

ALL WEATHER ARCHITECTURAL ALUMINUM TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON 8100 SERIES SLIDING GLASS DOOR

REPORT NUMBER

J0388.01-301-44 R3

TEST DATE

11/06/18 - 01/16/19

ISSUE DATE REVISION 3 DATE

02/18/19 07/11/19

RECORD RETENTION END DATE

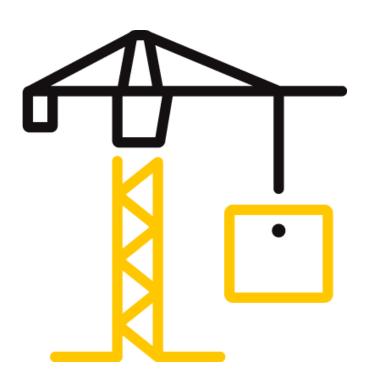
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PAGES

27

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2804 (04/17/18) © 2017 INTERTEK





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TEST REPORT FOR ALL WEATHER ARCHITECTURAL ALUMINUM

Report No.: J0388.01-301-44 R3

Date: 02/18/19

REPORT ISSUED TO

ALL WEATHER ARCHITECTURAL ALUMINUM

777 Aldridge Road Vacaville, California 95688

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by All Weather Architectural Aluminum to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their 8100 Series Sliding Glass Door. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in Fresno, California. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS	
AAMA/WDMA/CSA 101/I.S.2/A440-11	Class CW – PG30: Size Tested 2400 x 2111 (94-1/2 x 83-1/8) – Type SD	
Design Pressure	±1440 Pa (±30.08 psf)	
Air Infiltration	1.5 L/s/m² (0.29 cfm/ft²)	
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)	

Reference must be made to Intertek B&C Report No. J0388.01-301-44 R3, dated 07/11/19 for complete test specimen description and detailed test results.

For INTERTEK B&C:

COMPLETED BY:	Ricardo Cortez	REVIEWED BY:	Tyler Westerling, P.E.
TITLE:	Technician	TITLE:	Senior Project Engineer
SIGNATURE:		SIGNATURE:	
DATE:	07/11/19	DATE:	05/10/19
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SECTION 3

TEST SPECIFICATION(S)/METHOD

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-11- North American Fenestration Standard/Specification for Windows, Doors, and Skylights

The following test methods were used during testing:

ASTM E283-04(2012), Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

ASTM E330/E330M-14, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

ASTM E547-00(2016), Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference

ASTM E987-88(2017), Standard Test Methods for Deglazing Force of Fenestration Products

ASTM E2068-00(2016), Standard Test Method for Determination of Operating Force of Sliding Windows and Doors1

ASTM F842-17, Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact

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SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of five years from the test completion date.

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space and the exterior perimeter of the specimen was sealed to the test buck.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Through frame	Double row of #8 x 2" PPH	Head and jamb 12" on center
Sill	Silicone sealant	Sill seated on 1/4" shims seated on sill pan using only silicone sealant
Sill pan	Silicone sealant	Sill pan seated onto wood buck using only silicone sealant

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
David Douglass	Intertek B&C
Gino Vitali	Intertek B&C
Erick Caldera	Intertek B&C

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SECTION 6

TEST SPECIMEN DESCRIPTION

Product Type: Sliding Glass Door **Series/Model**: 8100 Series

Product Size:

OVERALL AREA:	WIDTH	WIDTH		
5.37 m ² (57.8 ft ²)	Millimeters	Inches	Millimeters	Inches
Overall size	2400	94-1/2	2111	83-1/8
Active panel	1220	48-1/16	2070	81-1/2
Fixed panel	1220	48-1/16	2070	81-1/2

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, sill, jambs Thermally broken aluminum		Broken by glass filled nylon
	JOINERY TYPE	DETAIL
All corners	Butted	Sealed; Four screws in each corner

Panel Construction:

MEMBER	MATERIAL	DESCRIPTION
Interlock Aluminum		Thermal break between member and glazing bead
Rails and stiles	Thermally broken aluminum	Broken by glass filled nylon
	JOINERY TYPE	DETAIL
All corners	Butted	Sealed; Four screws in each corner

Reinforcement: No reinforcement was utilized.

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Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Polypile with center fin	1 row	Interlock stiles
Polypile with center fin	5 rows	Sill
Polypile with center fin	2 rows	Jambs
Polypile with center fin (via attachment piece)	3 rows	Active panel interlock stile at sill corner

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	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	TPS spacer	3/16" tempered	3/16" tempered	Dry glazed and secured by glazing bead with EPDM gasket

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		Millimeters	Inches	
Fixed and active panel	2	1060 x 1860	41-3/4 x 73-1/4	1/2"

Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weephole	5/8" wide ovals	2 sets (4 per set)	Sill; 4-3/4" from corners

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Roller track	1 row	Sill track; slip fit
Track clip	1	Head track; snap-fit
Track filler	1	Sill; snap-fit
Roller assembly	2	Bottom rail of active panel
Latch	1	Lock stile
Keeper	1	Lock jamb; opposite lock stile
Handle	1	Lock stile; 3" below latch

Screen Construction: No screen construction was utilized.

