** All testing was performed in accordance with the referenced standard(s).

*Note 1: Loads were held for 30 seconds.*

*Note 2: 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.*

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

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.

\_\_\_\_\_  
José E. Colón  
Director – Regional Operations

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

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

Appendix-A: Photographs (1)

Appendix-B: Drawings (10)

This report produced from controlled document template ATI 00479, issued 01/27/12.

## Appendix A Photographs



**Photo No. 1  
Front Elevation**





**Architectural Testing**

Test Report No.: C5556.01-550-44  
Report Date: 03/25/13  
Test Record Retention End Date: 03/25/17

## **Appendix B**

### **Drawings**

# ATI TEST REPORT DRAWINGS FOR SERIES 200N BUTT HUNG DOOR WITH 3 POINT LOCK IN CF450 DOORFRAMES

GENERAL NOTES:

TEST STANDARDS

AIR-ASTM E283  
FORCED ENTRY-SFBCS 3603 (B) 5  
STATIC-ASTM E330

DESIGN PRESSURE 40 PSF

TYPICAL GLASS BITE IS 9/32"

1/4" MAX, SHIM SPACE @ PERIMETER UNLESS OTHERWISE NOTED

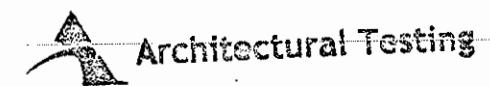
ALL ALUMINUM EXSTRUSIONS SHALL BE MADE OF 5050-H34 ALLOY AND TEMPER

MATERIALS WHICH COME IN CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2010 FLORIDA BUILDING CODE SECTION 200N3.8.4

ABBREVIATIONS:

D.L.O. = DAY LIGHT OPENING  
TYP. = TYPICAL  
D.O.W. = DOOR OPENING WIDTH  
D.O.H. = DOOR OPENING HEIGHT

SHEET	DRAWING INDEX
1	DRAWING INDEX AND NOTES
2	SERIES 200NN BUTT HUNG DOOR WITH 3-POINT LOCK IN CF450 DOORFRAME
3	SERIES CF450 DOORFRAME AND SERIES 200N DOOR DETAILS
4	CDH-12 BUTT HINGE INSTALLATION DETAIL
5	TOP AND BOTTOM RAIL SERIES 200N DOOR CORNER DETAILS (HINGE STILES)
6	TOP AND BOTTOM RAIL SERIES 200N DOOR CORNER DETAILS (ACTIVE/INACTIVE STILES)
7	DOORFRAME HINGE JAMB AND T-BAR ASSEMBLY
8	BILL OF MATERIALS AND HARDWARE SCHEDULE
9	PART PROFILES
10	PART PROFILES

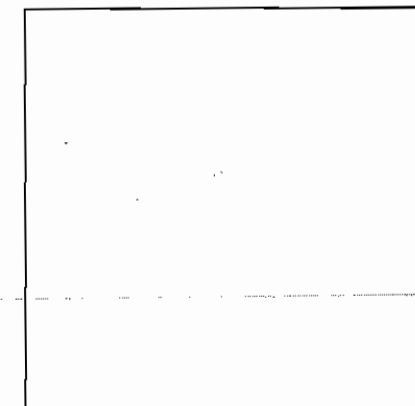


Test sample complies with these details.  
Deviations are noted.

Report # C5556.01-550-44

Date 3/12/2013

Tech [Signature]



REV	BY	DATE	DESCRIPTION

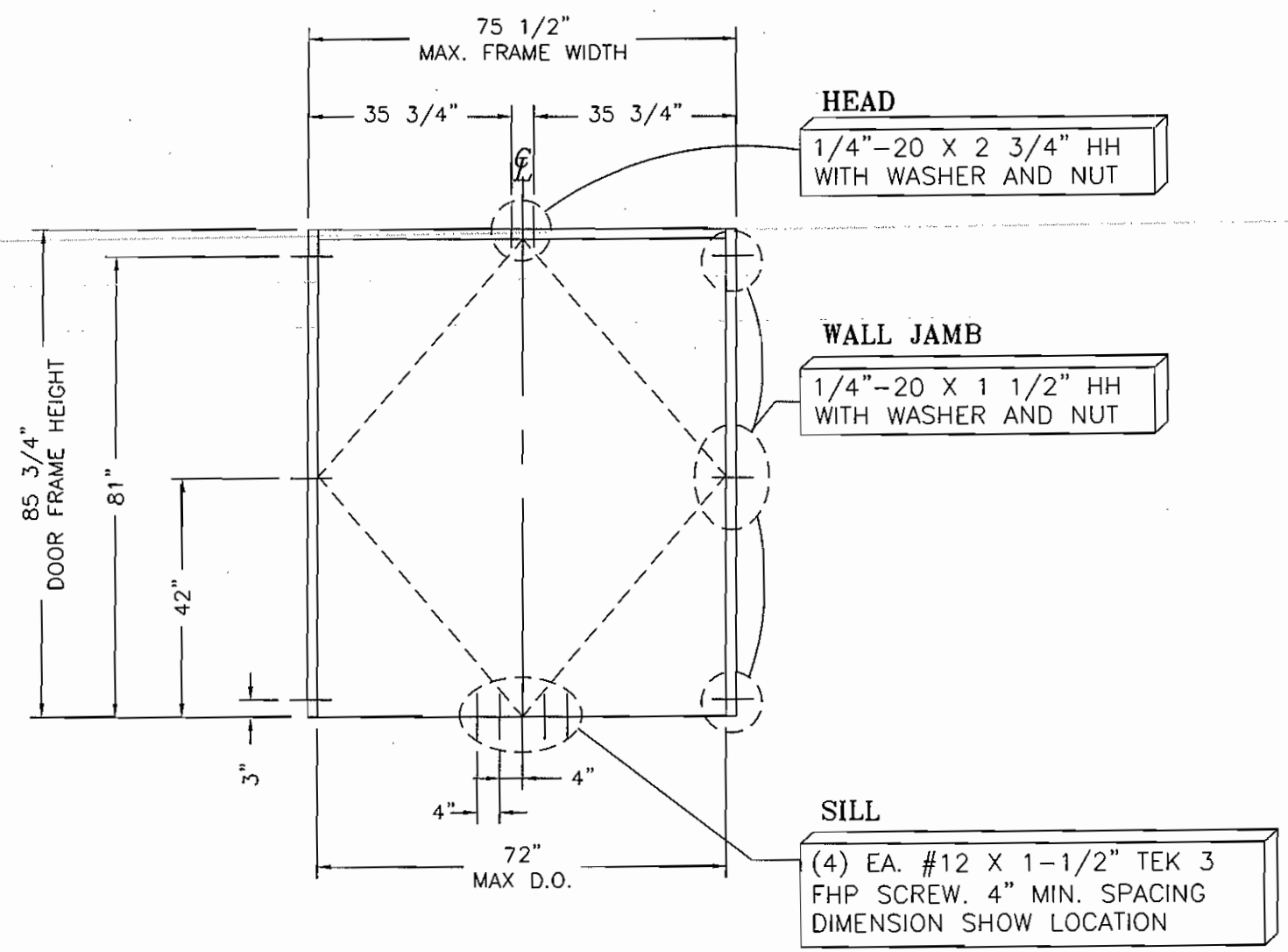
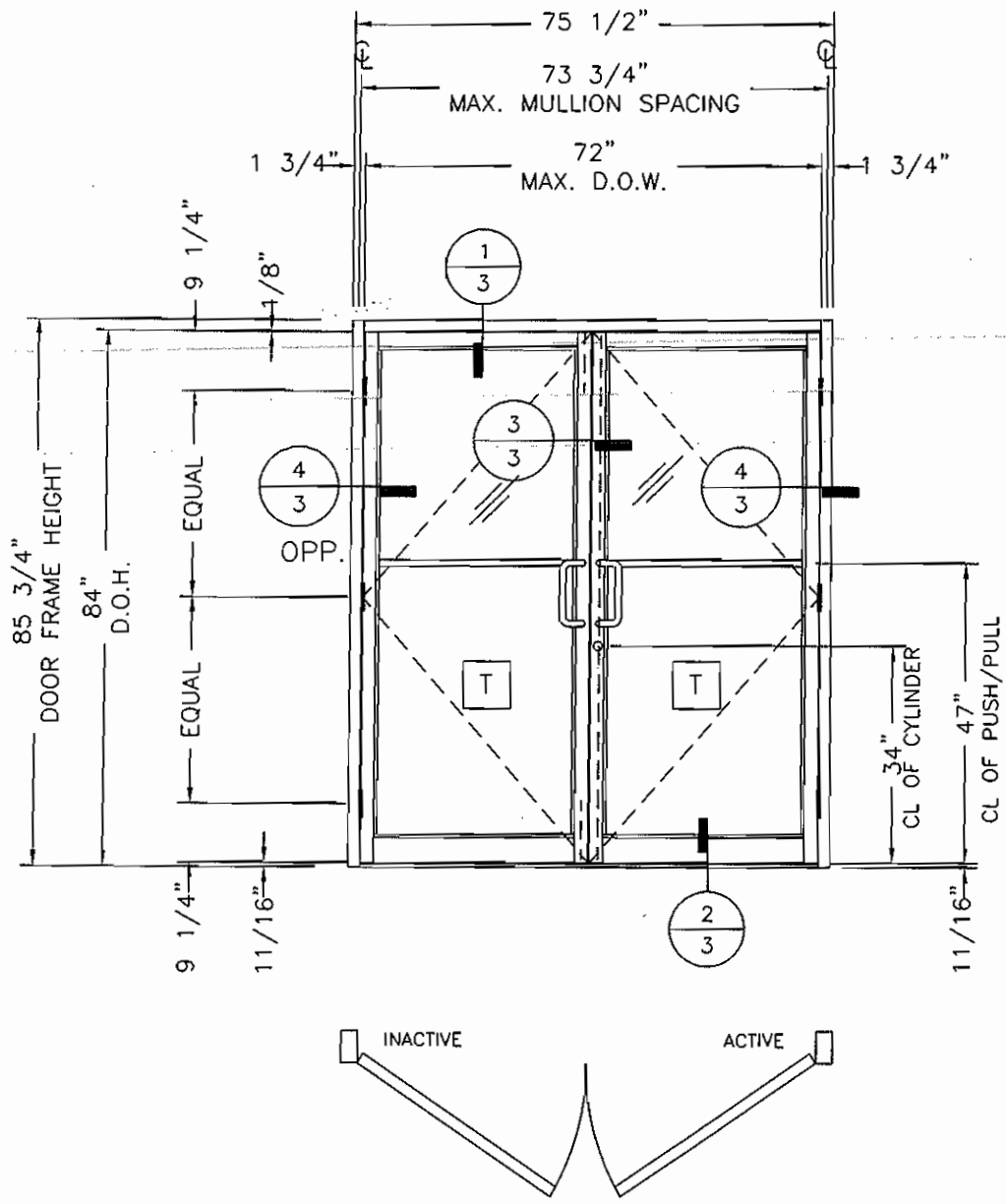
MANUAL COMP

