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FRAMELESS HARDWARE COMPANY LLC

THERMAL PERFORMANCE TEST REPORT

SCOPE OF WORK
500T SERIES ENTRY DOOR

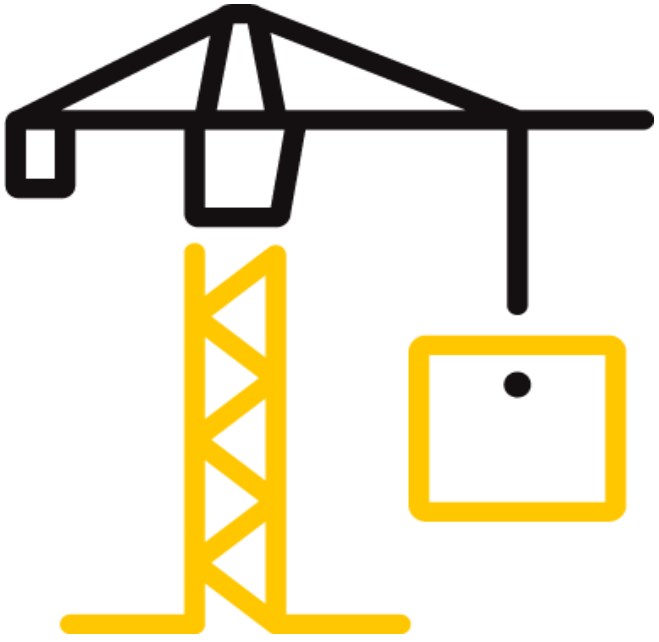
REPORT NUMBER
R3639.01-116-46 R0

TEST DATE
09/11/24

ISSUE DATE
09/16/24

PAGES
32

DOCUMENT CONTROL NUMBER
RTTDS-R-AMER-Test-8197(a) (04/24/24)



130 Derry Court
York, Pennsylvania 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC
Report No.: R3639.01-116-46 R0
Date: 09/16/24

REPORT ISSUED TO
FRAMELESS HARDWARE COMPANY LLC
4361 Firestone Blvd.

SECTION 1
SCOPE

SERIES/MODEL: 500T Series Entry Door
TYPE: Swinging Entrance Door (Single)

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Frameless Hardware Company LLC to evaluate the thermal performance per NFRC 102-2023. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at Intertek B&C test facility in York, Pennsylvania.

Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, or other pertinent project documentation, will be retained for the entire test record retention period. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of two and a half years from the submittal date to the Inspection Agency and no more than five years from the test date.

For INTERTEK B&C:

COMPLETED BY	Ryan P. Moser	**REVIEWED BY**	Shon W. Einsig
TITLE	Technician Team Lead, IIRC	**TITLE**	Project Lead, IIRC
SIGNATURE	Digitally Signed by: Ryan P. Moser	**SIGNATURE**	Digitally Signed by: Shon W. Einsig
DATE	09/16/24	**DATE**	09/16/24

RPM:kmm

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC
Report No.: R3639.01-116-46 R0
Date: 09/16/24

SECTION 2
SUMMARY OF TEST RESULTS

Standardized U-factor (Ust): 0.61 Btu/hr·ft^2·F (CTS Method)

SECTION 3
TEST SPECIMEN SUMMARY

SERIES/MODEL	500T Series Entry Door
TYPE	Swinging Entrance Door (Single)
OVERALL SIZE	37-3/4" x 82-3/8" (959 mm x 2092 mm) (Model Size)
NFRC STANDARD SIZE	37.8" x 82.3" (960 mm wide x 2090 mm high)
TEST SAMPLE SUBMITTED BY	Client
TEST SAMPLE SUBMITTED FOR	Validation for Initial Certification (Production Line Unit) & Plant Qualification

SECTION 4
TEST METHOD

The specimens were evaluated in accordance with the following:

NFRC 102-2023, Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems

SECTION 5
MATERIAL SOURCE/INSTALLATION

The test specimen was provided by the client.

The test sample was installed in a vertical orientation, the exterior of the specimen was exposed to the cold side.

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Shon W. Einsig	Intertek B&C
Ryan P. Moser	Intertek B&C

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC
Report No.: R3639.01-116-46 R0
Date: 09/16/24

SECTION 7
TEST SAMPLE DESCRIPTION

FRAME

MATERIAL	AU (0.14"): Aluminum w/ Thermal Improvements*		
SIZE	37-3/4" x 82-3/8" (Model Size)		
DAYLIGHT OPENING	N/A	**GLAZING METHOD**	N/A
EXTERIOR COLOR	Clear	**EXTERIOR FINISH**	Anodized
INTERIOR COLOR	Clear	**INTERIOR FINISH**	Anodized
CORNER JOINERY	Coped / Screws / Unsealed		

*Head and jambs were AU (0.14"), sill was AU (0.15")

PANEL

MATERIAL	AU (0.19"): Aluminum w/ Thermal Improvements		
SIZE	33-3/8" x 79-5/8"		
DAYLIGHT OPENING	21-3/8" x 70-1/8"	**GLAZING METHOD**	Interior
EXTERIOR COLOR	Clear	**EXTERIOR FINISH**	Anodized
INTERIOR COLOR	Clear	**INTERIOR FINISH**	Anodized
CORNER JOINERY	Square Cut / Screws / Unsealed		

GLAZING INFORMATION

LAYER 1	1/4"	Guardian SunGuard SNX 62/27 (e=0.020*, #2)	
GAP 1	0.47"	ZF-S: Silicone Foam Spacer	90% Argon*
LAYER 2	1/4"	Guardian SunGuard IS 20 (e=0.198*, #3)	
GAS FILL METHOD	Single-Probe Method*		

**Stated per the client/manufacturer and can affect the validity of results*
N/A Non-Applicable

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SECTION 7 (CONTINUED)
TEST SAMPLE DESCRIPTION (CONTINUED)

WEATHERSTRIPPING

DESCRIPTION	QUANTITY	LOCATION
Polypile with center fin	1 Row	Head and jambs
Flexible hollow bulb gasket	1 Row	Sill
Glazing gasket	1 Row	Exterior glazing perimeter
Glazing gasket	1 Row	Interior glazing perimeter

HARDWARE

DESCRIPTION	QUANTITY	LOCATION
Lock assembly	1	Lock stile
Non-pinch hinge	1	Hinge jamb/stile
Aluminum filler	3	Head and jambs
Aluminum stop	3	Head and jambs
AU (0.15") threshold	1	Sill

DRAINAGE

DRAINAGE METHOD	SIZE	QUANTITY	LOCATION
Sloped sill		1	Sill

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC
Report No.: R3639.01-116-46 R0
Date: 09/16/24

SECTION 8
THERMAL TRANSMITTANCE (U-FACTOR): MEASURED TEST DATA

HEAT FLOWS

1.	Total Measured Input into Metering Box (Qtotal)	1048.06	Btu/hr
2.	Surround Panel Heat Flow (Qsp)	29.26	Btu/hr
3.	Surround Panel Thickness	6.00	inches
4.	Surround Panel Conductance	0.0304	Btu/hr·ft^2·F
5.	Metering Box Wall Heat Flow (Qmb)	8.92	Btu/hr
6.	EMF vs Heat Flow Equation (equivalent information)	0.0114*EMF + -0.006	
7.	Flanking Loss Heat Flow (Qfl)	3.92	Btu/hr
8.	Net Specimen Heat Loss (Qs)	1005.97	Btu/hr

AREAS

1.	Test Specimen Projected Area (As)	21.59	ft^2
2.	Test Specimen Projected Frame Area (Af)	11.19	ft^2
3.	Test Specimen Projected Glazing Area (Ag)	10.41	ft^2
4.	Metering Box Opening Area (Amb)	36.11	ft^2
5.	Metering Box Baffle Area (Ab1)	33.94	ft^2
6.	Surround Panel Interior Exposed Area (Asp)	14.52	ft^2

TEST CONDITIONS

1.	Average Metering Room Air Temperature (th)	70.17	F
2.	Average Cold Side Air Temperature (tc)	-0.40	F
3.	Average Guard/Environmental Air Temperature	71.27	F
4.	Metering Room Average Relative Humidity	14.49	%
5.	Metering Room Maximum Relative Humidity	14.88	%
6.	Metering Room Minimum Relative Humidity	14.15	%
7.	Measured Cold Side Wind Velocity (Perpendicular Flow)	12.66	mph
8.	Measured Warm Side Wind Velocity (Parallel Flow)	N/A	mph
9.	Measured Static Pressure Difference Across Test Specimen	0.00" ± 0.04"	H_2O

AVERAGE SURFACE TEMPERATURES

1.	Metering Room Surround Panel	66.95	F
2.	Cold Side Surround Panel	0.75	F

RESULTS

1.	Thermal Transmittance of Test Specimen (Us)	0.66	Btu/hr·ft^2·F
2.	Standardized Thermal Transmittance of Test Specimen (Ust)	0.61	Btu/hr·ft^2·F

