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ADDENDUM

ATLNC Report # 0724.01-06
DC Not. # ATLNC 06006

Date: 5/31/07
Test Dates: 07/27/06 - 09/27/06

Test Requested By: Chris Gall
US Aluminum Inc.
720 Cel-River Road
Rock Hill, SC 29730
Phone 800-462-5668 Fax 800-841-8722

Subject- Dade Notification #

Reports reads:

ATLNC 0724.01-06

Report Date: 05/22/07

ATLNC Certification # 04-1013.08

Test Dates: 7/24/06 - 9/27/06

Report should read:

ATLNC 0724.01-06

DC Not. # ATLNC 06006

Report Date: 05/22/07

ATLNC Certification # 04-1013.08

Test Dates: 7/24/06 - 9/27/06

Subject- Specimen A, Air Infiltration

Reports reads:

Specimen A

Mockup #1

AIR INFILTRATION TEST
TAS 202, ASTM E 283-99

Report should read:

Specimen A

Mockup #1

AIR INFILTRATION TEST

TAS 202, ASTM E 283-04

Subject- Specimen F, Air Infiltration

Reports reads:

Specimen F

Mockup #2

AIR INFILTRATION TEST

TAS 202, ASTM E 283-99

Report should read:

Specimen F

Mockup #2

AIR INFILTRATION TEST

TAS 202, ASTM E 283-99

Keith Owen, Lab Manager

American Test Lab, Inc.

Keith Owen
7/2/09

All Tests Witnessed and Certified by:

David Johnson P. E.

1656 Calvert Rd.

Brevard, NC 28712

Florida P.E. # 00061915

Engineer Seal And Signature

David Wesley Johnson
7/2/09

COPY

Disclaimer

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Report Date: 05/22/07

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Test Requested By:

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US Aluminum Inc.
720 Cel-River Road
Rock Hill, SC 29730
Phone 800-462-5668 Fax 800-841-8722

Test Standards:

FBC – TAS 201, 202, 203
ASTM E 1886, E 1996-02
ASTM E 330-02, E 283-04, E331

Note: Specimens tested in accordance with BCCO Test Proposal 06-007R.

Test Conditions: 70-80 degrees F

Design Pressures: 65 psf, -65 psf

Specimen A, A1 and A2 (Mockup 1) Fixed Panel (182-1/2" x 120") as shown in #USA-2980 p 1 of 5
Specimen B, B1 (Mockup 4) Double Out Swing Doors / Transom (77" x 120") as shown in #USA-2980 p 4 of 5.
Specimen C, (Mockup 5A) Double Out Swing Doors / Transom (77" x 120") as shown in #USA-2980 p 5 of 5.
Specimen C1 (Mockup 5B) Double Out Swing Doors / Transom (77" x 120") as shown in #USA-2980 p 5 of 5.
Specimen D, D1 (Mockup 2) Double Out Swing Doors with sidelites / Transom. (197" x 120") as shown in #USA-2980 p 2 of 5.
Specimen E (Mockup 3) Double Out Swing Doors / Transom (197" x 120") as shown in #USA-2980 p 3 of 5.
Specimen F (Mockup 2) Double Out Swing Doors with sidelites / Transom. (197" x 120") as shown in #USA-2980 p 2 of 5.

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Configuration: All Specimens were mounted as follows:
 Specimens B, D, D1, E, F were mounted in a 2 x 12 wood test buck.
 Specimens A, A1 and A2 were mounted in a steel, CMU block and concrete test buck.
 Specimens C and C1 mounted in a solid concrete buck.

Model Material: Extruded Aluminum 6063 -T5 unless otherwise noted.

Mockup #1-A

Designation: IG 500 Series Fixed Panel. Specimens A, A1 and A2 as shown in drawing USA-2980.

Overall Size: 182-1/2" x 120-1/2"

Configuration: 3 lites wide x 2 lites high

Daylight Opening: 3 lites 57-1/2" x 96": 3 lites 57-1/2" x 15-7/8"

Glazing: 9/16" Laminated 1/4"HS + .090SGP + 1/4" HS

Glazing Method: Dry Glazing with 9/16" glass bite

Frame Construction: Extruded Aluminum

Part	Number	Location	Size	Attachment
Head Part NO. IG 526	3	Top of unit	5" x 2-1/2" x 57-1/2" as shown in drawing USA-2958 sheet 9 of 21	Attached to Jambs and verticals with 4 frame screws each end
Filler Head Part NO IG 100	3	Head	57-1/2" as shown in drawing USA-2958 sheet 9 of 21	Attached to Head
Horizontal Part NO IG 562	3	15-7/8" from head or sill as shown in drawing USA-2980 sheet 10 of 21	57-1/2" as shown in drawing USA-2958 sheet 10 of 21	Attached to Verticals with 3 frame screws each end
Jambs Part NO IG 526	2	Each side	5" x 2-1/2" x 119-3/8" as shown in drawing USA-2958 sheet 15 of 21	Attached to head and sill with 4 #12 x 1" HWH SMS screws at each location

Filler Vertical Part NO IG 100	2	Each jamb	4" wide as shown in drawing USA-2958 sheet 15 of 21	Snapped into jamb
Verticals Part NO IG 526	2	Vertical 60" from each side	5" x 2-1/2" x 119- 3/8" as shown in drawing USA- 2958 sheet 16 of 21	Attached to the head and sill with 4 #12 x 1" HWH SMS Screws at each location
Filler Vertical Part NO IG 524	2	Each vertical	4-1/2" wide as shown in drawing USA-2958 sheet 16 of 21	Snapped into vertical and sealed with Dow 995
Filler Jambs Part NO IG 100	16	Jambs located at fasteners.	4" as shown in drawing USA- 2958 sheet 15 of 21	Snapped to jamb
Sill Part NO IG 572	3	Bottom of unit	5" x 3-1/8" x 57- 1/2" as shown in drawing USA- 2958 sheet 11 of 21	Attached to the sub sill with #12 x 3/4" HWH SMS Type B 2" from end the 16" OC
Subsill Part NO IG 570	1	Bottom of unit	182-1/2" long and as shown in drawing USA- 2958 sheet 11 of 21	Attached to the substrate with 3/8" x 2-1/2" Powerbolt with minimum 2" embedment 2" from end than 16" OC set in a bed of sealant.
Stop Part NO IG563	6	Exterior on sill	57-1/2" long as shown in drawing USA-2958 sheet 11 of 21	Snapped to the sill as shown in drawing USA- 2958 sheet 11 of 21
Vertical closer Plates Part NO CP 801	2	Top of verticals	2-3/8" as shown in USA-2958 Sheet 7 of 21	Attached to top Verticals
Sub sill End Dam Part # EC 801	2	Each end of sub sill	As Shown in USA 2958 Sheet 11 of 21	Attached with 2 #8 x 3/4" PH OH Tek screws
Setting blocks Part NO SB916	12	Bottom of each Glass piece	As Shown in USA 2958 Sheet 10 of 21	Between bottom of glass and rails.
Jamb Water Deflector Part NO WD802	2	Head / Intermediate horizontal	As Shown in USA 2958 Sheet 9/10 of 21	Between Vertical and Horizontal

Deep Water Deflector Part NO WD802	2	Head / Intermediate horizontal	As Shown in USA 2958 Sheet 9/10 of 21	Between Vertical and Horizontal
Shallow Water Deflector Part NO WD801	2	Head / Intermediate horizontal	As Shown in USA 2958 Sheet 9/10 of 21	Between Vertical and Horizontal

Gaskets:

Quantity

140 ft

140 ft

Description

Exterior Gasket Part # NP825

Interior Gasket Part # NP826

Location

Exterior perimeter of all glass

Interior perimeter of all glass

Reinforcement: Mullions reinforced with 1/8" Steel channel fastened to the mullion with (2) #12 x 1" HWH SMS 1" from the ends and 12" OC as shown in drawing # USA-2958 sheet 16 of 21.

Screws and Method of Attachment:

CMU Jamb: 1/4" x 3" FH Tapcons / 1-1/4" min embedment

Steel Jamb: 1/4" x 2-1/2" FH Tek Screw

Sill: 3/8" x 2-1/2" Powerbolt / 2" min embedment.

Header: 1/4" x 3-1/2" Tapcons / 1-1/4" min embedment

Frame Assembly Screws: # 12 x 1" HWH SMS total of 60 as shown in drawings.

Sealant: Dow 795

Weep Holes: 3/8" diameter located 6" from end and 6" each side of verticals

Mockups # 2 and # 3

Designation: IG600 Series Double Out Swing Doors with sidelites / Transom. (197" x 120") as shown in #USA-2980 p 2 of 5, mounted in wood test bucks.

Overall Size: 197-3/4" x 120-1/2"

Configuration: Double Outswing doors with Side lights

Daylight Openings: Side Lights 57-1/2" x 96", Side Light Transoms 57-1/2" x 15-7/8", Doors 27-9/16" x 83-1/4", Door Transoms 72" x 19".

Glazing: Insulated 1/4"HS + 1/2" Air Space x 1/4"HS +.090SGP + 1/4" HS

Glazing Method: Dry Glazing with 9/16" glass bite

Frame Construction: Extruded Aluminum

Components: As shown Mock Up #2/3 Bill of Materials (USA 2980 Sheet 2/3 of 5) and detailed drawings USA-2959 Sheets 9 - 21.

Part	Number	Location	Size	
Head Part NO. IG 626	2	Top of unit	5" x 2-1/2" x 57-1/2" as shown in drawing USA 2959 sheet 9 of 12	Attached to jambs and verticals with frame assembly screws
Filler Head Part NO IG 100	2	Head	57-1/2" as shown in drawing USA 2959 sheet 9 of 12	Snaps on to head as shown in drawing
Horizontal Part NO IG662	3	15-7/8" from head or sill as shown in drawing USA-2980	57-1/2" as shown in drawing USA-2959 sheet 10 of 12	Attached to jambs or verticals with (4) frame assembly screws each location
Verticals Part NO. IG626	2	Vertical 60" from each side	5" x 2-1/2" x 119-3/8" as shown in drawing USA-2959 sheet 15 of 21	Attached to the head, horizontals, and sill with (4) frame assembly screws each location.
Vertical Filler Part NO IG 624	2	Each vertical	119 3/8" as shown in drawing USA-2959 Sheet 16 of 21	Attached to verticals as shown in drawing
Jambs Part NO. IG 626	2	Vertical each side	5" x 2-1/2" x 119-3/8" as shown in drawing USA-2959 sheet 16 of 21	Attached to the head, horizontals, and sill with (4) frame assembly screws each location.
Filler Jambs Part NO IG 100	32	Vertical Jambs located at fasteners.	4" drawing USA-2959 sheet 16 of 21	
Sill Part NO. IG 672	1	Bottom Of unit	5" x 3-1/2" x 197" as shown in drawing USA-2959 sheet 11 of 21	Attached to the sub sill with #12 x 3/4" HWH SMS Type B 2" from end the 16" OC
Sub-Sill Part NO. IG 570	1	Bottom of unit	5" x 3-1/8" x 197" as shown in drawing USA-2959 sheet 11 of 21	Attached with 1/4" x 3-1/2" tapcons located 2" from end and then 12-1/4" OC as shown in USA-2980 sheet 2 of 5

Stop Part NO IG663	4		As Shown in USA 2959 Sheet 11 of 21	
Sub Sill End dam Part No EC 801	2	Each end of sub sill	As Shown in USA 2959 Sheet 11 of 21	Attached with 2 #8 x 3/4" PH OH Tek screws
Setting blocks Part NO SB917	10	Bottom of each Glass piece	As Shown in USA 2959 Sheet 10 of 21	Between bottom of glass and rails.
Vertical closure Part No Plates CP 801	4	Top of Verticals	Between Vertical and Horizontal	Attached to top verticals
Jamb Water Deflector Part NO WD912	2	Head / Intermediate horizontal	As Shown in USA 2959 Sheet 9/10 of 21	Between vertical and horizontal
Deep Water Deflector Part NO WD912	2	Head / Intermediate horizontal	As Shown in USA 2959 Sheet 9/10 of 21	Between vertical and horizontal
Shallow Water Deflector Part NO WD911	2	Head / Intermediate horizontal	As Shown in USA 2959 Sheet 9/10 of 21	Between vertical and horizontal
Top Rail Part NO IE502	1	Top of door	As shown in USA- 2959 Sheet 12 of 21	Attached to door stile as shown in drawing
Door Header Part NO IG667	1	Above door	As shown in USA- 2959 Sheet 12 of 21	Attached to Mullions
Bottom Rail Part NO IE501	1	Bottom of door	As shown in USA- 2959 Sheet 13 of 21	Attached to door rail as shown in drawings
Water Threshold Part NO TH800	1	Bottom of door	As shown in USA- 2959 Sheet 13 of 21	
Door Rail (Stile) Part NO IE550/IE560	1	Side of door	As shown in USA- 2959 Sheet 17 of 21	Attached to top and bottom rails and jambs
Door Rail (Stile) Part NO IE550	1	Side of door	As shown in USA- 2959 Sheet 18 of 21	Attached to top and bottom rails and jambs
Transom Top Part NO IG626 / IG100	1 Each	Top Transom	As shown in USA- 2959 Sheet 9 of 21	Attached to verticals with 4 frame screws

Gaskets:

Quantity

80 ft

80 ft

Description

Exterior Gasket part # 825

Interior Gasket Part # 826

Location

Exterior perimeter of all glass

Interior perimeter of all glass

Reinforcement: Mullions reinforced with 1/8" Steel channel fastened to the mullion with (2) #12 x 1" HWH SMS 1" from the ends and 12" OC as shown in drawing # USA-2959 sheet 16 of 21.

Screws and Method of Attachment:

Head / Jambs / Sill: 1/4" x 3-1/2" Tapcons

Frame Assembly Screws: # 12 x 1" HWH SMS total of 40 as shown in drawings.

Hardware: Mockup 2 - Jackson 1285 Locks on both doors / LCN 4111 Closers

Hinges- 1-1/2 pair Hagar Butt Hinges

Mockup 3 - Jackson 1285 Panics on both doors / LCN 1461 Surface Closers

Hinges- 1-1/2 pair Hagar Butt Hinges

Sealants: Mock up 2 Spectrum 2

Mock up 3 Pecora 895

Weep Holes: 3/8" diameter located 6" from end and 6" each side of verticals

Mockup #4

Overall Size: 77-3/4" x 120-1/2"

Configuration: 3080 Double Outswing doors / Transom as shown in #USA-2980 p 4 of 5, mounted in wood test bucks.

Daylight Opening: Doors 27-9/16" x 83-1/4", Door Transom 72" x 18-1/6".

Glazing: 9/16" Laminated 1/4"HS + .090SGP + 1/4" HS

Glazing Method: Dry Glazing with 9/16" glass bite

Frame Construction: **Extruded Aluminum**

Designation: IG 500 series Double 3080 Outswing Doors / Transom

Part	Number	Location	Size	
Head Part NO. IG 526	1	Top of unit	5" x 2-1/2" x 72" as shown in drawing USA- 2958 sheet 9 of 12	Attached to Jambs with #12 x 1" HWH SMS Frame assembly screws

Filler Head Part NO IG 100	2	Head	72" as shown in drawing USA- 2958 sheet 9 of 12	Snapped on to head as shown in drawing
Jambs Part NO. IG 526	2	Vertical each side	5" x 2-1/2" x 120" as shown in drawing USA- 2958 sheet 19 of 21	Attached to the head and sill with (4) frame assembly screws each location.
Filler Jambs Part NO IG100	2	Vertical on jambs	As shown in USA- 2958 Sheet 19 of 21	Attached to Mullions
Header Part NO 577	1	Above the door	As shown in USA- 2958 Sheet 12 of 21	Attached to Jambs
Threshold Part NO. TH811	1	Bottom Of unit	72" as shown in drawing USA- 2958 sheet 14 of 21	Attached to the test buck with 1/4" x 2" Tapcons as shown in drawing.
Filler Jambs Part NO IG 100	25	Vertical jambs located at fasteners.		
Sub Sill End dam Part No EC 801	2	Each end of Threshold	As Shown in USA 2958 Sheet 11 of 21	Attached with 2 #8 x 3/4" PH OH Tek screws
Jamb Water Deflector Part NO WD 802	2	Head	As Shown in USA 2958 Sheet 9/10 of 21	Between Vertical and Horizontal
Top Rail Part NO IE 402	1	Top of door	As shown in USA- 2958 Sheet 12 of 21	Attached to door stile as shown in drawing
Bottom Rail Part NO IE 401	1	Bottom of door	As shown in USA- 2958 Sheet 14 of 21	Attached to door rail as shown in drawings
Door Rail (Stile) Part NO IE420	1	Side of door	As shown in USA- 2958 Sheet 19 of 21	Attached to top and bottom rails and jambs
Door Rail (Stile) Part NO I 450 / IE 460	1	Meeting stiles of doors	As shown in USA- 2958 Sheet 18 of 21	Attached to top and bottom rails
Setting blocks Part NO SB916	2 each door	Between glass and bottom rail	As shown in USA- 2958 Sheet 14 of 21	Bottom Rail
W. Block Part NO WB600	4 each door	Between glass and stiles	As shown in USA- 2958 Sheet 18 of 21	Stiles

Gaskets:Quantity

60 ft

60 ft

Description

Exterior Gasket part # 825

Interior Gasket Part # 826

Location

Exterior perimeter of all glass

Interior perimeter of all glass

Reinforcement: None**Screws and Method of Attachment:****Head / Jambs / Sill:** 1/4" x 3-1/2" Tapcons as shown in drawings**Frame Assembly Screws:** # 12 x 1" HWH SMS total of 14 as shown in drawings.**Hardware:** Mockup 4 - Left Hand Door - Jackson 20-330 OHCC Closer
Right Hand Door - LCN 2030 Closer
Hinges- 1-1/2 pair Hagar Butt Hinges
Adams Rite G86 Panics on both doors**Sealants:** Spectrum 2**Weep Holes:** None**Mockup #5A and 5B****Overall Size:** 77-3/4" x 120-1/2"**Configuration:** 3080 Double Outswing doors / Transom, mounted in Concrete and CMU test bucks as shown in #USA-2980 p 5 of 5.**Daylight Opening:** Doors 27-9/16" x 83-1/4", Door Transom 72" x 19".**Glazing:** Insulated 1/4"HS + 1/2" Air Space x 1/4"HS +.090SGP + 1/4" HS**Glazing Method:** Dry Glazing with 9/16" glass bite**Frame Construction:** Extruded Aluminum**Designation:** IG 600 series Double 3080 Outswing Doors / Transom