CARDINAL COMMERCIAL PRODUCTS  
4795 SHEPHERDVILLE ROAD  
LOUISVILLE, KY. 40218  
TEL: 502-969-4059  
FAX: 800-313-4195


PROJECT  
ATI TEST REPORT DRAWINGS FOR  
SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS  
IN CF450 DOORFRAME

DRAWING INDEX AND NOTES

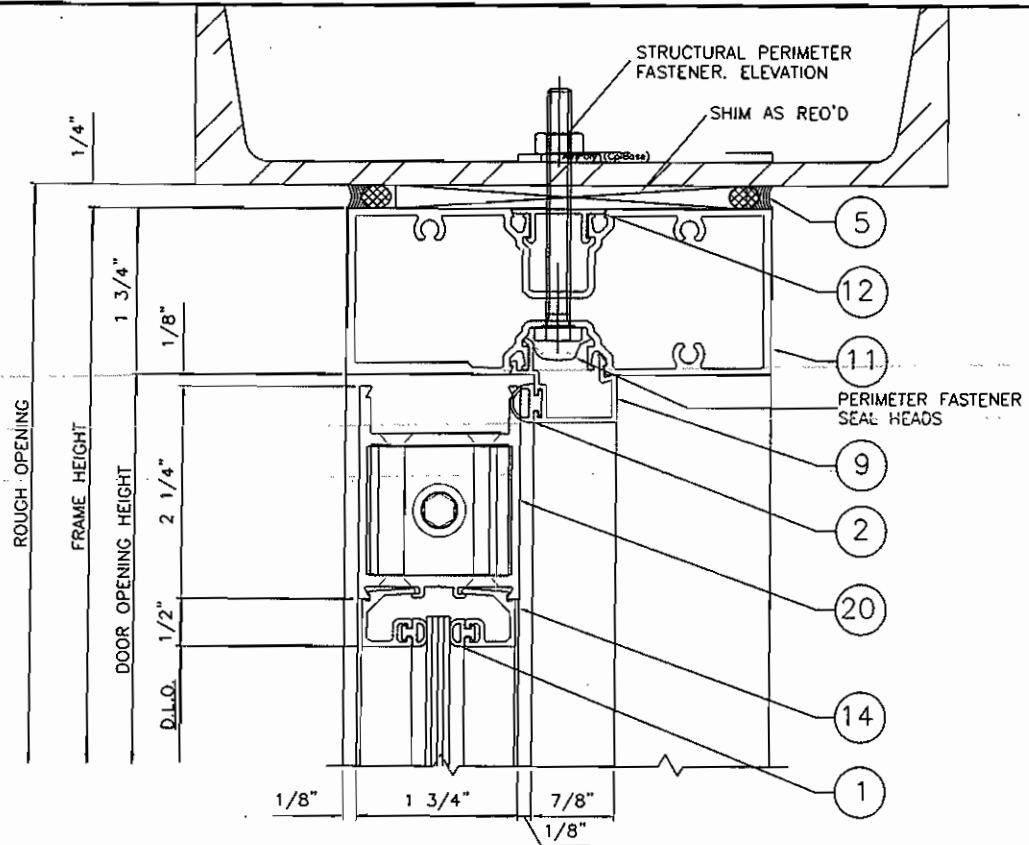
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DRAWN	DATE
WRD	9/19/12
SCALE	6" = 1'-0"
DRAWING NO.	200N-J_01
	1 OF 10



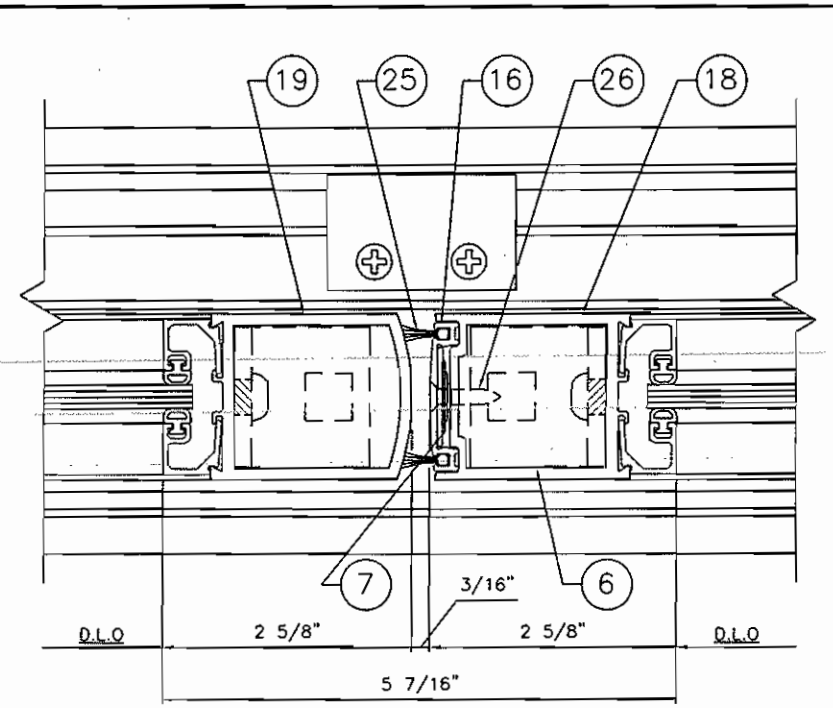
**SERIES 200N BUTT HUNG DOOR  
WITH 3 POINT LOCK IN CF450 DOORFRAME**


**Architectural Testing**  
 Test sample complies with these details.  
 Deviations are noted.  
 Report # C5556.01-SS0-44  
 Date 3/18/2013 Tech. [Signature]