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SECTION 9
THERMAL TRANSMITTANCE (U-FACTOR): CALCULATED TEST DATA

CTS METHOD RESULTS

1.	Warm Side Surface Emittance of CTS (e1)	0.84	
2.	Warm Side Area-Weighted Surface Emittance of Specimen Frame (ef1)	0.80	
3.	Warm Side Area-Weighted Surface Emittance of Specimen Glazing (eg1)	0.84	
4.	Warm Side Surface Emittance of Surround Panel (esp1)	0.90	
5.	Warm Side Area-Weighted Surface Emittance in View of the Baffle (es1)	0.85	
6.	Warm Side Baffle Emittance (eb1)	0.92	
7.	Cold Side Baffle Emittance (eb2)	N/A	
8.	Equivalent Warm Side Surface Temperature (t1)	38.19	F
9.	Equivalent Cold Side Surface Temperature (t2)	8.93	F
10.	Warm Side Baffle Surface Temperature	67.77	F
11.	Cold Side Baffle Surface Temperature	N/A	F
12.	Measured Warm Side Surface Conductance (hh)	1.46	$Btu/hr \cdot ft^2 \cdot F$
13.	Measured Cold Side Surface Conductance (hc)	4.99	$Btu/hr \cdot ft^2 \cdot F$
14.	Test Specimen Thermal Conductance (Cs)	1.59	$Btu/hr \cdot ft^2 \cdot F$
15.	Convection Coefficient (Kc)	0.33	$Btu/(hr \cdot ft^2 \cdot F^{1.25})$
16.	Radiative Test Specimen Heat Flow (Qr1)	467.68	Btu/hr
17.	Conductive Test Specimen Heat Flow (Qc1)	538.29	Btu/hr
18.	Radiative Heat Flux of Test Specimen (qr1)	21.66	$Btu/hr \cdot ft^2 \cdot F$
19.	Convective Heat Flux of Test Specimen (qc1)	24.93	$Btu/hr \cdot ft^2 \cdot F$
20.	Standardized Warm Side Surface Conductance (hsth)	1.23	$Btu/hr \cdot ft^2 \cdot F$
21.	Standardized Cold Side Surface Conductance (hstc)	5.28	$Btu/hr \cdot ft^2 \cdot F$
22.	Standardized Thermal Transmittance (Ust)	0.61	$Btu/hr \cdot ft^2 \cdot F$

SECTION 10
TEST DURATION

1. The environmental systems were started at 06:39 hours, 09/10/24.
2. The test parameters were considered stable for two consecutive four hour test periods from 07:02 hours, 09/11/24 to 15:02 hours, 09/11/24.
3. The thermal performance test results were derived from 11:02 hours, 09/11/24 to 15:02 hours, 09/11/24.

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SECTION 11
GLAZING DEFLECTION

	PANEL
EDGE GAP WIDTH	0.47"
ESTIMATED CENTER GAP WIDTH upon receipt of specimen in laboratory (after stabilization)	0.47"
CENTER GAP WIDTH at laboratory ambient conditions on day of testing	0.47"
CENTER GAP WIDTH at test conditions	0.44"

Glass collapse determined using a digital glass and air space meter

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

"This test method does not include procedures to determine the heat flow due to either air movement through the specimen or solar radiation effects. As a consequence, the thermal transmittance results obtained do not reflect performances which are expected from field installations due to not accounting for solar radiation, air leakage effects, and the thermal bridge effects that have the potential to occur due to the specific design and construction of the fenestration system opening. The latter can only be determined by in-situ measurements. Therefore, it is important to recognize that the thermal transmittance results obtained from this test method are for ideal laboratory conditions and should only be used for fenestration product comparisons and as input to thermal performance analyses which also include solar, air leakage and thermal bridge effects."

Required annual calibrations for the Intertek B&C, 'thermal test chamber' (ICN 000001) in York, Pennsylvania were last conducted in May 2024 in accordance with Intertek B&C calibration procedure. A CTS Calibration verification was performed August 2024. A Metering Box Wall Transducer and Surround Panel Flanking Loss Characterization was performed July 2024.

The reported Standardized Thermal Transmittance (Ust) was determined using CTS Method, per Section 9.2(A) of NFRC 102.

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SECTION 12
CTS CALIBRATION DATA

1.	CTS Test Date	02/03/24	
2.	CTS Size	21.53	ft^2
3.	CTS Glass/Core Conductance	0.41	$Btu/hr \cdot ft^2 \cdot F$
4.	Warm Side Air Temperature	69.80	F
5.	Cold Side Air Temperature	-0.40	F
6.	Warm Side Average Surface Temperature	54.29	F
7.	Cold Side Average Surface Temperature	3.78	F
8.	Convection Coefficient (Kc)	0.33	$Btu/(hr \cdot ft^2 \cdot F^{1.25})$
9.	Measured Cold Side Surface Conductance (hc)	4.99	$Btu/hr \cdot ft^2 \cdot F$
10.	Measured Thermal Transmittance	0.31	$Btu/hr \cdot ft^2 \cdot F$

ANSI/NCSL Z540-2-1997 type B uncertainty for this test was 1.51%.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk Approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

"Ratings included in this report are for submittal to an NFRC licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those options identified on a valid Certificate of Authorization (CA) are to be used for labeling purposes."

The direction of heat transfer was from the interior (warm side) to the exterior (cold side) of the specimen. The ratings were rounded in accordance to NFRC 601, NFRC Unit and Measurement Policy. The data acquisition frequency is 5 minutes.

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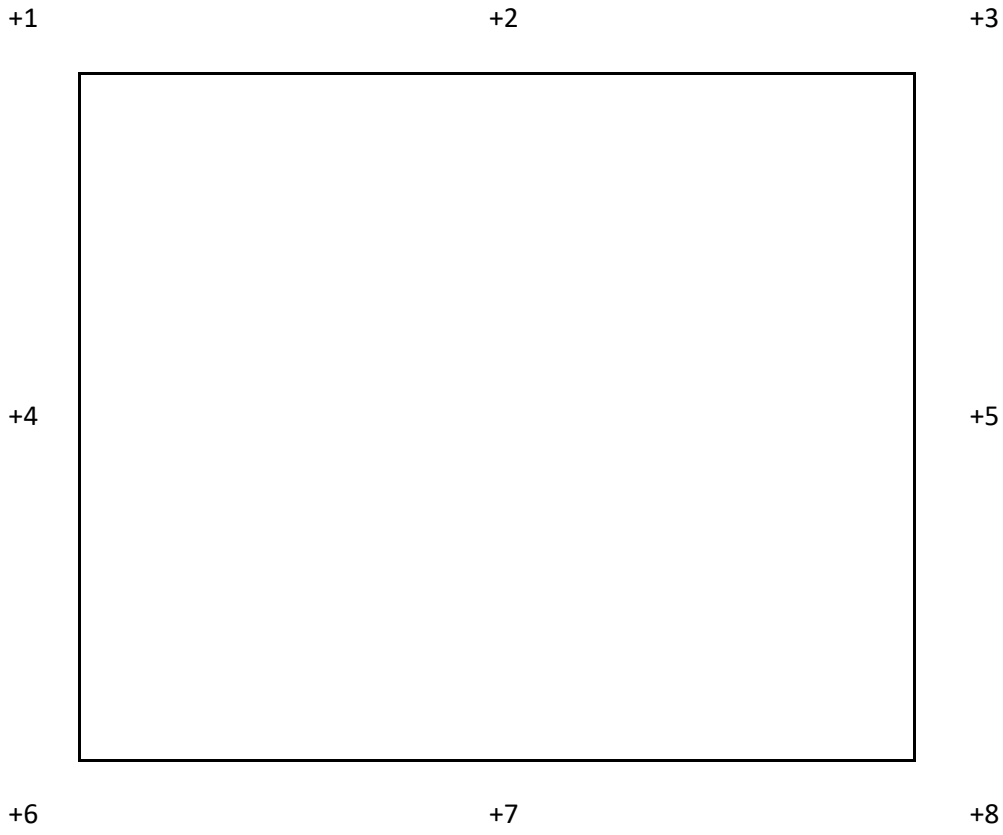
SECTION 13
SURROUND PANEL WIRING DIAGRAM



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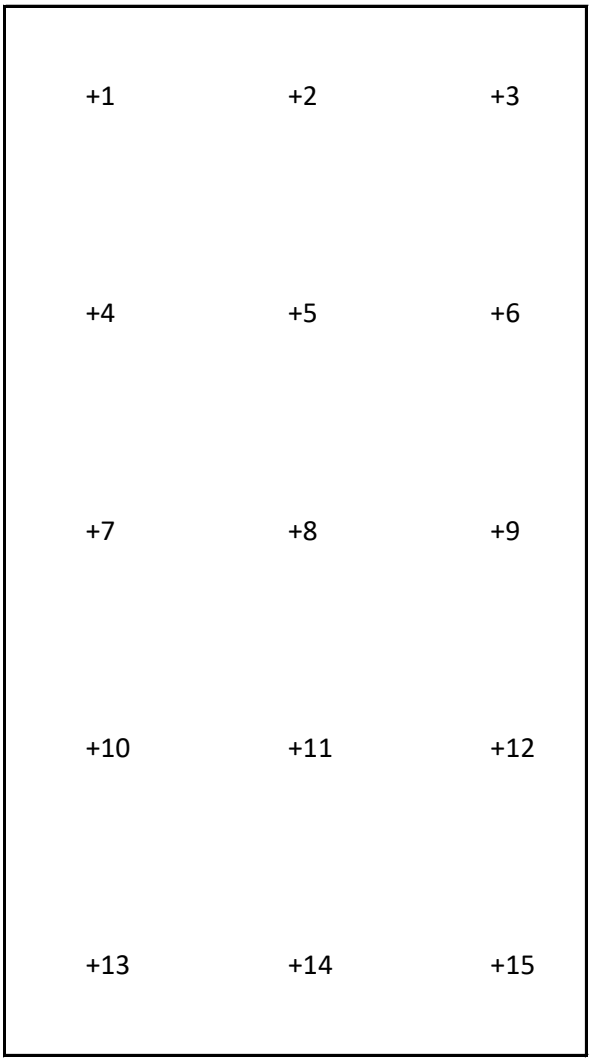
TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC
Report No.: R3639.01-116-46 R0
Date: 09/16/24

SECTION 14
BAFFLE WIRING DIAGRAM



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SECTION 15
SUBMITTAL FORM AND DRAWINGS

The test specimen drawings which follow 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.

