

CMI ARCHITECTURAL PRODUCTS, INC. COMPUTER SIMULATION REPORT

SCOPE OF WORK

452 WIDE STILE DOOR - ANSI/NFRC 100/200 and NFRC 500

REPORT NUMBER

N3187.02-201-45 R0

TEST DATE

08/25/22

ISSUE DATE

08/25/22

RECORD RETENTION END DATE

08/25/27

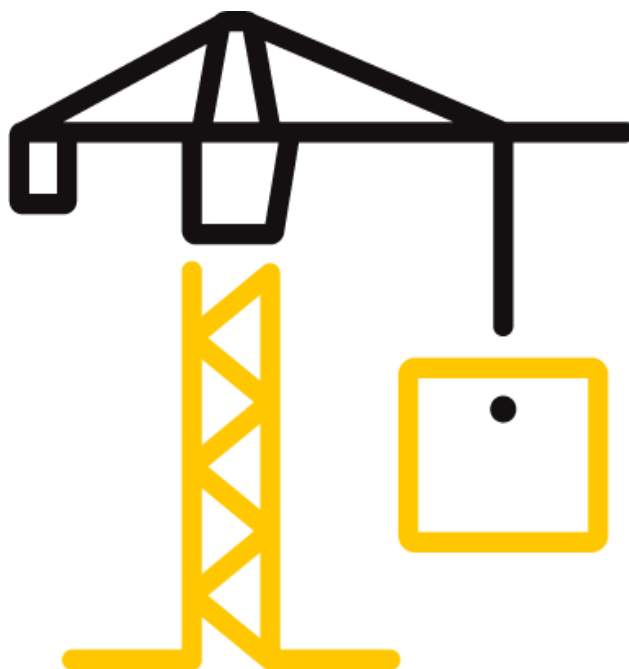
PAGES

23

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-4044 (01/16/19)

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TEST REPORT FOR CMI ARCHITECTURAL PRODUCTS, INC.

Report No: N3187.02-201-45 R0

Date: 08/25/22

REPORT ISSUED TO

CMI ARCHITECTURAL PRODUCTS, INC.

1630 101st Avenue NE

Blaine, Minnesota 55449

SECTION 1

SUMMARY

SERIES/MODEL: 452 Wide Stile Door

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance simulations in accordance with the National Fenestration Rating Council (NFRC).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. 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, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

FOR INTERTEK B&C:

COMPLETED BY: Andrew C. Walczak

Simulation Project

TITLE: Manager, SIRC

SIGNATURE:

DATE: 08/25/22

ACW:emd/wma

REVIEWED BY: Eid M. Dushaishi

Project Engineer, NFRC

TITLE: Certified Simulator

SIGNATURE:

DATE: 08/25/22

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SECTION 2

TEST METHODS

The products were evaluated in accordance with the following:

ANSI/NFRC 100-2020, Procedure for Determining Fenestration Product U-Factors

ANSI/NFRC 200-2020, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

NFRC 500-2017, Procedure for Determining Fenestration Product Condensation Resistance Values

**Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.*

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certificate of Authorization (CA) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.

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SECTION 3

TEST PROCEDURE

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

FRAME AND EDGE MODELING	THERM 7.4.4
CENTER-OF-GLASS MODELING	WINDOW 7.4.14
TOTAL PRODUCT CALCULATIONS	WINDOW 7.4.14
SPECTRAL DATA LIBRARY	IGDB 87.0
NFRC MATERIALS LIBRARY	NFRC 101-2020 [E1A11]

Modeling Assumptions / Technical Interpretations

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) Non-continuous hardware was not modeled.
- 3) Single door was used to represent single and double door assemblies per ANSI/NFRC 100-2020, table 4-3, note 5.

SECTION 4

SIMULATION SPECIMEN DESCRIPTION

SERIES/MODEL	452 Wide Stile Door
PRODUCT TYPE	Swinging Door, Single Leaf Entrance Door
FRAME MATERIAL	AT - Aluminum w/ Thermal Breaks - All Members
SASH MATERIAL	AL - Aluminum (Non-thermally broken)
STANDARD SIZE	960mm x 2090mm

TEST REPORT FOR CMI ARCHITECTURAL PRODUCTS, INC.

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SECTION 4 (Continued)
SIMULATION SPECIMEN DESCRIPTION

SPACER OPTIONS			
TYPE	PRIMARY SEAL	SECONDARY SEAL	CODE
Aluminum Spacer	Butyl Rubber	Butyl Rubber	A1-D

GRID OPTIONS		
GRID SIZE	GRID TYPE	GRID PATTERN
---	---	---

REINFORCEMENT OPTIONS	
LOCATION	MATERIAL
---	---

GAS FILLING TECHNIQUE	
FILL TYPE	METHOD
94.83% Xenon	Dual Probe w/ Concentration Sensor
74.78% Argon	Single Probe, Timed
91.89% Krypton	Dual Probe w/ Concentration Sensor
62.51% Argon	Single Probe, Timed
86.08% Argon	Single Probe, Timed
81.60% Xenon	Single Probe, Timed
94.54% Xenon	Dual Probe w/ Concentration Sensor
81.48% Krypton	Single Probe, Timed
71.52% Xenon	Single Probe, Timed

EDGE-OF-GLASS CONSTRUCTION	
INTERIOR CONDITION	EPDM Gasket
EXTERIOR CONDITION	EPDM Gasket

WEATHERSTRIPPING		
TYPE	QUANTITY	LOCATION
Mohair	1 Row	Head, Jambs

FRAME/SASH MATERIALS FINISH	
INTERIOR	Aluminum (painted)
EXTERIOR	Aluminum (painted)

VALIDATION MATRIX*	
PRODUCT LINE	REPORT NUMBER
---	---

*These products are part of a validation matrix. Only one is required for validation testing.

TEST REPORT FOR CMI ARCHITECTURAL PRODUCTS, INC.

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SECTION 5

SPECIALTY PRODUCTS TABLE

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. The method calculates overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

	No Dividers	Dividers < 1	Dividers > 1
SHGC0	0.047259	0.049732	0.051991
SHGC1	0.509193	0.436320	0.387709
VT0	0.000000	0.000000	0.000000
VT1	0.461934	0.386588	0.317754

$$\text{SHGC} = \text{SHGC0} + \text{SHGCc} (\text{SHGC1} - \text{SHGC0})$$

$$\text{VT} = \text{VT0} + \text{VTc} (\text{VT1} - \text{VT0})$$

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SECTION 6
SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (452 Wide Stile Door)												
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft2-F)			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)		
1	COG=0.3200											
	0.230	0.500	0.225					XEN95	0.331(#2)	CL	A1-D	N
	U-Factor		0.77	SHGC(N)				0.13	VT(N)		0.06	CR 48
2	COG=0.3000											
	0.233	0.500	0.225					ARG75	0.166(#2)	CL	A1-D	N
	U-Factor		0.76	SHGC(N)				0.25	VT(N)		0.25	CR 48
3	COG=0.2800											
	0.233	0.500	0.225					KRY92	0.166(#2)	CL	A1-D	N
	U-Factor		0.76	SHGC(N)				0.25	VT(N)		0.25	CR 48
4	COG=0.2600											
	0.223	0.500	0.225					ARG63	0.035(#2)	CL	A1-D	N
	U-Factor		0.75	SHGC(N)				0.23	VT(N)		0.32	CR 48
5	COG=0.2400											
	0.223	0.500	0.223					ARG86	0.035(#2) / 0.035(#3)	CL	A1-D	N
	U-Factor		0.74	SHGC(N)				0.22	VT(N)		0.29	CR 49
6	COG=0.2200											
	0.223	0.500	0.223					XEN82	0.018(#2) / 0.018(#3)	CL	A1-D	N
	U-Factor		0.73	SHGC(N)				0.16	VT(N)		0.24	CR 49
7	COG=0.2000											
	0.223	0.500	0.223					XEN95	0.018(#2) / 0.018(#3)	CL	A1-D	N
	U-Factor		0.72	SHGC(N)				0.16	VT(N)		0.24	CR 49
8	COG=0.1800											
	0.223	0.250	0.003	0.250	0.225			KRY81/AIR	0.018(#2) / 0.76(#3) / 0.11(#4)	CL	A1-D	N
	U-Factor		0.71	SHGC(N)				0.16	VT(N)		0.26	CR 50
9	COG=0.1600											
	0.223	0.250	0.003	0.250	0.223			XEN72/AIR	0.018(#2) / 0.76(#3) / 0.11(#4) / 0.018(#5)	CL	A1-D	N
	U-Factor		0.71	SHGC(N)				0.16	VT(N)		0.21	CR 50



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TEST REPORT FOR CMI ARCHITECTURAL PRODUCTS, INC.

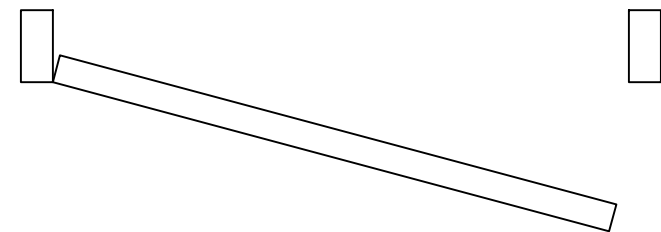
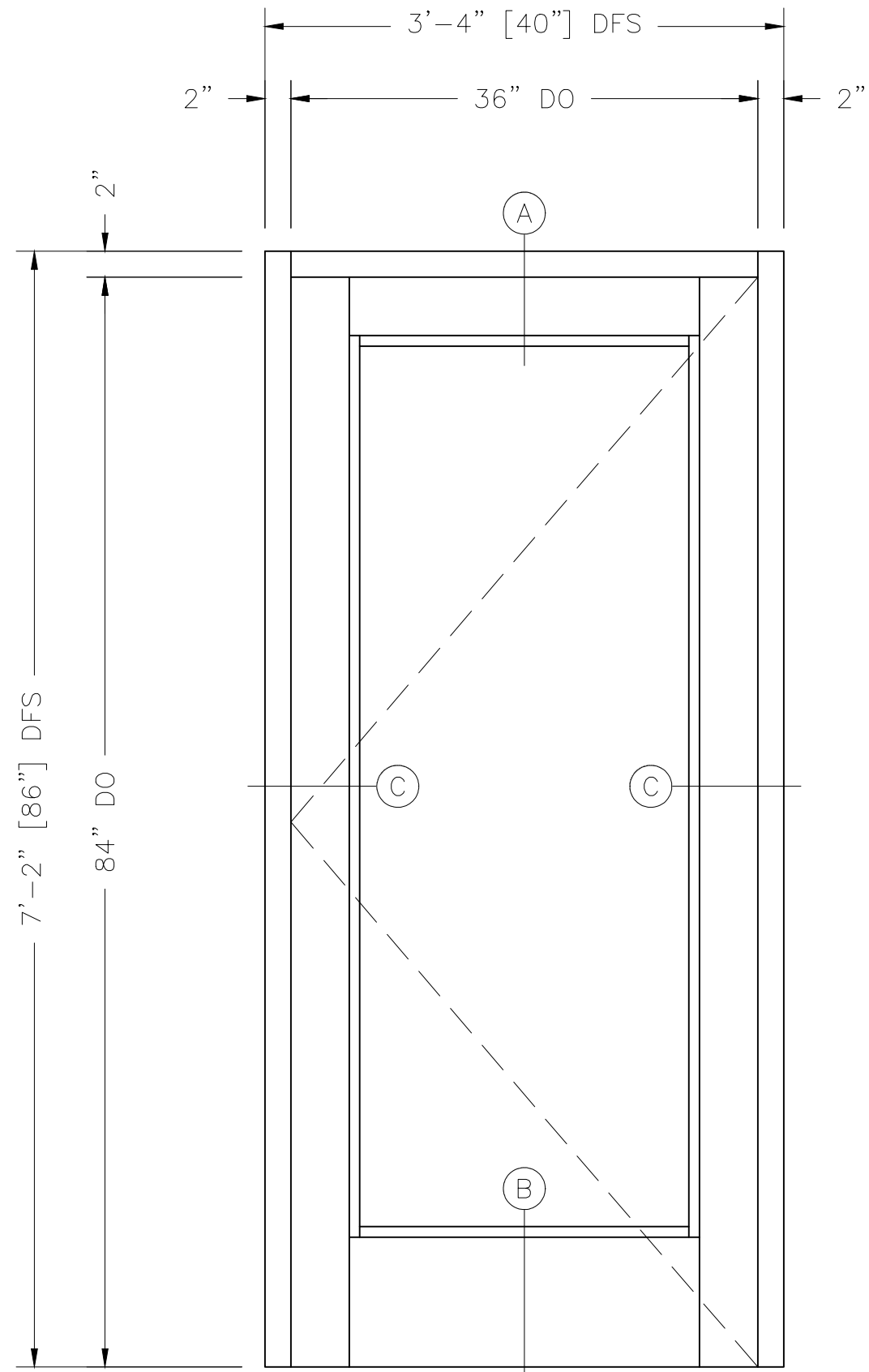
Report No: N3187.02-201-45 R0