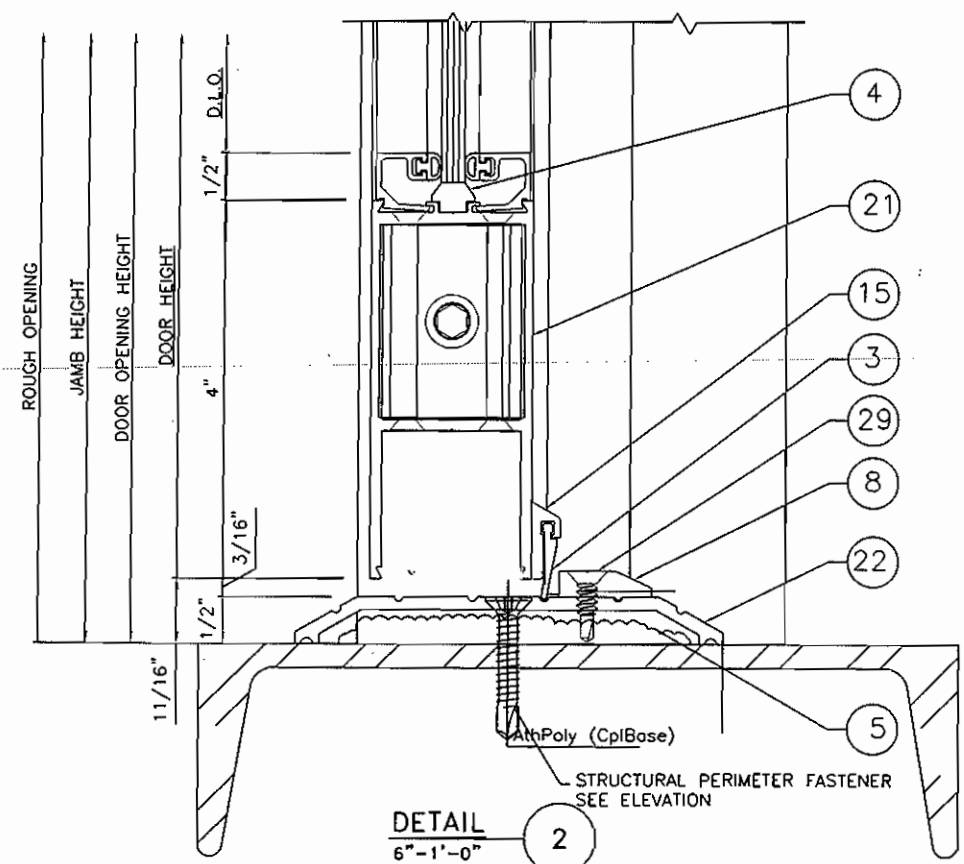
PROJECT		CARDINAL COMMERCIAL PRODUCTS 4795 SHEPHERDSVILLE ROAD LOUISVILLE, KY. 40218 TEL: 502-969-4059 FAX: 800-313-4195	
PROJECT NO.		ELEVATION	
PROJECT	ATI TEST REPORT DRAWINGS FOR SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS IN CF450 DOORFRAME	REV BY	DATE
PROJECT		MANUAL COMP	
DRAWN	WRD	DATE	9/19/12
SCALE	1/2" = 1'-0"		
DRAWING NO.	200N-J_01 2 OF 10		



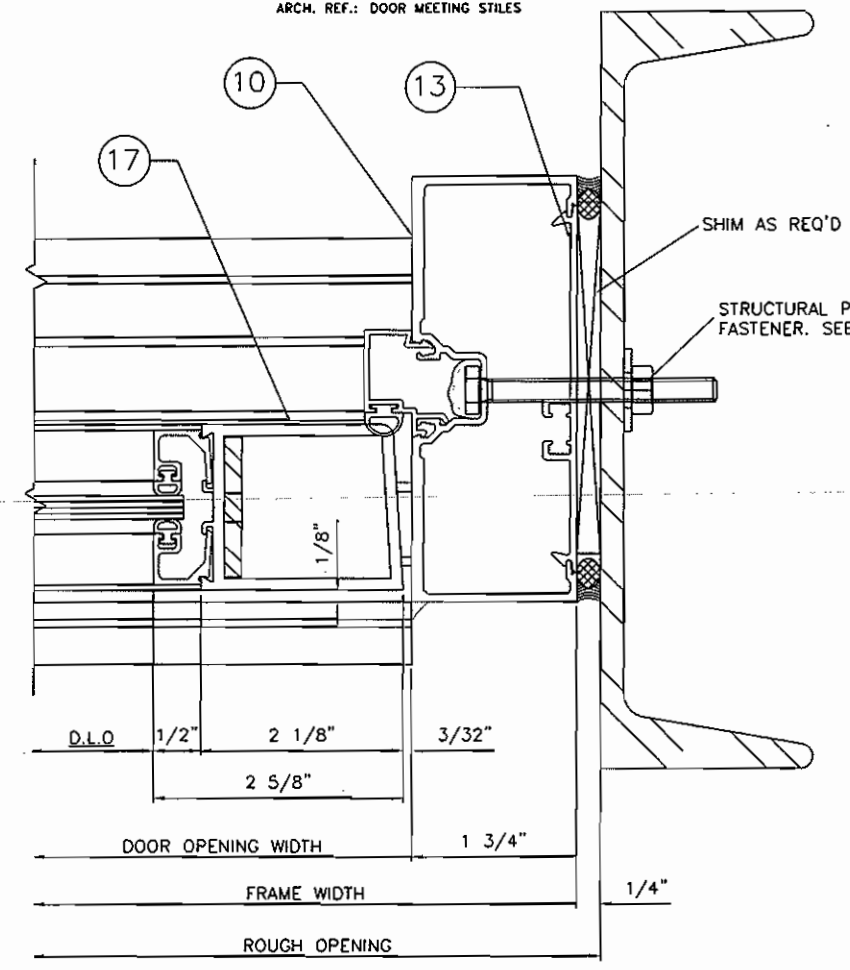
**DETAIL 1**  
6"-1'-0"  
ARCH. REF.: DOOR TOP RAIL



**DETAIL 3**  
6"-1'-0"  
ARCH. REF.: DOOR MEETING STILES



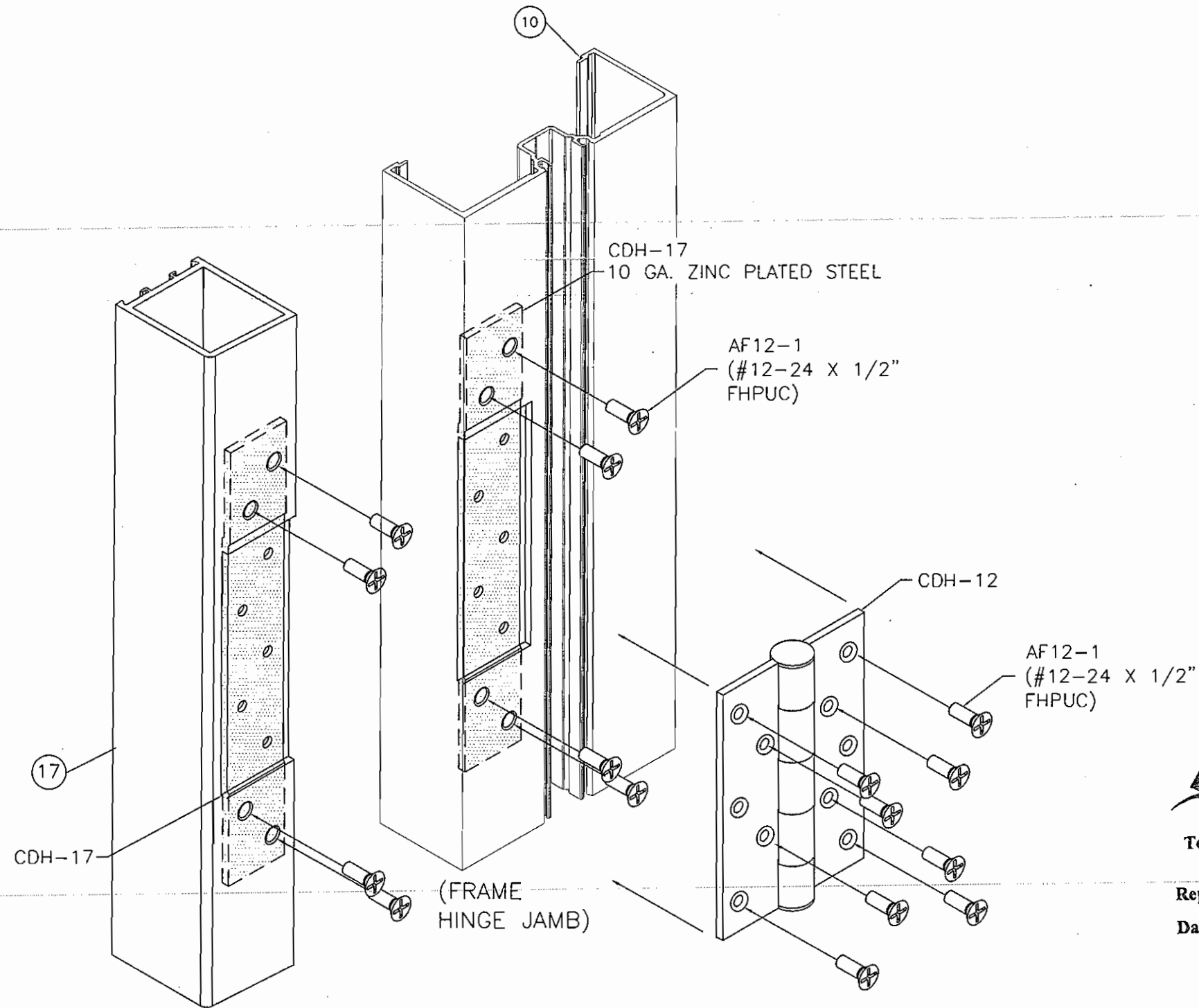
**DETAIL 2**  
6"-1'-0"  
ARCH. REF.: DOOR BOTTOM RAIL