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SECTION 7

TEST RESULTS

The temperature during testing was 20°C (68°F). The results are tabulated as follows:

Test Specimen #1:

	DECLUE:	411 011/50	
TITLE OF TEST	RESULTS	ALLOWED	NOTE
Operating Force,			
per ASTM E2068			
Initiate Motion:	75 N (17 lbf)	180 N (40.5 lbf) max	
Maintain Motion:	53 N (12 lbf)	115 N (25.9 lbf) max	
Latches:	36 N (8 lbf)	100 N (22.5 lbf) max	
Air Leakage,			
Infiltration per ASTM E283	1.5 L/s/m ²	1.5 L/s/m ²	
at 75 Pa (1.57 psf)	(0.29 cfm/ft ²)	(0.3 cfm/ft ²) max.	1, 2
Water Penetration,			
per ASTM E547			
at 220 Pa (4.59 psf)	Pass	No leakage	3
Uniform Load Deflection,			
per ASTM E330			
Deflections taken at interlock			
+1440 Pa (+30.08 psf)	11.9 mm (0.47")	11.9 mm (0.47")	3, 4,
-1440 Pa (-30.08 psf)	11.9 mm (0.47")	11.9 mm (0.47")	5
Uniform Load Structural,			
per ASTM E330			
Permanent set taken at interlock			
+2160 Pa (+45.11 psf)	0.3 mm (0.01")	8.1 mm (0.32") max.	
-2160 Pa (-45.11 psf)	0.3 mm (0.01")	8.1 mm (0.32") max.	3, 4, 5
Forced Entry Resistance,			
per ASTM F842,			
Type: A - Grade: 10	Pass	No entry	
Deglazing,			
per ASTM E987			
Operating direction,			
320 N (70 lbf)	Pass	Meets as stated	
Remaining direction,			
230 N (50 lbf)	Pass	Meets as stated	

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Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 11/06/18 / Time: 08:15 AM

Note 3: The client opted to start at a pressure higher than the minimum required.

Note 4: Loads were held for 10 seconds.

Note 5: Tape and film were not used to seal against air leakage during structural testing.

SECTION 8

ALTERATIONS

No alterations were required.

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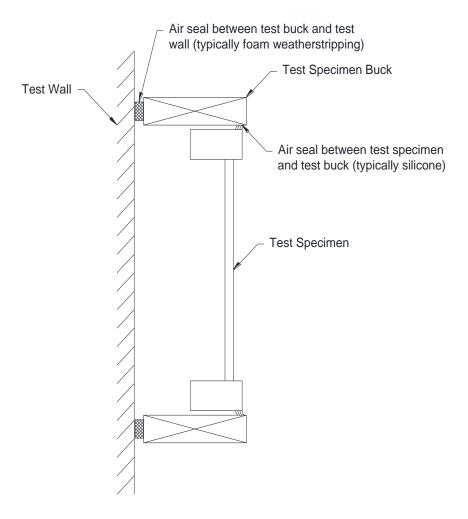
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SECTION 9

LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



SECTION 10

CONCLUSION

The specimen tested successfully met the performance requirements for a Class CW – PG30: Size Tested 2400 x 2111 (94-1/2 x 83-1/8) – Type SD rating.

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SECTION 11

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

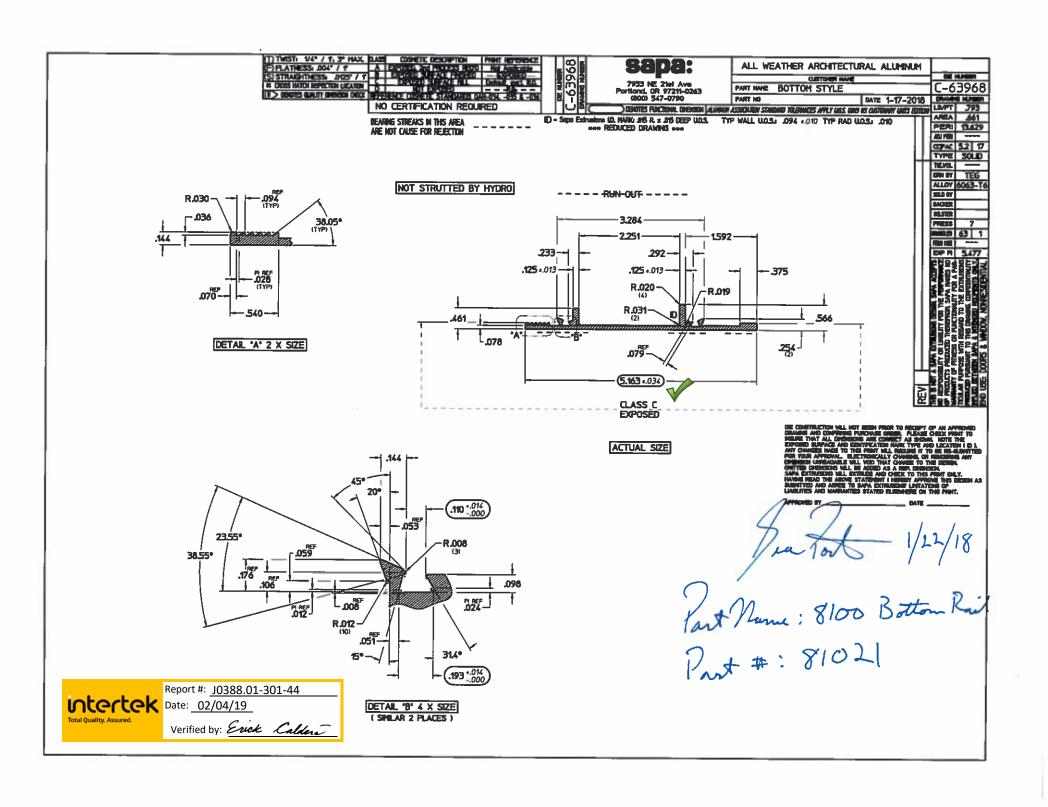
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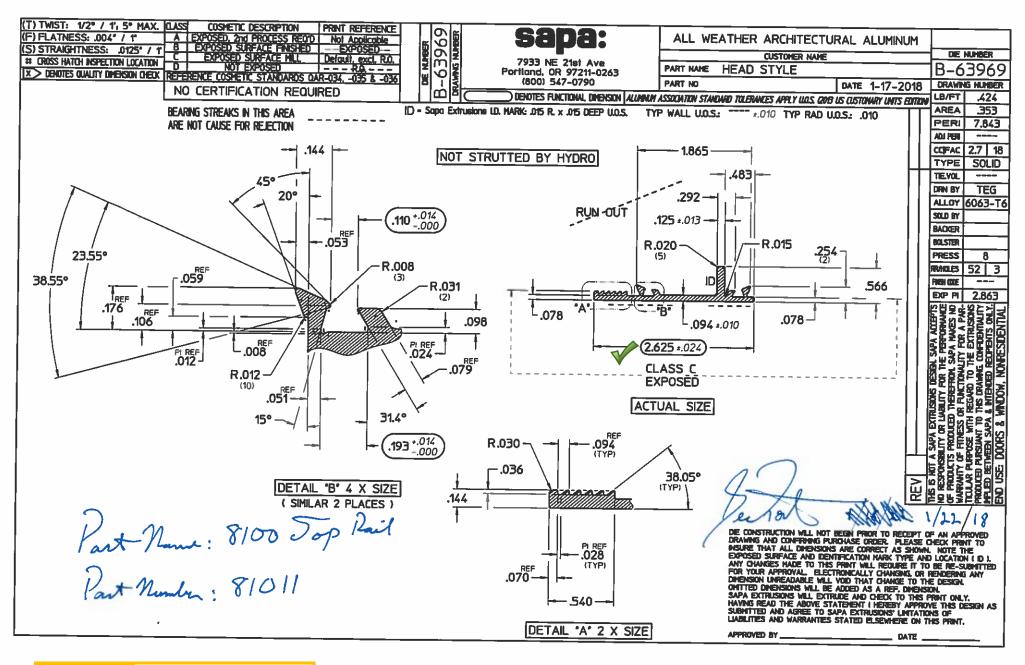