NFRC Product Certification Program

Submittal Form for Test Samples

For use by Manufacturers, Lineal Suppliers and Fabricators

1. Information on Production of the Test Sample (complete **ALL** fields):

Manufacturer: FHC Frameless Hardware Company Date of sample manufacture: 7/17/2024

Plant Address where manufactured: 2323 Firestone Blvd

City: South Gate State: CA Zip Code: 90280

Name of IA: Associated Laboratories Inc Phone: 888-295-4531 Fax: 323-336-8307

2. Product Information (complete **APPLICABLE** fields):

Existing Product Line ID (CPD) No.: _____ Product/Operator Type (Table 4-3 of NFRC 100): Side-Hinged Exterior Door

Series/Model: FHC Aluminum 500T Thermal Door

3. Test sample is being submitted for (select **ONE**):

a. ☐ Validation for Initial Certification (prototype only) no plant qualification

b. ☑ Validation for Initial Certification or Recertification (production line unit) & plant qualification

c. ☐ Plant Qualification Only (production line unit)

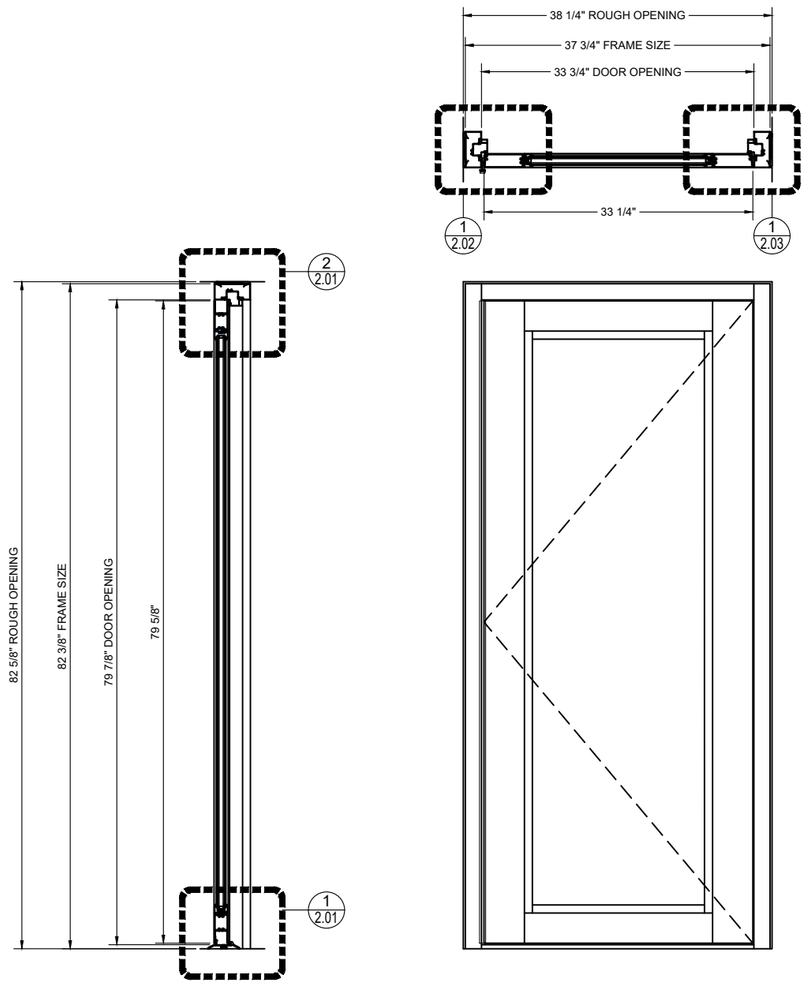
d. ☐ Test Only Alternative (production line unit) & plant qualification

I, Mario Salazar, as the designated agent for FHC do hereby attest that the foregoing information is true to the best of my information, knowledge, and belief. Further, if the unit is identified in Section 3 as a production line unit, I hereby authorize the NFRC-accredited testing laboratory to send a copy of the test report to the IA identified above for plant qualification purposes pursuant to the NFRC Product Certification Program.

Signature: M_SL Date: 9/6/2024

For Laboratory Use Only

1. Laboratory: Intertek
2. Date Sample Received: 7/22/24 Test Report #: R3639
3. Date Sample Tested: 9/11/24 By:
4. Modifications made:



1 FHC 500T SERIES ELEVATION

ARCH REF: NONE SCALE: 1-1/2"=1'-0"

Report #: R3639-116-46
Date: 09/11/2024
Verified by:

FHC
FRAMELESS HARDWARE COMPANY
FHC-USA.COM 888-260-4551

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

REV#	DATE	DRAWN BY
1	------	--

Drawn By: MS
Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
1.01

BILL OF MATERIALS

ITEM:	PART NUMBER:	DESCRIPTION:	MATERIAL:	FINISH:
1	6455TCA	2 X 4-1/2 THERMAL CENTER GLAZED HEAD/JAMB	6063-T6 ALUMINUM	CLEAR ANODIZE
2	6925CA	1-3/4 & 2 X 4-1/2 SNAP IN FLAT FILLER	6063-T6 ALUMINUM	CLEAR ANODIZE
3	6935CA	SNAP IN DOOR STOP FOR POCKET	6063-T6 ALUMINUM	CLEAR ANODIZE
4	6650TCA	OFFSET MEDIUM DOOR STILE BEVEL RAIL THERMAL	6063-T6 ALUMINUM	CLEAR ANODIZE
5	5654TCA	MEDIUM STILE 4" TOP & BOTTOM RAIL THERMAL	6063-T6 ALUMINUM	CLEAR ANODIZE
6	253X226T	PEMKO LATCHING PANIC SADDLE THRESHOLD	ALUMINUM	MILL
7	5674TCA	1" GLASS STOP THERMAL	6063-T6 ALUMINUM	CLEAR ANODIZE
8	5675CA	1" GLASS SNAP BEAD FACE	6063-T6 ALUMINUM	CLEAR ANODIZE
9	CDSG31612	GLASS STOP GASKET FOR 1/4" 3/16" 1/2" GLASS	EPDM 70A	CARBON BLACK
10	9116	DOOR STOP PILE BLACK .270" W X .280" HEIGHT	POLYPROPYLENE	BLACK
11	9912	GLASS SETTING BLOCKS (15/16" X 1/4" X 3" LONG)	NEOPRENE/GRADE 80	BLACK
12	813083CA	CONTINUOUS HINGE	ALUMINUM	CLEAR ANODIZE
13	18041SB	THERMAL DOOR BOTTOM DOOR SWEEP	ALUMINUM	BLACK
14	T5R1BL	THRESHOLD THERMAL SEAL	EPDM 70A	BLACK

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FINISHING HARDWARE COMPANY
FHC-USA.COM 888-260-4331