**DETAIL 4**  
6"-1'-0"  
ARCH. REF.: DOOR JAMB

**Architectural Testing**  
Test sample complies with these details.  
Deviations are noted.  
Report # 05556.01-560-44  
Date 3/18/2013 Tech [Signature]

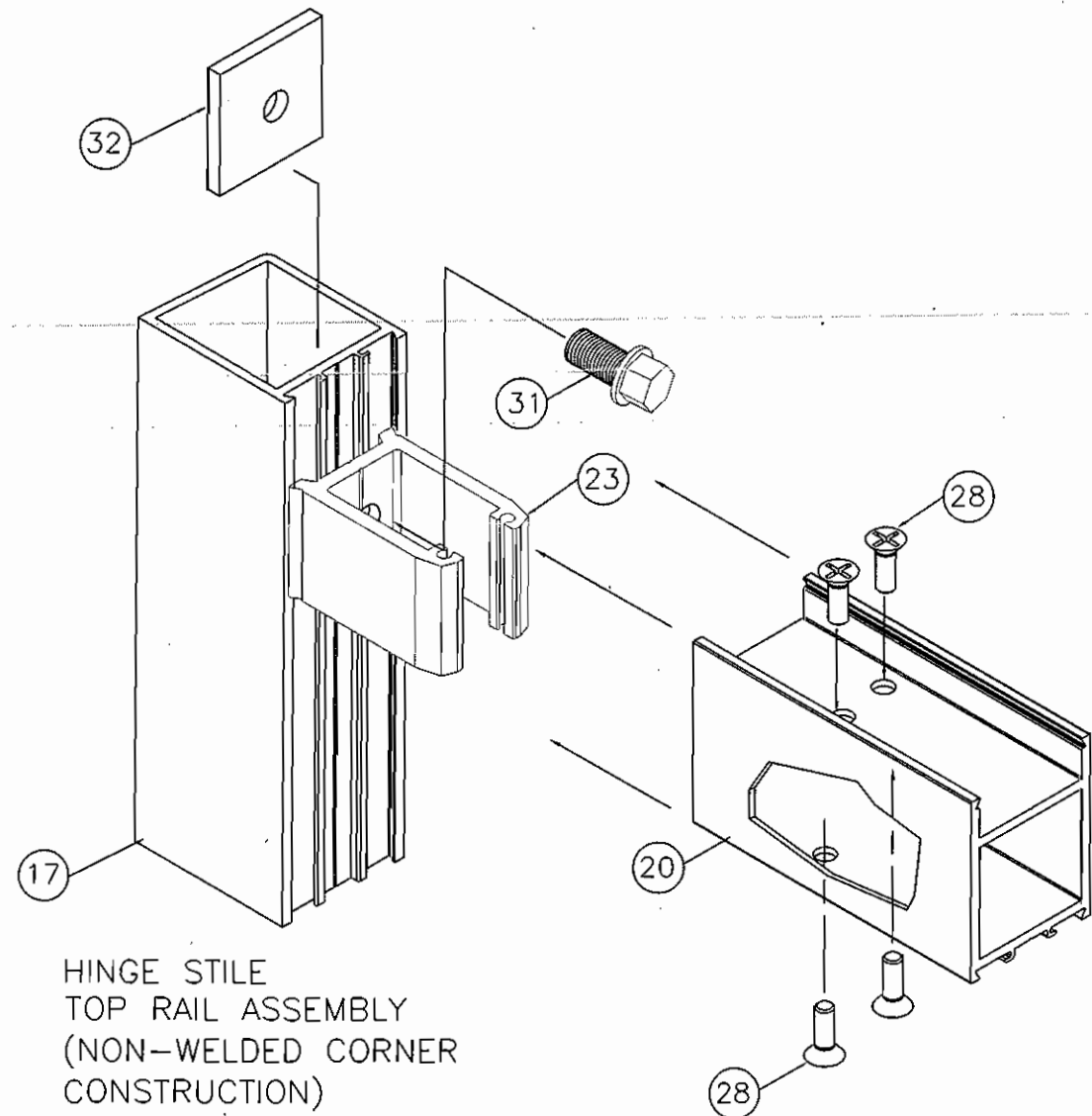
PROJECT NO.	DATE	DESCRIPTION
PROJECT	REV BY	DATE
ATI TEST REPORT DRAWINGS FOR SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS IN CF450 DOORFRAME	MANUAL COMP	
CARDINAL COMMERCIAL PRODUCTS 4795 SHEPHERDVILLE ROAD LOUISVILLE, KY. 40218 TEL: 502-969-4059 FAX: 800-313-4195		
STANDARD DETAILS		
DRAWN	DATE	
WRD	9/19/12	
SCALE		
6"=1'-0"		
DRAWING NO.		
200N-J_01		
3 OF 10		



(DOOR HINGE STILE) BUTT HINGE ASSEMBLY  
 (FRAME HINGE JAMB) RIGHT HAND SHOWN  
 LEFT HAND OPP.

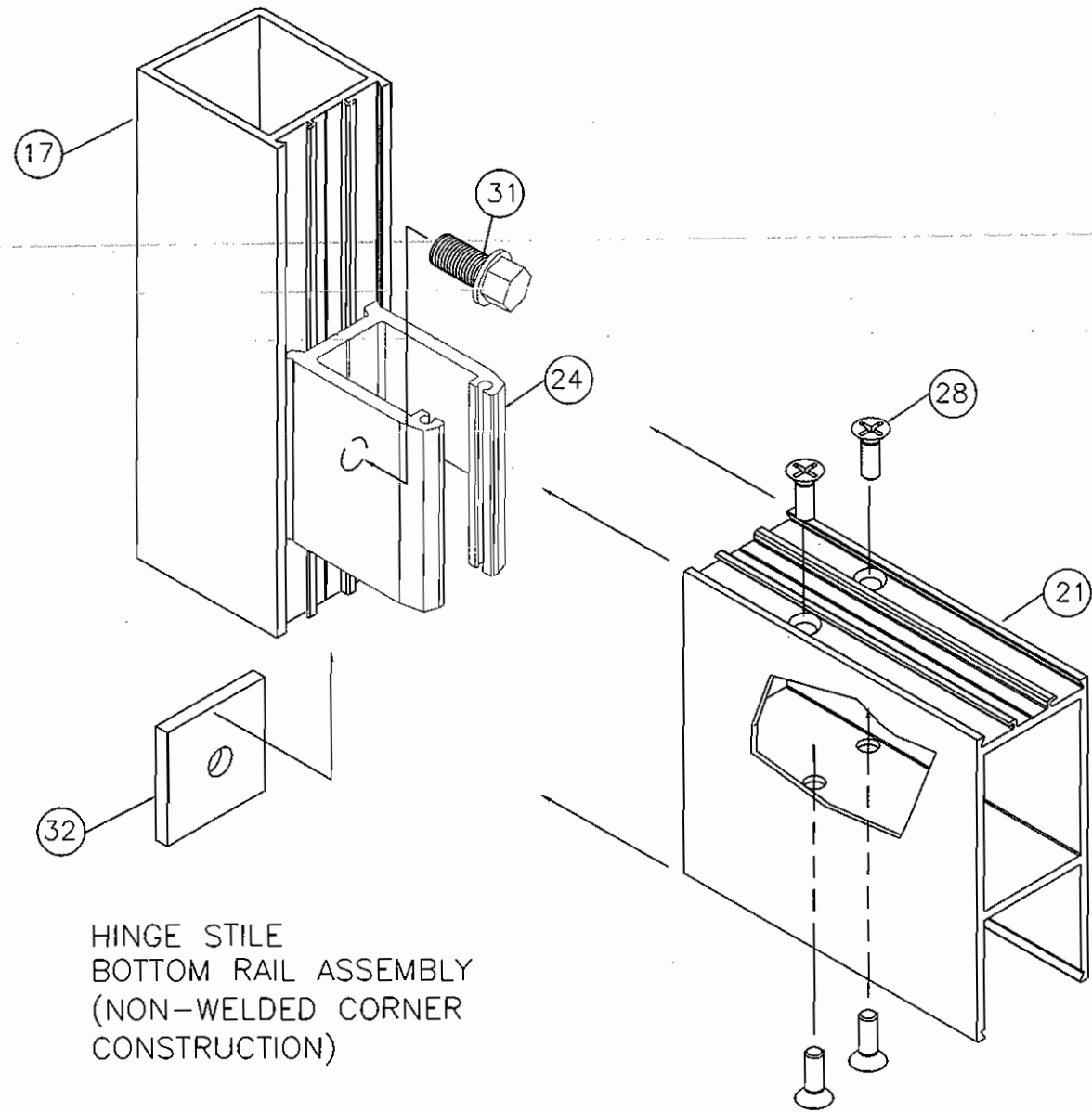
**Architectural Testing**  
 Test sample complies with these details.  
 Deviations are noted.  
 Report # C5556-01-SSO-44  
 Date 3/18/2013 Tech. [Signature]