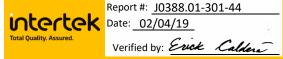
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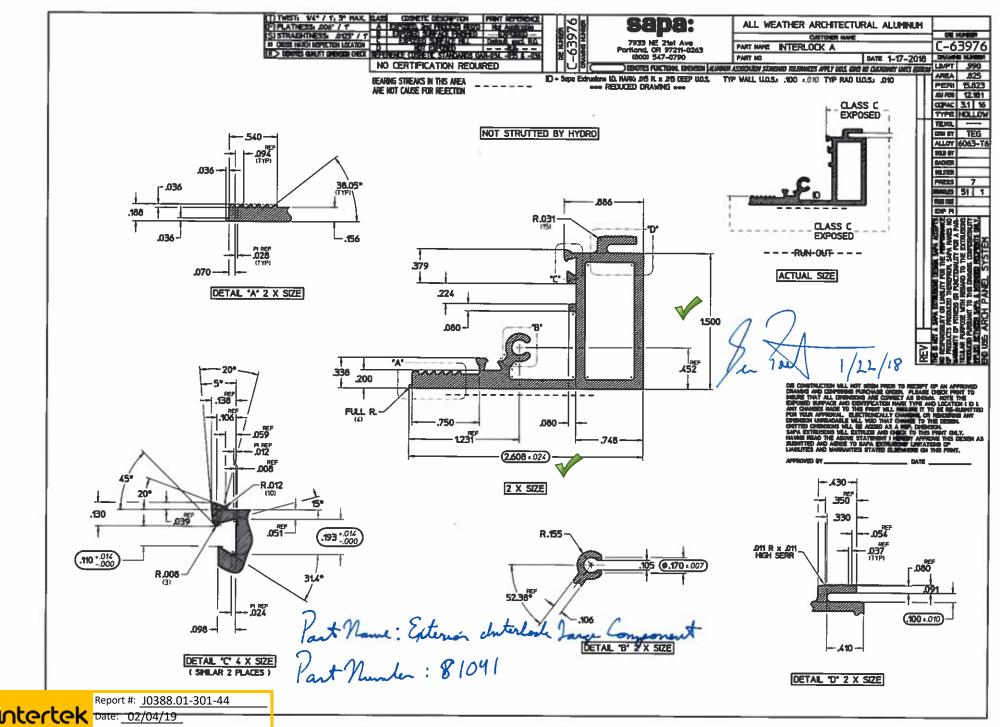
Series/Model: 8100 Fixed

Part #	Part Description	Material	Finish			
OX Sash and Frame						
81011	Sash – Top Rail	Aluminum	Painted & Anodized			
81021	Sash – Bottom Rail	Aluminum	Painted & Anodized			
81031	Sash – Lead Stile	Aluminum	Painted & Anodized			
81041	Sash - Exterior Interlocker Large Component	Aluminum	Painted & Anodized			
81042	Sash – Exterior Interlocker Small Component	Aluminum	Painted & Anodized			
81051	Sash – Interior Interlocker Large Component	Aluminum	Painted & Anodized			
81052	Sash – Interior Interlocker Small Component	Aluminum	Painted & Anodized			
81211	Frame Head Track	Aluminum – Pour and Debridged	Painted & Anodized			
81221	Frame Sill Track	Aluminum – Pour and Debridged	Painted & Anodized			
81231	Frame Jamb Track	Aluminum – Pour and Debridged	Painted & Anodized			
8199	Panel Connector	Aluminum – Pour and Debridged	Painted & Anodized			
8196	Track Clip	Aluminum	Painted & Anodized			
8113	Sill Filler	Aluminum	Painted & Anodized			
8112	Track Filler	Aluminum	Painted & Anodized			
Glazing Boot	Gasket	Vinyl				
Thermal Strut	Thermal Strut	Glass Filled Nylon				
Roller Track	Track	Stainless Steel				
Foam Insulation	Foam insert	Extruded Polystyrene (3 lb density)				
Weatherstrip	Weatherstrip	Pile with vinyl fin				