Date: 08/25/22

SECTION 7

DRAWINGS / BILL OF MATERIALS

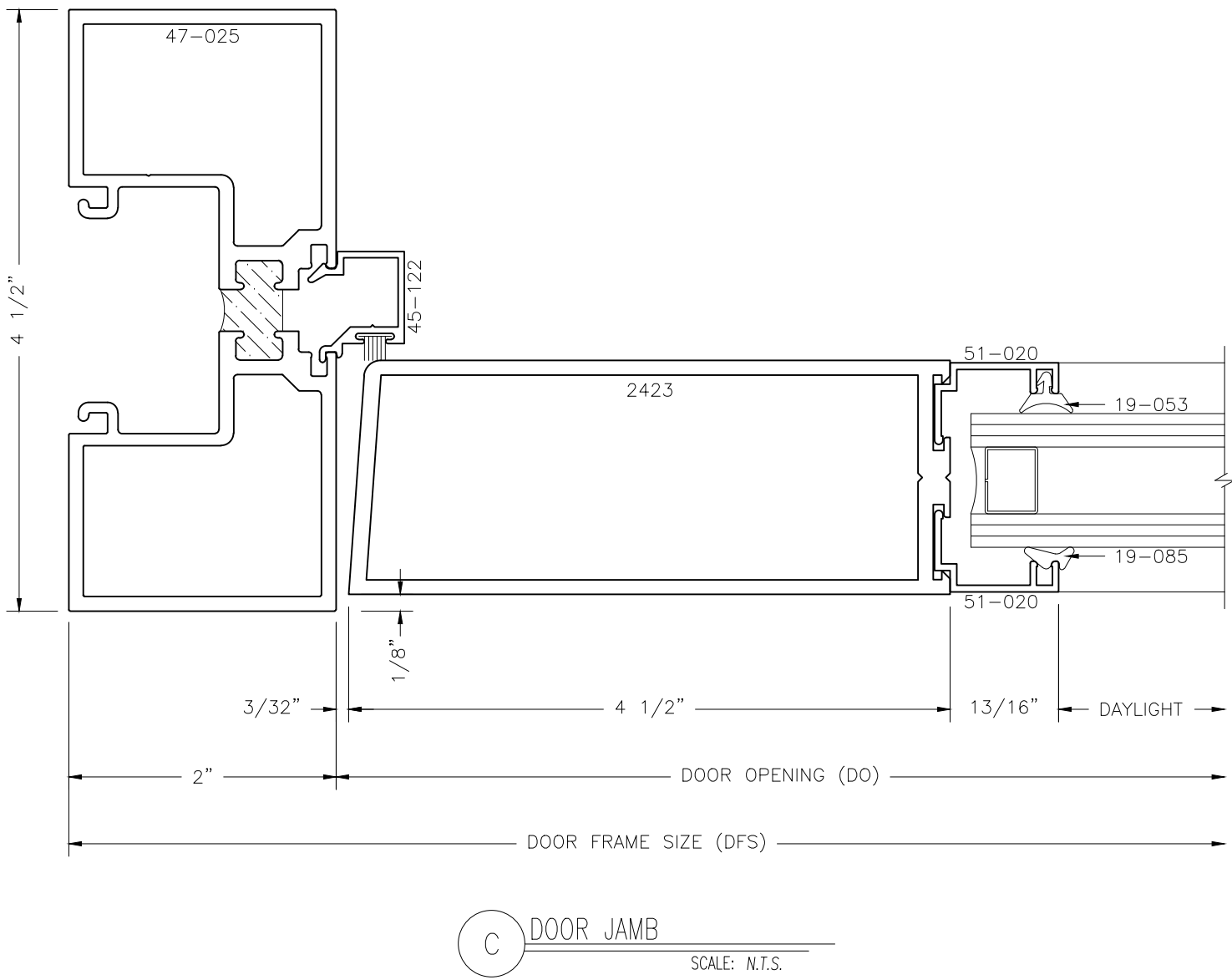
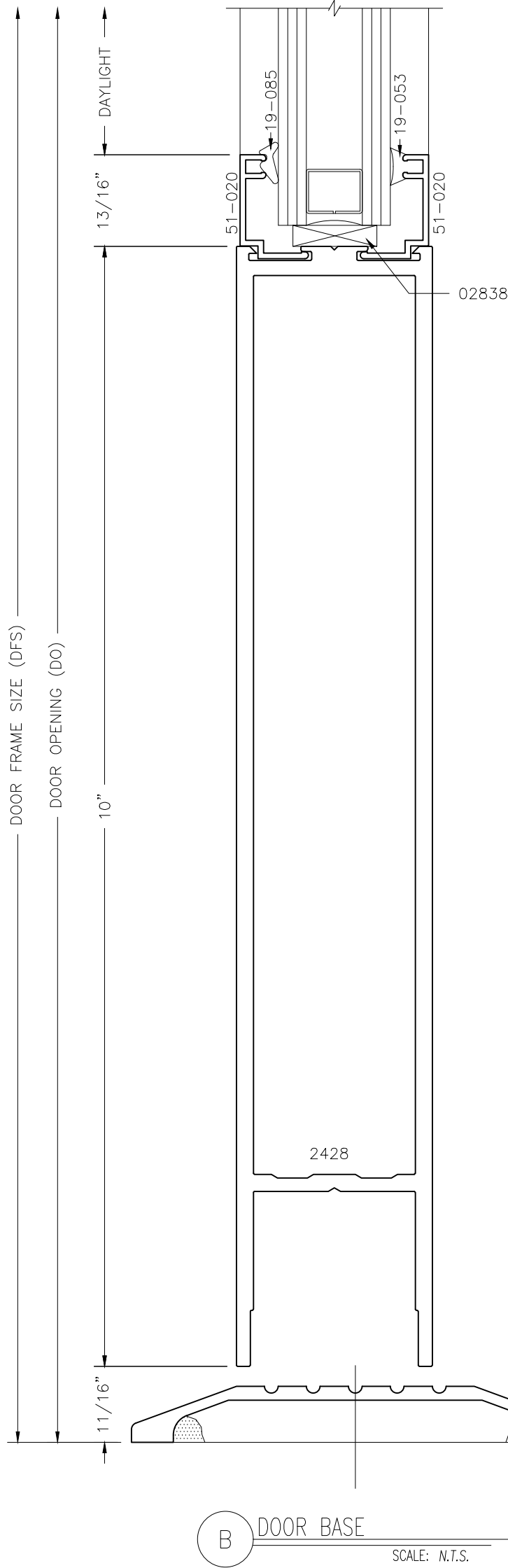
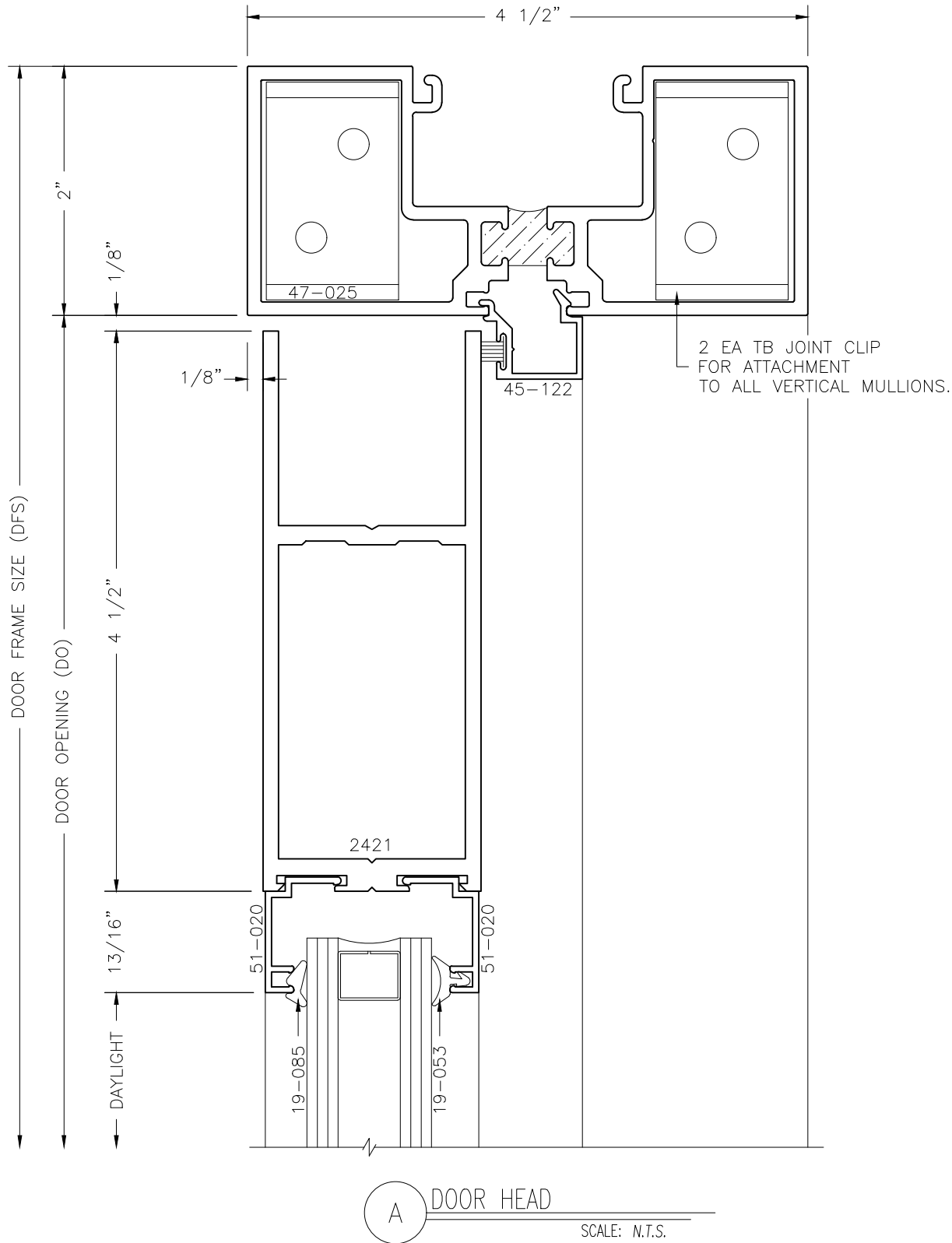
The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation results reported herein. Any deviations are documented herein or on the drawings.