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

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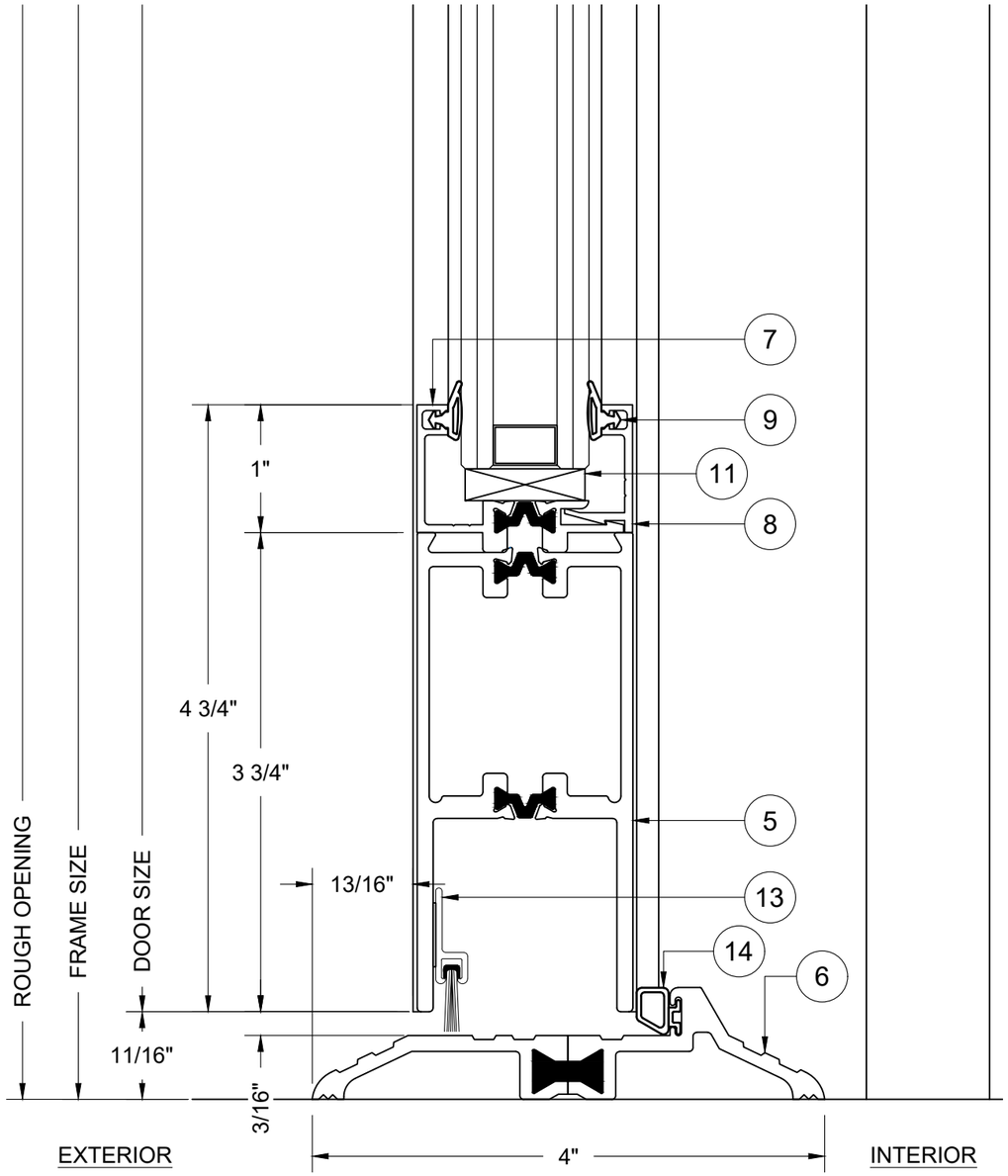
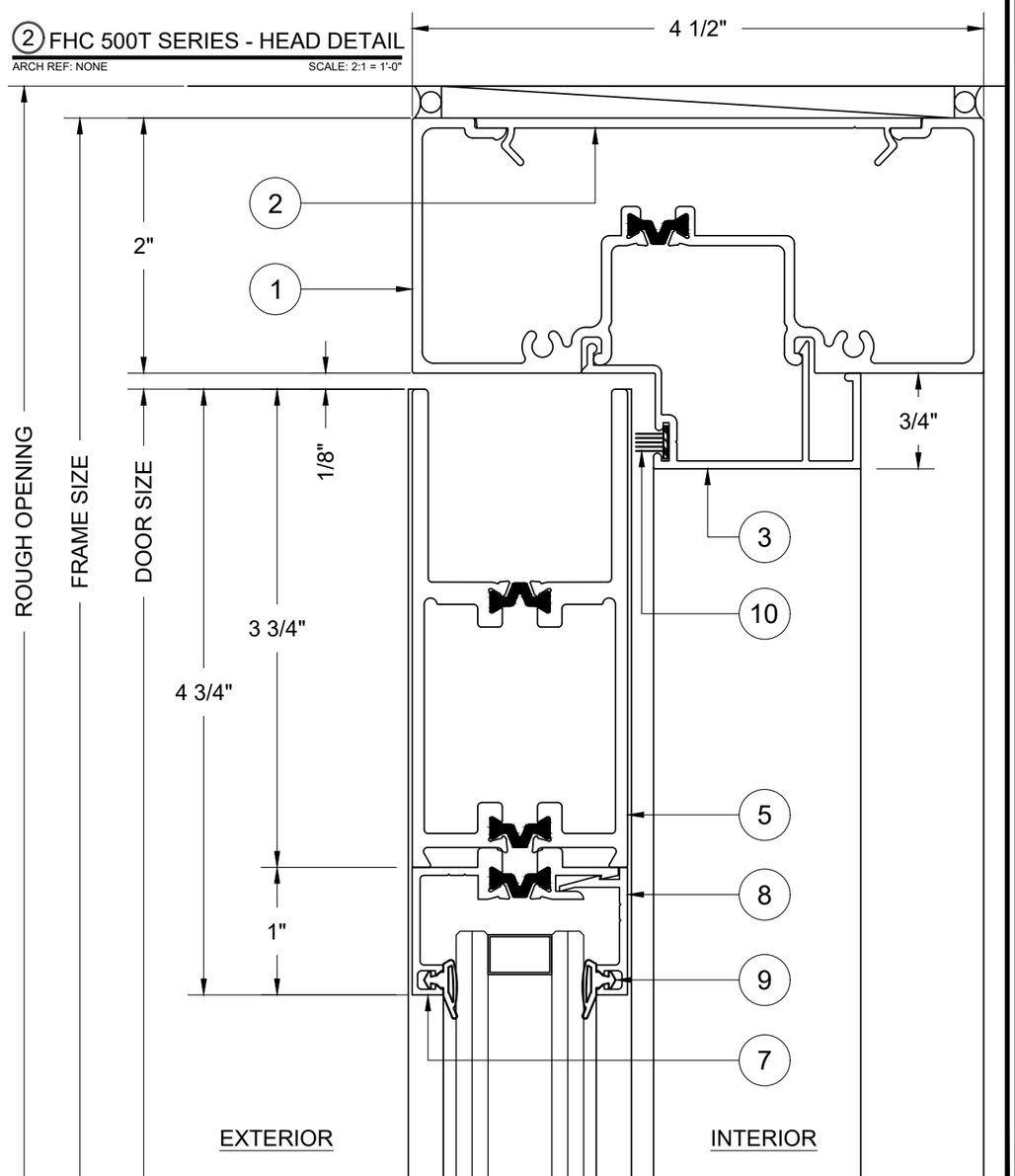


1 FHC 500T SERIES - SILL DETAIL

ARCH REF: NONE SCALE: 2:1 = 1'-0"



2 FHC 500T SERIES - HEAD DETAIL

ARCH REF: NONE SCALE: 2:1 = 1'-0"

intertek

Report #: R3639-116-46

Date: 09/11/2024

Verified by: Ryan A. Moser

FHC

FAMILIUS HARDWARE COMPANY

FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name:

NFRC THERMAL

INTERTEK (ATI) FHC ALUM 500T THERMAL

REF QUOTEE: 304864

Phone: (717) 767-3758

Fax: N/A

Contact: KIRBY MOSER

Customer:

Phone:

Fax:

Contact:

REV#	DATE	DRAWN BY
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Date: 5/16/24

Scale: AS NOTED

Project #: 12756-4-1

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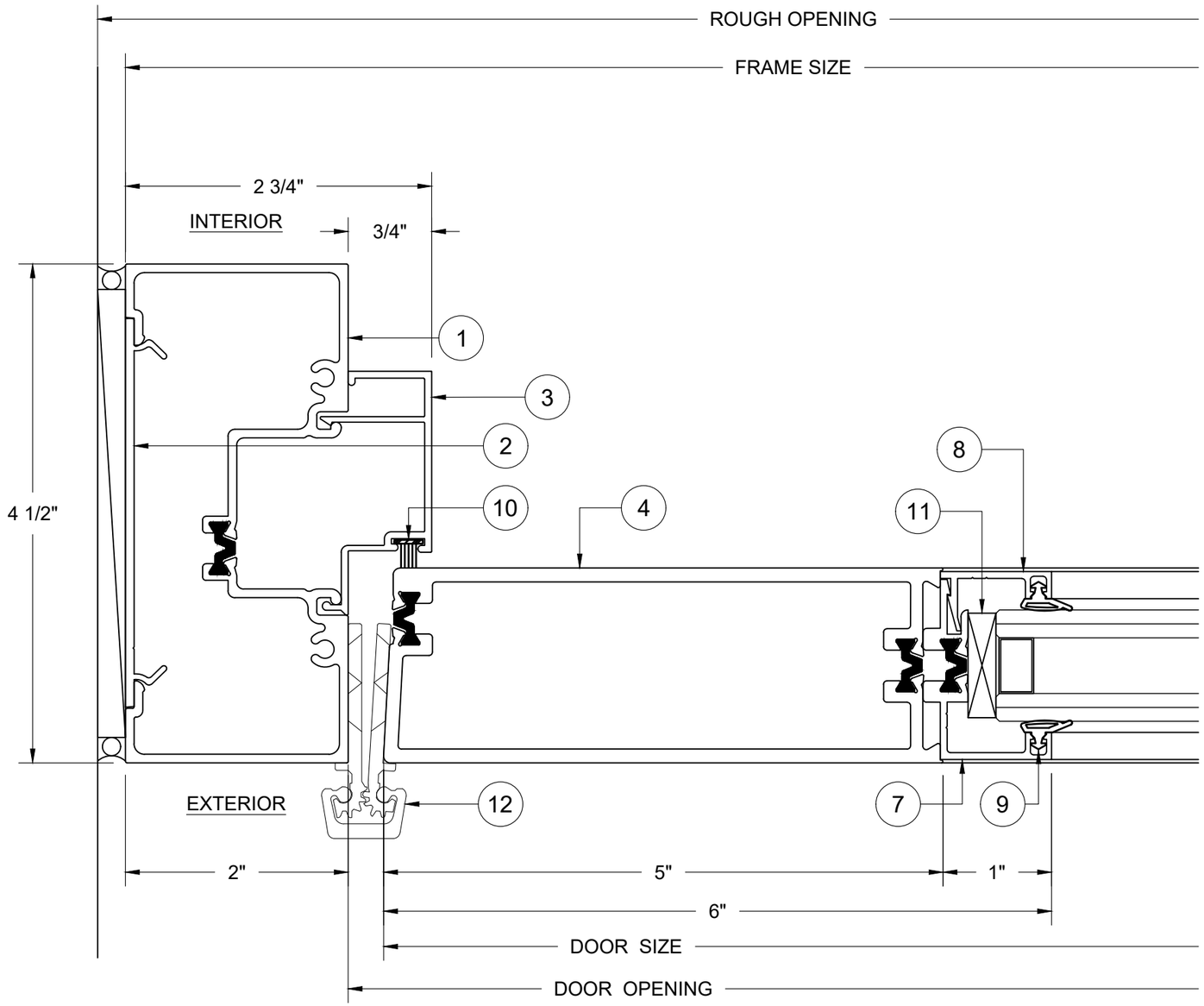