PROJECT	ATI TEST REPORT DRAWINGS FOR
PROJECT NO.	SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS
DATE	9/19/12
SCALE	6" = 1'-0"
DRAWING NO.	200N-J_01
REV BY	MANUAL COMP
DATE	
DESCRIPTION	HINGE INSTALLATION
CARDINAL COMMERCIAL PRODUCTS 4795 SHEPHERDSVILLE ROAD LOUISVILLE, KY. 40218 TEL: 502-969-4059 FAX: 800-313-4195	



HINGE STILE  
TOP RAIL ASSEMBLY  
(NON-WELDED CORNER  
CONSTRUCTION)

TOP RAIL ASSEMBLY



HINGE STILE  
BOTTOM RAIL ASSEMBLY  
(NON-WELDED CORNER  
CONSTRUCTION)

BOTTOM RAIL ASSEMBLY

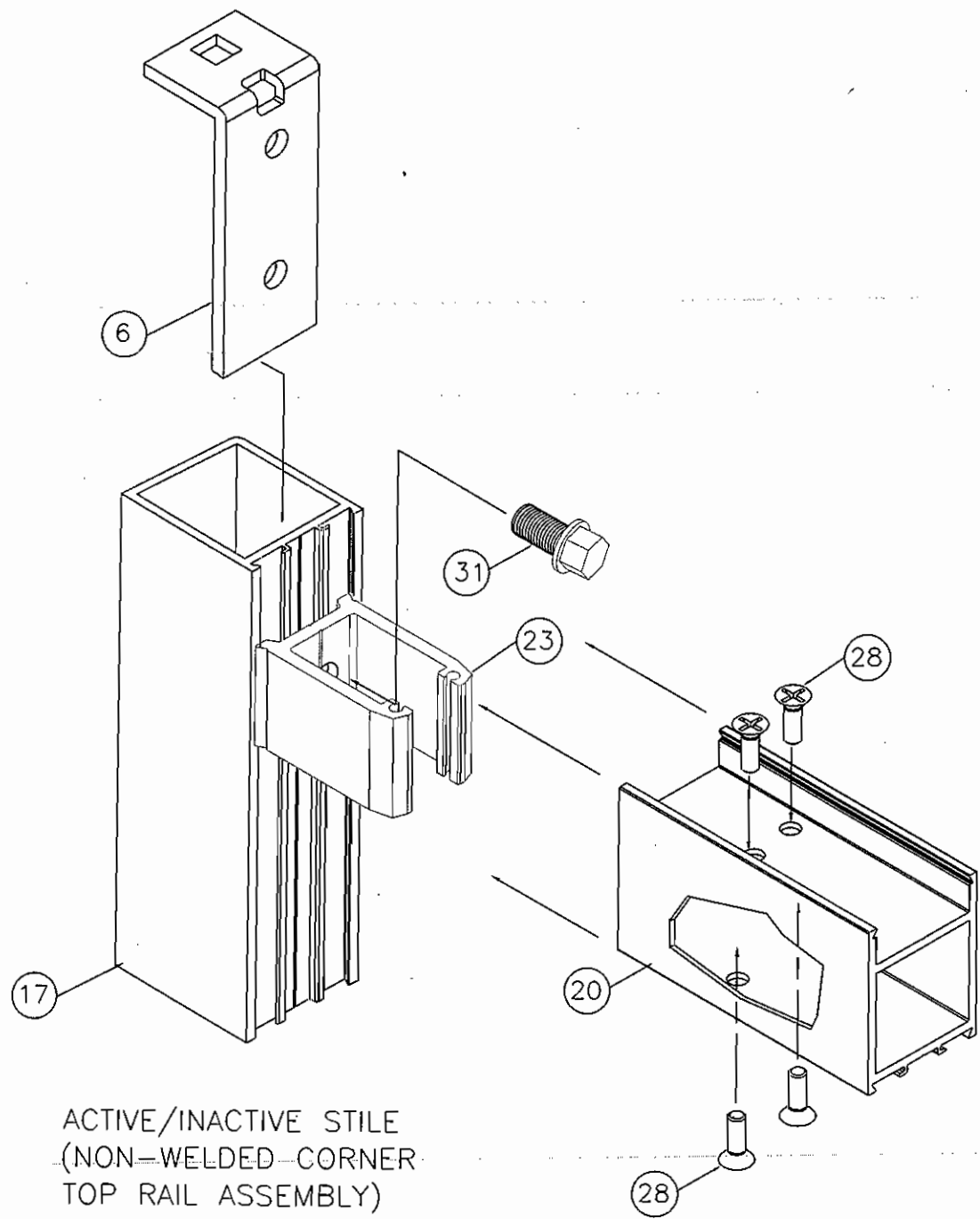


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Deviations are noted.

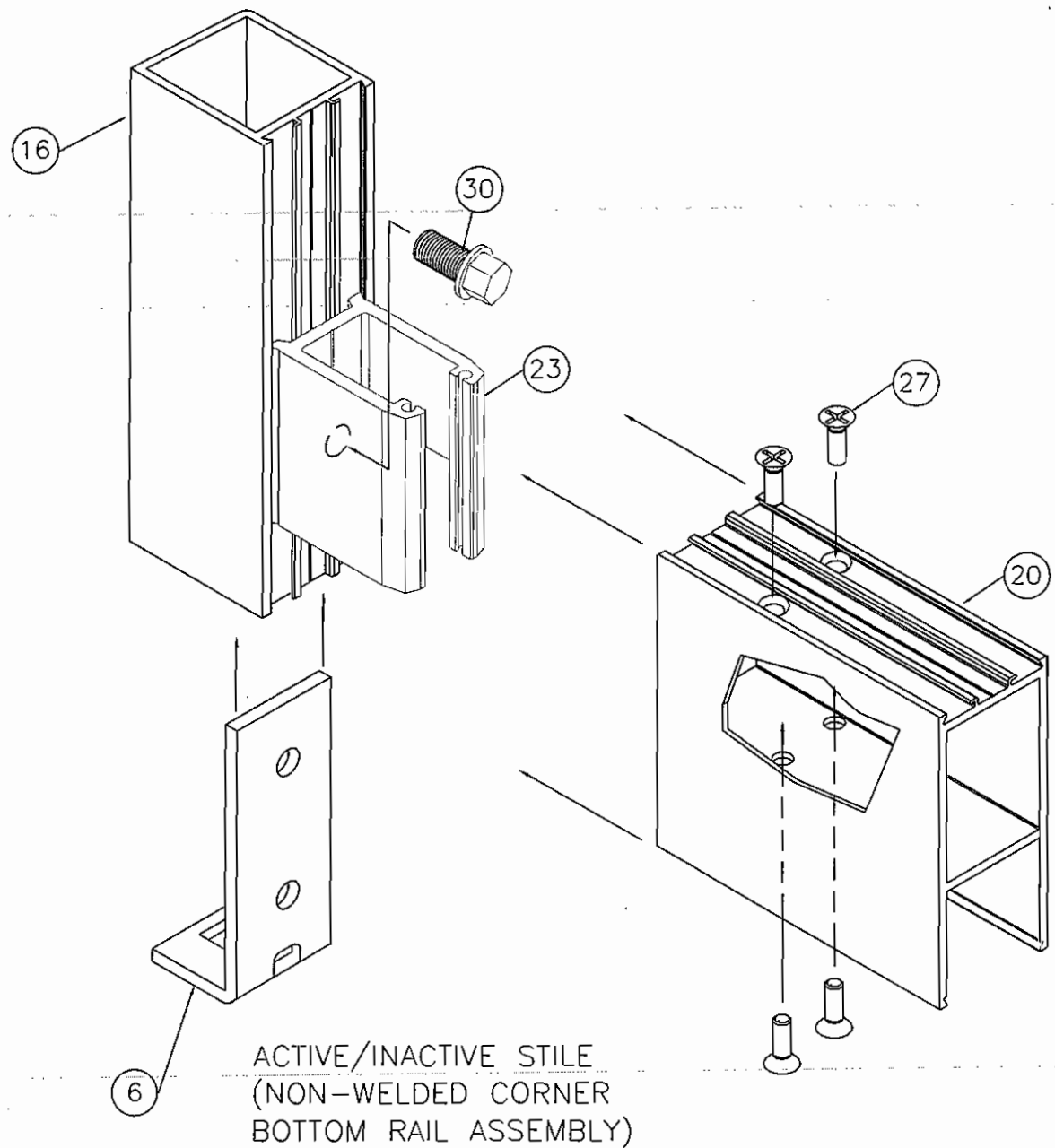
Report # C5556.01-550-44

Date 3/18/2013 Tech [Signature]

PROJECT		DESCRIPTION	
ATI TEST REPORT DRAWINGS FOR		MANUAL COMP	
SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS		REV	BY
IN CP450 DOORFRAME		DATE	
CARDINAL COMMERCIAL PRODUCTS			
4795 SHEPHERDSVILLE ROAD			
LOUISVILLE, KY. 40218			
TEL: 502-969-4059			
FAX: 800-313-4195			
TOP AND BOTTOM RAIL ASSEMBLY			
PROJECT NO.			
DRAWN	DATE		
WRD	9/19/12		
SCALE			
6" = 1'-0"			
DRAWING NO.			
200N-J_01			
5 OF 10			



ACTIVE/INACTIVE STILE  
(NON-WELDED CORNER  
TOP RAIL ASSEMBLY)



ACTIVE/INACTIVE STILE  
(NON-WELDED CORNER  
BOTTOM RAIL ASSEMBLY)

 **Architectural Testing**

Test sample complies with these details.  
Deviations are noted.