452 WIDE STILE – SINGLE
45-025 FRAMING SCALE: N.T.S.

PARTS LIST:		
#	USE	DESCRIPTION
47-025	THERMAL DOOR FRAME	6063-T5 ALUMINUM w/POLYURETHANE THERMAL BREAK
45-122	1/2" DOOR STOP	6063-T6 ALUMINUM
51-020	1" GLASS STOP	6063-T5 ALUMINUM
2421	4 1/2" TOP RAIL	6063-T5 ALUMINUM
2428	10" BOTTOM RAIL	6063-T5 ALUMINUM
2423	BEVELED WIDE STILE	6063-T5 ALUMINUM
19-085	GLAZING GASKET	EPDM 70 ±5 DUROMETER
19-053	GLAZING GASKET	EPDM 70 ±5 DUROMETER

TESTING PARAMETERS:
AAMA 507: STANDARD PRACTICE FOR DETERMINING THE THERMAL PERFORMANCE CHARACTERISTICS OF FENESTRATION SYSTEMS INSTALLED IN COMMERCIAL BUILDINGS.
NFRC 100/200/500: PROCEDURES FOR DETERMINING FENESTRATION PRODUCT U-FACTORS, SOLAR HEAT GAIN COEFFICIENT, VISIBLE TRANSMITTANCE AT NORMAL INCIDENCE AND CONDENSATION RESISTANCE VALUES.



REVISIONS

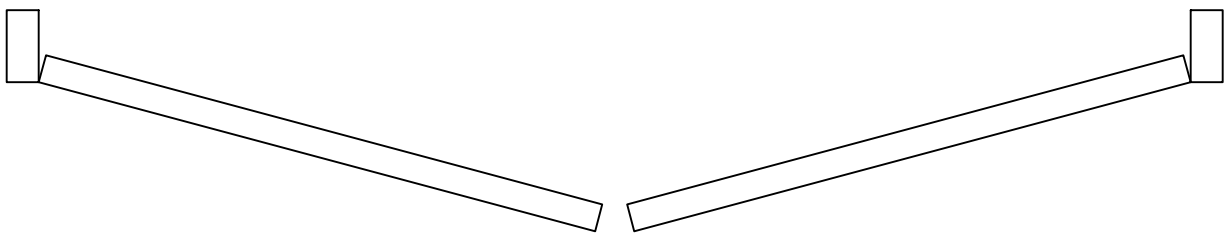
REV	INT'L	DATE	DISCRIPTION
A			

TEST:
452 WIDE STILE DOOR - SINGLE
AAMA 507 COMPUTER SIMULATION
NFRC 100/200/500 COMPUTER
SIMULATION

TESTING AGENCY:
INTERTEK - ATI
40 51ST WAY NE
SUITE 100
FRIDLEY, MN 55421
P: 651.636.3835

DRAWN BY: ASHLEY ALT
DATE: 05.10.2022

SHEET #:



45-025 FRAMING SCALE: N.T.S.

TESTING PARAMETERS:

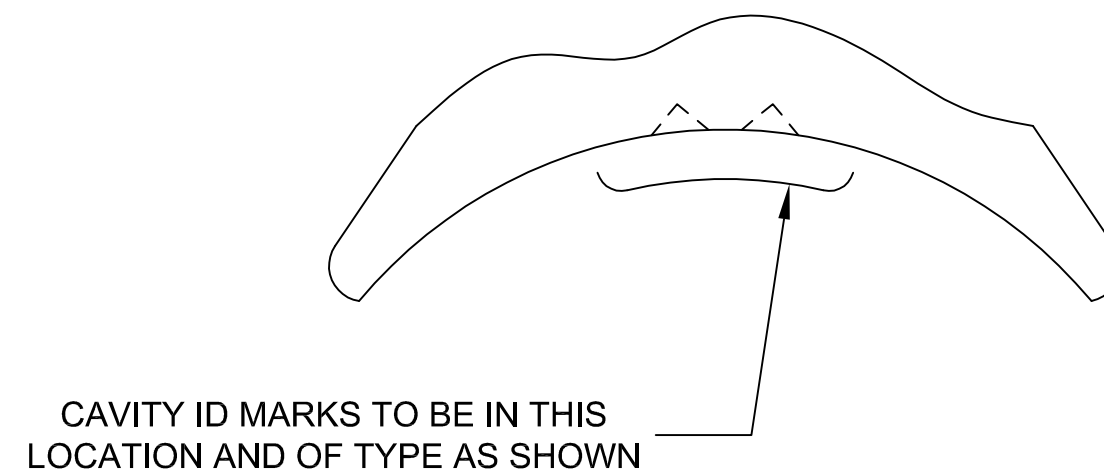
AAMA 507: STANDARD PRACTICE FOR DETERMINING THE THERMAL PERFORMANCE CHARACTERISTICS OF FENESTRATION SYSTEMS INSTALLED IN COMMERCIAL BUILDINGS.

NFRC 100/200/500: PROCEDURES FOR DETERMINING FENESTRATION PRODUCT U-FACTORS, SOLAR HEAT GAIN COEFFICIENT, VISIBLE TRANSMITTANCE AT NORMAL INCIDENCE AND CONDENSATION RESISTANCE VALUES.

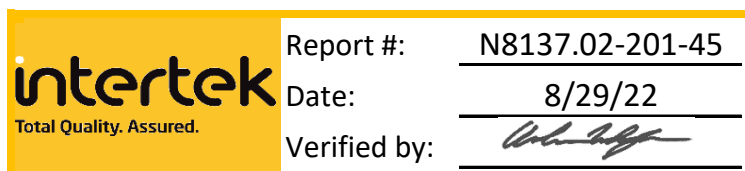


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SHEET #:



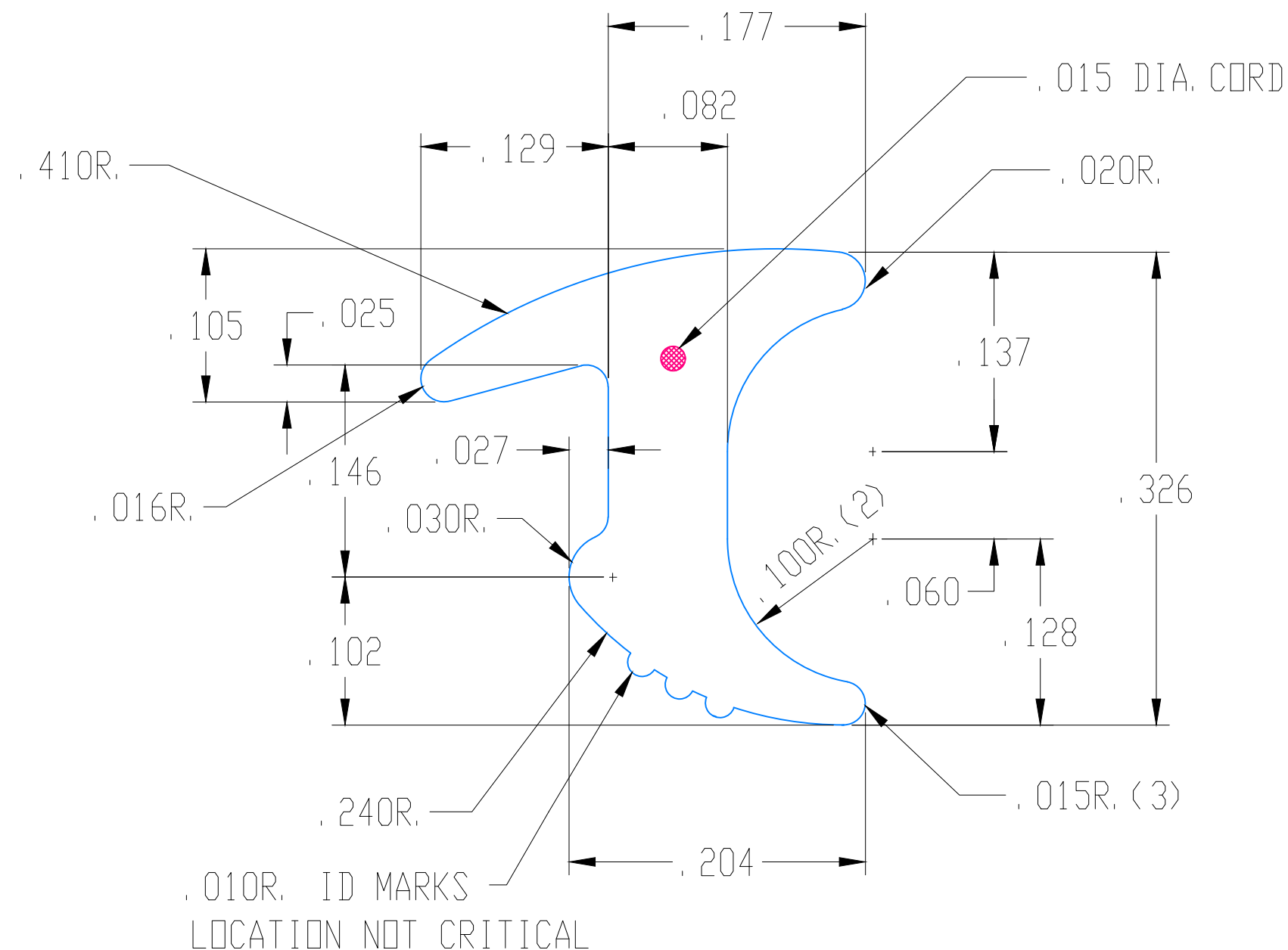
			2	1-2-08	ADDED ID MARK LOCATION	DLS
EXTRUSION CUT LENGTH TOLERANCE			1	8-3-07	ADDED DIMENSIONS (NO PART CHANGE)	DLS
0	- 1.6"	±.060"	No.	Date	Description	By
1.6"	- 2.5"	±.080"	 1451 Jacobson Ave Ashland, Ohio 44805 U.S.A. Phone : 800-321-6357 Fax : 419-289-6645			
2.5"	- 4.0"	±.100"				
4.0"	- 6.3"	±.130"				
6.3"	- 10.0"	±.160"				
10.0"	- 16.0"	±.200"				
16.0"	- 25.0"	±.250"				
25.0"	- 40.0"	±.400"				
40.0"	- 63.0"	±.500"				
63.0"	- 100.0"	±.630"				
100.0"	- 160.0"	±.800"				
+160.0"		±.50%	Customer: CMI Customer Part No. 19-053			
			Project:			
			Drawn by: E. TANGO		Scale: 10X	Date: 6/13/2005
			Compound: EPDM		Designed F.C. *.125	Drawing No. TR-13921E
			Durometer: 70 ±5		Area: .039	



The design of the gasket shown herein is the product of Tremco Incorporated. No reproduction or use of this design is authorized without the consent of Tremco Incorporated.