1 FHC 500T SERIES - HINGE JAMB DETAIL

ARCH REF: NONE SCALE: 2:1 = 1'-0"

intertek Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan C. Moser

FHC
FHC-USA.COM 888-295-4531

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

REV#	DATE	DRAWN BY
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3		
4		
5		
6		

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Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
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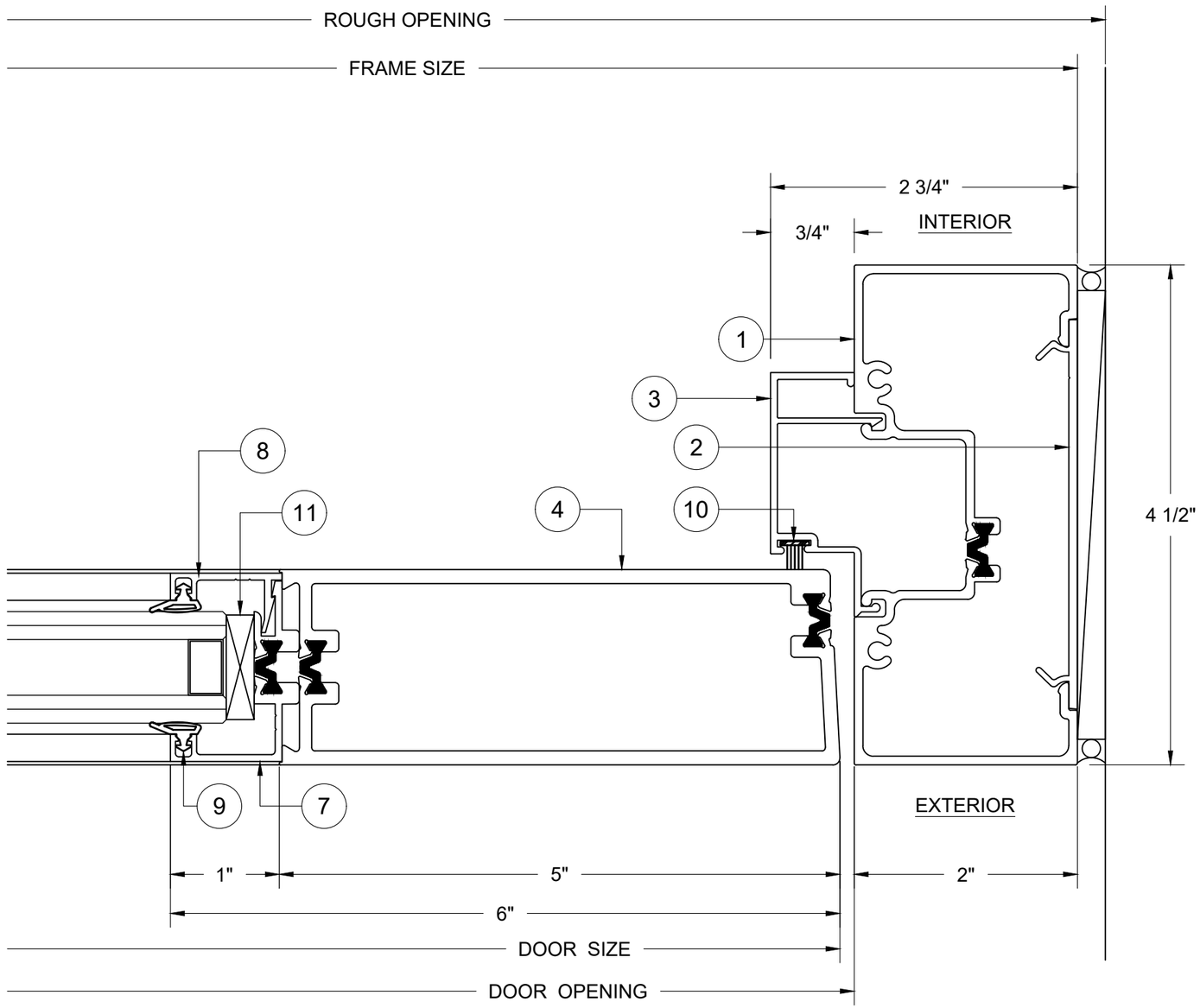

1 FHC 500T SERIES - JAMB DETAIL

ARCH REF: NONE SCALE: 2:1 = 1'-0"

intertek

Report #: R3639-116-46

Date: 09/11/2024

Verified by: Ryan A. Moser

FHC
FRAMELESS HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

REV#	DATE	DRAWN BY
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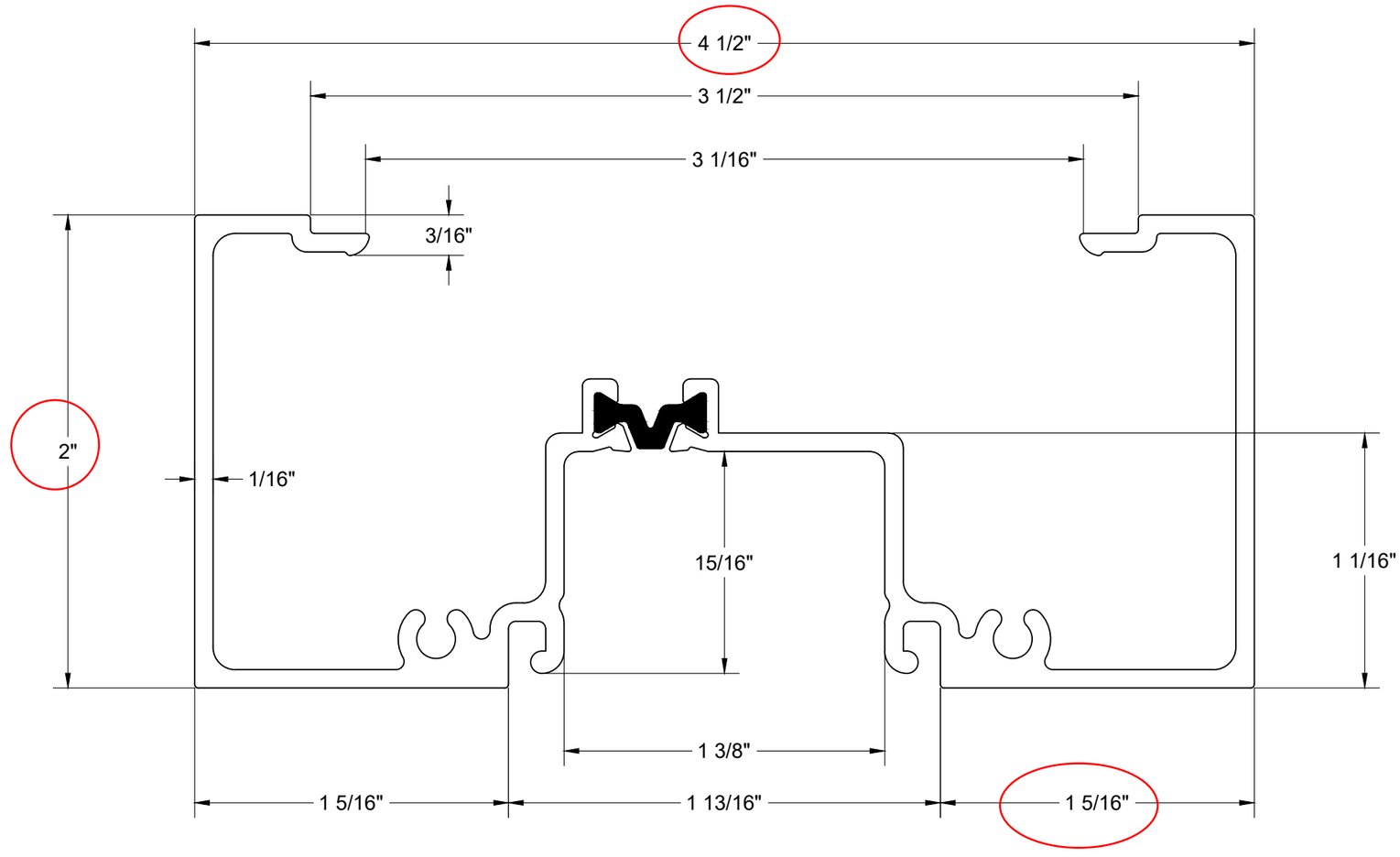
Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
2.03