Part	Number	Location	Size	
Head Part NO. IG 626	1	Top of unit	5" x 2-1/2" x 72" as shown in drawing USA- 2959 sheet 9 of 12	Attached to Jambs with #12 x 1" HWH SMS Frame assembly screws

Filler Head Part NO IG 100	2	Head	72" as shown in drawing USA- 2959 sheet 9 of 12	Snapped on to head as shown in drawing
Jambs Part NO. IG 526	2	Vertical each side	5" x 2-1/2" x 120" as shown in drawing USA- 2959 sheet 19 of 21	Attached to the head, header and sill with (4) frame assembly screws each location.
Filler Jambs Part NO IG100	2	Vertical on jambs	As shown in USA- 2959 Sheet 19 of 21	Attached to Jambs
Header Part NO 677	1	Above the door	As shown in USA- 2959 Sheet 12 of 21	Attached to Jambs
Threshold Part NO. TH811	1	Bottom Of unit	72" as shown in drawing USA- 2959 sheet 14 of 21	Attached to the test buck with 1/4" x 2" Tapcons as shown in drawing.
Sub Sill End dam Part No EC 801	2	Each end of Threshold	As Shown in USA 2959 Sheet 11 of 21	Attached with 2 #8 x 3/4" PH OH Tek screws
Vertical closure Part No Plates CP801	2	Top of stile	2-3/8" as shown in USA-2959 Sheet 7 of 21	Attached to top jambs
Jamb Water Deflector Part NO WD 912	2	Verticals	As shown in USA 2959 sheet 9/10 of 21	Between Vertical and Horizontal
Top Rail Part NO IE 502	1	Top of door	As shown in USA- 2959 Sheet 12 of 21	Attached to door stile as shown in drawing
Bottom Rail Part NO IE 501	1	Bottom of door	As shown in USA- 2959 Sheet 14 of 21	Attached to door rail as shown in drawings
Door Rail (Stile) Part NO IE 520	1	Side of door	As shown in USA- 2959 Sheet 19 of 21	Attached to top and bottom rails and jambs
Door Rail (Stile) Part NO IE 550 / IE 560	1	Meeting stiles of doors	As shown in USA- 2959 Sheet 18 of 21	Attached to top and bottom rails
Setting blocks Part NO D916	2 each door	Between glass and bottom rail	As shown in USA- 2959 Sheet 14 of 21	Bottom Rail
W. Block Part NO WB600	4 each door	Between glass and stiles	As shown in USA- 2959 Sheet 18 of 21	Stiles

Gaskets:

<u>Quantity</u>	<u>Description</u>	<u>Location</u>
60 ft	Exterior Gasket part # NP825	Exterior perimeter of all glass
60 ft	Interior Gasket Part # 826	Interior perimeter of all glass

Reinforcement: None

Screws and Method of Attachment:

Head / Jambs / Sill: 1/4" x 3-1/2" Tapcons as shown in drawings

Frame Assembly Screws: # 12 x 1" HWH SMS total of 14 as shown in drawings.

Hardware: Mockup 5A - Left Hand Door - Ives Flush Bolts / CR Lawrence Surface Closer
 Right Hand Door - Standard Lock / CR Lawrence Surface Closer
 Hinges- 1-1/2 pair Hagar Butt Hinges

Mockup 5B - Left Hand Door - US Aluminum Flush Bolts / CR Lawrence Surface Closer
 Right Hand Door - Standard Lock / CR Lawrence Surface Closer
 Hinges- 1-1/2 pair Hagar Butt Hinges

Sealant: Dow 795

Weep Holes: None

Test Sequence

Specimen A: Air Infiltration; Positive Design Load; Negative Design Load; Water Infiltration, Positive Test Load; Negative Test Load;

Specimen A1: Impact; Positive Cycling; Negative Cycling

Specimens B, C, E: Impact; Positive Cycling; Negative Cycling

Specimen F: Air Infiltration; Positive Design Load; Negative Design Load; Water Infiltration, Positive Test Load; Negative Test Load; FER; Impact; Positive Cycling; Negative Cycling

Note: All tests were performed in accordance with FBC TAS 201, 202, 203; ASTM E 1886-97; E 1996-02, E 283-99, and E 330-97 with no deviations.

Specimen A
Mockup #1

AIR INFILTRATION TEST
 TAS 202, ASTM E 283-99

Tested @ psf	Air Infiltration CFM/Sq. Ft.	Allowed CFM/Sq. Ft.	Results
6.24	.05	.3	passed

WATER INFILTRATION TEST
TAS 202, ASTM E 331-00

Design Pressure	PSF Load	Results
100 psf	15	Passed

STATIC AIR PRESSURE
TAS 202, ASTM E 330-02

Design Loads +65, -65

Range of tests

			Mullion		Horizontal		Header	
Positive loads	Time Seconds	Load psf	Max. Def.	Perm. Set	Max. Def.	Perm. Set	Max. Def.	Perm. Set
½ Test	30	48.8						
Design	30	65	.48"		.04"			
Test	30	97.5		.00"		.02"		.04"

Range of tests

Negative loads

½ Test

Design

Test

		Mullion		Horizontal		Header	
Time Seconds	Load psf	Max. Def.	Perm. Set	Max. Def.	Perm. Set	Max. Def.	Perm. Set
30	48.8						
30	65	.42"		.04"			
30	97.5		.00"		.00"		.04"

Specimen B:
Mock up 4

STATIC AIR PRESSURE
TAS 202, ASTM E 330-02

Design Loads +65, -65

Range of tests

			Jamb		Door Bottom		Header	
Positive loads	Time Seconds	Load psf	Max. Def.	Perm. Set	Max. Def.	Perm. Set	Max. Def.	Perm. Set
½ Test	30	48.8						
Design	30	65						
Test	30	97.5		.01"		.03"		.02"

Range of tests

Negative loads

½ Test

Design

Test

		Jamb		Door Bottom		Header	
Time Seconds	Load psf	Max. Def	Perm. Set	Max. Def	Perm. Set	Max. Def	Perm. Set
30	48.8						
30	65						
30	97.5		.00		.02		.02

Forced Entry Test

Forced entry test was conducted in accordance with FBC TAS 202 with no deviations. 300 lbs of force was placed for 5 minutes perpendicular to the door top and bottom in the direction that would open the door with no failure.

Note: Door was operable before and after all tests.

Specimen C:

Mock up 5A

STATIC AIR PRESSURE

TAS 202, ASTM E 330-02

Design Loads +65, -65

Range of tests

Positive loads

½ Test

Design

Test

		Meeting Stile	
Time Seconds	Load psf	Max. Def	Perm. Set
30	48.8		
30	65		
30	97.5		.0"

Range of tests

Negative loads

½ Test

Design

Test

		Meeting Stile	
Time Seconds	Load psf	Max. Def	Perm. Set
30	48.8		
30	65		
30	97.5		.01

Forced Entry Test

Forced entry test was conducted in accordance with FBC TAS 202 with no deviations. 300 lbs of force was placed for 5 minutes perpendicular to the door top and bottom in the direction that would open the door with no failure.

Note: Door was operable before and after all tests.

Specimen F
Mockup #2

AIR INFILTRATION TEST
TAS 202, ASTM E 283-99

Tested @ psf	Air Infiltration CFM/Sq. Ft.	Allowed CFM/Sq. Ft.	Results
6.24	.08	.3	passed

WATER INFILTRATION TEST
TAS 202, ASTM E 331-00

Design Pressure	PSF Load	Results
65	10	Passed

STATIC AIR PRESSURE
TAS 202, ASTM E 330-02

Design Loads +65, -65

Range of
tests

			Mullion		Horizontal		Door Header		Jamb	
Positive loads	Time Seconds	Load psf	Max. Def	Perm. Set	Max. Def	Perm. Set	Max. Def	Perm. Set	Max. Def	Perm. Set
½ Test	30	48.8								
Design	30	65	.47"		.1"					
Test	30	97.5		.01"				0.0"		0.0"

Range of
tests

**Negative
loads**

½ Test

Design

Test

			Mullion		Header		Door Header		Jamb	
	Time Seconds	Load psf	Max. Def	Perm. Set	Max. Def	Perm. Set	Max. Def	Perm. Set	Max. Def	Perm. Set
½ Test	30	48.8								
Design	30	65	.45"		.09"					
Test	30	97.5		.06"				.01"		.01"

Note: Specimen D fail negative test load. Doors came unlocked. Striker was not properly adjusted. Specimen D1 failed water infiltration. New specimen was built and tested as Specimen F successfully.

Forced Entry Test

Forced entry test was conducted in accordance with FBC TAS 202 with no deviations. 300 lbs of force was placed for 5 minutes perpendicular to the door top and bottom in the direction that would open the door with no failure.

Note: Door was operable before and after all tests.

Impact
Large Missile
TAS 201, ASTM E 1996-97/02

Type and weight of missile: Missile level D - #2 Southern Pine 2 x 4, Length 96" and 9lbs.

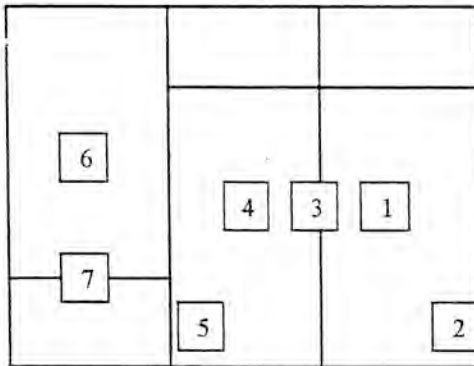
Note:

X measurement from left edge of lite.

Y measurement from bottom edge of lite.

Specimen A1 and A2

Mock up 1



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	28-1/2"	48"
2	50	51-1/4"	7-1/2"
3	50	mullion	56"
4	50	28 1/2"	47-1/2"
5	50	7"	7"
6	50	29"	48-1/2"
7	50	26-1/2"	Horizontal

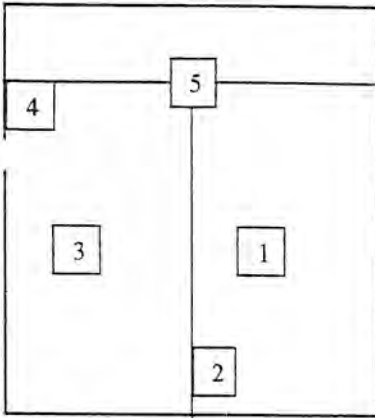
Note: Right lite failed in right bottom corner during positive cycling. Lite was boarded up and test on other lites continued. Right lite was reglazed and tested as Specimen A2.

Specimen A2

Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	28"	47-1/2"
2	50	51-1/2"	7"

Note: Specimen A2 right lite was impacted at same locations as Impacts 1 and 2 for Specimen A1, center and right bottom corner.

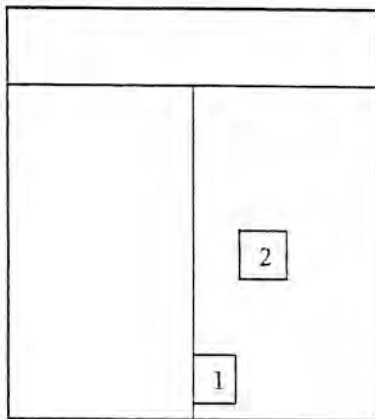
Specimen B1
Mock up 4



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	13-1/2"	41"
2	50	6"	6-1/2"
3	50	13"	41"
4	50	6-1/2"	76"
5	50	39"	97"

Note: No penetration or ruptures from any impacts occurred.

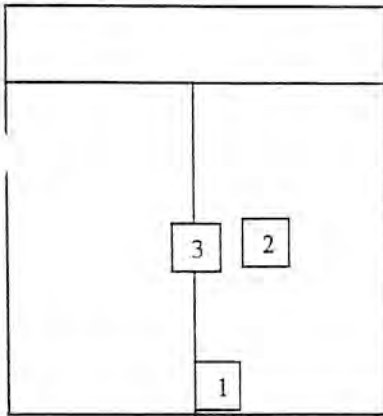
Specimen C
Mockup 5A



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	7"	7-1/2"
2	50	13"	41-1/2"

Note: No penetration or ruptures from any impacts occurred.

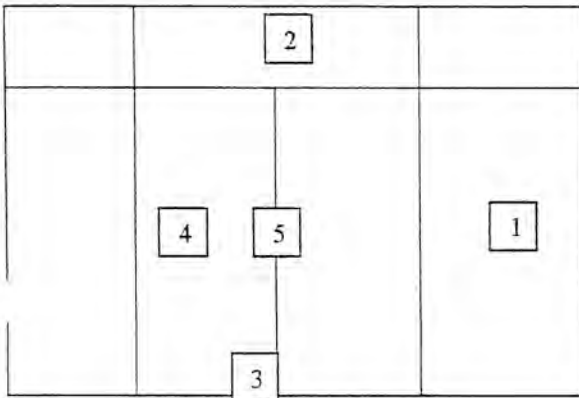
Specimen C1
Mockup 5B



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	6"	7-1/2"
2	50	12-1/2"	40-1/2"
3	50	Meeting Stiles	31"

Note: No penetration or ruptures from any impacts occurred.

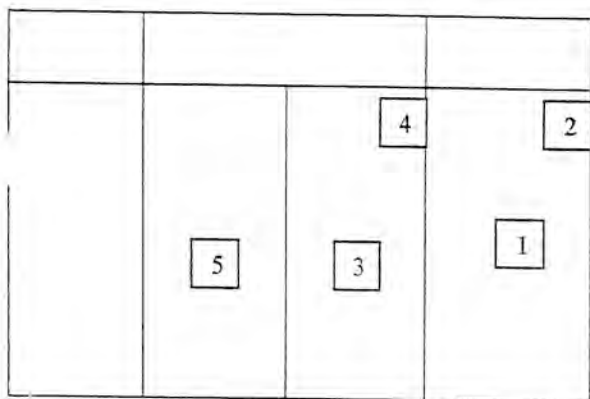
Specimen E
Mock up 3



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	29-1/2"	48"
2	50	37"	10"
3	50	20"	6"
4	50	13"	41-1/2"
5	50	Meeting Stiles	38"

Note: No penetration or ruptures from any impacts occurred.

Specimen F
Mock up 2



Impact No.	Speed Ft./sec.	X Meas.	Y Meas.
1	50	28"	48"
2	50	51"	89"
3	50	13"	39"
4	50	20-1/2"	47"
5	50	13-1/2"	38"

Note: No penetration or ruptures from any impacts occurred.

Cyclical Test

TAS 203, ASTM E 1996-97/02

Specimens: A1, A2, E

Design Loads: +65 psf -65psf

Range of test Positive loads	Actual Load psf	# of cycles	Cycles per minute		
			A1	A2	E
+ .2 – 0.5	13 - 33	3500	43	44	42
+ 0 – 0.6	0 - 39	300	45	45	43
+ .5 – 0.8	33 - 52	600	46	45	45
+ .3 – 1.0	20 - 65	100	46	46	45

Range of test Negative loads	Actual Load psf	# of cycles	Cycles per minute		
			A1	A2	E
0.3 – 1.0	20 - 65	50	45	47	46
0.5 – 0.8	33 - 52	1050	45	46	46
0 – 0.6	0 - 39	50	44	44	45
0.2 – 0.5	13 - 33	3350	43	42	44

Cycles Completed 9000

Specimens: B1, C, C1**Design Loads: +65 psf -65psf**

Range of test Positive loads	Actual Load psf	# of cycles	Cycles per minute		
			B1	C	C1
+ .2 – 0.5	13 - 33	3500	52	48	51
+ 0 – 0.6	0 - 39	300	53	48	52
+ .5 – 0.8	33 - 52	600	53	49	51
+ .3 – 1.0	20 - 65	100	54	49	51

Range of test Negative loads	Actual Load psf	# of cycles	Cycles per minute		
			B1	C	C1
0.3 – 1.0	20 - 65	50	50	49	50
0.5 – 0.8	33 - 52	1050	49	47	50
0 – 0.6	0 - 39	50	49	47	49
0.2 – 0.5	13 - 33	3350	49	46	49

Cycles Completed 9000

Specimen: F**Design Loads: +65 psf -65psf**

Range of test Positive loads	Actual Load psf	# of cycles	Cycles per minute		
			F		
+ .2 – 0.5	13 - 33	3500	48		
+ 0 – 0.6	0 - 39	300	47		
+ .5 – 0.8	33 - 52	600	47		
+ .3 – 1.0	20 - 65	100	46		

Range of test Negative loads	Actual Load psf	# of cycles	Cycles per minute		
			F		
0.3 – 1.0	20 - 65	50	50		
0.5 – 0.8	33 - 52	1050	49		
0 – 0.6	0 - 39	50	48		
0.2 – 0.5	13 - 33	3350	46		

Cycles Completed 9000

Description of specimens after test:

Specimens showed no resultant failure or distress after cyclical test. No failure of fasteners or separation of glass from the aluminum frame was observed. All doors were operable before and after all tests.

Note: 2-mil polyethylene film was used for the Static Air Pressure Test and Cycle Test; it is the opinion of the undersigned that it had no influence on the results of the tests.

Observers-

Tony Sivore / ATL
Eddie Ashe, Keith Owen, Brian Koontz, Jim Cox / ATL
Chris Gall / US Aluminum
David Johnson P.E.

Keith Owen / Lab Manager
American Test Lab, Inc.