FULL SIZE



NOTE: PROFILE TO BE SILICONE COATED



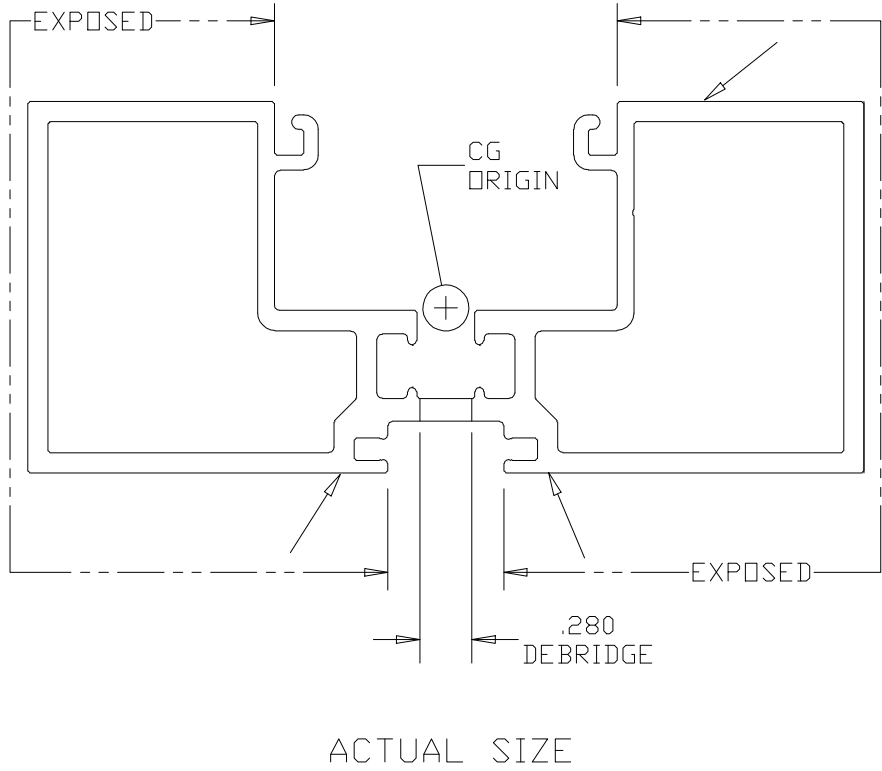
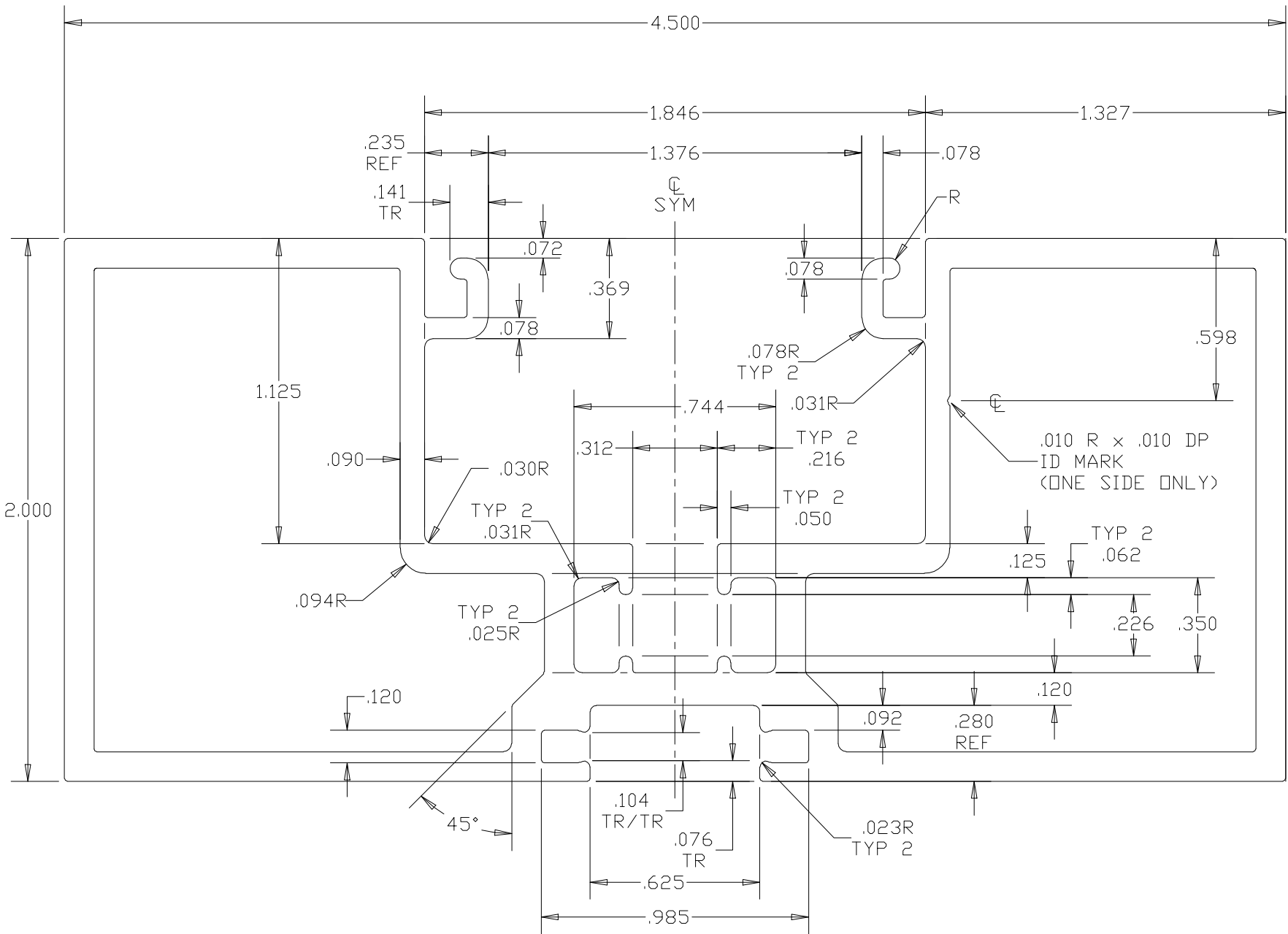
Report #: N8137.02-201-45
Date: 8/29/22
Verified by: [Signature]

THE DESIGN OF THE GASKET SHOWN HEREIN IS THE PRODUCT OF TREMCO, INC. NO REPRODUCTION OR USE OF THIS DESIGN IS AUTHORIZED WITHOUT THE CONSENT OF TREMCO.

1	7-27-95	ADD WORLD BANK GRAY EPDM	DAT
1	5-27-86	ADD NOTE	JRB
NO.	DATE	DESCRIPTION	BY
TREMCO		1451 JACOBSON AVE. ASHLAND, OH 44805 U. S. A.	
TREMCO STANDARD			
DRAWN BY	POIRIER	SCALE 10X	DATE 9-26-85
COMPOUND	EPDM	DESIGNED F. C.	DRAWING NO.
DURIMETER	70±5	AREA .0420	TR-1965E

Standard Aluminum Association tolerances apply unless otherwise noted.				DIE NUMBER	REV
CUST PART #: 47025		TITLE BLOCK: REV A	EUC	CRO-8364	
CUST PART NAME: THERMAL DOOR FRAME		DIM AND TOL BLOCK REMOVED	151		
PROPOSAL:	REL. DATE 3-13-12 TMB	ALLOY 6063-T5		FINISH VEL	

STRUCTURAL STREAKS EXPECTED



WARRANTY:
Bonnell warrants that the product(s) supplied by Bonnell shall be free from defects in workmanship and material and shall conform to all descriptions and specifications, as agreed between Bonnell and Purchaser. BONNELL DISCLAIMS ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHETHER CREATED BY CONTRACT, BY STATUTE OR OTHERWISE BY OPERATION OF LAW, INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
PURCHASER'S DESIGNS, PLANS, DRAWINGS, SPECIFICATIONS AND REQUIREMENTS.
For any product that is not included in Bonnell's standard product line offered for sale generally in the usual course of Bonnell's business, it is agreed that Purchaser has engaged Bonnell to manufacture such product to Purchaser's specifications and requirements. Bonnell shall not be responsible for the adequacy of prints, drawings, specifications and requirements respecting such product or for the adequacy of the design represented thereby. Bonnell also shall not be responsible for the adequacy of the materials incorporated in such product or for testing or otherwise determining the sufficiency and applicability of the design. Bonnell shall not be responsible for determining or assuring that such product or the use or application of such product conforms with applicable federal, state or local laws, rules or regulations. Bonnell's only warranty with respect to such products shall be as set forth above: All Designs, plans, prints, or drawings of whatever kind prepared by Bonnell with respect to such products are and shall remain the sole property of Bonnell.