P/N: 6455TCA
ITEM #: 1
2 X 4-1/2 THERMAL CENTER GLAZED HEAD/JAMB



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FRAMELESS HARDWARE COMPANY
FHC-USA.COM 888-260-4551

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

REV#	DATE	DRAWN BY
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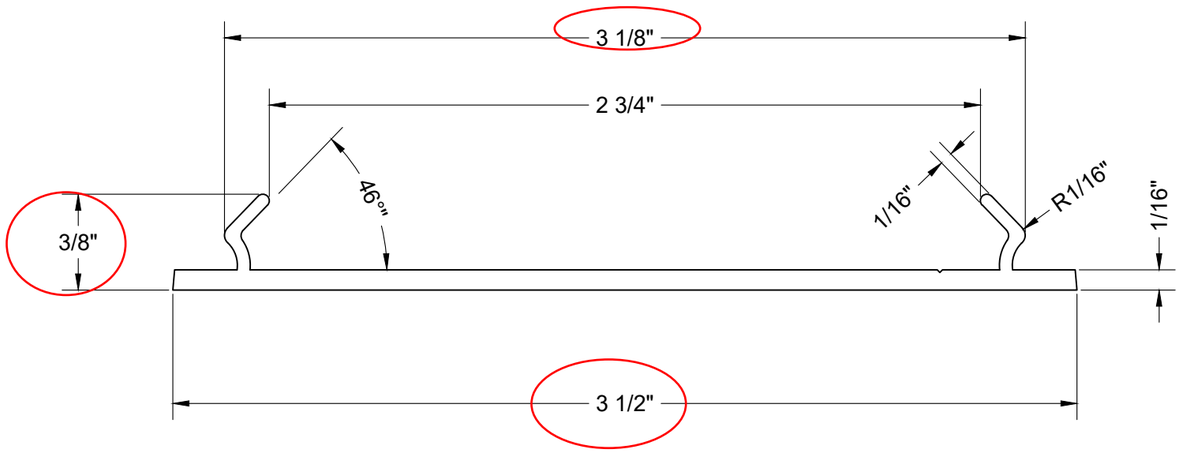
Drawn By: MS
Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
3.01

P/N: 6925CA
ITEM #: 2
1-3/4 & 2 X 4-1/2 SNAP IN FLAT FILLER



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan A. Moser

FHC
FABRICATED HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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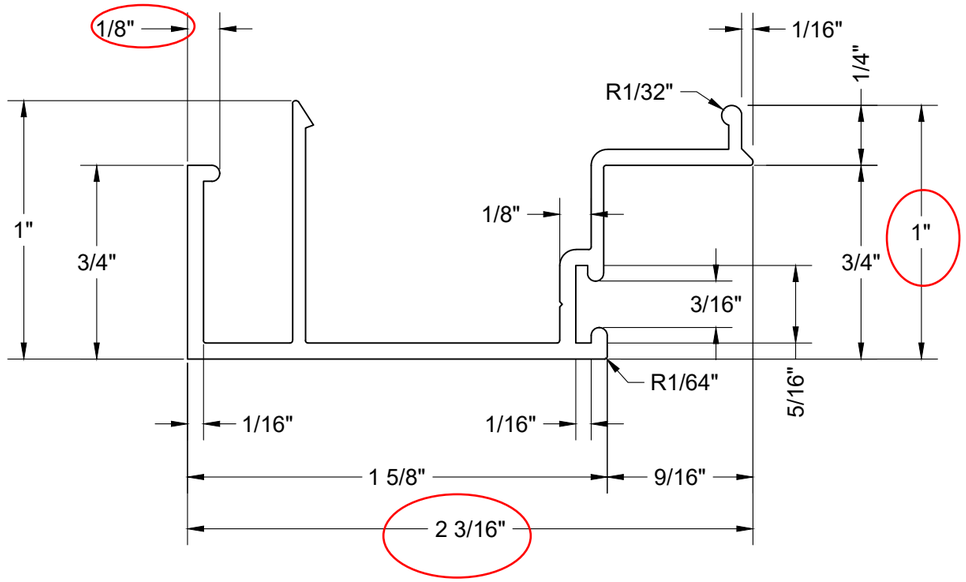
Drawn By: MS
Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
3.02

P/N: 6935CA
ITEM #: 3
SNAP IN DOOR STOP FOR POCKET



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FABRICATED HARDWARE COMPANY
FHCUSA.COM 888-292-4531

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Checked By:
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

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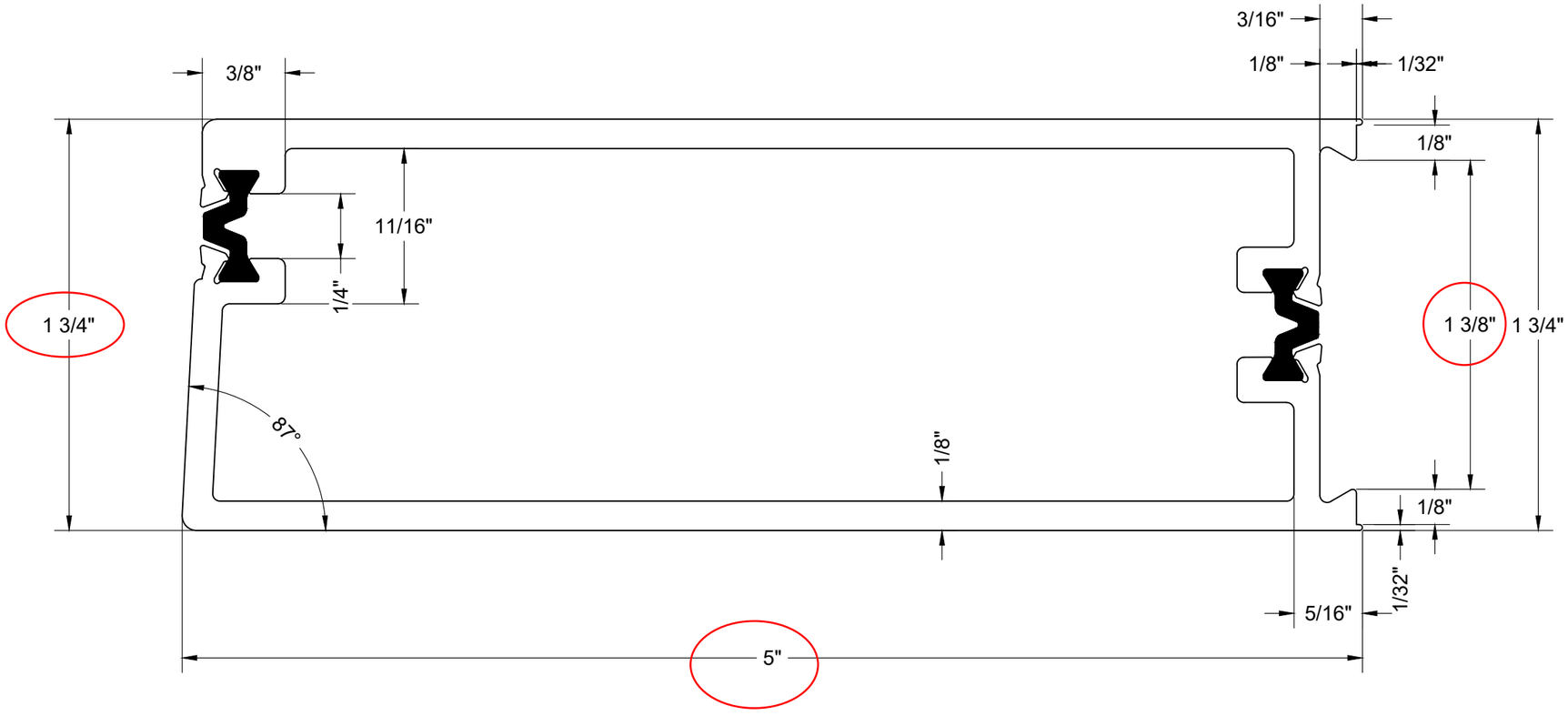
P/N: 6652TCA
ITEM #: 4
OFFSET WIDE STILE BEVEL RAIL THERMAL