Report # CS556.01-550-44

Date 3/18/2013 Tech. [Signature]

REV	BY	DATE	DESCRIPTION

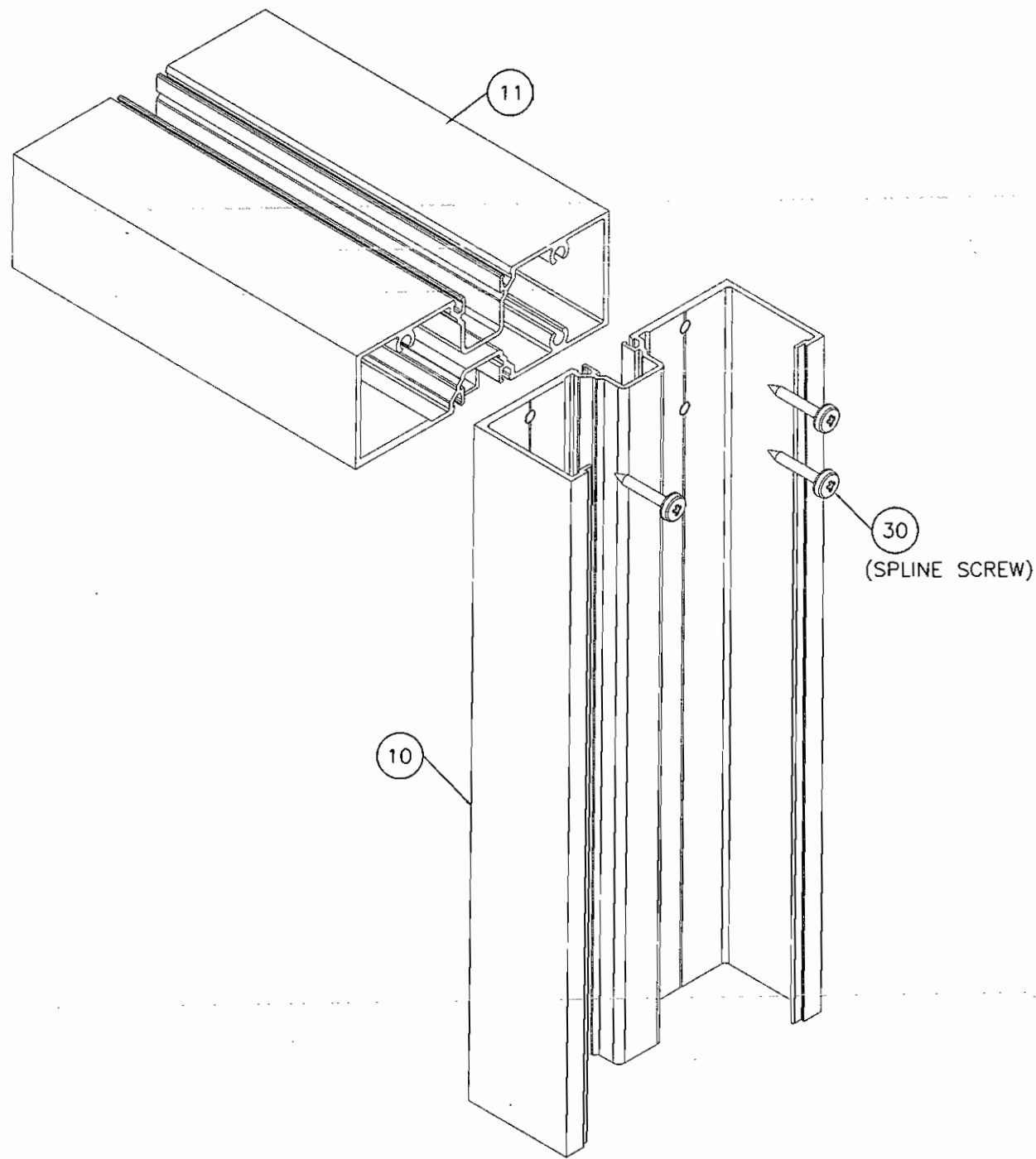
MANUAL COMP

CARDINAL COMMERCIAL PRODUCTS  
4795 SHEPHERDSVILLE ROAD  
LOUISVILLE, KY. 40218  
TEL: 502-969-4059  
FAX: 800-313-4195

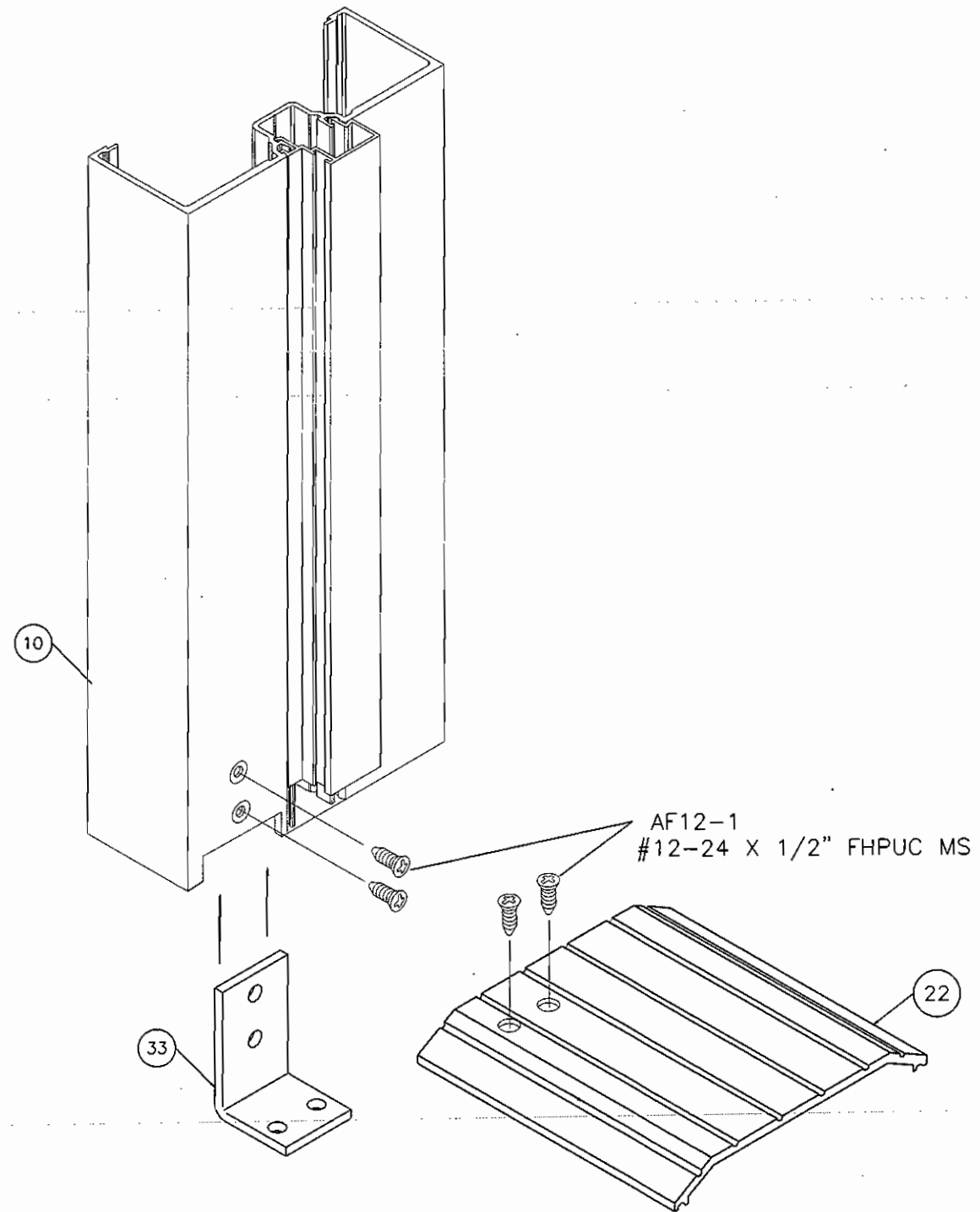
PROJECT  
ATTI TEST REPORT DRAWINGS FOR  
SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS  
IN CF450 DOORFRAME

FRAME ASSEMBLY

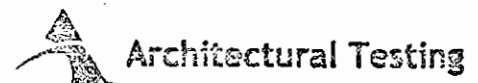
DRAWN	DATE
WRD	9/19/12
SCALE 6" = 1'-0"	
DRAWING NO. 200N-J_01 6 OF 10	