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Thickness Tolerance Chart (in)

Date: 8/29/22

Verify: [Signature]

Up to 0.125 - 0.249 .007 0.500 - 0.749 .009 hollows 10% .010 min .060 max CGx:

Structural values estimated for reference only.							
.3817 x 10 ⁶ mm ⁴	.917 in ⁴	Iy:	1.5821 x 10 ⁶ mm ⁴	3.801 in ⁴	Sy:	27.683 x 10 ³ mm ³	1.689 in ³
13.526 x 10 ³ mm ³	.825 in ³	Sy:	27.683 x 10 ³ mm ³	1.689 in ³	CGy:	57.15 mm	2.250 in

CRO-8364

12343

CMI ARCHITECTURAL PRODS, INC.
608 4th STREET S.E.
P.O. BOX T

DE SMET SD 57231



UNSPECIFIED WALLS:	2.77 mm	MASS:	3.264 kg/m	2.194 lb/ft
	.109 in	EST PER:	859.43 mm	33.836 in
UNSPECIFIED RADII:	.25R mm	OUT PER:	517.20 mm	20.362 in
	.010R in	EXP PER:	mm	in
DATE:	3-8-12	BUFF PER:	mm	in
DRAWN:	JMK/TMB	BUFF TURNS:	CLASS:	Hollow III
SCALE:	2:1	FACTOR:	263 metric	15 imperial
THM BAR:	NO	C.C.D.:	125.08 mm	4.924 in
P&D CODE:	EES	P&D AREA:	182.58 mm ²	.283 in ²

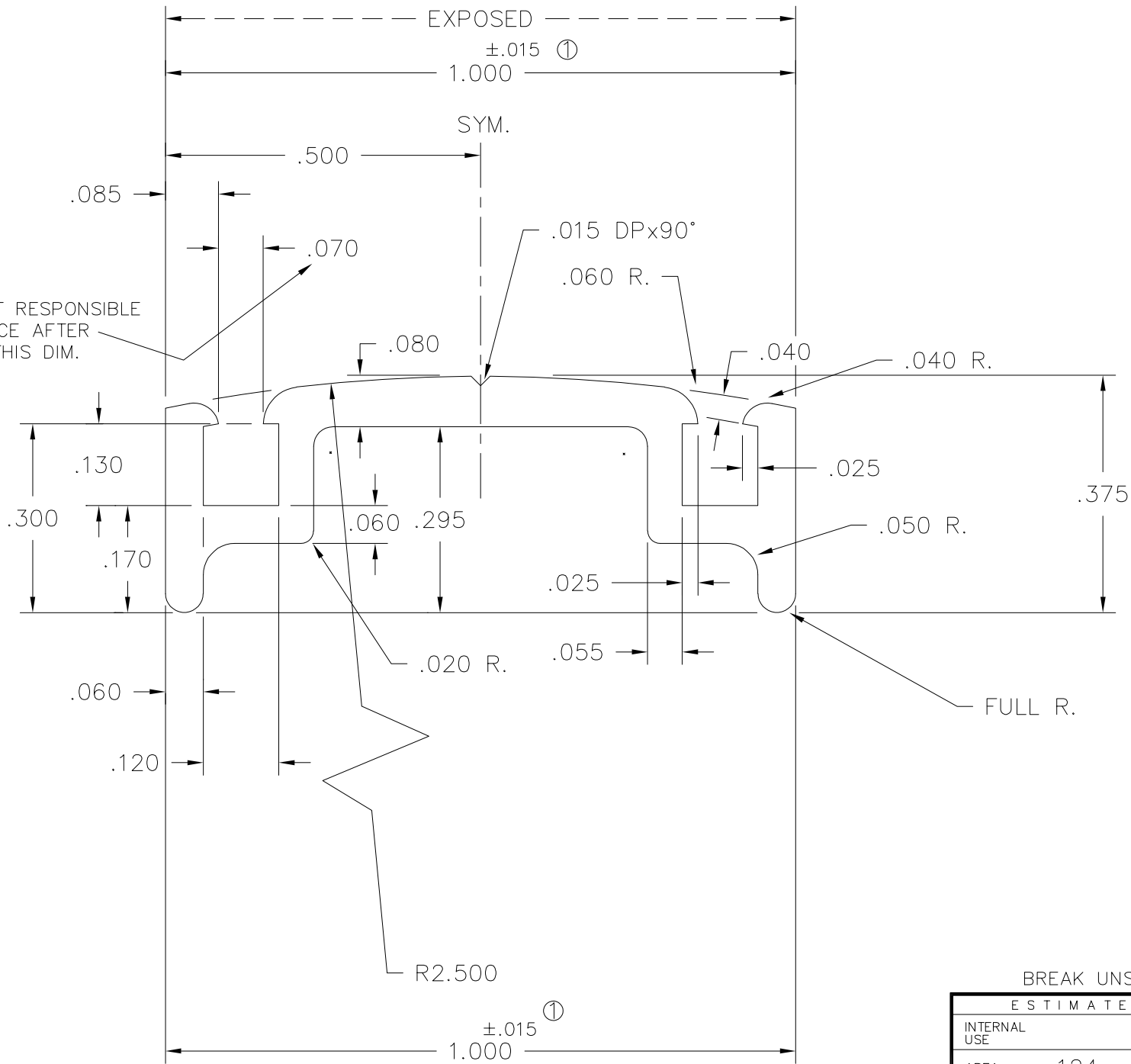
PRINT REVISIONS			DATE
①	ADDED TOL. TO 1.000 DIM	M.C.	7-6-95

CRM-170

REV.

DELHI	TIFTON	BOTH
☒	☐	☐

NOTE:
TIFTON IS NOT RESPONSIBLE
FOR TOLERANCE AFTER
ANODIZE OF THIS DIM.



ACTUAL SIZE



Report #: **N8137.02-201-45**
Date: **8/29/22**
Verified by: *[Signature]*

BREAK UNSPECIFIED CORNERS .010 R. ----- TYPICAL WALL UNLESS SPECIFIED OTHERWISE.			
ESTIMATED DIE DATA		sapa: Sapa Extrusions, Inc. DELHI, LA 71232	CADD #
INTERNAL USE	6063-T5		MRC--141 279
AREA .124	WT/FT .149		SCALE
PERIMETER 3.924	CIRCLE SIZE 1 - 2		ACTUAL & 4x
OUTSIDE PERIMETER	FACTOR 26		DATE
EXPOSED PERIMETER 1.770	SOLID	CUSTOMER CMI-CRONSTROMS, INC. 1045 GEMINI ROAD EAGAN, MN 55121	LAST REVISION
PRESS SIZE			7-6-95
LEGEND			DRAWN
• = .031 R.			M. COPES
○ = .062 R.			JOB
× = .125 R.		APPLICATION DOOR ASTRIGAL	CUSTOMER NUMBER 5731
⊗ = .250 R.			
* =			
DIE REVISIONS			
DATE			

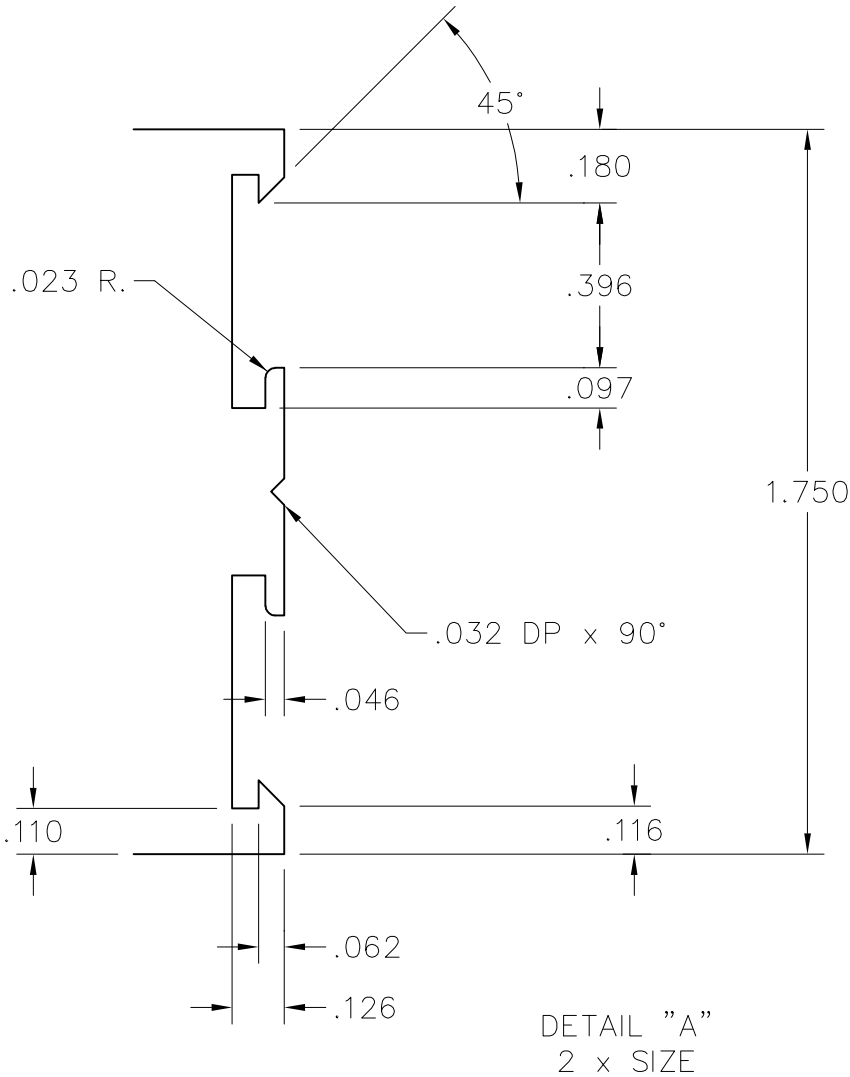
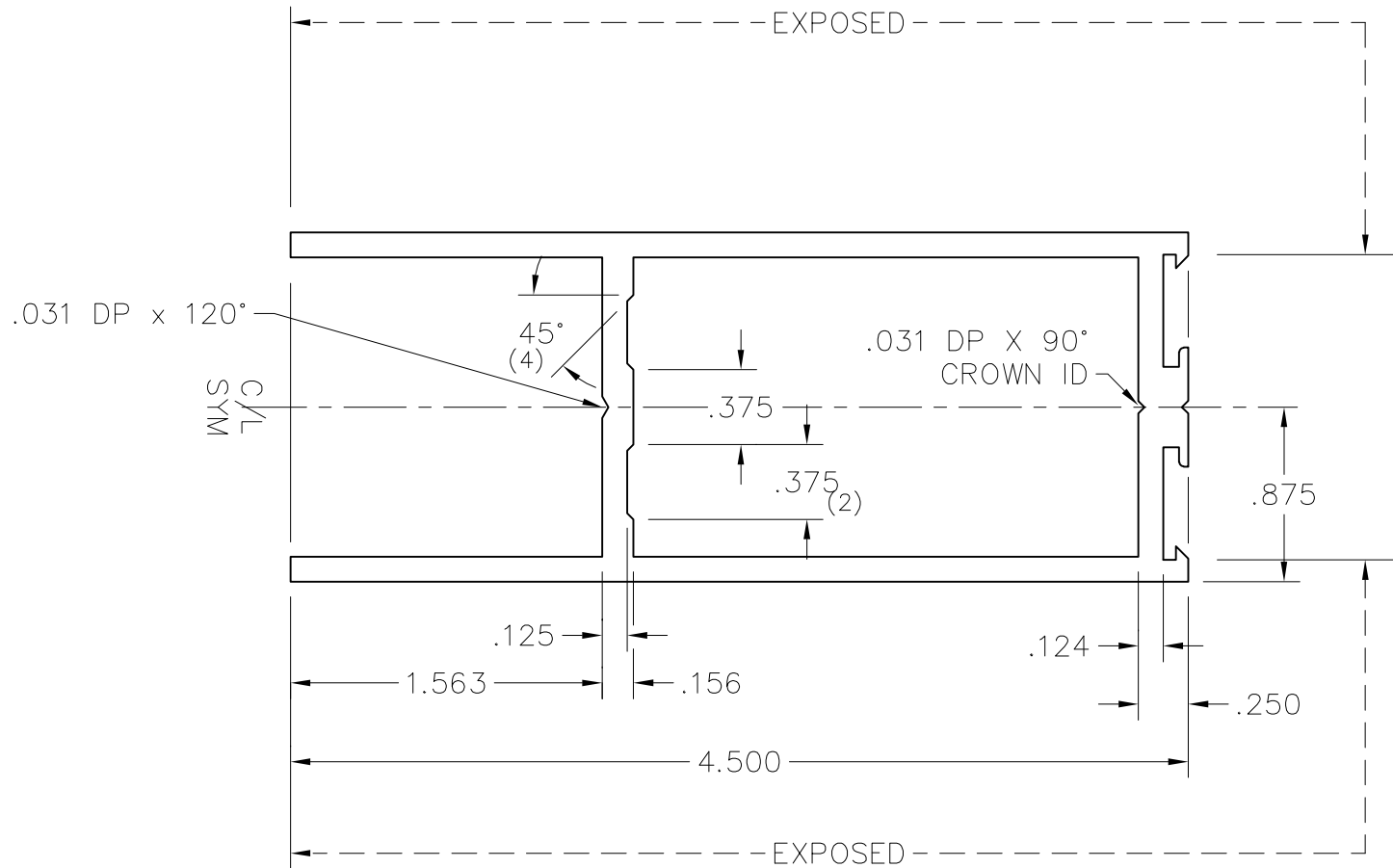
PRINT REVISIONS		DATE

13135

Die Number

2421M

Customer Number



STRAIGHTNESS & TWIST ARE CRITICAL!

STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

BREAK UNSPECIFIED CORNER: .010 R. TYPICAL WALL UNLESS OTHERWISE NOTED: .125



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Date: **8/29/22**

Verified by: 

of the design as represented hereby. CMI shall not be responsible for determining or assuring that such product for it's intended use or application of such product conforms to the purchaser's usefulness of the product. All Designs, drawings and physical tooling prepared by or manufactured for CMI with respect to such products are and shall remain the sole property of CMI.

		ESTIMATED DIE DATA				 Crown Extrusions, Inc. 122 Columbia Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328		DIE #		13135			
		ALLOY/TEMPER: 6063-T5						SCALE		FULL & NOTED			
		AREA 1.581		WT/FT 1.898									
		PERIMETER 24.854		CIRCLE SIZE 4-5									
		OUTSIDE PERIMETER 16.741		FACTOR 13									
PRESS SIZE		EXPOSED PERIMETER 9.232		HOLLOW		 CMI Architectural Products, Inc. 20621 SD Highway 25 DeSmet, SD 57231-5827 605-854-3326 Fax: 605-854-3620		DATE		11-16-10			
LEGEND		DIE REVISIONS						DATE		LAST REVISION			
• = .031 R.										DRAWN		GJG	
◦ = .062 R.										CUSTOMER NUMBER		2421M	
× = .125 R.													
⊗ = .250 R.													
* =													
PART NAME:								4 1/2" TOP RAIL					

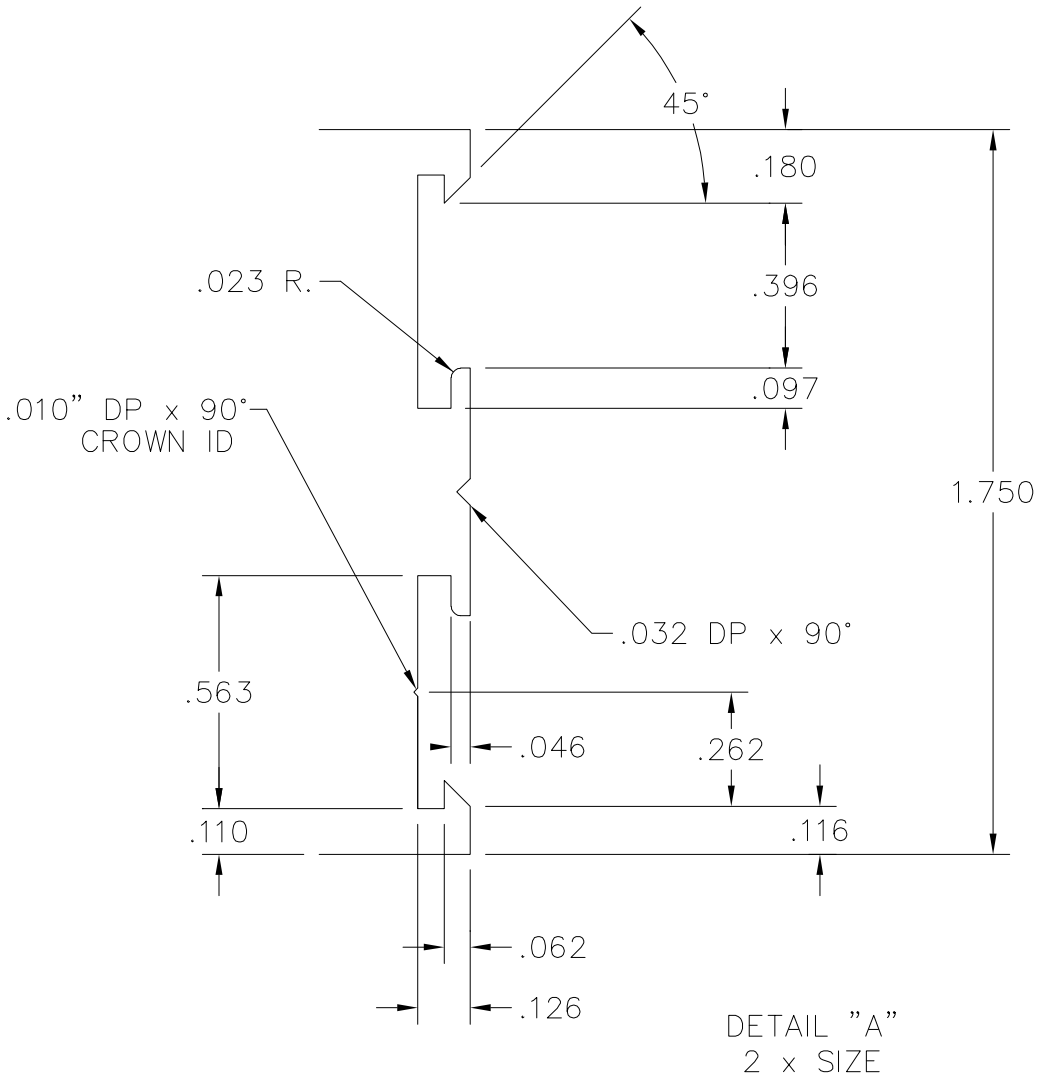
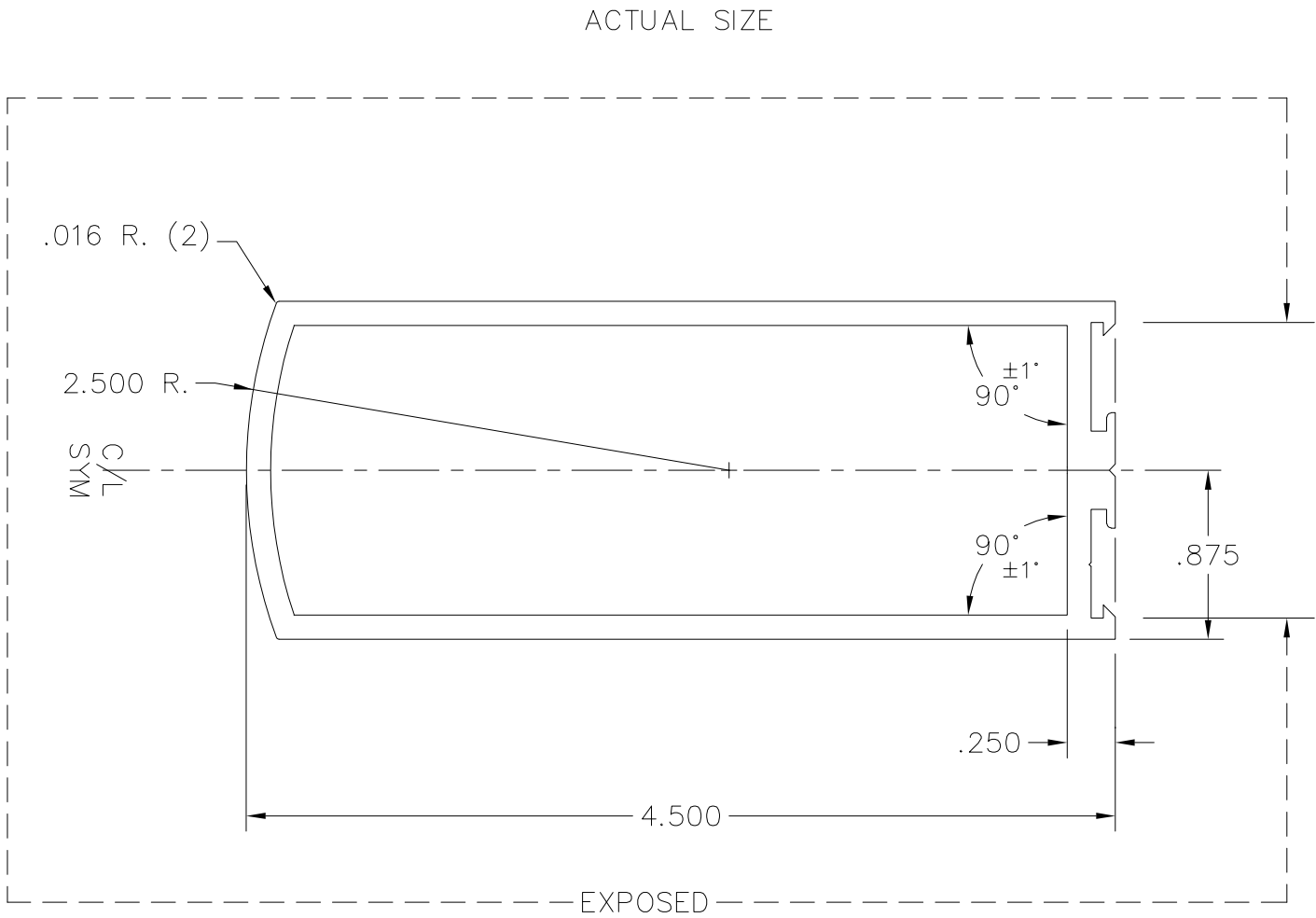
PRINT REVISIONS		DATE

12579

Die Number

6585M

Customer Number



STRAIGHTNESS & TWIST ARE CRITICAL!