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan O. Moser

FHC
FRANKLINS HARDWARE COMPANY
FHC-USA.COM 888-292-4551

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Project #: 12756-4-1

Sheet No.
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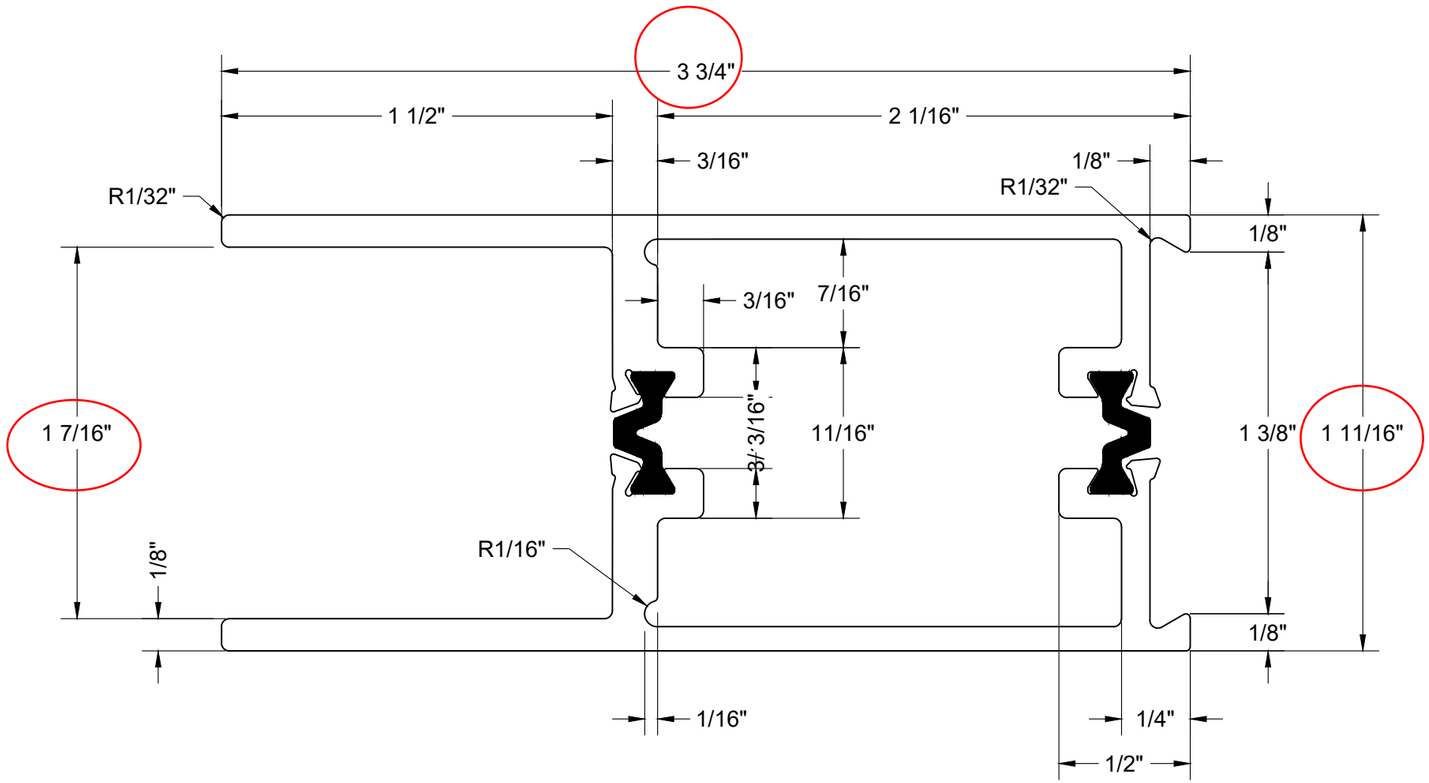
P/N: 5654TCA
ITEM #: 5
MEDIUM STILE 4" TOP RAIL THERMAL



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FINISHED HARDWARE COMPANY
FHC-USA.COM 888-292-4551

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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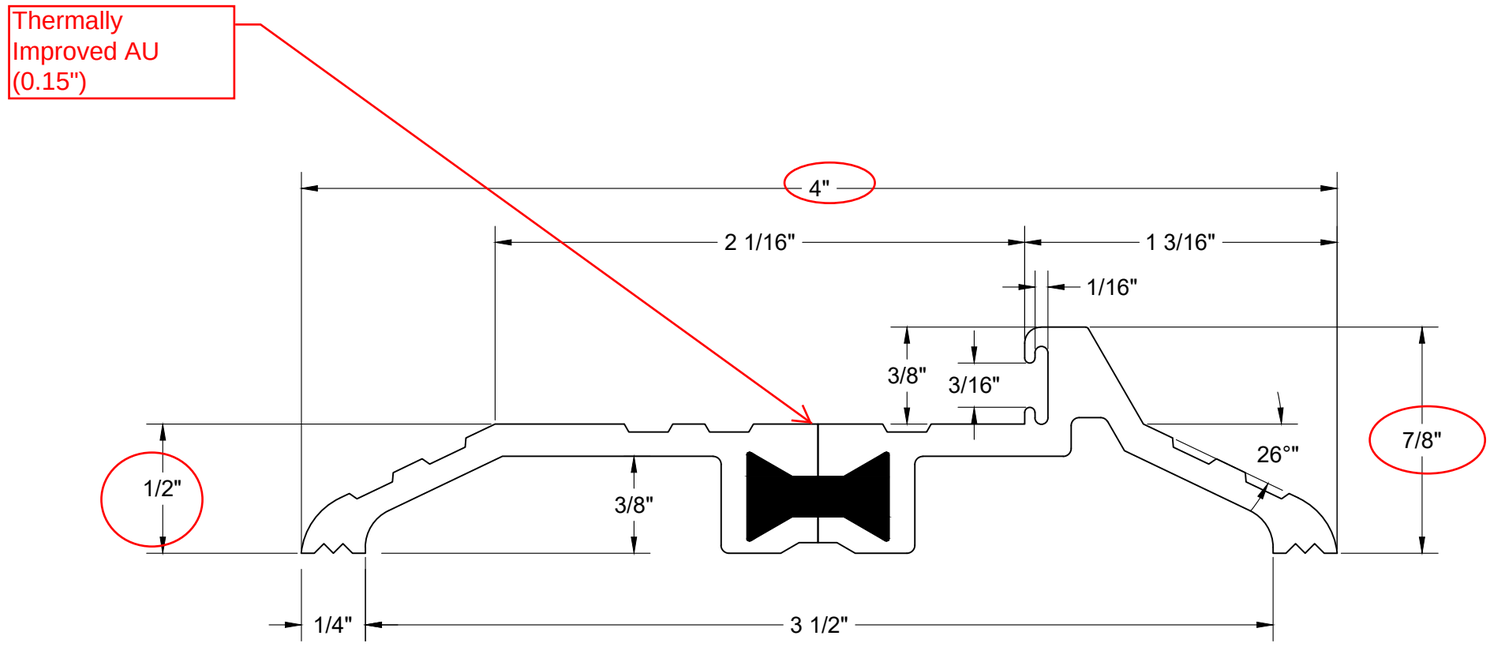
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
3.05

P/N: 252X226T
ITEM #: 6
PEMKO LATCHING PANIC SADDLE THRESHOLD



MATERIAL: ALUMINUM
FINISH: MILL

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FINKBEINER HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTE#: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Project #: 12756-4-1

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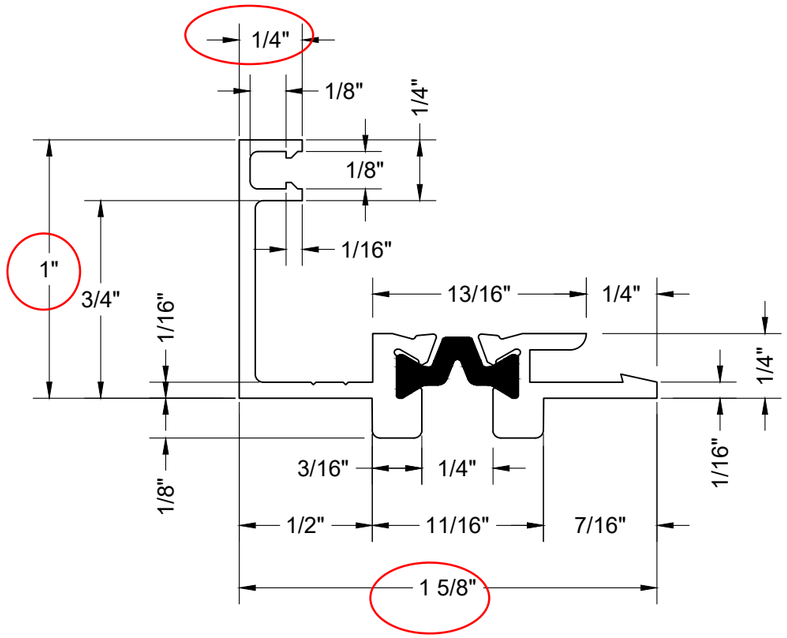
3.06