T-BAR TO DOORFRAME  
JAMB ASSEMBLY



THRESHOLD TO DOORJAMB  
ASSEMBLY



Architectural Testing  
 Test sample complies with these details.  
 Deviations are noted.  
 Report # C5556-01-550-44  
 Date 3/18/2013 Tech [Signature]

PROJECT	DATE	DESCRIPTION
ATL TEST REPORT DRAWINGS FOR SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS IN CF450 DOORFRAME		
CARDINAL COMMERCIAL PRODUCTS 4795 SHEPHERDSVILLE ROAD LOUISVILLE, KY. 40218 TEL: 502-969-4059 FAX: 800-313-4195		
FRAME ASSEMBLY		
PROJECT NO.		
DRAWN	DATE	
WRD	9/19/12	
SCALE		
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DRAWING NO.		
		200N-J_01
		7 OF 10

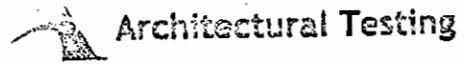


**BILL OF MATERIAL**

ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	GSK-4	BULB GASKET CD-100	0.229 x 0.281 x 0.038	EPDM-ASTM C-864	VARIES	
2	GSK-5	BULB GASKET CF200-7	0.260 x 0.420 x 0.050	EPDM-ASTM C-864	VARIES	
3	GSK-6	DOOR SWEEP WEATHERING	0.188 x 1.146	EPDM-ASTM C-864	VARIES	
4	SB-8	SETTING/EDGE BLOCK FOR DOOR	0.710 x 0.319 x 0.060	ABS PLASTIC	CARDINAL COMMERCIAL PRODUCTS	3/DOOR LITE
5	795	SILICONE	FILL SPACE	SILICONE	DOW CORNING	USED AT PERIMETER
6	CDH-57	FLUSHBOLT/3 PT. LOCK GUIDE	3.282 x 1.438 x 0.180	ZP CRS	CARDINAL COMMERCIAL PRODUCTS	
7	CDH-104	CONE SPRING FOR CD202	0.055 DIA. CONE	302 S. STL	CARDINAL COMMERCIAL PRODUCTS	7/DOOR
8	CF200-6-1	PANIC STOP @ THRESHOLD	1.216 x 0.344 x 2.00	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
9	CF200-7	DOORFRAME STOP	0.875 x 0.500 x 0.050	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
10	CF450-30	DOORFRAME JAMB	1.750 x 4.500 x 0.085	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
11	CF450-31	DOORFRAME T-BAR HEADER	1.750 x 4.500 x 0.085	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
12	CF450-16	POCKET FILLER	1.000 x 0.358 x 0.050	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	6" LONG @ FASTENER LOCATIONS
13	CF450-17	FILLER PLATE	3.875 x 0.265 x 0.070	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
14	CD100-1	DOOR GLAZING BEAD	0.539 x 0.614 x 0.055	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
15	CD100-8	DOOR SWEEP W/GSK-6	0.812 x 0.302 x 0.125	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
16	CD202	ADJASRAGAL WWP-1 WEATHERING	1.567 x 0.255 x 0.052	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
17	CD203	DOOR HINGE STILE	2.125 x 1.750 x 0.120	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
18	CD204	DOOR ACTIVE STILE	2.068 x 1.750 x 0.120	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
19	CD205	DOOR INACTIVE STILE	2.125 x 1.750 x 0.120	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
20	CD225	DOOR TOP RAIL	2.250 x 1.750 x 0.120	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
21	CD400	DOOR BOTTOM RAIL	4.500 x 1.750 x 0.120	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
22	T450	THRESHOLD	4.500 x 0.500 x 0.141	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
23	CD100-7-001354	CORNER BLOCK FOR CD225	2.500 x 1.540 x 0.110	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
24	CD100-7-002040	CORNER BLOCK FOR CD400	2.500 x 1.540 x 0.110	6063-T5 ALUM.	CARDINAL COMMERCIAL PRODUCTS	
25	WP-1	WEATHERING	SK1003-510 x 0.630 HEIGHT	TEXTILE WEATHERING	SCHLEGEL/AMESBURY GROUP	2 ROWS INSTALLED IN CD202
26	AF8-1	FASTENER	#8 x 3/4" POH #2 SD	302 S. STL	VARIES	7/DOOR (ATTACH CD202)
27	AF8-2	FASTENER	#8-18 x 3/4 FHPUC	ZP STEEL	VARIES	ATTACH CD100-8-36 (3/DOOR)
28	AF10-3	FASTENER	#10-32 x 3/4" FHPUC	ZP STEEL	VARIES	ATTACH CORNER BLOCK TO RAILS
29	AF10-7	FASTENER	#10-16 x 3/4" FHP STS	ZP STEEL	VARIES	ATTACH CF200-6-1
30	AF12-4	FASTENER	#12 x 1" PH SQ DRVE	ZP STEEL	VARIES	SPLINE SCREW
31	AF32-1	FASTENER	5/16" -18 x 3/4" HWH BOLT	ZP STEEL	VARIES	
32	CDH-21	SQUARE NUT	5/16"-18 x 1.475 x 1.475 x 0.180 THK	ZP STEEL	CARDINAL COMMERCIAL PRODUCTS	ATTACH CORNER BLOCK TO STILES
33	CDH-24	THRESHOLD CLIP	1.034 x 1.750 x 11 GA.	CR STEEL	CARDINAL COMMERCIAL PRODUCTS	ATTACH THRESHOLD TOP JAMB

**SERIES 200 72" X 84" BUTT HUNG DOOR PAIR WITH 3-POINT LOCK)**

HARDWARE DESCRIPTION	PART NUMBER	QTY	MANUFACTURER	USED
BUTT HINGE 4 1/2" X 4"	CDH-12	6	HAGER	YES
PULL HANDLE	CPH-1	2	CARDINAL COMMERCIAL PRODUCTS	YES
PUSH BAR	CPB-1-36	2	CARDINAL COMMERCIAL PRODUCTS	YES
CYLINDER (ACTIVE)	CDH-46-1	1	SWIC	YES
THUMB TURN (ACTIVE) OPTIONAL	CDH-47	1	SWIC	YES
LOCK (ACTIVE)	CDH-32 -3 PT	1	SWIC	YES
FLUSH BOLT (INACTIVE)	CDH-53	2	CARDINAL COMMERCIAL PRODUCTS	YES
3-POINT LOCK	CDH-37	1	CARDINAL COMMERCIAL PRODUCTS	YES
HINGE BACK-UP PLATE (DOOR)	CDH-17	12	KELLY TOOLS	YES



Test sample complies with these details.  
Deviations are noted.