BREAK UNSPECIFIED CORNER: .015 R. TYPICAL WALL UNLESS OTHERWISE NOTED: .125



Report #: N8137.02-201-45
Date: 8/29/22
Verified by: 

STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

		E S T I M A T E D D I E D A T A		 Crown Extrusions, Inc. 122 Columbla Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328	DIE #
		ALLOY/TEMPER: 6063-T5			12579
		AREA 1.527	WT/FT 1.832		SCALE FULL & NOTED
		PERIMETER 24.360	CIRCLE SIZE 4 - 5		DATE 12-11-08
		OUTSIDE PERIMETER 13.314	FACTOR 13		LAST REVISION
PRESS SIZE	EXPOSED PERIMETER 10.698	HOLLOW			DRAWN TCG
LEGEND		DIE REVISIONS		DATE	CUSTOMER NUMBER
• = .031 R.					6585M
o = .062 R.					
x = .125 R.					
⊗ = .250 R.					
* =					
				PART NAME: BULL NOSE WIDE STILE	

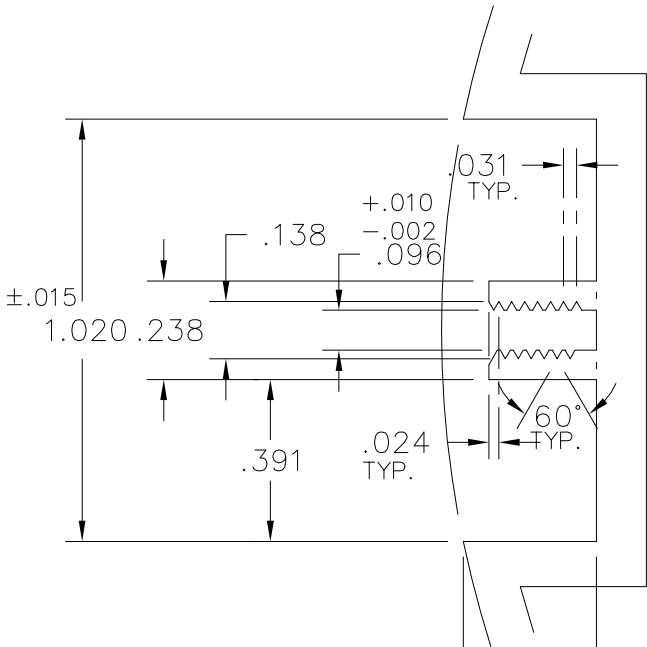
PRINT REVISIONS		DATE

12578

Die Number

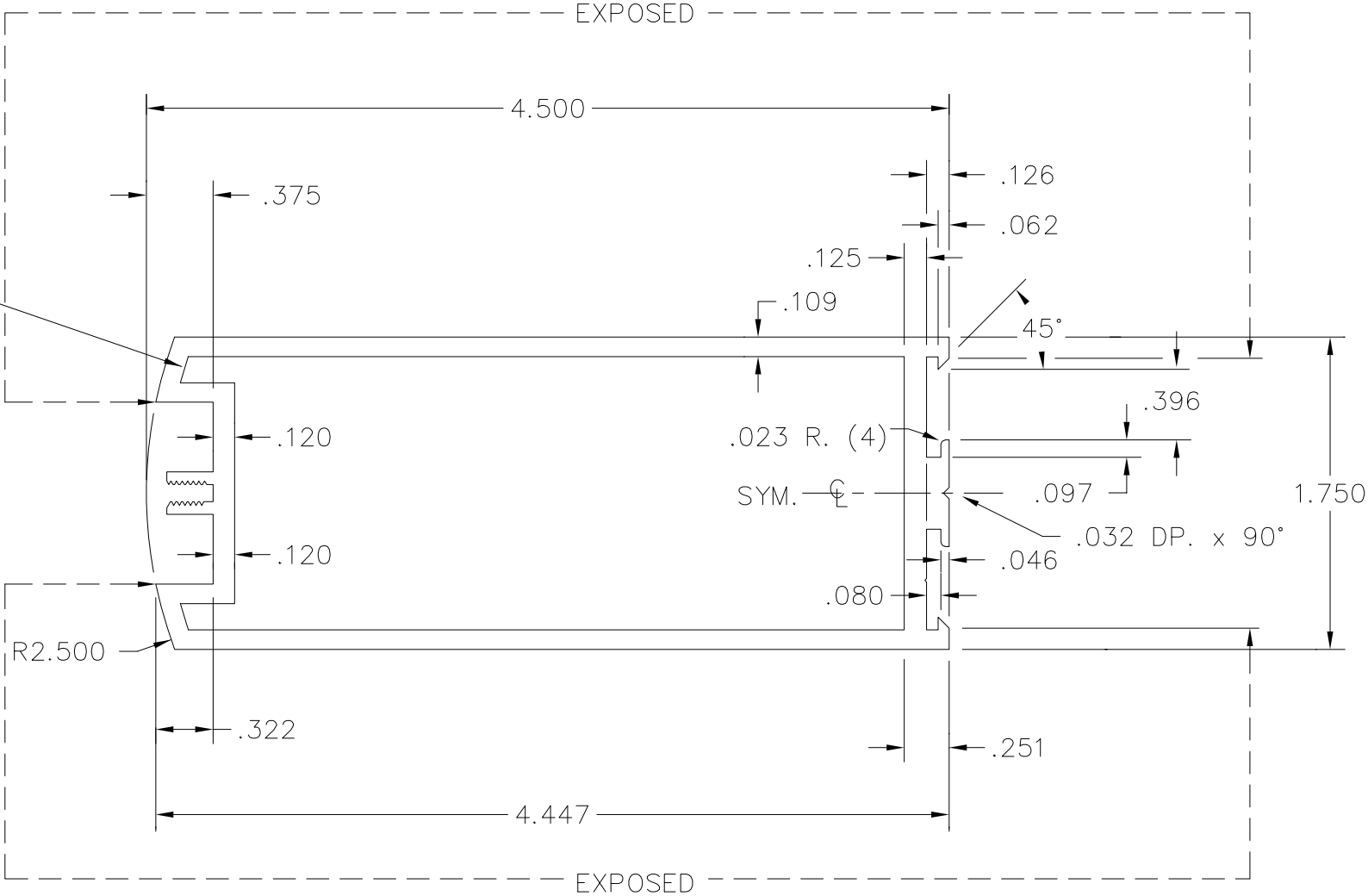
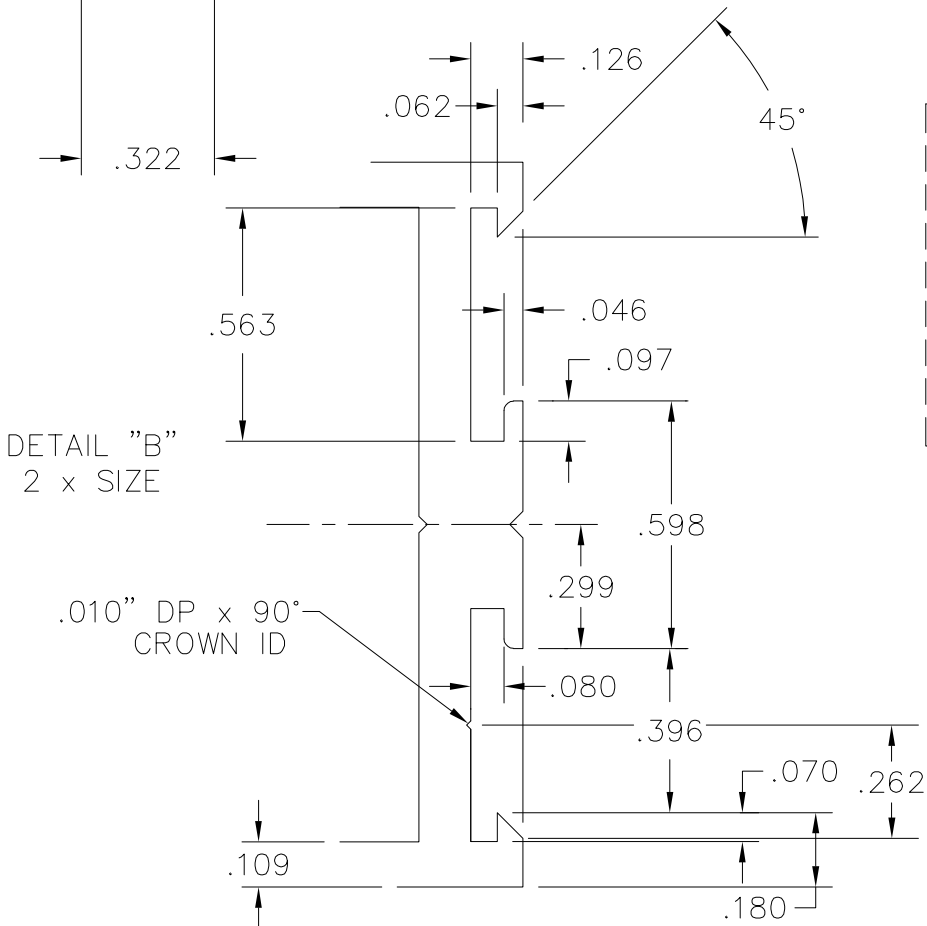
2435M

Customer Number



NOTE:
SYMMETRICAL EXCEPT FOR
SCREW RECEIVER AND I.D. MARK.

DETAIL "A"
2 x SIZE



Report #: **N8137.02-201-45**
Date: **8/29/22**
Verified by: *[Signature]*

STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

PRESS SIZE
LEGEND
• = .031 R.
○ = .062 R.
x = .125 R.
⊗ = .250 R.
* =

BREAK UNSPECIFIED CORNER: .010 R.			TYPICAL WALL UNLESS OTHERWISE NOTED: .109			
ESTIMATED DIE DATA			 CROWN EXTRUSIONS	Crown Extrusions, Inc. 122 Columbia Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328		DIE # 12578
ALLOY/TEMPER: 6063-T5						SCALE ACTUAL & NOTED
AREA 1.488	WT/FT 1.786					DATE 12-11-08
PERIMETER 27.024	CIRCLE SIZE 4 - 5					LAST REVISION
OUTSIDE PERIMETER 15.295	FACTOR 15					DRAWN TCG
EXPOSED PERIMETER 9.664	HOLLOW					CUSTOMER NUMBER 2435M
DIE REVISIONS			DATE			
			CUSTOMER  CMI Architectural CMI Architectural Products, Inc. 20621 SD Highway 25 DeSmet, SD 57231-5827 605-854-3326 Fax: 605-854-3620			
PART NAME:			BULL NOSE WIDE STILE W/ ASTRIGAL			