Keith Owen
5/22/07

All Tests Witnessed and Certified by:

David Johnson P. E.
1656 Calvert Rd.
Brevard, NC 28712
Florida P.E. # 00061915

Engineer Seal And Signature

David Wesley Johnson
5/22/07

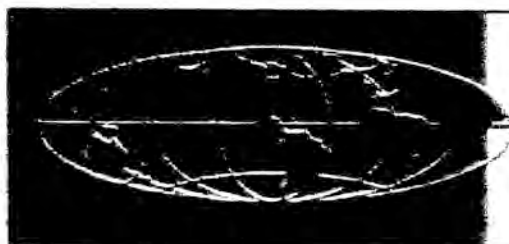
COPY

Certificate of Independence: The witnessing engineer has no financial interest in American Test Lab of North Carolina, US Aluminum or their parts vendors. Witnessing engineer is in complete compliance of Florida Statue 9B-72, Section 72.110.

Disclaimer

This test report was prepared by American Test Lab North (ATL) for the exclusive use of the above named client; it does not constitute certification of this product. The results are for that particular specimen tested and does not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. ATL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any produced tested or installed.

Mock Up #1A	Bill of Materials(USA 2980 Sheet 1 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG526	Head (Detail #1- pg 9 of 21)USA-2958	3	57 1/2"
IG100	Filler- Head(Detail #1- pg 9 of 21)USA-2958	3	57 1/2"
IG562	Horizontal(Detail #2- pg 10 of 21)USA-2958	3	57 1/2"
IG572	Sill(Detail #3- pg 11 of 21)USA-2958	3	57 1/2"
IG563	Stop(Detail #3- pg 11 of 21)USA-2958	6	57 1/2"
IG570	Sub-Sill(Detail #3- pg 11 of 21)USA-2958	1	182 1/2"
IG526	Jamb/Vertical(Detail #7/8- pg 15 /16 of 21)USA-2958	4	119 3/8"
IG524	Filler Vertical(Detail #8- pg 16 of 21)USA-2958	2	119 3/8"
NP825	Exterior Gasket	1	140'
NP826	Interior Gasket	1	140'
SB916	Setting Blocks	12	EA
CP801	Vertical Closer Plates	4	EA
WD803	Jamb Water Deflector	2	EA
WD802	Deep Water Deflector	2	EA
WD801	Shallow Water Deflector	2	EA
ST266	Frame Asseby Screw	60	EA
ST268	Sill to Sub -Sill Screw	15	EA
EC801	Sub-Sill End Dam	2	EA
---	1/4" x 3 1/2" Tapcon Jamb/Head	23	EA
---	1/4" x 2 3/4" Tapcon/ Sill	15	EA
---	1/4" x 2 1/2" FH Tek Screw /Steel Jamb	8	EA
IG100	Filler 4" Vertical Jamb	16	EA



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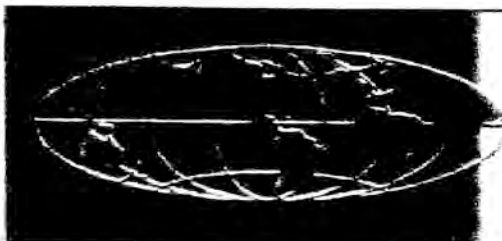
Kent Owen
 ATL INSPECTOR

Mock Up #2	Bill of Materials (USA -2980 Sheet 2 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG626	Head (Detail#1 pg 9 of 12) USA-2959	2	57 1/2"
IG100	Filler-Head(Detail#1 pg 9 of 12)USA-2959	2	57 1/2"
IG662	Horizontal(Detail#2 pg 10 of 12)USA-2959	2	57 1/2"
IG672	Sill(Detail#3 pg 11 of 12)USAS-2959	2	57 1/2"
IG563	Stop(Detail#3 pg 11 of 12)USA-2959	4	57 1/2"
IG570	Sub-Sill(Detail#3 pg 11 of 12)USA-2959	1	197"
IG626	Jamb/Vertical(Detail#7/8 pg 15/16 of 12)USA-2959	2	119 3/8"
IG624	Filler Vertical(Detail#8 pg 16 of 12)USA-2959	2	119 3/8"
NP825	Exterior Gasket	1	80'
NP826	Interior Gasket	1	80'
SB917	Setting Blocks	10	EA
CP801	Vertical Closer Plates	4	EA
WD913	Jamb Water Deflector	2	EA
WD912	Deep Water Deflector	2	EA
WD911	Shallow Water Deflector	2	EA
ST266	Frame Assembly Screw	40	EA
ST268	Sill to Sub -Sill Screw	19	EA
EC801	Sub-Sill End Dam	2	EA
---	1/4" x 3 1/2" Tapcon Head/Jamb/Sill	51	EA
IG100	Filler 4" Jambs	32	EA
SZ625/OF925	Doors & Frames- see items below	1	EA
IE502/IG667	Top Rail/ Door Header (Detail 4 pg 12of 21)USA-2959		
IE501/TH800	Bottom Rail/ Water T.Hold (Detail#5 pg 13 of 21) USA-2959		
IG626/IE520	Jamb/ Door Rail (Detail #9 pg 17 of 21)USA-2959		
IE560/IE550	Door Rail (Detail #10 pg 18 of 21) USA-2959		
IG626/IG100	Transom Top(Detail#1 pg 9 of 12)USA-2959		



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Mock Up #3	Bill of Materials(USA 2980 - sheet 3 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG626	Head (Detail#1 pg 9 of 12) USA-2959	2	57 1/2"
IG100	Filler-Head(Detail#1 pg 9 of 12)USA-2959	2	57 1/2"
IG662	Horizontal(Detail#2 pg 10 of 12)USA-2959	2	57 1/2"
IG672	Sill(Detail#3 pg 11 of 12)USAS-2959	2	57 1/2"
IG563	Stop(Detail#3 pg 11 of 12)USA-2959	4	57 1/2"
IG570	Sub-Sill(Detail#3 pg 11 of 12)USA-2859	2	60"
IG626	Jamb/Vertical(Detail#7/8 pg 15/16 of 12)USA-2959	2	120"
IG624	Filler Vertical(Detail#8 pg 16 of 12)USA-2959	2	120"
NP825	Exterior Gasket	1	80'
NP826	Interior Gasket	1	80'
SB917	Setting Blocks	10	EA
CP801	Vertical Closer Plates	4	EA
WD913	Jamb Water Deflector	2	EA
WD912	Deep Water Deflector	2	EA
WD911	Shallow Water Deflector	2	EA
ST266	Frame Assembly Screw	40	EA
ST268	Sill to Sub -Sill Screw	19	EA
EC801	Sub-Sill End Dam	2	EA
---	1/4" x 3 1/2" Tapcon Head/Jamb/Sill	51	EA
IG100	Filler 4" Jambs	32	EA
SZ625/OF925	Doors & Frames- see below for details	1	EA
IE502/IG667	Top Rail/ Door Header (Detail 4 pg 12of 21)USA-2959		
IE501/TH800	Bottom Rail/ Water T.Hold (Detail#5 pg 14 of 21) USA-2959		
IG626/IE520	Jamb/ Door Rail (Detail #9 pg 17 of 21)USA-2959		
IE560/IE550	Door Rail (Detail #10 pg 18 of 21) USA-2959		
IG626/IG100	Transom Top(Detail#1 pg 9 of 12)USA-2959		



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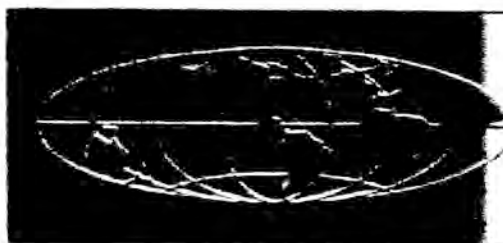
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Kent O'neal
 ATC INSPECTOR

Mock Up #4	Bill of Materials(USA 2980 sheet 4 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG526	Head (Detail#1 pg 9 of 12) USA-2958	1	72"
IG100	Filler-Head(Detail#1 pg 9 of 12)USA-2958	1	72"
IG577	Header(Detail#4 pg 12 of 21)USA-2958	1	72"
TH811	Threshold(Detail#5 pg 14 of 21)USA-2958	2	72"
IG526	Jamb/Vertical(Detail#11 pg 19 of 21)USA-2958	2	120"
NP825	Exterior Gasket	1	60'
NP826	Interior Gasket	1	60'
SB916	Setting Blocks	2	EA
CP801	Vertical Closer Plates	2	EA
WD803	Jamb Water Deflector	2	EA
ST266	Frame Assembly Screw	14	EA
----	1/4" x 3 1/2" Tapcon Head/Jamb/Sill	32	EA
IG100	Filler 4" Jams	25	EA
SZ425/OF625	Doors & Frames See Items below	1	EA
IE402/IG5667	Top Rail/ Door Header (Detail 4 pg 12of 21)USA-2958		
IE401/TH811	Bottom Rail/ Water T.Hold (Detail#5 pg 14 of 21) USA-2958		
IG526/IE420	Jamb/ Door Rail (Detail #11 pg 19 of 21)USA-2958		
IE460/IE450	Door Rail (Detail #10 pg 18 of 21) USA-2958		
IG526/IG100	Transom Top(Detail#1 pg 9 of 21)USA-2958		



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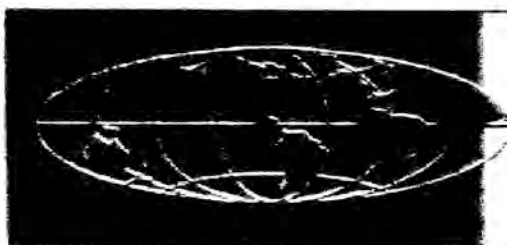
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Kent Olsen
 ATL INSPECTOR

Mock Up #5A	Bill of Materials (USA 2980 sheet 5 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG626	Head (Detail#1 pg 9 of 12) USA-2959	1	72"
IG100	Filler-Head(Detail#1 pg 9 of 12)USA-2959	1	72"
IG677	Header(Detail#4 pg 12 of 21)USA-2959	1	72"
TH811	Threshold(Detail#5 pg 14 of 21)USA-2959	2	72"
IG526	Jamb/Vertical(Detail#11 pg 19 of 21)USA-2959	2	120"
NP825	Exterior Gasket	1	60'
NP826	Interior Gasket	1	60'
SB917	Setting Blocks	2	EA
CP801	Vertical Closer Plates	2	EA
WD913	Jamb Water Deflector	2	EA
ST266	Frame Assembly Screw	14	EA
EC801	Sub-Sill End Dam	2	EA
----	1/4" x 3 1/2" Tapcon Head/Jamb/Sill	32	EA
IG100	Filler 4" Jambs	25	EA
SF625/OF925	Doors & Frames- See items below	1	EA
IE502/IG667	Top Rail/ Door Header (Detail 4 pg 12 of 21)USA-2959		
IE501/TH811	Bottom Rail/ Water T.Hold (Detail#5 pg 14 of 21) USA-2959		
IG626/IE520	Jamb/ Door Rail (Detail #11 pg 19 of 21)USA-2959		
IE560/IE550	Door Rail (Detail #10 pg 18 of 21) USA-2959		
IG626/IG100	Transom Top(Detail#1 pg 9 of 21)USA-2959		



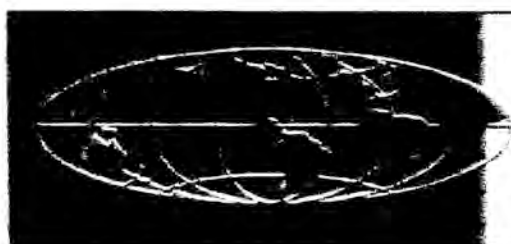
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Keith Owen
 ATL INSPECTOR

Mock Up #5B	Bill of Materials(USA 2980 Sheet 5 of 5)		
Part NO.	DESCRIPTION	QTY	LENGTH
IG626	Head (Detail#1 pg 9 of 12) USA-2959	1	72"
IG100	Filler-Head(Detail#1 pg 9 of 12)USA-2959	1	72"
IG677	Header(Detail#4 pg 12 of 21)USA-2959	1	72"
TH811	Threshold(Detail#5 pg 14 of 21)USA-2959	2	72"
IG526	Jamb/Vertical(Detail#11 pg 19 of 21)USA-2959	2	120"
NP825	Exterior Gasket	1	60'
NP826	Interior Gasket	1	60'
SB917	Setting Blocks	2	EA
CP801	Vertical Closer Plates	2	EA
WD913	Jamb Water Deflector	2	EA
ST266	Frame Assembly Screw	14	EA
EC801	Sub-Sill End Dam	2	EA
----	1/4" x 3 1/2" Tapcon Head/Jamb/Sill	32	EA
IG100	Filler 4" Jambs	25	EA
SF625/OF925	Doors & Frames	1	EA
IE502/IG667	Top Rail/ Door Header (Detail 4 pg 12of 21)USA-2959		
IE501/TH811	Bottom Rail/ Water T.Hold (Detail#5 pg 14 of 21) USA-2959		
IG626/IE520	Jamb/ Door Rail (Detail #11 pg 19 of 21)USA-2959		
IE560/IE550	Door Rail (Detail #10 pg 18 of 21) USA-2959		
IG626/IG100	Transom Top(Detail#1 pg 9 of 21)USA-2959		



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Kurt Owen
 ATL INSPECTOR

SINGLE GLAZED

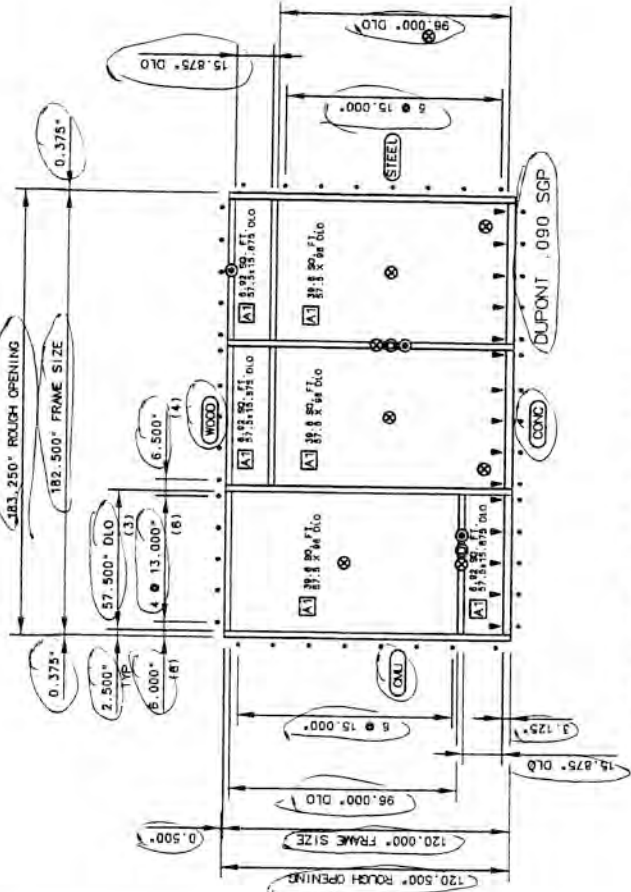
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AMERICAN TEST LAB

DATE 5/22/07

REPORT NO. ATLWC 072401-06

North
Keith Owen
ATL INSPECTOR



STOREFRONT MOCKUP #1-A - 1 ROD.

- (1) TAS 202-94 (Dp = 2.65 PSF)
AIR INFILTRATION
WATER INFILTRATION - 15 PSF
STRUCTURAL
- (1) TAS 201/203-94 LARGE MISSILE/CYCLIC LOAD

SEALANT - DOW 795

INFILL SCHEDULE		
SYMBOL	DESCRIPTION	QTY TO TEST
A	$\frac{1/4" \times 5/8"}{24" \times 96"} \times \frac{180 \text{ SQ. FT.}}{1/4" \times 5/8"} \times 1/4" \times 1/8"$ 138 @ 90, PT.1 DUPONT	3
A	$\frac{1/4" \times 5/8"}{20" \times 96"} \times \frac{180 \text{ SQ. FT.}}{1/4" \times 5/8"} \times 1/4" \times 1/8"$ 20 @ 90, PT.1 DUPONT	3

TEST REQUIREMENTS FOR FBC, HWZ	
ALLOWABLE AIR INFILTRATION: (PARTIAL TEST) 1.37 psf AND 6.24 psf	IMPACT TEST: FBI TYPE III LARGE MISSILE (AT IMP/LL)
ALLOWABLE WATER INFILTRATION: (PARTIAL TEST) 1.37 psf AND 6.24 psf	CYCLIC LOADING TEST: 10,000 CYCLES 4,000 CYCLES (-) 85 psf
STRUCTURAL PERFORMANCE: (PARTIAL TEST) 1.37 psf AND 6.24 psf	ALLOWABLE DEFLECTION: 1/100, 3/11\"/>

LARGE MISSILE IMPACT
DEFLECTION
PER. SET

United States Aluminum	
220 Cal-River Road Rock Hill, SC 29730 200 Singleton Drive Monroeville, TX 75165	
DATE BY J. FREY	REVISION SERIES 10500
DATE 06/23/06	DESCRIPTION STORMFRONT SYSTEM 9/16\"/>

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

DUAL GLAZED

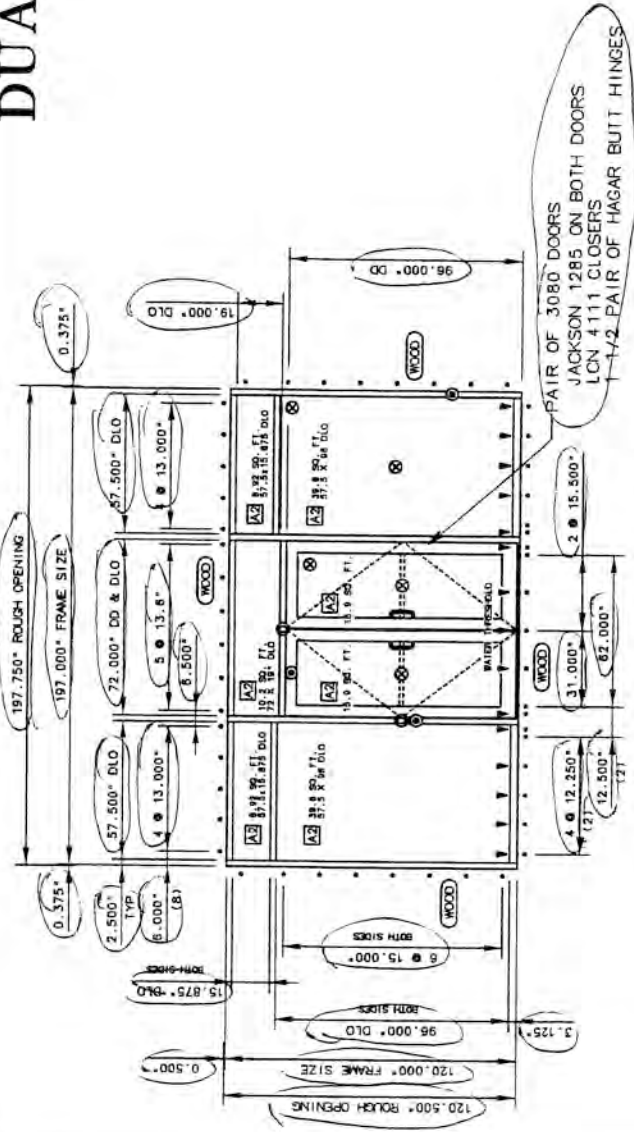
SYM	REVISION	DATE	BY

AMERICAN TEST LAB

DATE 5/22/07

REPORT NO ATLNC 012497-06

David Owen
ATL INSPECTOR



STOREFRONT MOCKUP #2 --- 1 ROD.