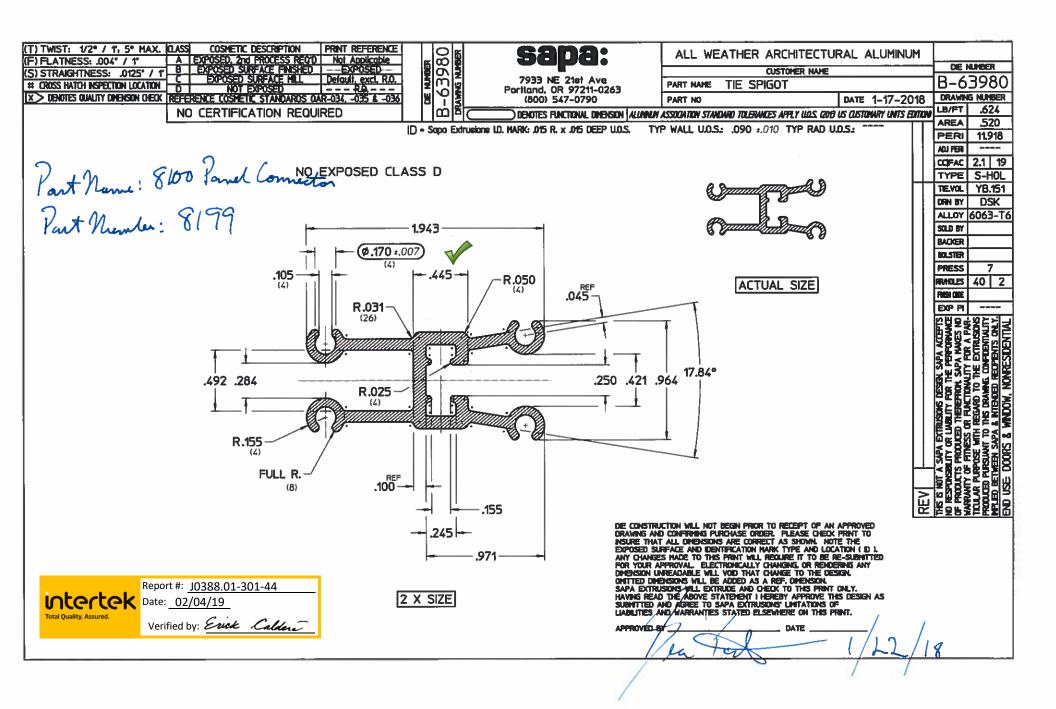


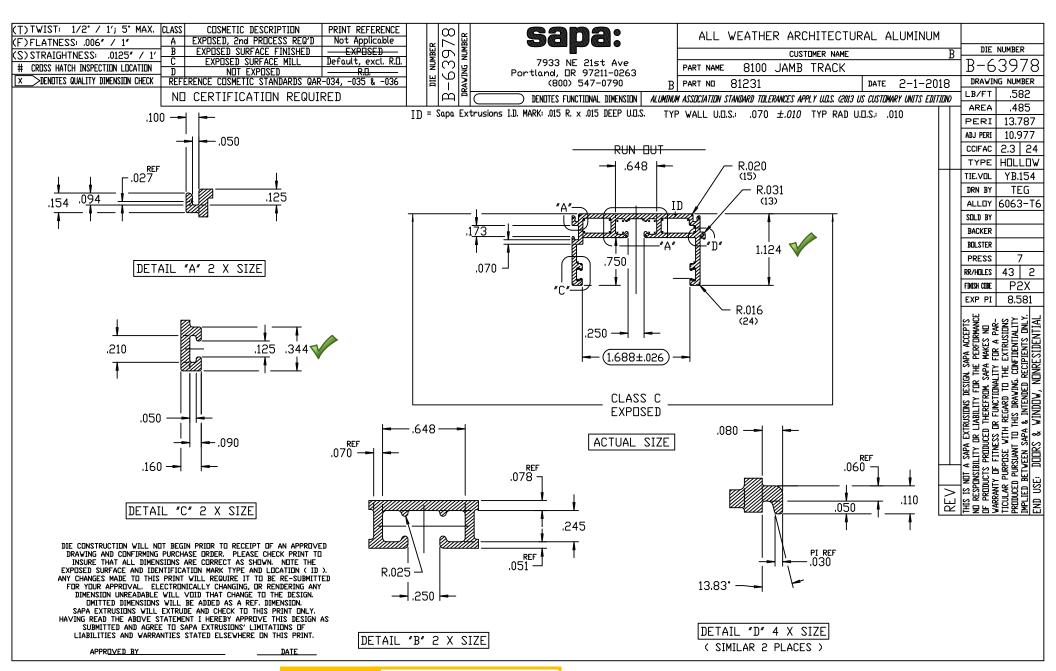


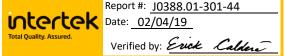


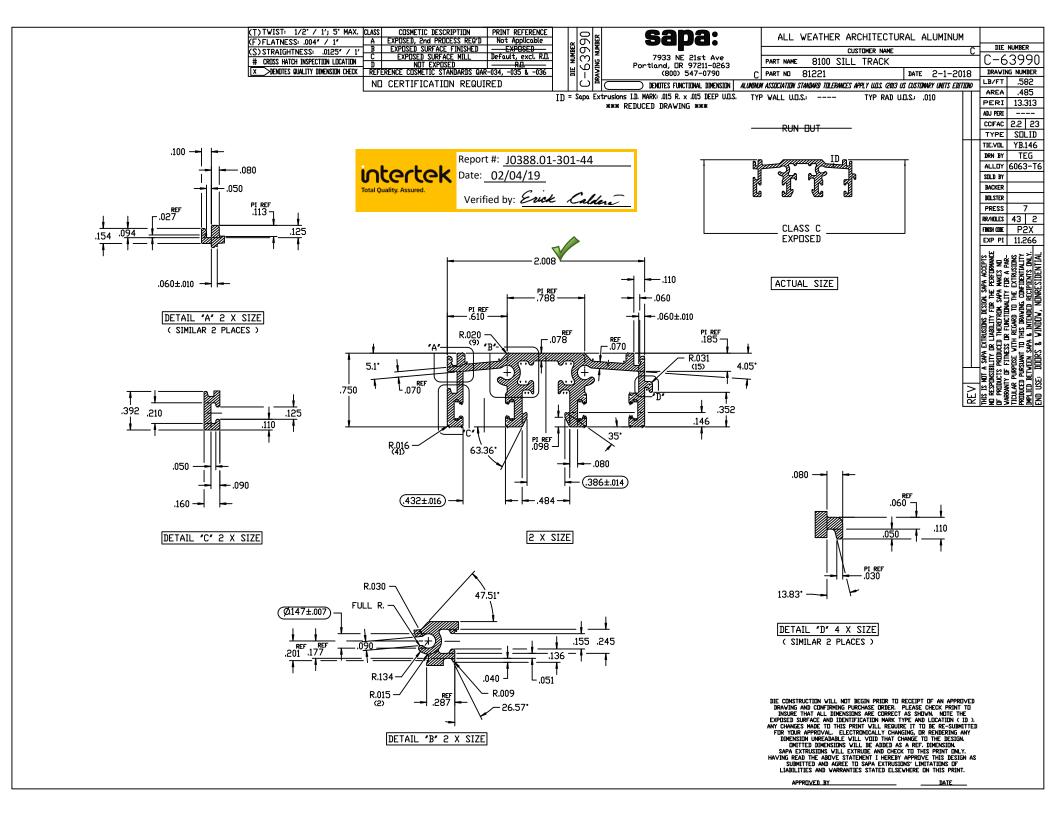


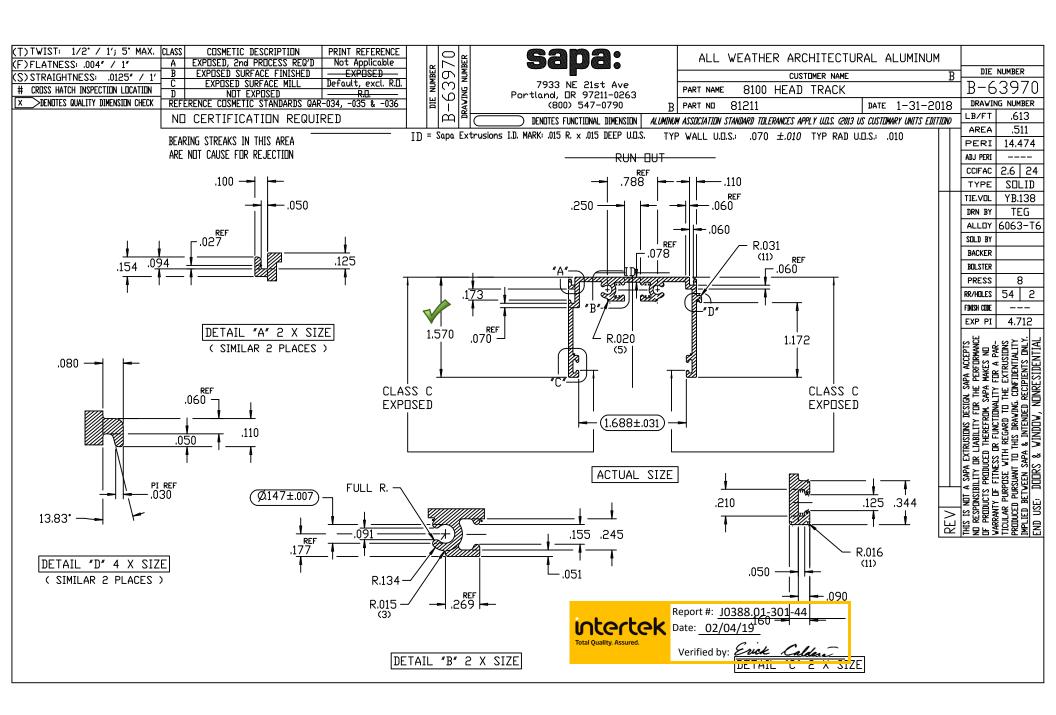
Verified by: Erick Calder