Report # C5556.01-550-44

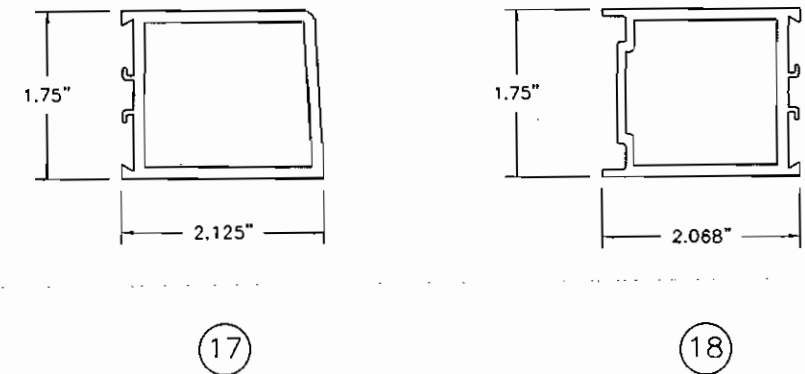
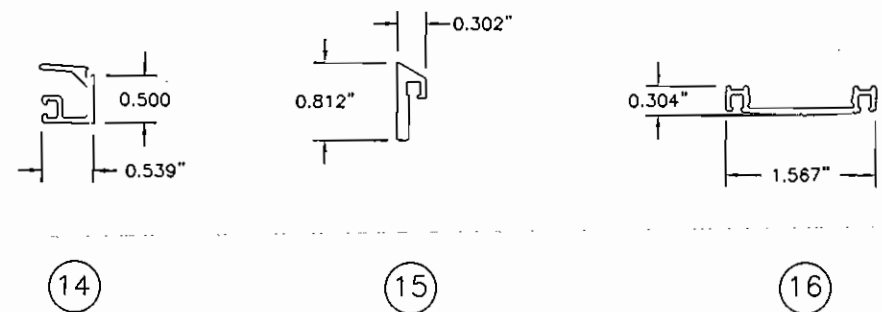
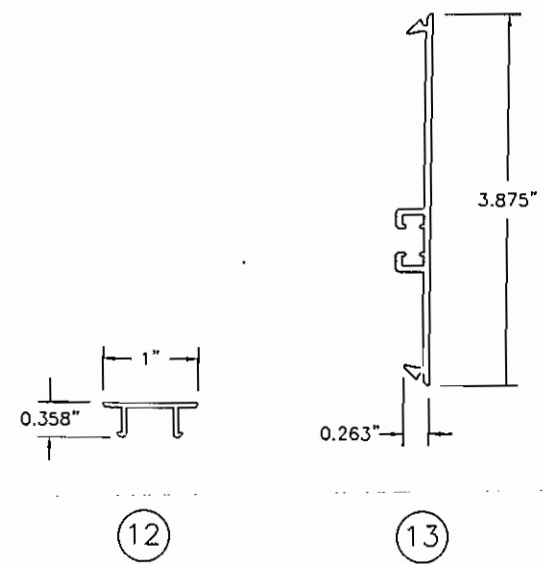
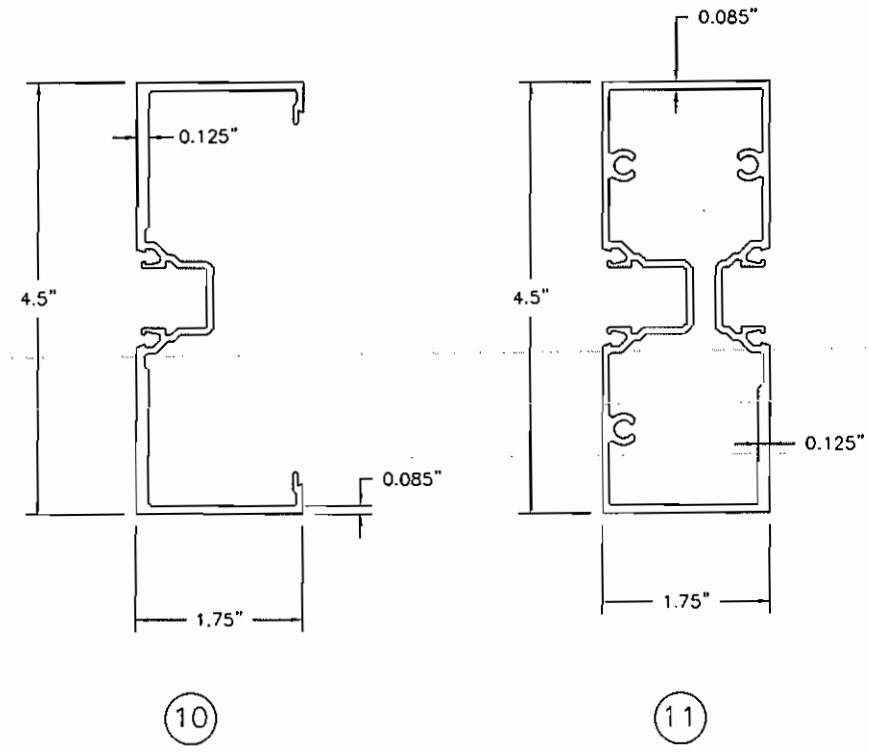
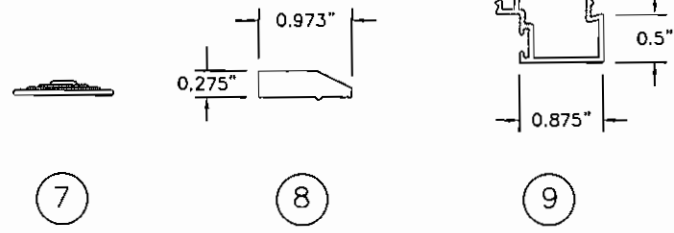
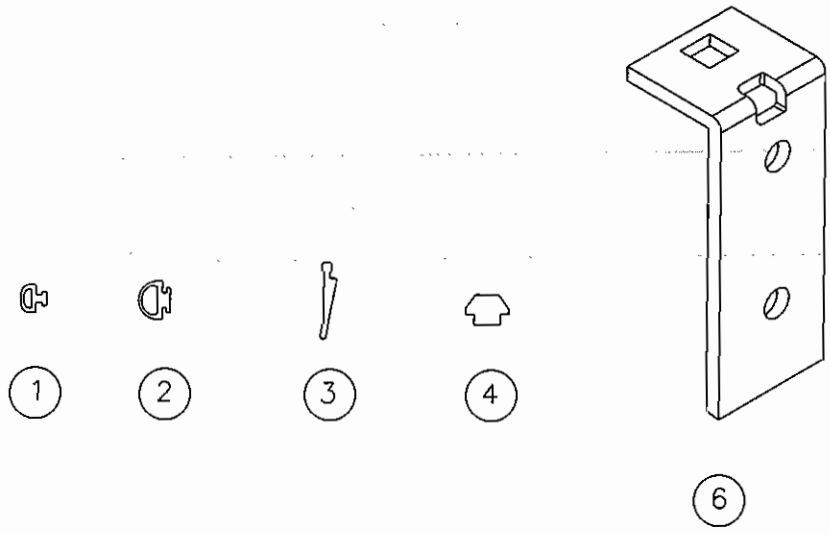
Date 3/18/2013 Tech [Signature]

PROJECT	DESCRIPTION
PROJECT NO.	
DRAWN	DATE
WRD	9/19/12
SCALE	
	FULL
DRAWING NO.	
	200N-J_01
	8 OF 10

CARDINAL COMMERCIAL PRODUCTS  
4795 SHEPHERDSVILLE ROAD  
LOUISVILLE, KY. 40218  
TEL: 502-969-4059  
FAX: 800-313-4195

ATT TEST REPORT DRAWINGS FOR  
SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS  
IN CF450 DOORFRAME

BOM AND HARDWARE



REV	BY	DATE	DESCRIPTION

MANUAL COMP

CARDINAL COMMERCIAL PRODUCTS  
 4795 SHEPHERDSVILLE ROAD  
 LOUISVILLE, KY. 40218  
 TEL: 502-969-4059  
 FAX: 800-313-4195

ATI TEST REPORT DRAWINGS FOR  
 SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS  
 IN CF450 DOORFRAME

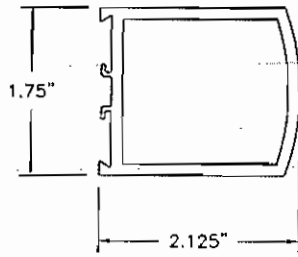
PROFILES

**Architectural Testing**

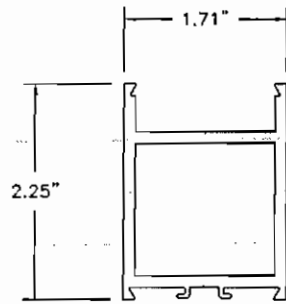
Test sample complies with these details.  
 Deviations are noted.

Report # C5556.01-550-44  
 Date 3/18/2013 Tech [Signature]

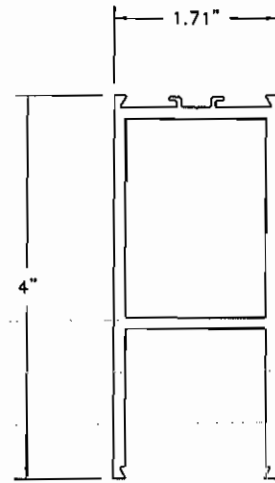
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DRAWN	DATE
WRD	9/19/12
SCALE	6"=1'-0"
DRAWING NO.	200N-J_01
9 OF 10	



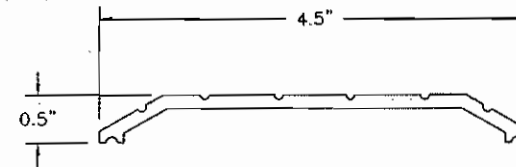
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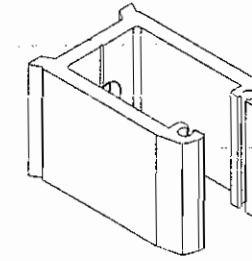
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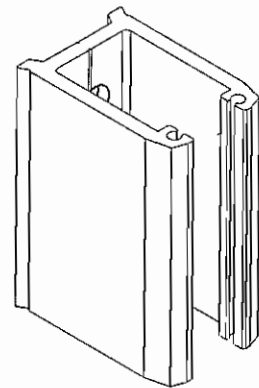
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24



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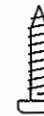
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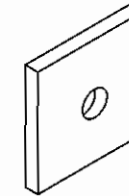
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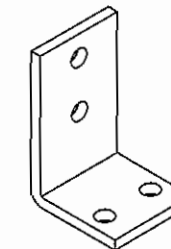
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31



32



33



Test sample complies with these details.  
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Report # C5556.01-550-44

Date 3/18/2013 Tech [Signature]

REV	BY	DATE	DESCRIPTION

MANUAL COMP

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ATI TEST REPORT DRAWINGS FOR  
SERIES 200N 1 1/2 PAIR BUTT HINGE DOORS  
IN CF450 DOORFRAME

PROFILES

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WRD	9/19/12
SCALE	6" = 1'-0"
DRAWING NO.	200N-J_01
	10 OF 10