- (1) TAS 202-94 (Dp = 55 PSF)
- AIR INFILTRATION
- WATER INFILTRATION - 10 PSF ON DOORS
- STRUCTURAL
- FORCED ENTRY
- (1) TAS 201/203-94 LARGE MISSILE/CYCLIC LOAD

SEALANT - SPECTREM 2

IMFILL SCHEDULE		
SAMPLE	DESCRIPTION	TEST
A1	$3\frac{1}{4}$ W/8" X $20\frac{1}{2}$ 1/4" A/R = 1 1/4 HS = 128 SQ. FT., DUPOINT	2
A2	$5\frac{1}{8}$ W/8" X $20\frac{1}{2}$ A/R = 1 1/4 HS = 128 SQ. FT., DUPOINT	2
A3	$3\frac{1}{4}$ W/8" X 202 A/R = 1 1/4 HS = 128 SQ. FT., DUPOINT	2
A4	$3\frac{1}{4}$ W/8" X 83 1/4" A/R = 1 1/4 HS = 128 SQ. FT., DUPOINT	1
A5	$3\frac{1}{4}$ W/8" X $20\frac{1}{2}$ 1/4" A/R = 1 1/4 HS = 128 SQ. FT., DUPOINT	

TEST REQUIREMENTS FOR FBC, HAZ	
ALLOWABLE AIR INFILTRATION:	FORCED ENTRY:
1.37 CFM @ 0.24 PSI	IMPACT TEST:
ALLOWABLE WATER INFILTRATION:	1.5\"/>

- ⊗ LARGE MISSILE IMPACT
- ⊙ DEFLECTION
- ⊙ PER. SET

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

United States Aluminum	
• 200 Cal-Rite Road	
• Rock Hill, SC 29729	
• 200 Singleton Drive	
• North Charleston, SC 29505	
DESIGN BY	J. FREY
DATE	08/23/06
PROJECT NO.	USA-2980
SCALE	1\"/>

DUAL GLAZED

SYM	REVISION	DATE	BY

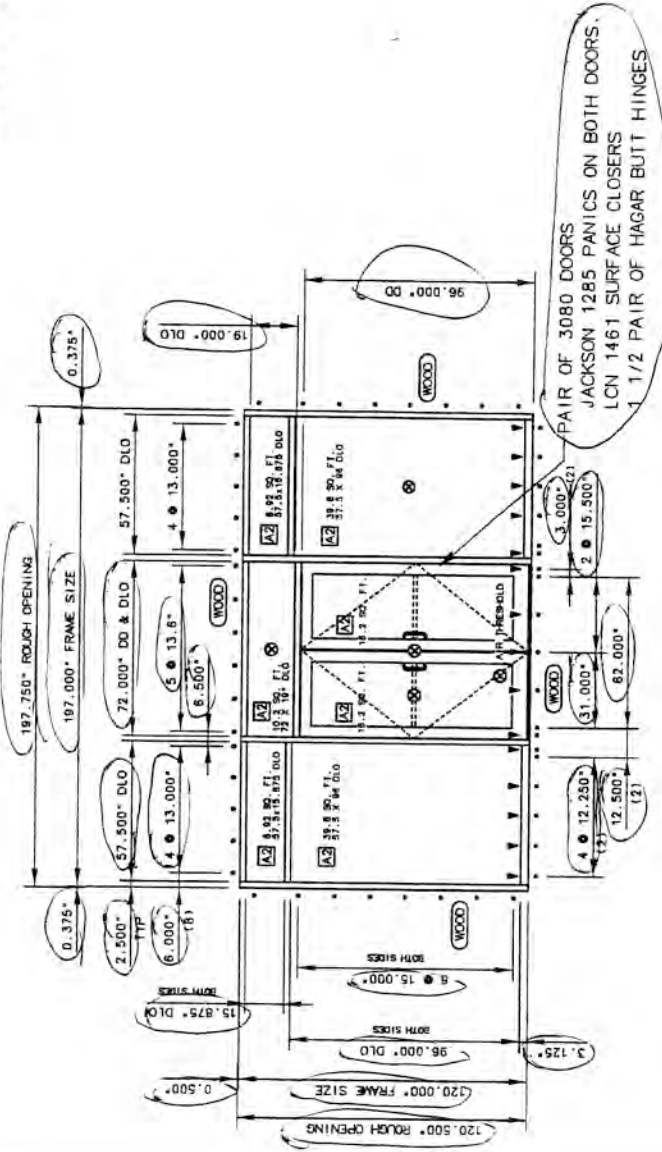
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REPORT NO. ATLNC 072401-06

Paul Chen
ATL INSPECTOR



STOREFRONT MOCKUP #3 --- 1 RQD.

(Dp = 5.65 PSF)
(1) 1AS 201/203-94 LARGE MISSILE/CYCLIC LOAD

SEALANT - PECORA 895

INFILL SCHEDULE			
SYMBOL	DESCRIPTION	TEST	QTY TO TEST
A1	1/4" x 3/8" x 1/4" MS - 250 PSF, 1/4" SUPORT	125' x 50', 1/4" SUPORT	2
A2	3/4" x 3/8" x 1/4" MS - 250 PSF, 1/4" SUPORT	125' x 50', 1/4" SUPORT	1
A3	1/4" x 3/8" x 1/4" MS - 250 PSF, 1/4" SUPORT	125' x 50', 1/4" SUPORT	2
A4	1/4" x 3/8" x 1/4" MS - 250 PSF, 1/4" SUPORT	125' x 50', 1/4" SUPORT	1

TEST REQUIREMENTS FOR FBC, HWZ	
IMPACT TEST:	(LARGE MISSILE (AS IMPILL))
DEFLECTION:	(LARGE MISSILE (AS IMPILL))
DEFLECTION:	(LARGE MISSILE (AS IMPILL))
DEFLECTION:	(LARGE MISSILE (AS IMPILL))

② LARGE MISSILE IMPACT
③ DEFLECTION
④ PER. SET

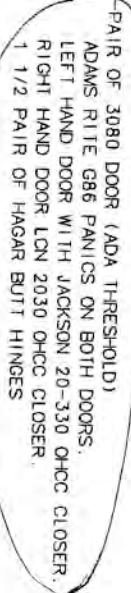
United States Aluminum	
200 Capital Ave. 200 Capital Ave. 200 Capital Ave. 200 Capital Ave. 200 Capital Ave.	
DATE	08/23/06
BY	J. FREY
DESCRIPTION	SERIES IG600 STORMFRONT SYSTEM 1 5/16" LAM. GLAZING
ELEVATION & BILL OF MATERIALS	USA-2980
SCALE	3 OF 5

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

REV	REVISION	DATE	BY
1			
2			
3			
4			

DATE 5/22/07
REPORT NO. ATLNC 07202107

ALL INSPECTION



(1) TAS 202-94 (Dp = ± 0.5 PSF)
STRUCTURAL
FORCED ENTRY
(1) TAS 201/203-94 LARGE MISSILE/CYCLIC LOAD

IN-FILE SCHEDULE

TEST REQUIREMENTS FOR FOC-H072

PERFORMANCE:
FUEL CONSUMPTION: 10.5 gph
MAX. ALTITUDE: 10,000 ft
ALLOWED DEVIATION: 1/160, 3/4" MAX

LOGGED DATA:
FUEL INLET
FUEL OUT
TANK WEIGHT (AT INLET)

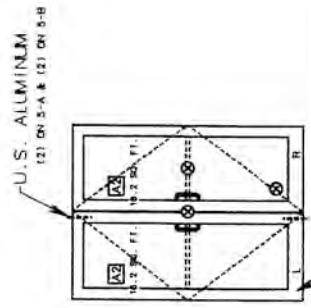
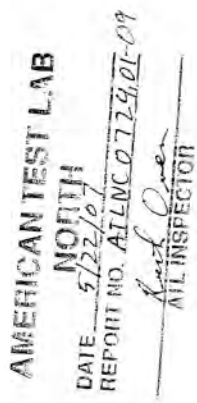
FOCAL POINTING TEL:
4,500 CIRCLES (1.85 DEG)
4,500 CIRCLES (1.85 DEG)

⑧ LARGE MISSILE IMPACT
⑦ DEFLECTION
⑥ PER. SET

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

United States Aluminum	
* 720 Cal-River Road * Box 1111, SC 29730 * 200 Singleton Dr. * Columbia, TX 75165	
ORDER BY	SHIP TO
J. FREY	
DATE	
06/23/08	
APPRO BY	DESCRIPTION
	BILL OF MATERIALS
QUANTITY	ELEVATION & SLOPE
USA-2980	4 OF 5
FULL SIZE	

SYM	REVISION	DATE	BY



PAIR OF 3080 DOOR (ADA THRESHOLD)
STANDARD LOCK ON RIGHT DOOR.
1YES FLUSH BOLTS ON THE LEFT DOOR.
OR LAWRENCE SURFACE CLOSERS (CLO45).
1 1/2 PAIR OF HAGAR BUTT HINGES

PAIR OF 3080 DOORS
STANDARD LOCK ON RIGHT DOOR.
U.S. ALUMINUM FLUSH BOUTS ON THE LEFT DOOR
CR. LAWRENCE SURFACE CLOSERS (CL045).
1 1/2 PAIR OF HAGAR BUTT HINGES

STOREFRONT MOCKUP #5-B - 1 RQD.

(1) TAS 202-94 (Dp = ±65 PSF)

STRUCTURAL

(1) TAS 201/203-94 LARGE MISSILE/CYCLIC LOAD

SEALANT - DOW 795

[illegible]

TEST REQUIREMENTS

STRUCTURAL REFERENCE:
ASTM A 36-61
ASTM A 572-61
STRUCTURAL STEEL
ALLOWABLE DETENTION = 1/100, 2 1/4" MAX.

DESIGN LOADING TEST:
TENSILE YIELD
4,400 COILS (-) 85 PSI
4,400 COILS (+) 85 PSI
9,200 COILS (-) 85 PSI

IMPACT TEST:
ASTM A 36-61
1/2" X 1/2" X 1/2"
1/2" X 1/2" X 1/2"
102 102 111

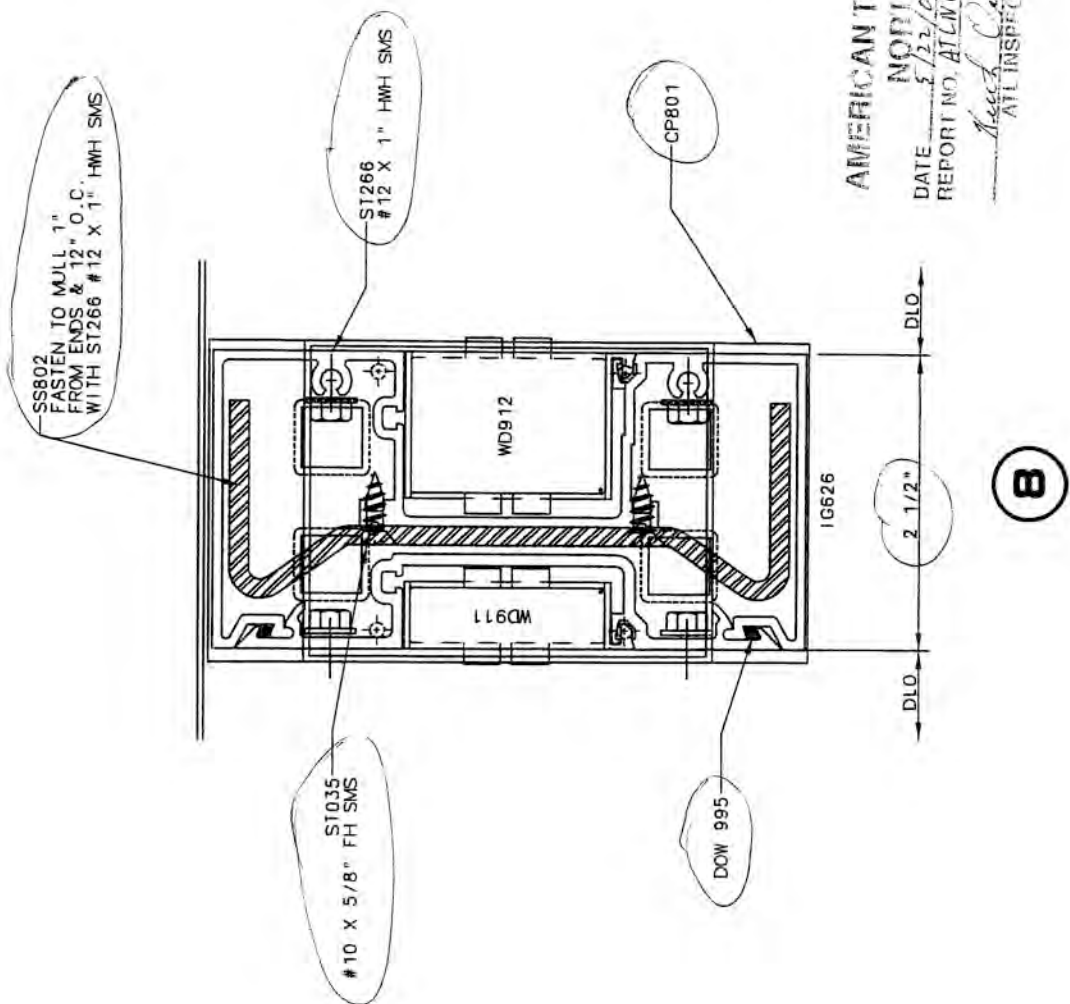
COILED ROLL:

⊗ LARGE MISSILE IMPACT
⊙ DEFLECTION
⊙ PER. SET

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

United States Aluminum • 720 Cl-ri-ver Road • Moss Hill, SC 29710 • 800 Single-ton Drive • Rock Hill, S.C. 29730	
ORDER # DATE QUANTITY APPROVED BY	J. FREY, 05/23/06 15'x16'x16'x16' 15'x16'x16'x16' 15'x16'x16'x16'
SERIES 1G600 STORM-PROOF SYSTEM 1 5/16" LAM. GLAZING	ELEVATION & BILL OF MATERIALS SHEET
SCALE FULL SIZE	DRAWING NO. USA-2980 5 OF 5

SYM	REVISION	DATE	BY

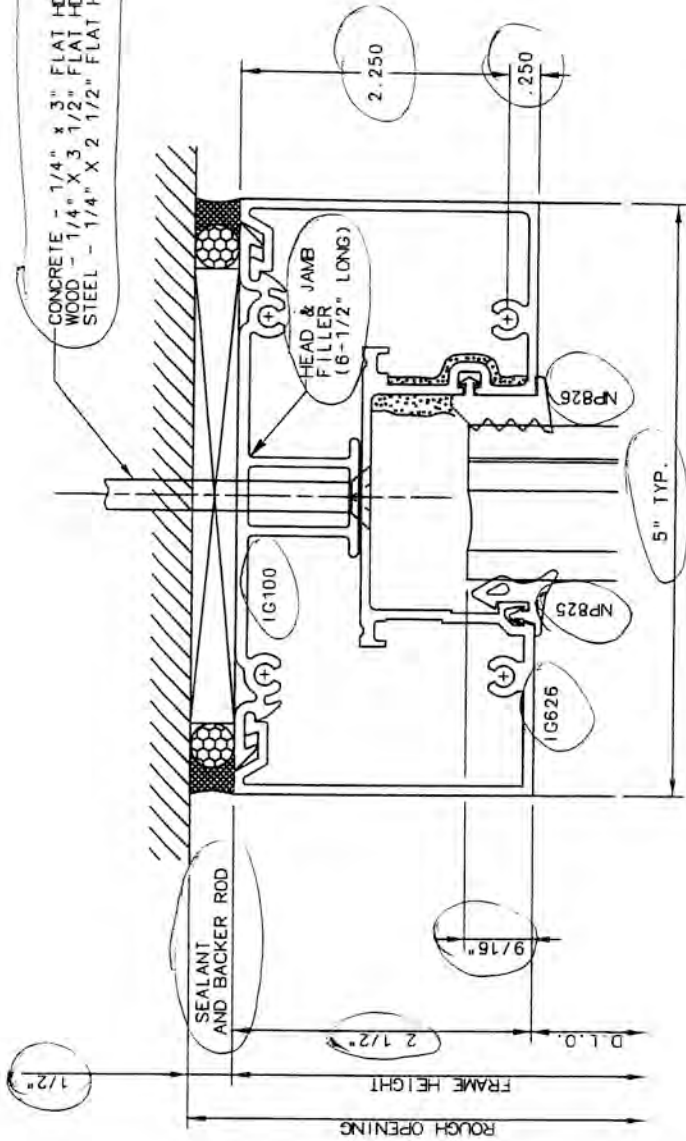


AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ATLWC 012401-06
Neel Cooper
 ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER	
THIS SPACE RESERVED FOR METRO-DADE USE ONLY	
 United States Aluminum • 720 Cal-River Road Rock Hill, SC 29730 • 800 Singlefort Drive Northridge, TX 75365	
DRAWN BY TER MEER	SYSTEM SERIES IG600 STORM FRONT SYSTEM
DATE 03/02/07	DESCRIPTION DETAILS
SCALE FULL SIZE	SHEET NO. USA-2959
SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION	
08 OF 21	