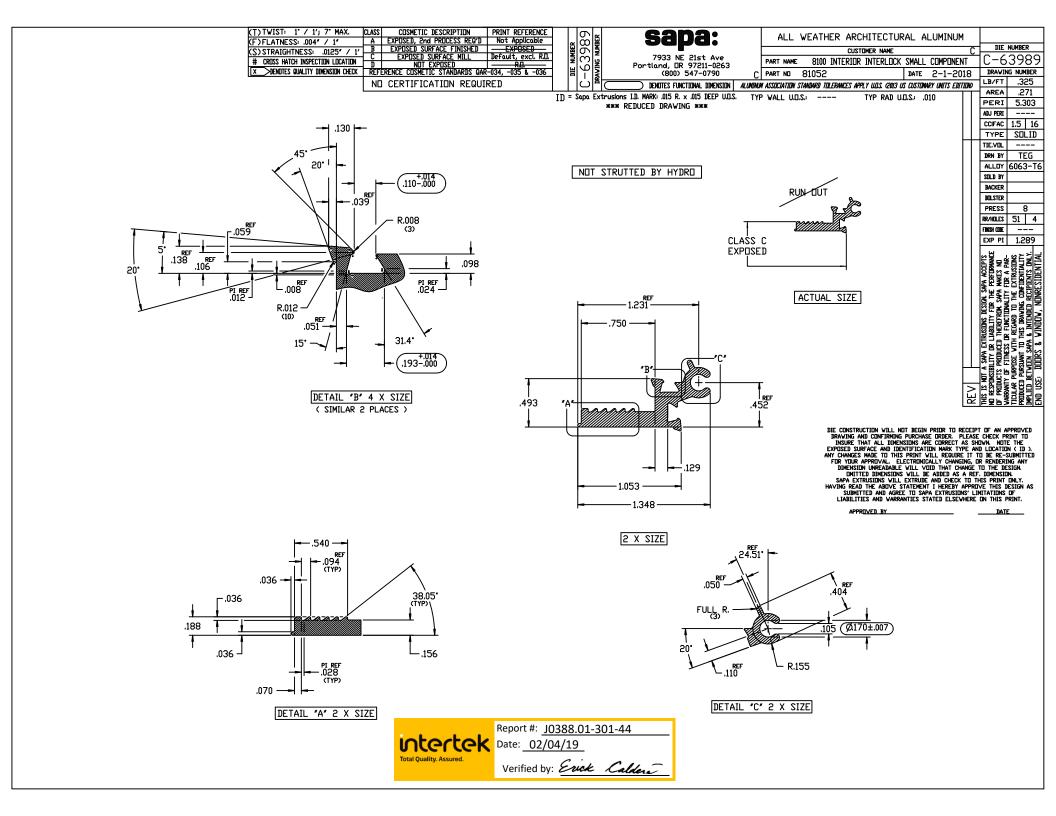


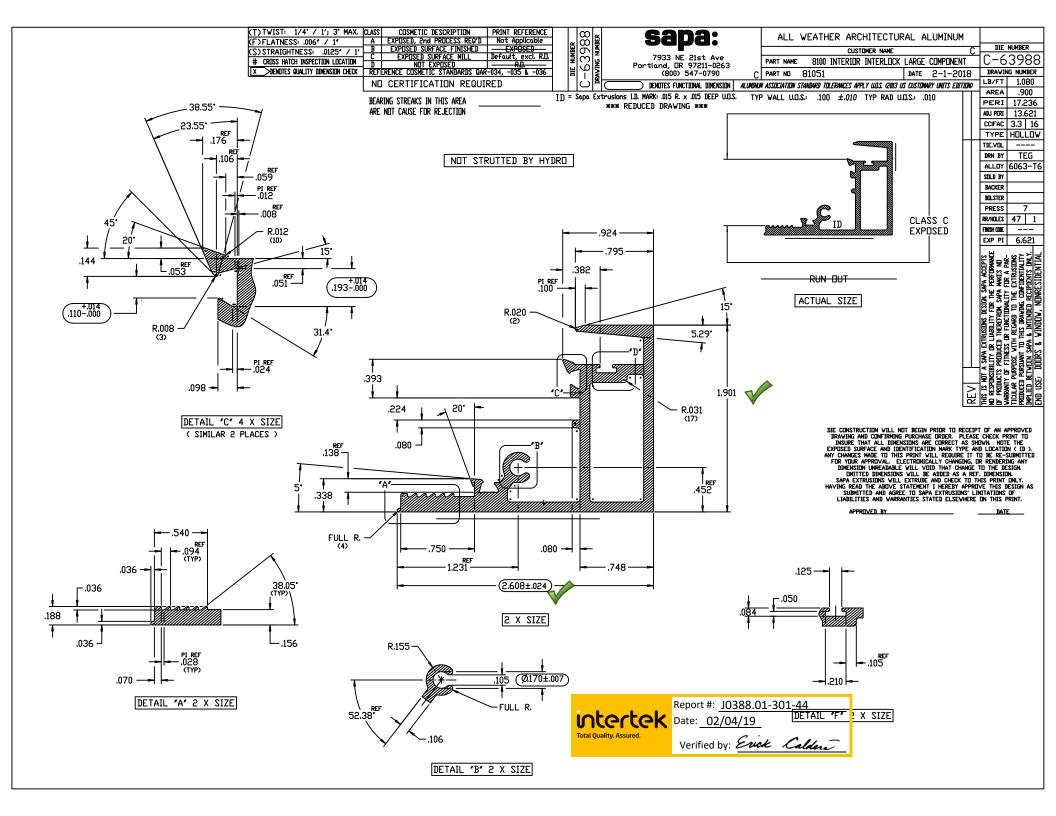


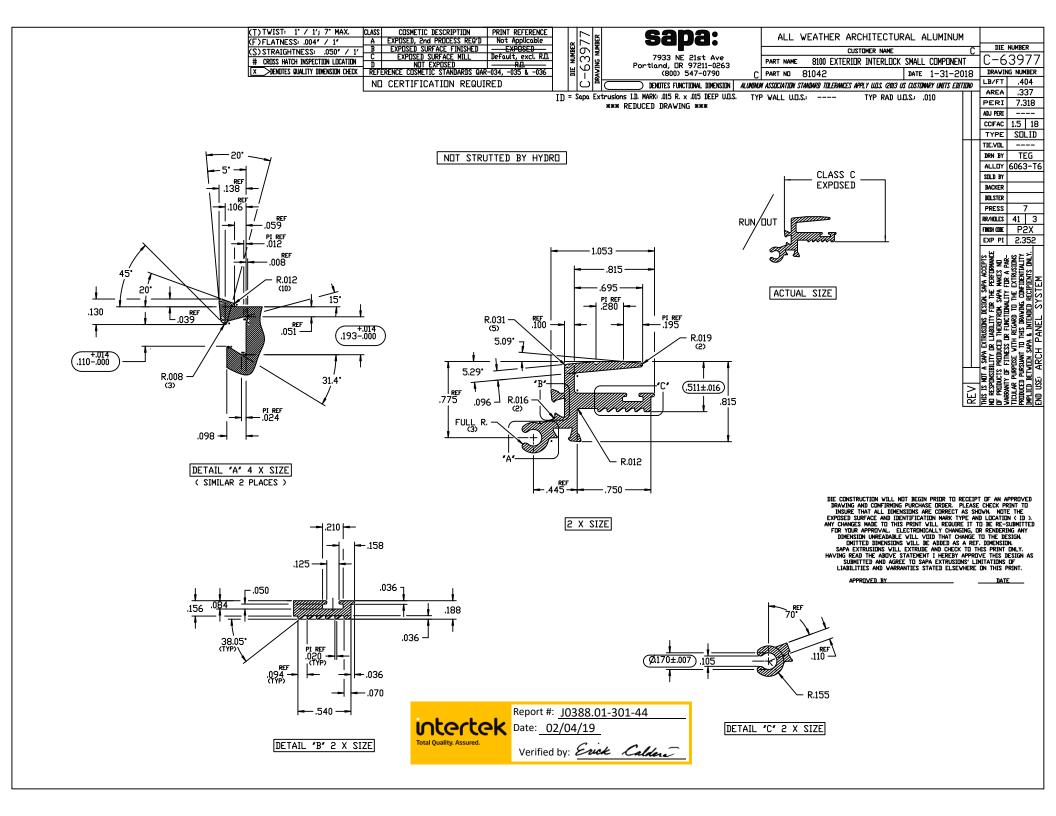


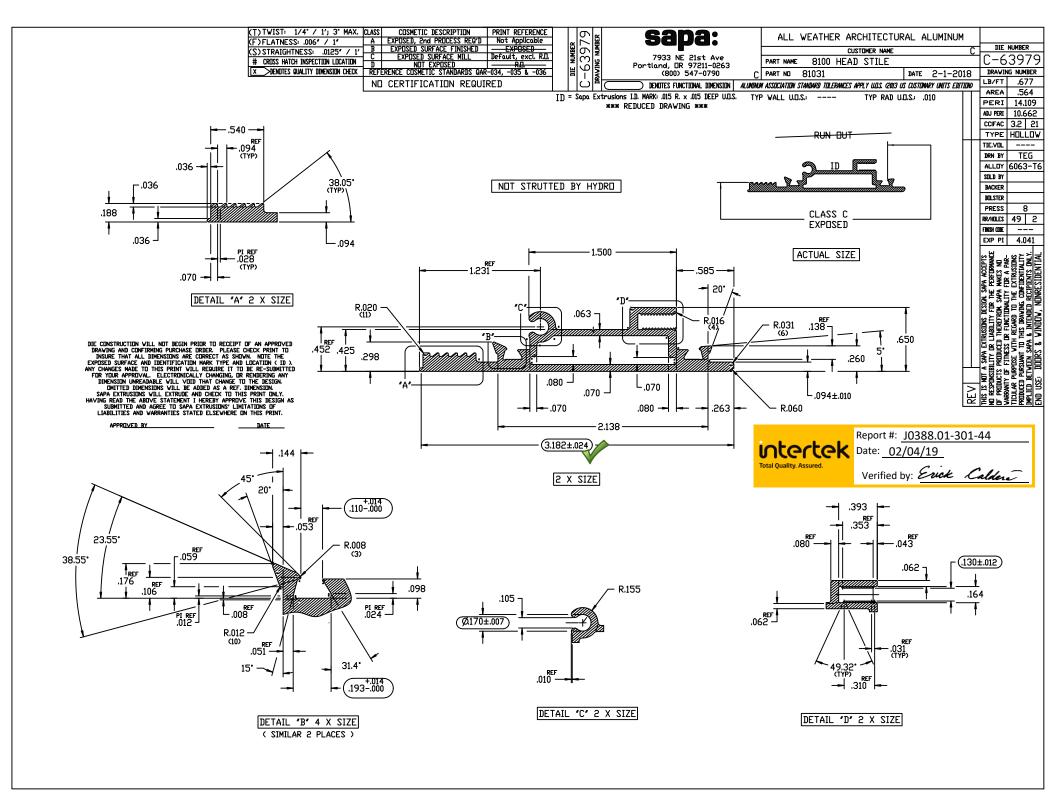


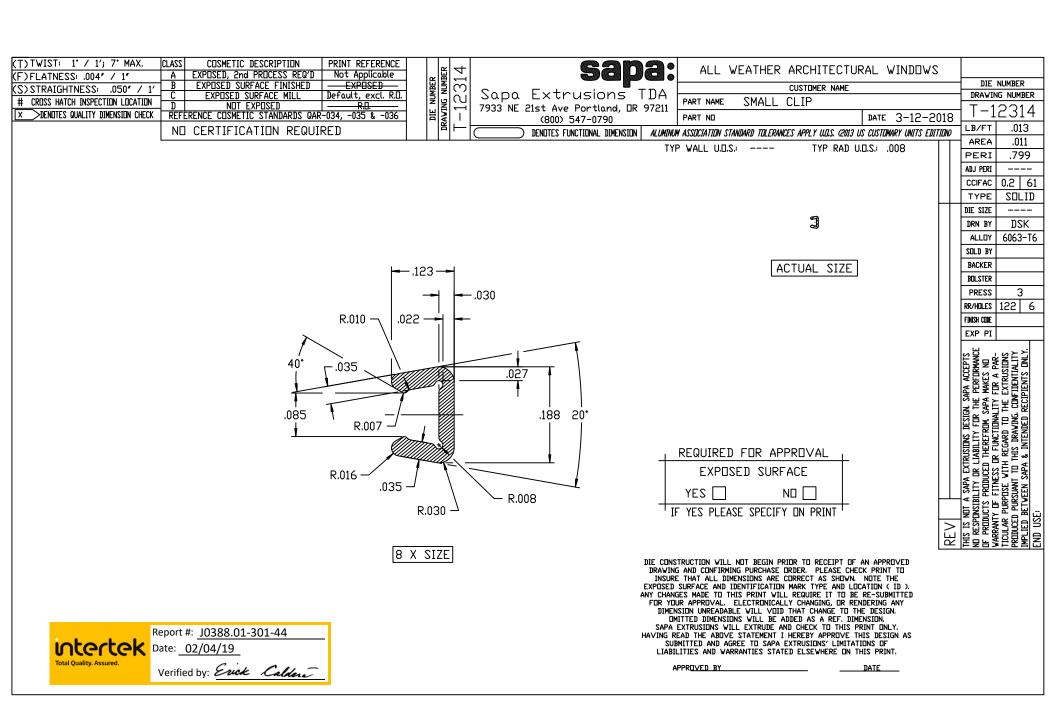