P/N: 5674TCA
ITEM #: 7
1" GLASS STOP THERMAL



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FINKBEINER HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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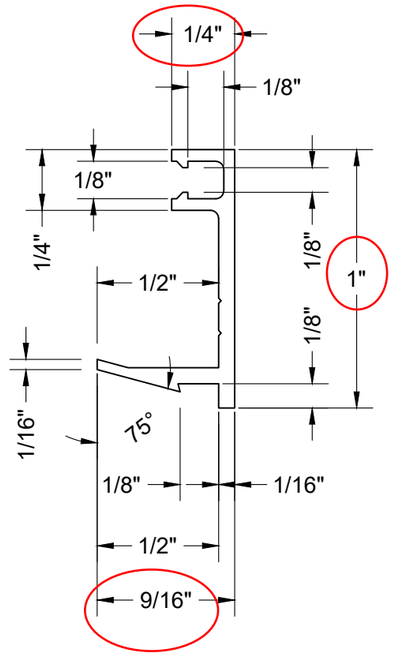
P/N: 5675CA
ITEM #: 8
1" GLASS SNAP BEAD FACE



MATERIAL: 6063-T6 ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Bryan P. Moser

FHC
FINISHING HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

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Phone:
Fax:
Contact:

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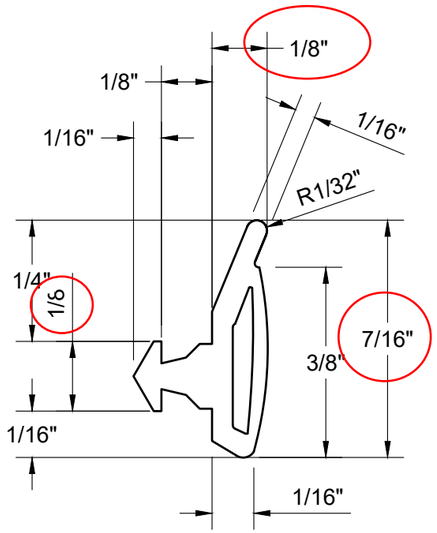
3.08

P/N: CDSG31612
ITEM #: 9
GLASS STOP GASKET FOR 1/4" 3/16" 1/2" GLASS



MATERIAL: EPDM 70A
FINISH: CARBON BLACK

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan C. Moser

FHC
FINISHERS HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Project #: 12756-4-1

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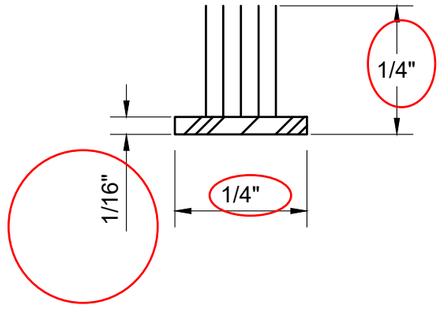
4.01

P/N: 9116
ITEM #: 10
DOOR STOP PILE BLACK .270" W X .280" HEIGHT



MATERIAL: POLYPROPYLENE
FINISH: BLACK

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FLOMERFELT HARDWARE COMPANY
FHCUSA.COM 888-290-4531

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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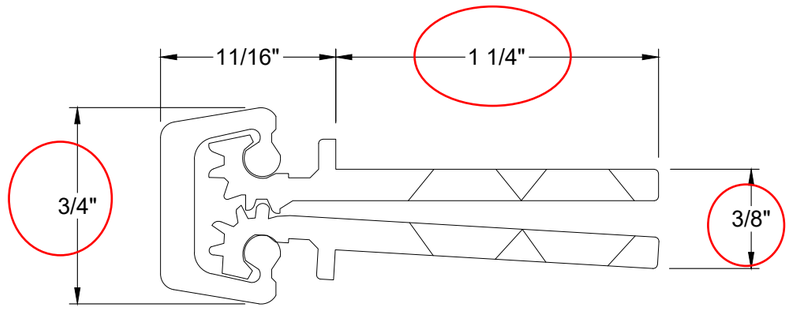
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
4.02

P/N: 813083CA
ITEM #: 12
CONTINUOUS HINGE



MATERIAL: ALUMINUM
FINISH: CLEAR ANODIZE

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan C. Moser

FHC
FHC-USA.COM 888-295-4531

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTEE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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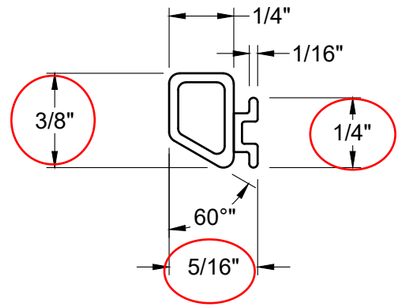
Date: 5/16/24
Scale: AS NOTED
Project #: 12756-4-1

Sheet No.
4.04

P/N: T5R1BL
ITEM #: 14
THRESHOLD THERMAL SEAL



MATERIAL: EPDM 70A
FINISH: BLACK

intertek
Report #: R3639-116-46
Date: 09/11/2024
Verified by: Ryan P. Moser

FHC
FAMILIUS HARDWARE COMPANY
FHC-USA.COM 888-290-4591

ENGINEER STAMP

Job Name: NFRC THERMAL
INTERTEK (ATI) FHC ALUM 500T THERMAL
REF QUOTE: 304864
Phone: (717) 767-3758
Fax: N/A
Contact: KIRBY MOSER

Customer:
Phone:
Fax:
Contact:

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Project #: 12756-4-1

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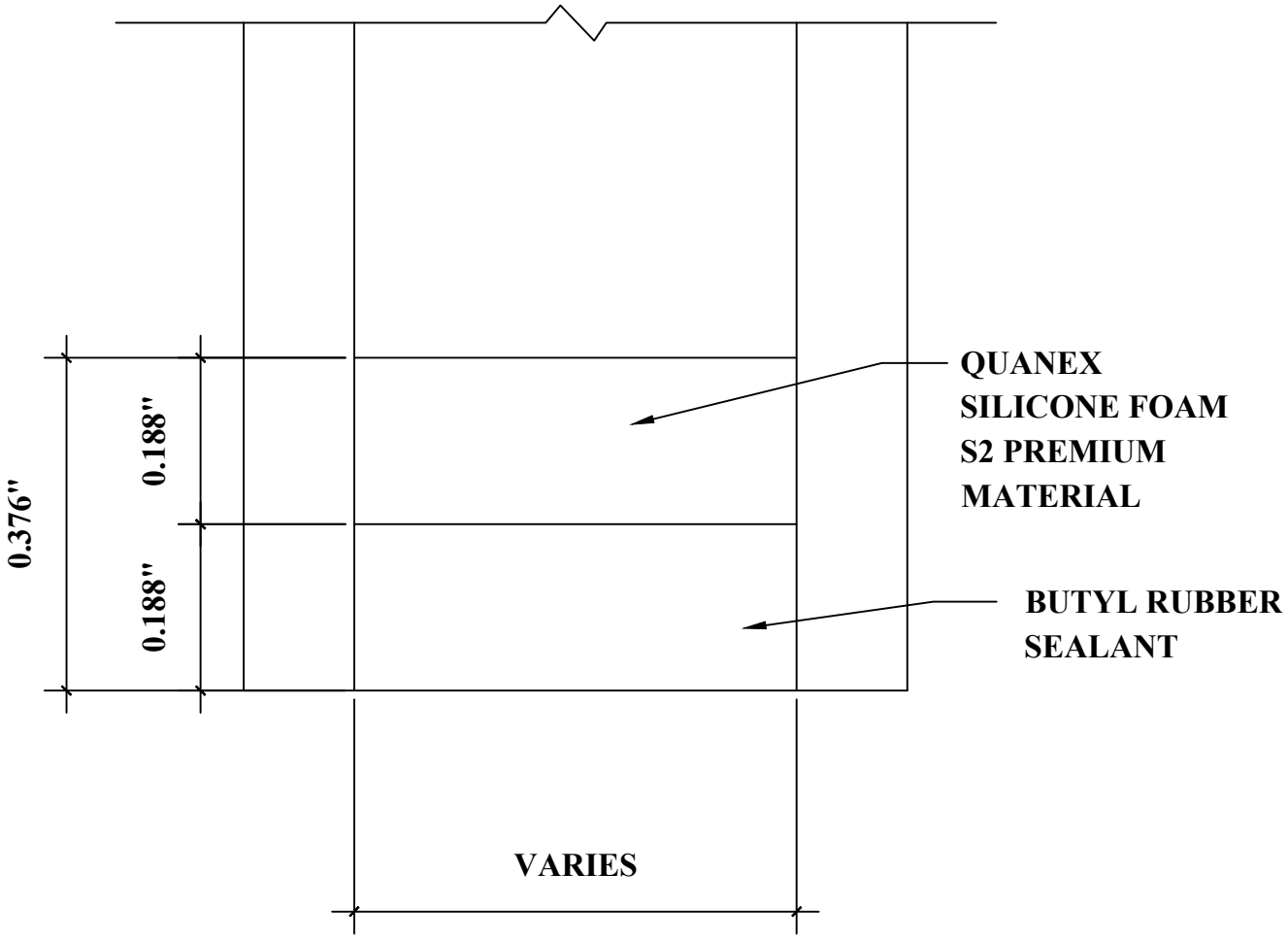

DETAIL FOR THERMAL MODELING OF
QUANEX SUPER SPACER PREMIUM (ZF-S)

130 Derry Court
York, Pennsylvania 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

SECTION 16
REVISION LOG

REVISION #	DATE	PAGES	REVISION
.01 R0	09/16/24	N/A	Original Report Issue