SYM	REVISION	DATE	BY

CONCRETE - 1/4" x 3" FLAT HD TAPCON EMBEDDED 1 1/4" MIN.
WOOD - 1/4" x 3 1/2" FLAT HD TAPCON EMBEDDED 1 1/2" MIN.
STEEL - 1/4" x 2 1/2" FLAT HD TEK SCREW



THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

AMERICAN TEST LAB

DATE 5/22/07
REPORT NO. ATLNC 072401-06
Jack Davis
ATLINSPECTOR

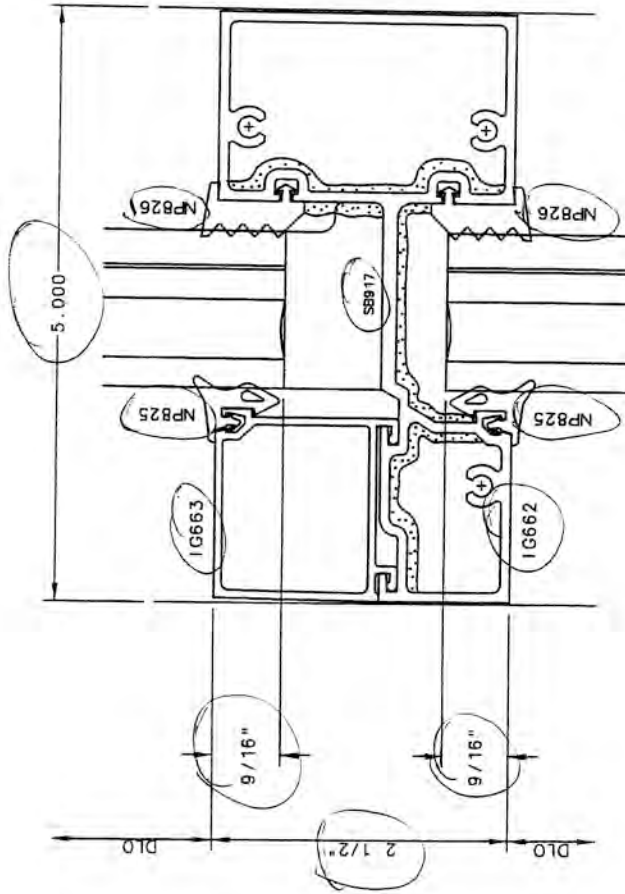
1

United States Aluminum
720 Cal-River Road
Rock Hill, SC 29730
400 Singleton Drive
Greenville, TX 75165

TER MEER	SERIES IG600	STORM FRONT SYSTEM
DATE	05/18/06	
APPROVED BY		
SCALE	USA-2959	9 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY



AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ATLNC 0729.01-06
Handwritten signature
 ATTENTION

2

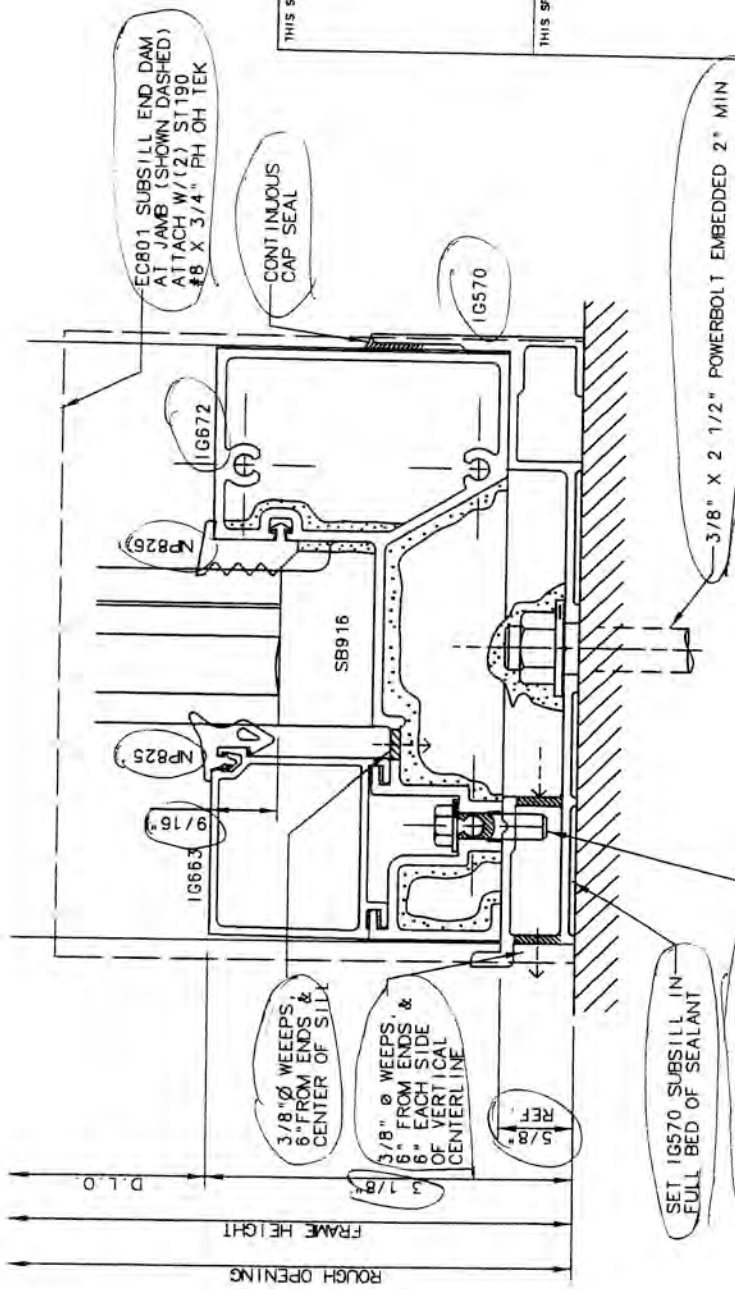
THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

		United States Aluminum 720 Col-River Road Rock Hill, SC 29730 Phone: 803/961-1717 Fax: 803/961-1718
DRAWN BY TER MEER	SERIES IG600	SYSTEM STORM FRONT SYSTEM
DATE 05/18/06	REVISION DETAILS	SHEET 10 OF 21
SCALE FULL SIZE	DRAWING NO. USA-2959	

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY



AMERICAN TEST LAB

DATE 5/22/07
 REPORT NO. ALLNC 072401-06
 ALL INSPECTOR

3

United States Aluminum
 • 720 Cellier Road
 Houston, TX 77050
 • 200 Singletree Dr.
 Waco, TX 76798

TER MEER SERIES IG600
 STORM FRONT SYSTEM

DATE 05/18/06
 DRAWING NO. USA-2959
 SHEET 11 OF 21

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

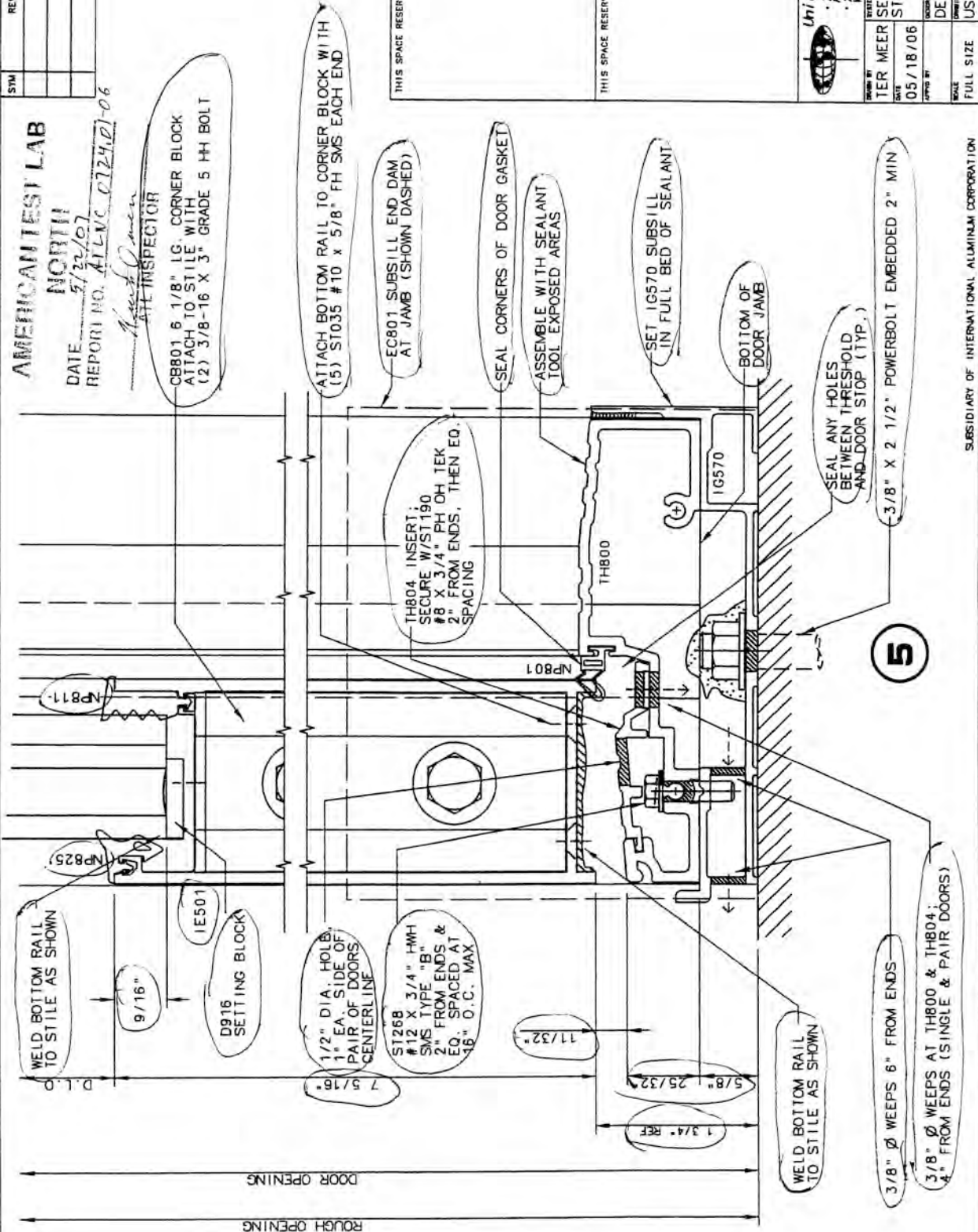
SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ALLVC 072407-06

Inspector
SPE INSPECTOR

CB801 6 1/8" LG. CORNER BLOCK
ATTACH TO STILE WITH
(2) 3/8-16 X 3" GRADE 5 HH BOLT



THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

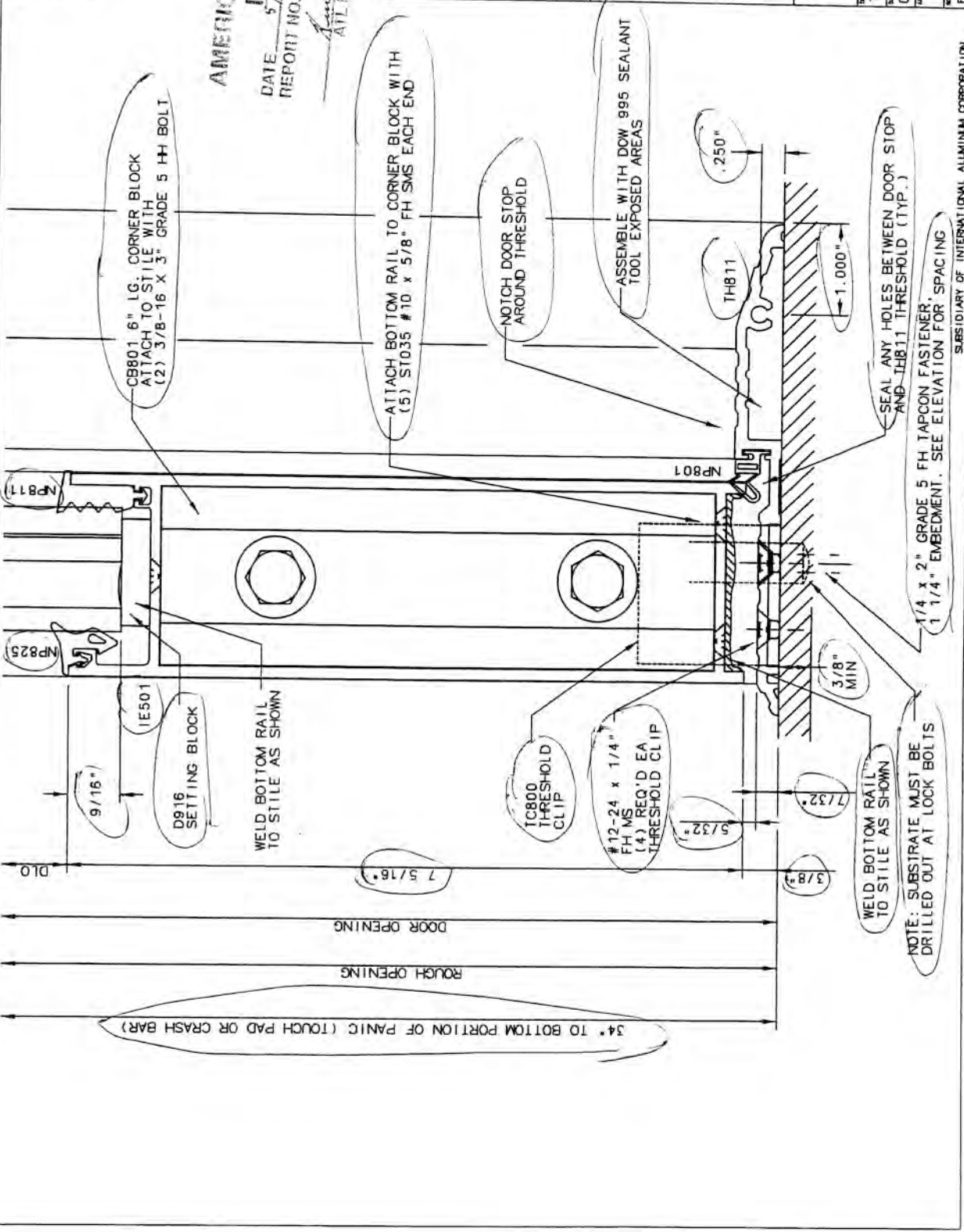
THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum
220 Cat River Road
Chillicothe, GA 30610
200 Singletown Drive
Marietta, GA 30066

DESIGNED BY	TER MEER
DATE	05/18/06
PROJECT	STORM FRONT SYSTEM
SCALE	USA-2959
SHEET	13 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

REV	REVISION	DATE	BY



AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ALWC 072401-06
 Andrew Owen
 AIR INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DATE USE ONLY

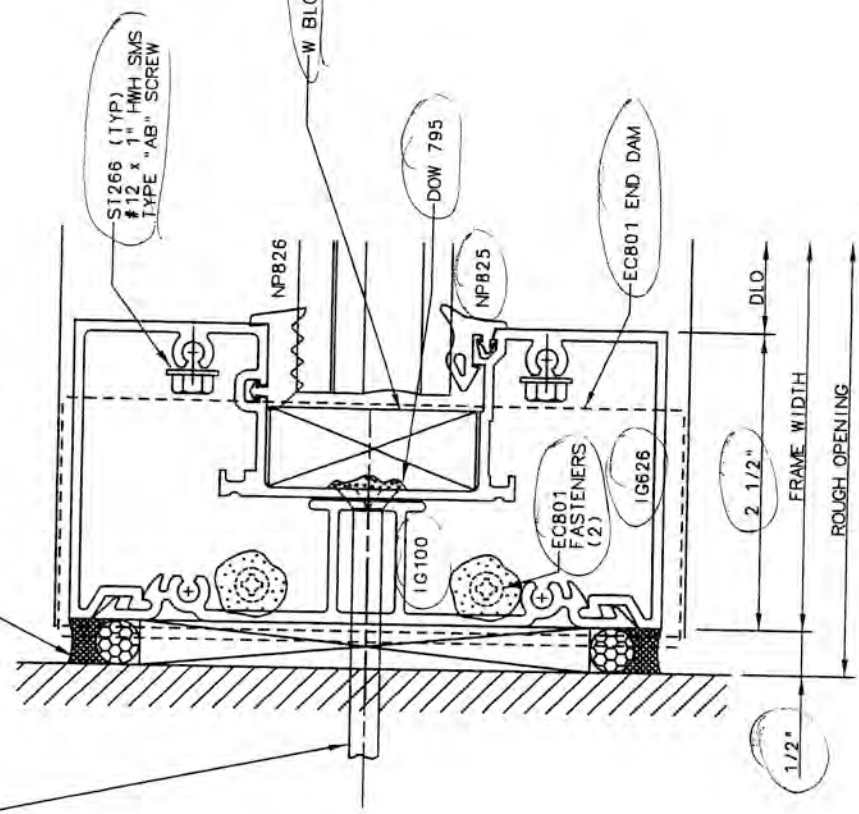
United States Aluminum
 • 720 Cal-River Road
 Rock Hill, SC 29730
 • 200 Singleton Drive
 Marietta, GA 30066

DESIGNED BY	TER MEER
DATE	05/18/06
DESCRIPTION	STORM FRONT SYSTEM
SCALE	DETAILS
FULL SIZE	USA-2959
SHEET	14 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