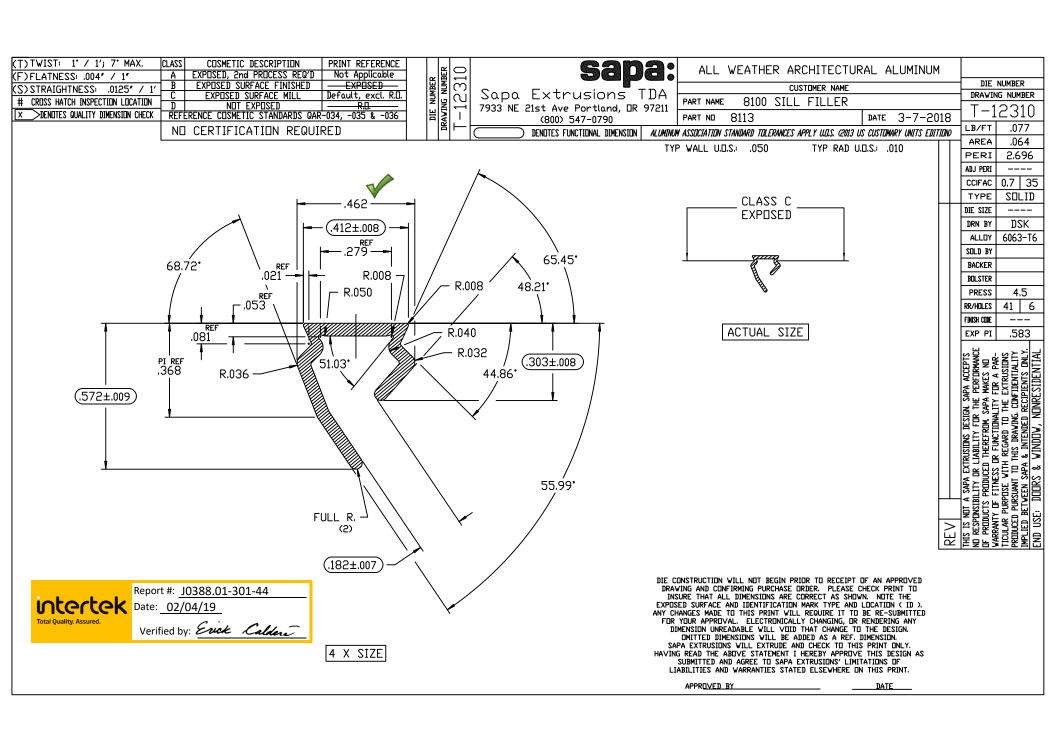


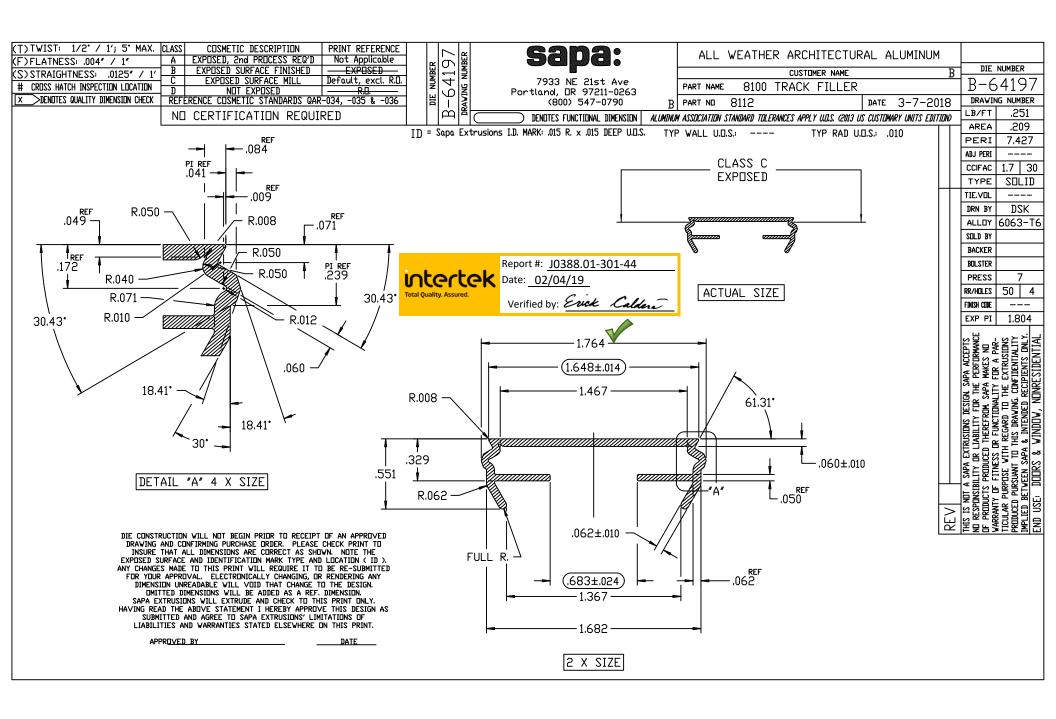


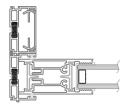


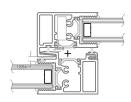


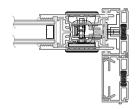


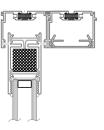


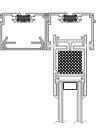


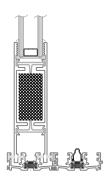
















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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	02/18/19	N/A	Original Report Issue
1	05/06/19	2,3	Updated report to 2011 AAMA standard
2	05/10/19	2	Updated report to 2011 AAMA standard
			Changed description of spacer from
3	07/11/19	6	stainless steel to TPS

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