CONCRETE - 1/4" x 3" FLAT HD TAPCON EMBEDDED 1 1/4" MIN.
 WOOD - 1/4" x 3 1/2" FLAT HD TAPCON EMBEDDED 1 1/2" MIN.
 STEEL - 1/4" x 2 1/2" FLAT HD TEK SCREW

SEALANT AND BACKER ROD



7

AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ATLNC 0724101-06
Keith Owen
 ATL INSPECTOR

W BLOCK (.688 WIDE) WB600

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

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United States Aluminum
 720 Cal-River Road
 Rock Hill, SC 29730
 800 Singleton Drive
 Rock Hill, SC 29730

DESIGNED BY	TER MEER
DATE	05/18/06
DRAWN BY	DESCRIPTION
	SERIES IG600
	STORM FRONT SYSTEM
	DETAILS
SHEET	USA-2959
FULL SIZE	15 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

REVISION	DATE	BY

AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ATLNC 072401-01
Paul Chen
ATL INSPECTOR

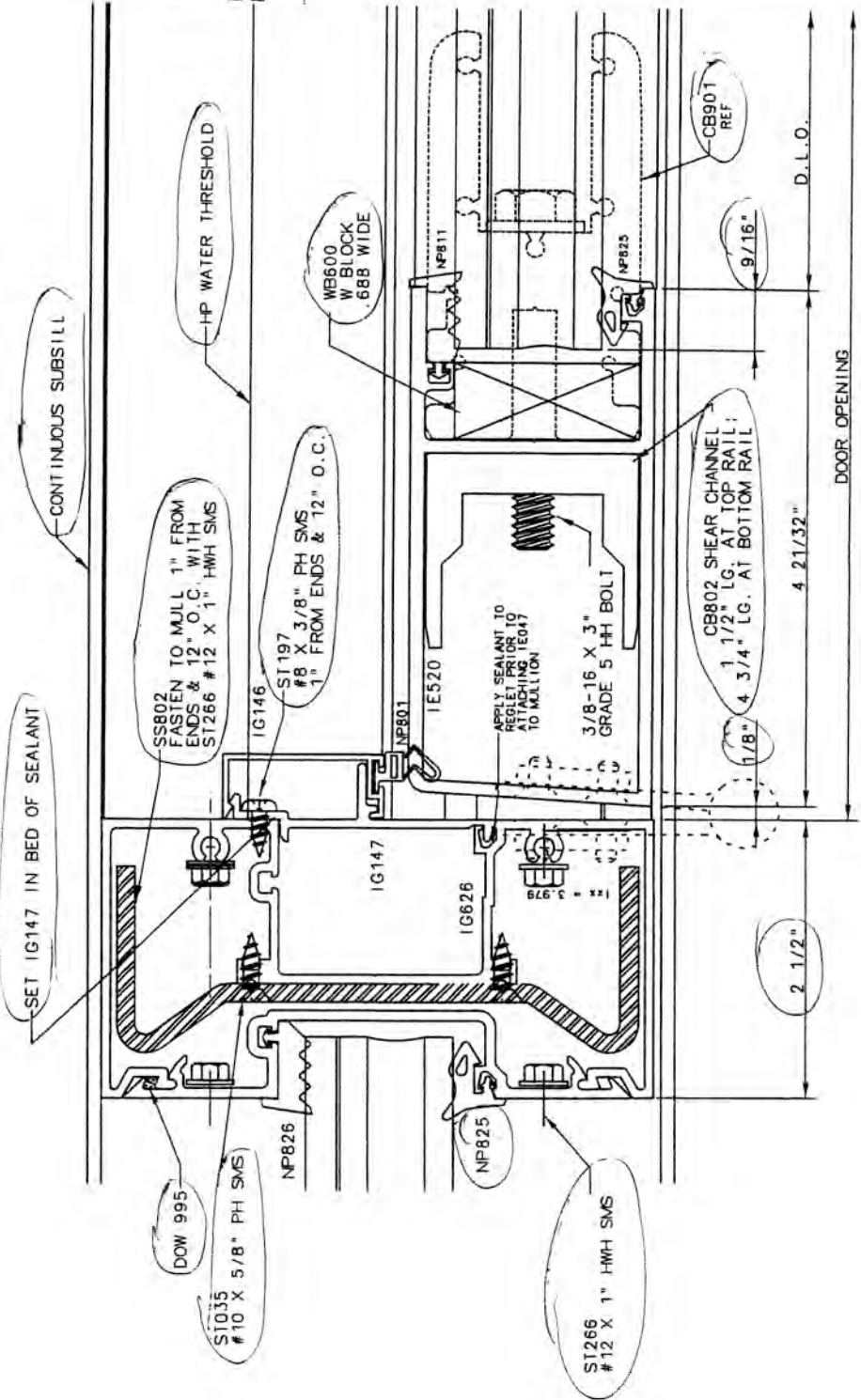
THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY



United States Aluminum
• 220 Cal-River Road
Rock Hill, SC 29730
• 200 Singleton Drive
Marathon, TX 75165

DESIGN BY	SYSTEM
TER MEER	SERIES IG600
DATE	STORM FRONT SYSTEM
05/18/06	
DESIGNED BY	DETAILS
SCALE	USA-2959
FULL SIZE	17 OF 21

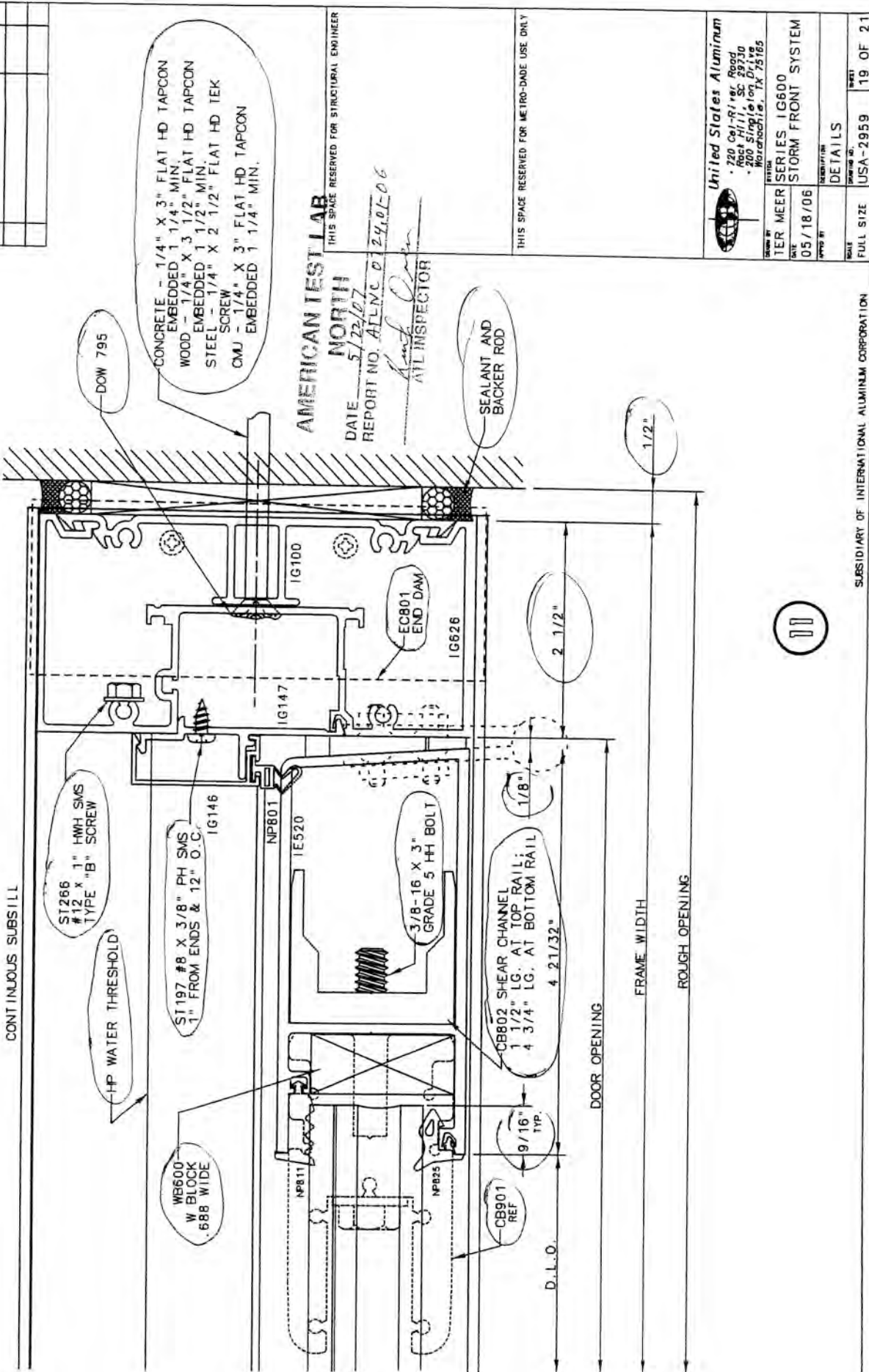


9

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

CONTINUOUS SUBSILL



AMERICAN TEST LAB

NORTH
DATE 5/22/07
REPORT NO. ATLNC 072401-06
ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

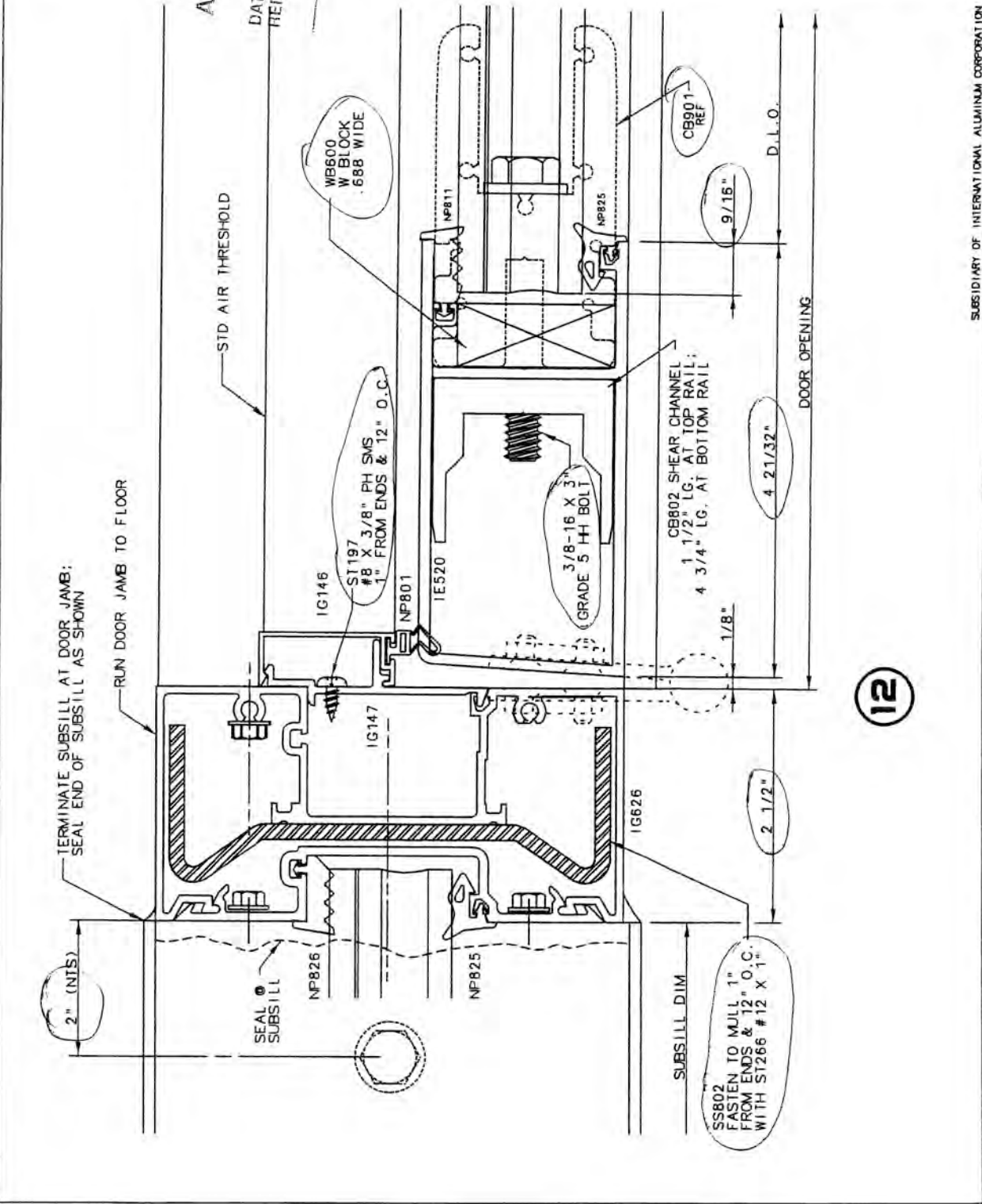
THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum
720 Col-River Road
Rock Hill, SC 29730
200 Singleton Drive
Worcester, TX 75785

TER MEER	SERIES IG600
DATE	05/18/06
APPROVED BY	DETAILS
SCALE	USA-2959
FULL SIZE	19 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYN	REVISION	DATE	BY



12

AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ATLWC 0729.01-06
ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum
720 Cal-River Road
Rock Hill, SC 29730
254 S. Main Street
Rock Hill, SC 29730

TER MEER
SERIES IG800
STORM FRONT SYSTEM

DATE
05/18/06

DESCRIPTION
DETAILS

SCALE
FULL SIZE

PROJECT NO.
USA-2959

SHEET
20 OF 21

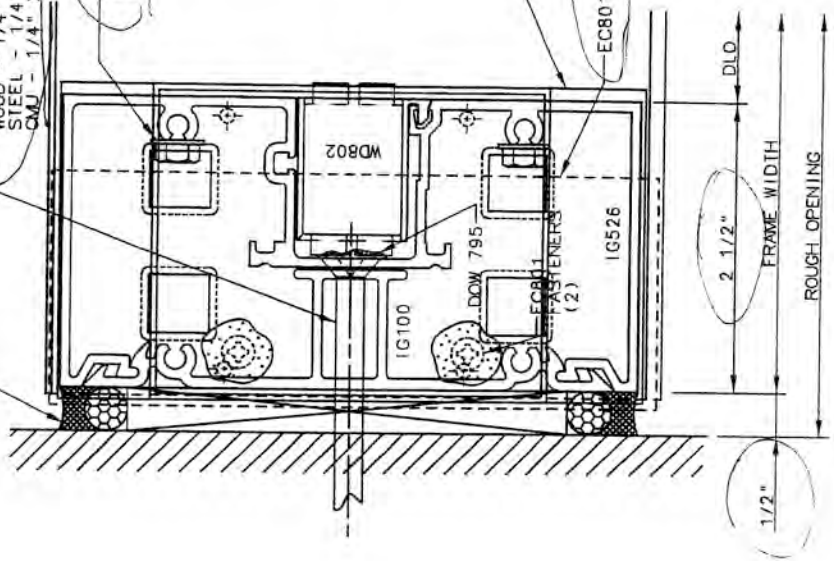
SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

SEALANT AND BACKER ROD

CONCRETE - 1/4" X 3" FLAT HD TAPCON EMBEDDED 1 1/4" MIN.
WOOD - 1/4" X 3 1/2" FLAT HD TAPCON EMBEDDED 1 1/2" MIN.
STEEL - 1/4" X 2 1/2" FLAT HD TEK SCREW
CMU - 1/4" X 3" FLAT HD TAPCON EMBEDDED 1 1/4" MIN.

ST266 (TYP)
#12 x 1" HHW SMS
TYPE "AB" SCREW



AMERICAN TEST LAB

NORTH
DATE 5/22/07
REPORT NO. ATLNC 072401-06
ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRIC-DATE USE ONLY

United States Aluminum
 • 720 Cal-River Road
 Rock Hill, SC 29730
 • 200 Singleton Drive
 North Charleston, TX 75165

DESIGN BY	TER MEER
DATE	03/12/07
APPROVED BY	
DESCRIPTION	SERIES IG500 STORM FRONT SYSTEM
SCALE	DETAILS
FULL SIZE	2958
SHEET	07 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

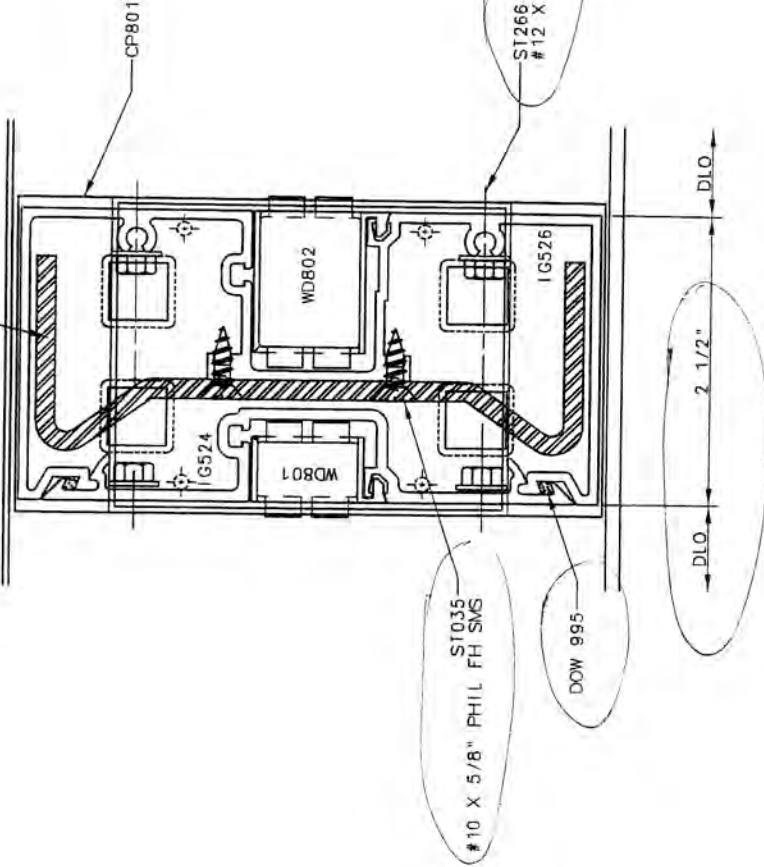
AMERICAN TEST LAB

NORTH
DATE 5/22/07

REPORT NO. ATLNC 072401-06

Paul Owen
ATL INSPECTOR

SS802
FASTEN TO MULL 1"
FROM ENDS & 12" O.C.
WITH ST266 #12 X 1" HMH SMS



8

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-GAGE USE ONLY

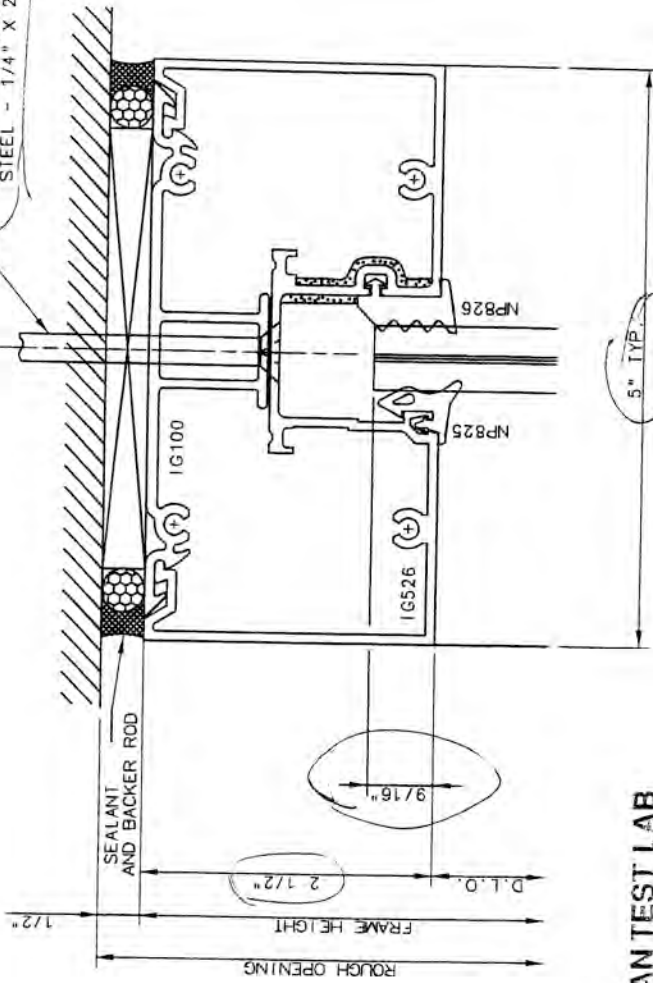
United States Aluminum
220 Cal-River Road
Rock Hill, SC 29730
200 S. Main St., Suite 200
Waco, TX 76798

DRAWN BY TIER MEER DATE 03/12/07	REVISION SERIES IG500 STORM FRONT SYSTEM
SCALE FULL SIZE	DRAWING NO. USA-2958
SHEET 08 OF 21	

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY
B	REVISED HEAD EXTRUSION	05/04/00	RT

CONCRETE - 1 1/4" X 3" FLAT HD TAPCON EMBEDDED 1 1/4" MIN.
WOOD - 1 1/4" X 3 1/2" FLAT HD TAPCON EMBEDDED 1 1/2" MIN.
STEEL - 1/4" X 2 1/2" FLAT HD TEK SCREW



AMERICAN TEST LAB

NORTH

DATE 5/22/07
REPORT NO. ATLVC 0719.01-06

Karl Green
ATL INSPECTOR

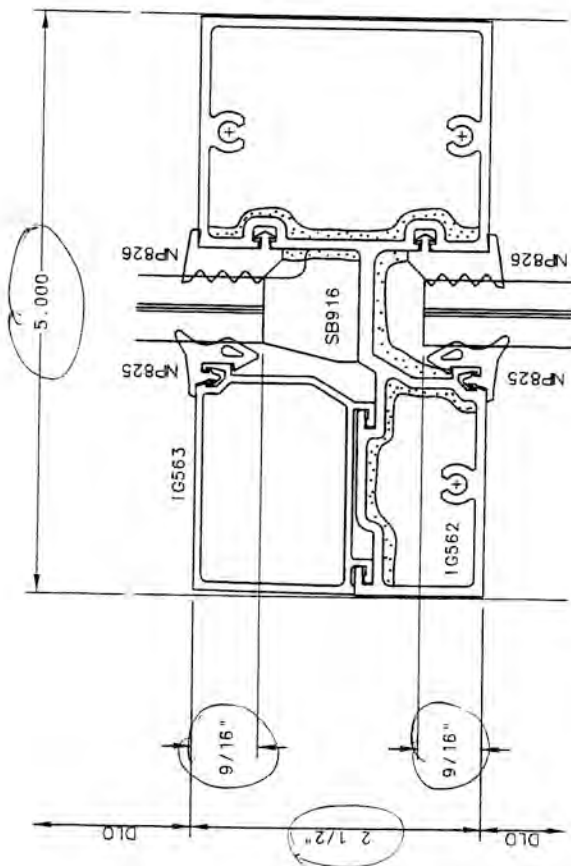
THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DAVE USE ONLY

United States Aluminum
• 220 Cal-River Road
• 220 S. Highway 101, SC 29730
• 200 S. Highway 101, TX 75165

DESIGN BY	SYSTEM
TER MEER	SERIES IG500
DATE	STORM FRONT SYSTEM
05/18/06	
APPROVED BY	DESCRIPTION
	DETAILS
NOTE	DRAWING NO.
	USA-2958
	SHEET
	9 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION



AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ATLNC 072401-06
 ATL INSPECTOR

2

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

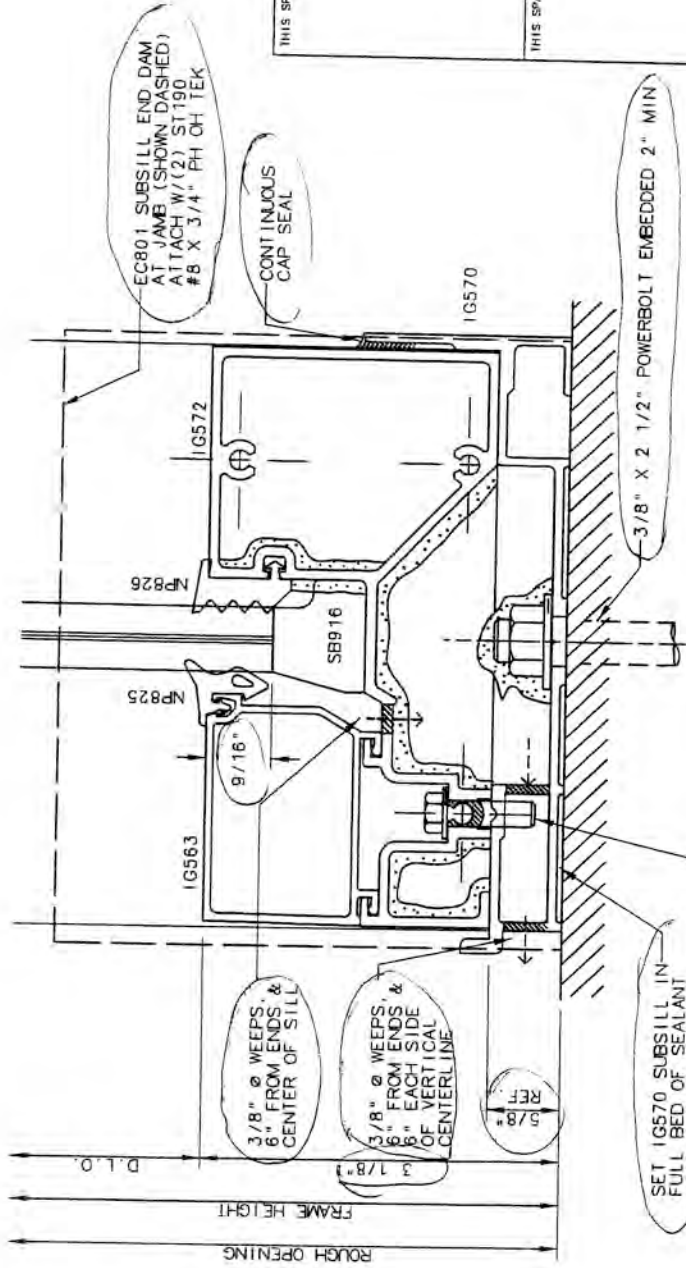
THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum
 • 720 Co-River Road
 • 6001 N. W. 13th Ave.
 • 200 Singleton Dr 130
 • Worth, Georgia, TX 75165

DESIGN BY TIER MEER	DATE 05/18/06	DESCRIPTION STORM FRONT SYSTEM	SCALE DETAILS	SHEET USA-2958	10 OF 21
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SYM	REVISION	DATE	BY



AMERICAN TEST LAB

NORTH

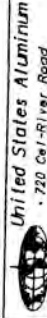
DATE 5/22/07
REPORT NO. ATLNC 072401-06

Red Green
ATL INSPECTOR

3

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-GRADE USE ONLY

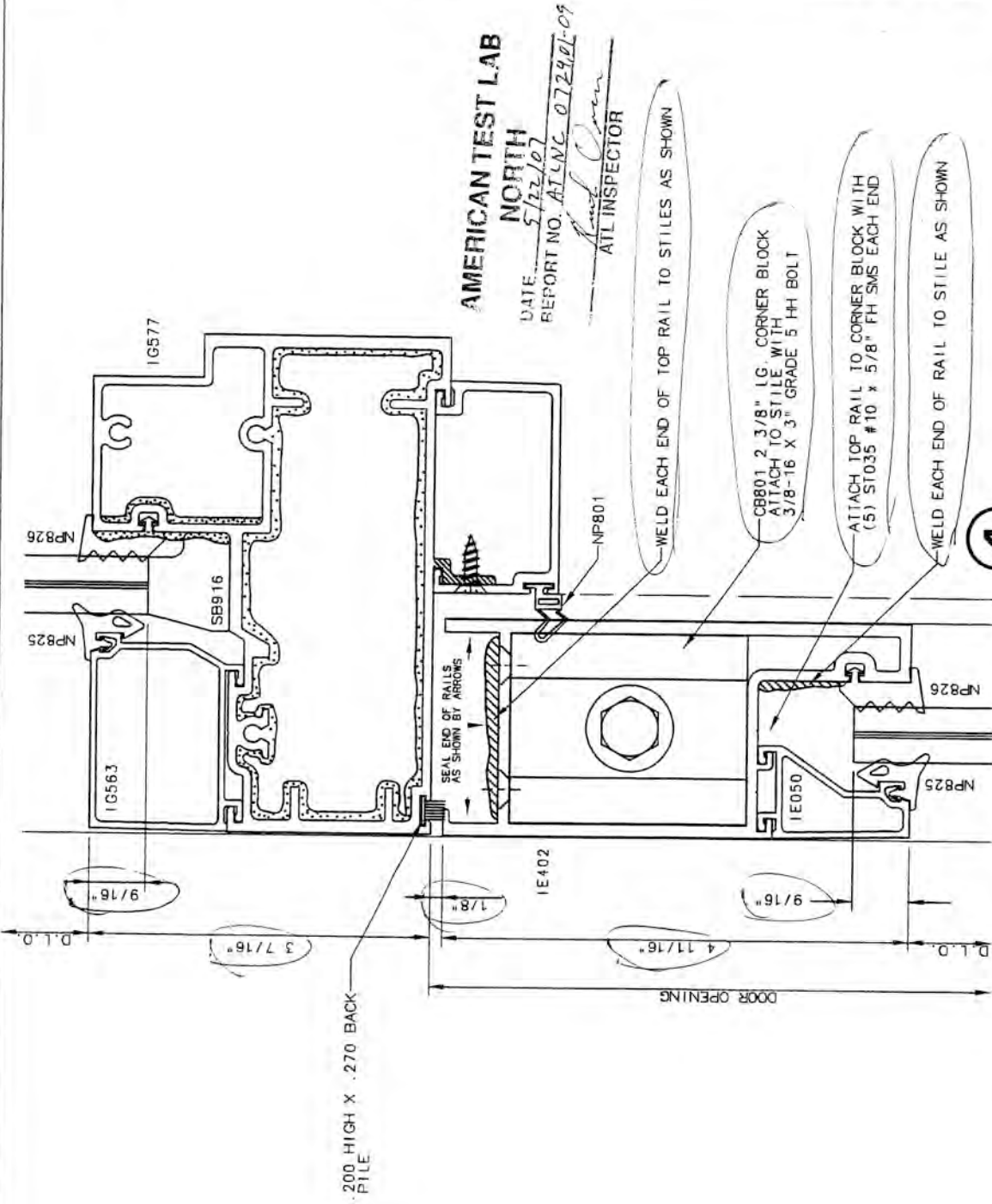


United States Aluminum
720 Cal-River Road
Hilli, SC 29730
200 S. Highway 17
Washburn, TX 75165

DESIGNED BY	TER MEER	SERIES	IG500
DATE	05/18/06	SYSTEM	STORM FRONT SYSTEM
DRAWN BY		DETAILS	
SCALE		FULL SIZE	
		USA-2958	11 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

STN	REVISION	DATE	BY



AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ATLNC 072401-09
Paul Owen
ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

		United States Aluminum 220 Cal-River Road Rock Hill, SC 29730 803-781-1111 803-781-1112 803-781-1113	
DRAWN BY TER MEER	DATE 06/26/02	SYSTEM SERIES IG500	DESCRIPTION STORM FRONT SYSTEM
SCALE FULL SIZE	DRAWING NO. USA-2958	SHEET 12	OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ATLVC 072407-06
ATL INSPECTOR

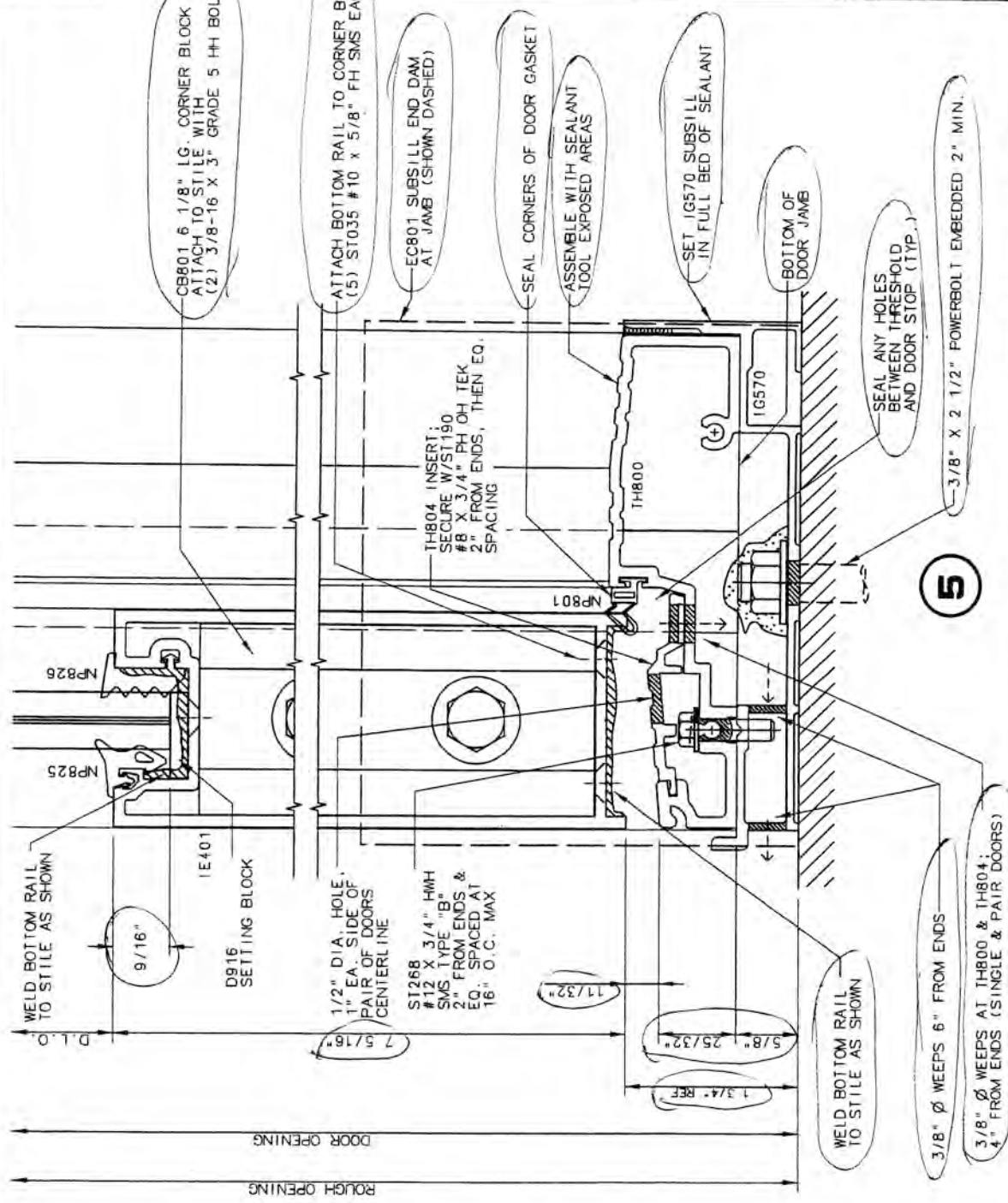
THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY



United States Aluminum
7200 Cal-River Road
Rock Hill, SC 29730
200 Singleton Drive
Worsham, TX 75165

DRAWN BY TER MEER	CHECKED BY 05/18/06	TITLE STORM FRONT SYSTEM
SCALE FULL SIZE		
SHEET 13 OF 21		



SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SW	REVISION	DATE	BY

AMERICAN TEST LAB

NORTH

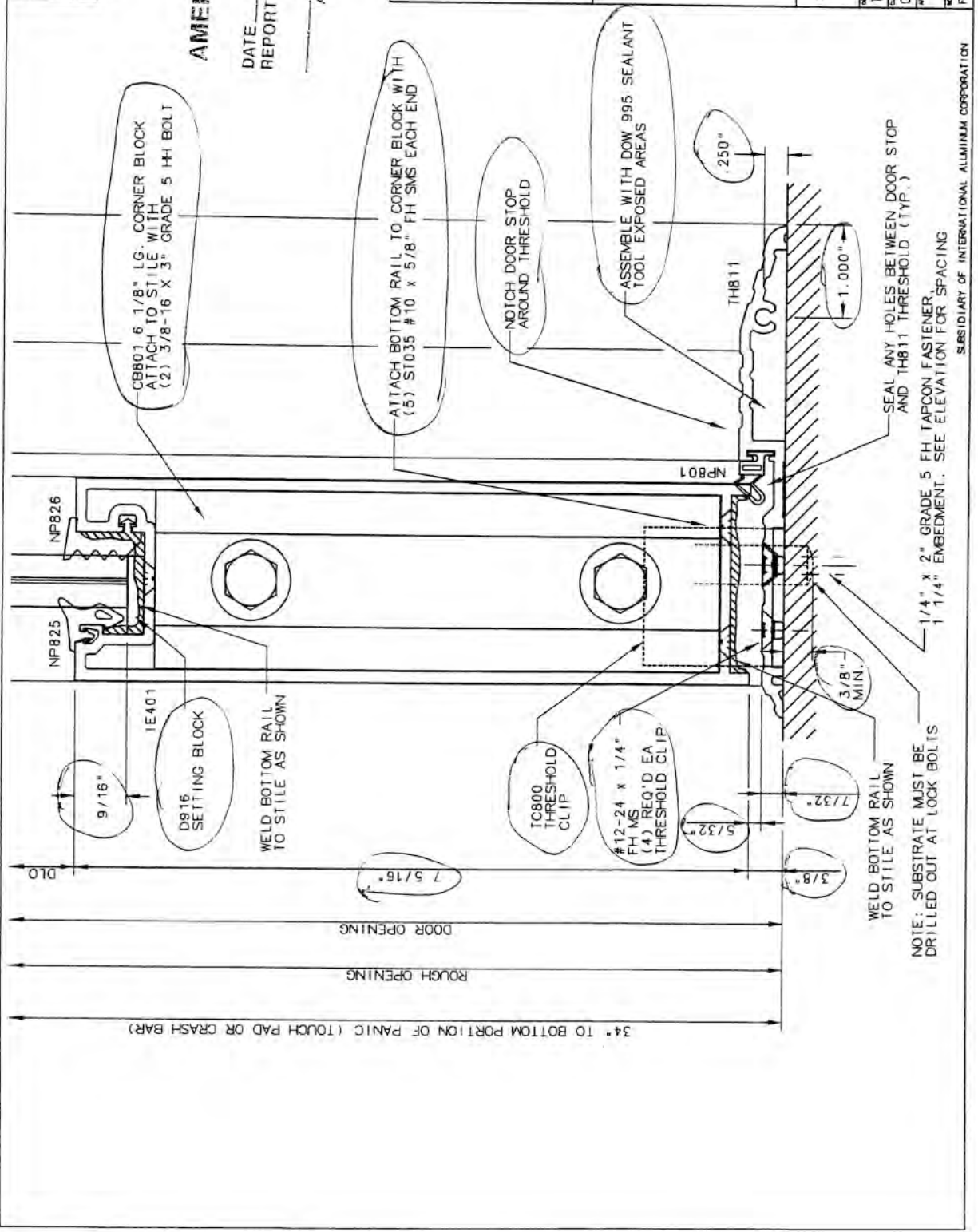
DATE 5/22/07
 REPORT NO. ATLNC 072401-26
Paul Davis
 ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DATE USE ONLY

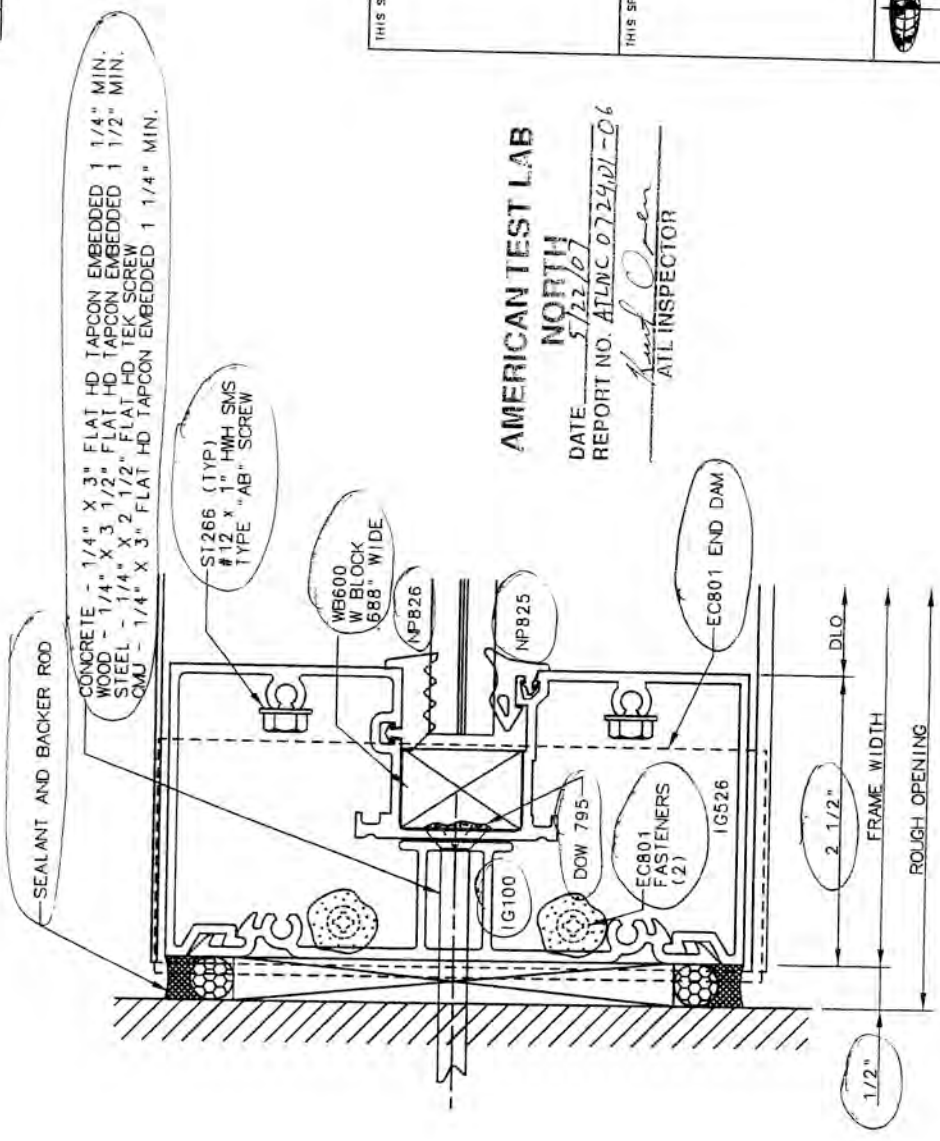
United States Aluminum
 700 Cal-River Road
 Rock Hill, SC 29730
 • 200 Singleton Drive
 Wadsworth, TX 75185

DESIGN BY	TER MEER	SERIES	IG500
DATE	05/18/06	DESCRIPTION	STORM FRONT SYSTEM
APPROVED BY		DETAILS	
SCALE			
FULL SIZE	USA-2958	SHEET	14 OF 21



SEALANT OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY



AMERICAN TEST LAB
NORTH
DATE 5/22/07
REPORT NO. ATLNC 0724,01-06
Handwritten Signature
ATL INSPECTOR

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-PADE USE ONLY

United States Aluminum
• 200 Cal Rieg Road
Rock Hill, SC 29730
• 200 Singleton Drive
Watahatchie, TX 75165

DESIGNED BY	TER MEER
DATE	05/18/06
APPROVED BY	TER MEER
SERIES	SERIES IG500
DESCRIPTION	STORM FRONT SYSTEM
DETAILS	
SCALE	1/4" = 1'-0"
FULL SIZE	2958
SHEET	15 OF 21

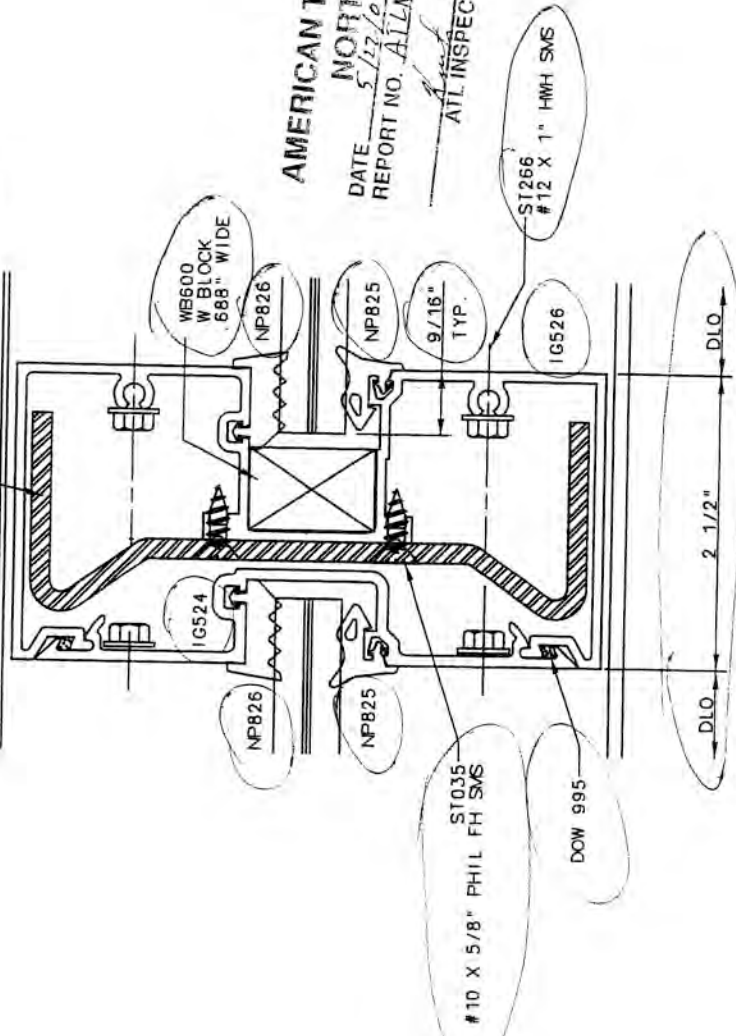
SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

7

STM	REVISION	DATE	BY

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER	
THIS SPACE RESERVED FOR METRO-DADE USE ONLY	
 United States Aluminum • 720 Cal-River Road Rock Hill, SC 29730 • 200 Singleton Drive Waco, TX 76785	
DRAWN BY TER MEER	CHECKED BY IG500
DATE 05/18/06	PROJECT STORM FRONT SYSTEM
SCALE USA-2958	
FULL SIZE 16 OF 21	

SS802
FASTEN TO MULL 1"
FROM ENDS & 12" O.C.
WITH ST266 #12 X 1" HHW SMS



AMERICAN TEST LAB
NORTH
 DATE 5/17/07
 REPORT NO. ATLNC 072401-06
John Owen
 ATL INSPECTOR

8

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION



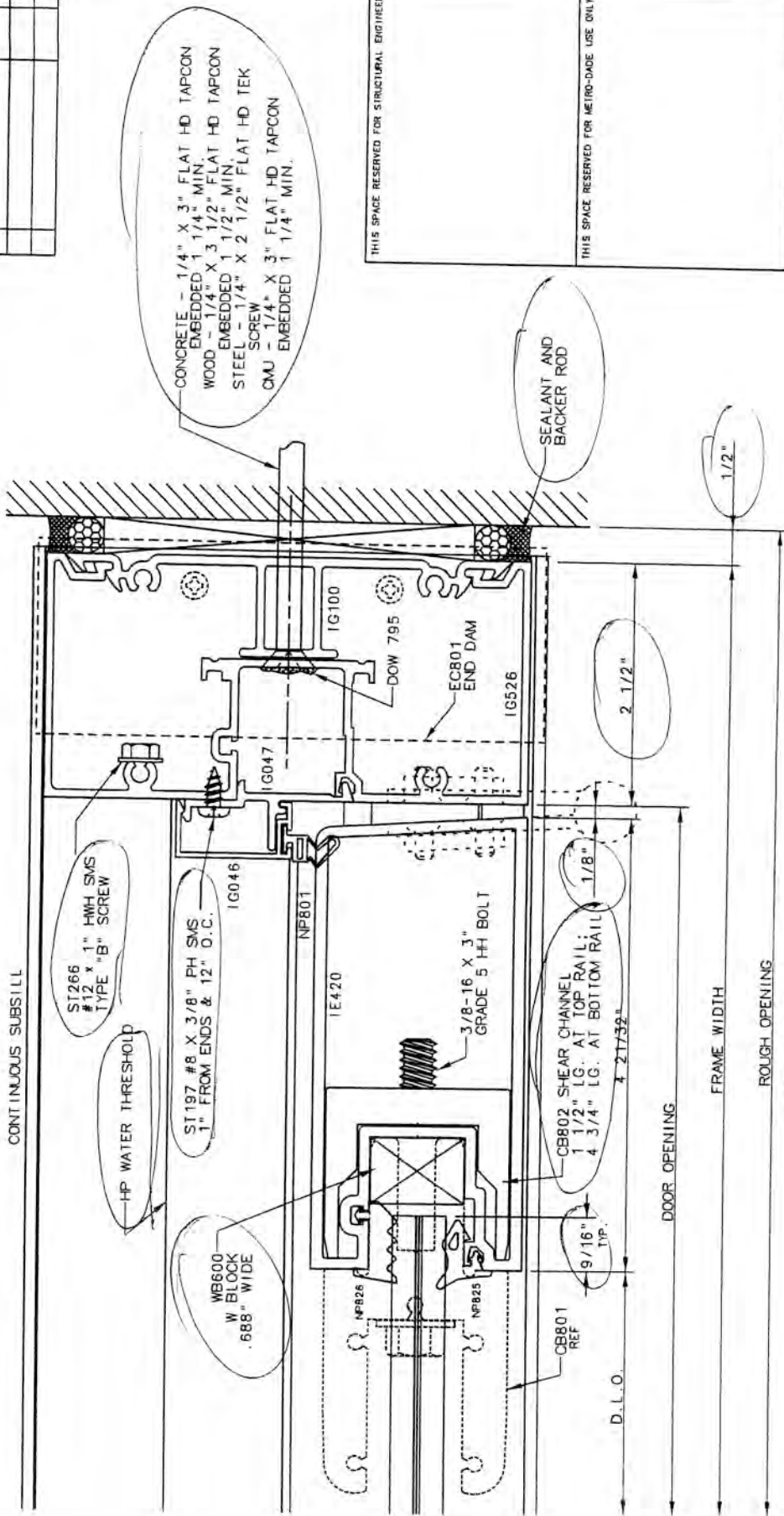
DATE 5/22/97
REPORT NO. ALWC 072401-06
NORTH
AFL INSPECTOR Just Owen

DRUM #1	TER MEER	ITEM	SERIES IG500	
DATE	05/18/06		STORM FRONT SYSTEM	
APP'D #1		DESCRIPTION	DETAILS	
SCALE		DRAWING NO.	USA-2958	SHEET 18 OF 21
FULL SIZE				

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

SYM	REVISION	DATE	BY

CONTINUOUS SUBSILL



THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DOME USE ONLY

United States Aluminum
 720 Cal-River Road
 Rock Hill, SC 29730
 200 Singleton Drive
 Northchile, TX 75165

TER MEER	DATE	APPROV BY	SCALE	FULL SIZE	USA-2958	19 OF 21
SERIES IG500	05/18/06					
STORM FRONT SYSTEM			DETAILS			

AMERICAN TEST LAB
 NORTH
 DATE 5/22/07
 REPORT NO. ATLNC 072401-06
 ATL INSPECTOR

11

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION

AMERICAN TEST LAB

NORTH

DATE 5/22/07
REPORT NO. ALLNC 071401-06

Handwritten Signature
ATL INSPECTOR

NOTE: DOOR JAMB RUNS TO FLOOR

STANDARD AIR THRESHOLD

ST266
#12 X 1" HWH SMS
TYPE "B" SCREW

ST197 #8 X 3/8" PH SMS
1" FROM ENDS & 12" O.C.

WB600
W BLOCK
688" WIDE

IE420

NP801

IG046

IG047

IG100

DOW 795

IG526

3/8-16 X 3"
GRADE 5 HI BOLT

CB802 SHEAR CHANNEL
1 1/2" LG. AT TOP RAIL;
4 3/4" LG. AT BOTTOM RAIL

9/16" TYP.

D.L.O.

4 21/32"

2 1/2"

1/2"

DOOR OPENING

FRAME WIDTH

ROUGH OPENING

13

SEALANT AND
BACKER ROD

CONCRETE - 1/4" X 3" FLAT HD TAPCON
EMBEDDED 1 1/4" MIN.
WOOD - 1/4" X 3 1/2" FLAT HD TAPCON
EMBEDDED 1 1/2" MIN.
STEEL - 1/4" X 2 1/2" FLAT HD TEK
SCREW
CMU - 1/4" X 3" FLAT HD TAPCON
EMBEDDED 1 1/4" MIN.

THIS SPACE RESERVED FOR STRUCTURAL ENGINEER

THIS SPACE RESERVED FOR METRO-DADE USE ONLY

United States Aluminum
220 Cal-River Road
Rock Hill, SC 29730
200 Singleton Drive
Norcross, GA 30071

TER MEER SERIES IG500
STORM FRONT SYSTEM

DATE 05/18/06

SCALE FULL SIZE

USA-2958

21 OF 21

SUBSIDIARY OF INTERNATIONAL ALUMINUM CORPORATION