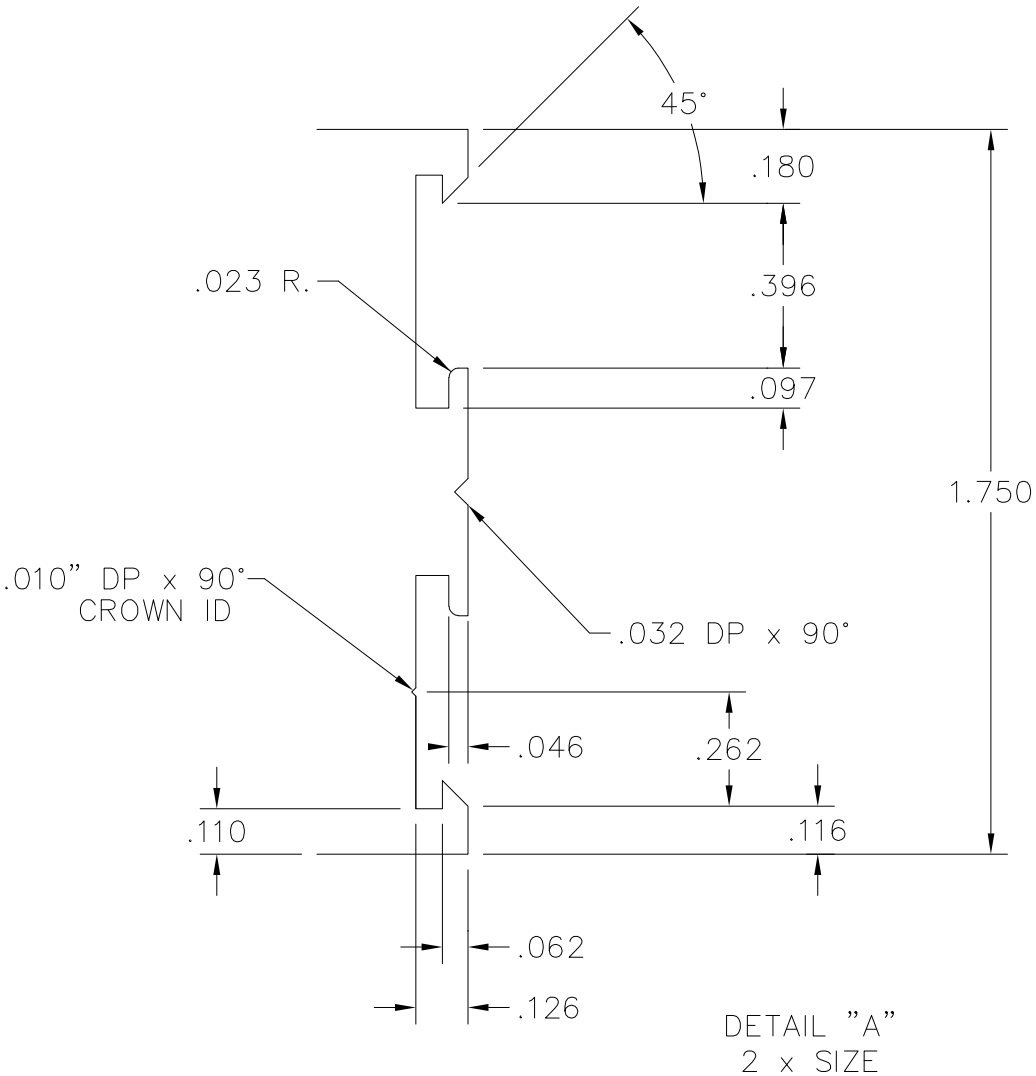
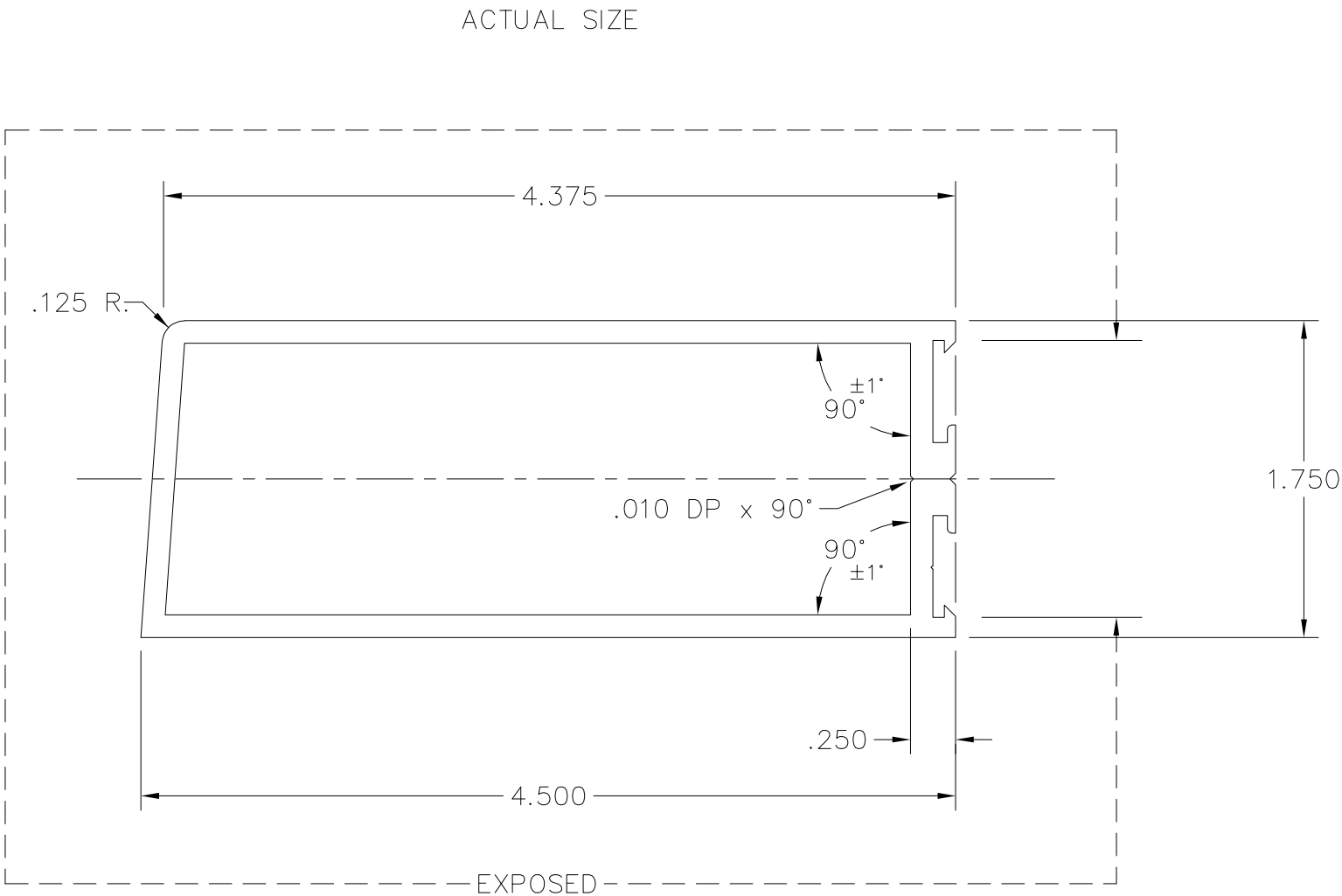
PRINT REVISIONS		DATE

12572

Die Number

2423M

Customer Number



STRAIGHTNESS & TWIST ARE CRITICAL!



intertek
Total Quality. Assured.

Report #: **N8137.02-201-45**

Date: **8/29/22**

Verified by: 

STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

BREAK UNSPECIFIED CORNER: .015 R. TYPICAL WALL UNLESS OTHERWISE NOTED: .125

		ESTIMATED DIE DATA			 Crown Extrusions, Inc. 122 Columbla Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328	DIE # 12572	
		ALLOY/TEMPER: 6063-T5				SCALE FULL & NOTED	
		AREA 1.540	WT/FT 1.848			DATE 12-11-08	
		PERIMETER 24.574	CIRCLE SIZE 4 - 5	LAST REVISION			
		OUTSIDE PERIMETER 13.432	FACTOR 13				
PRESS SIZE	EXPOSED PERIMETER 10.816	HOLLOW		DRAWN TCG			
LEGEND		DIE REVISIONS			DATE	CUSTOMER NUMBER 2423M	
• = .031 R.							
o = .062 R.							
x = .125 R.							
⊗ = .250 R.							
* =							
					PART NAME: BEVELED WIDE STILE		

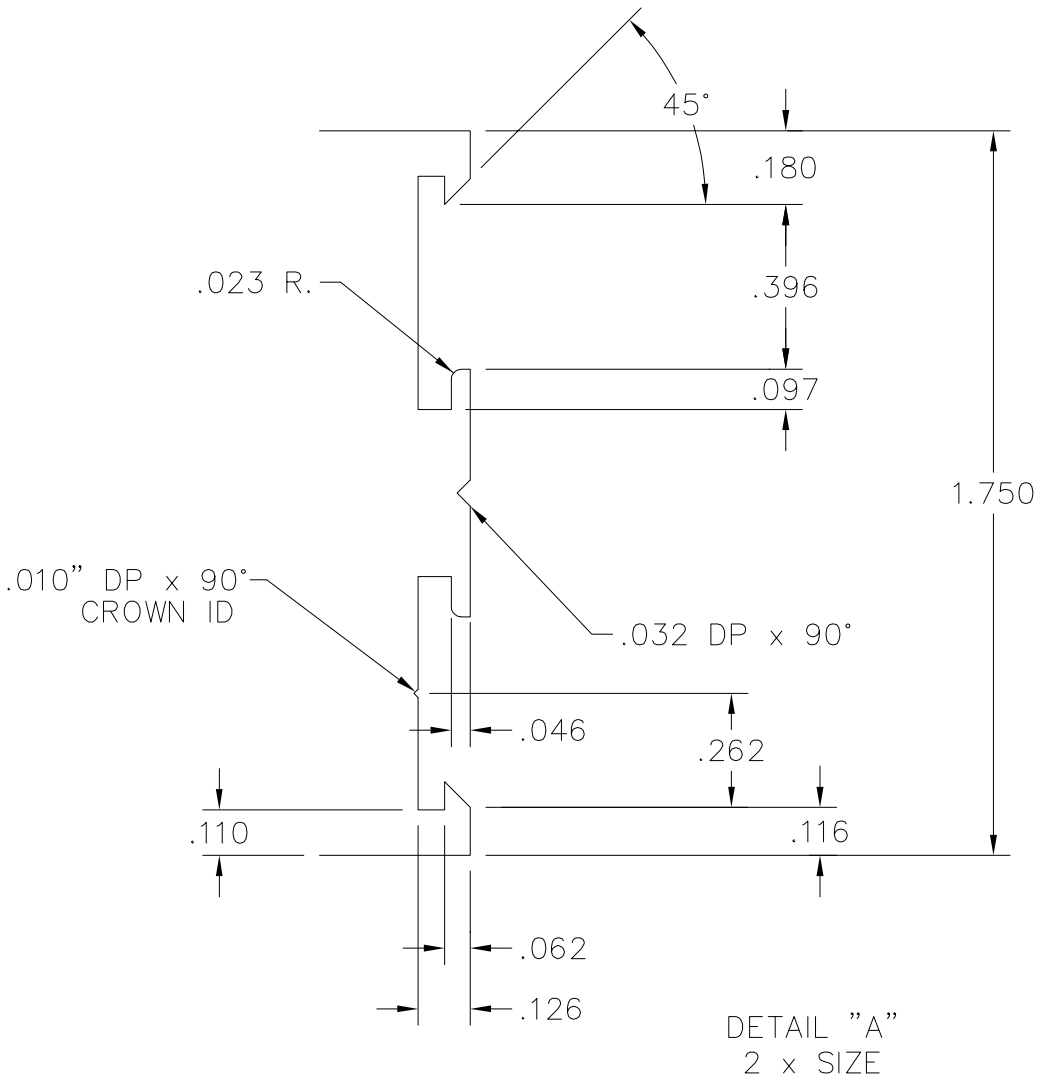
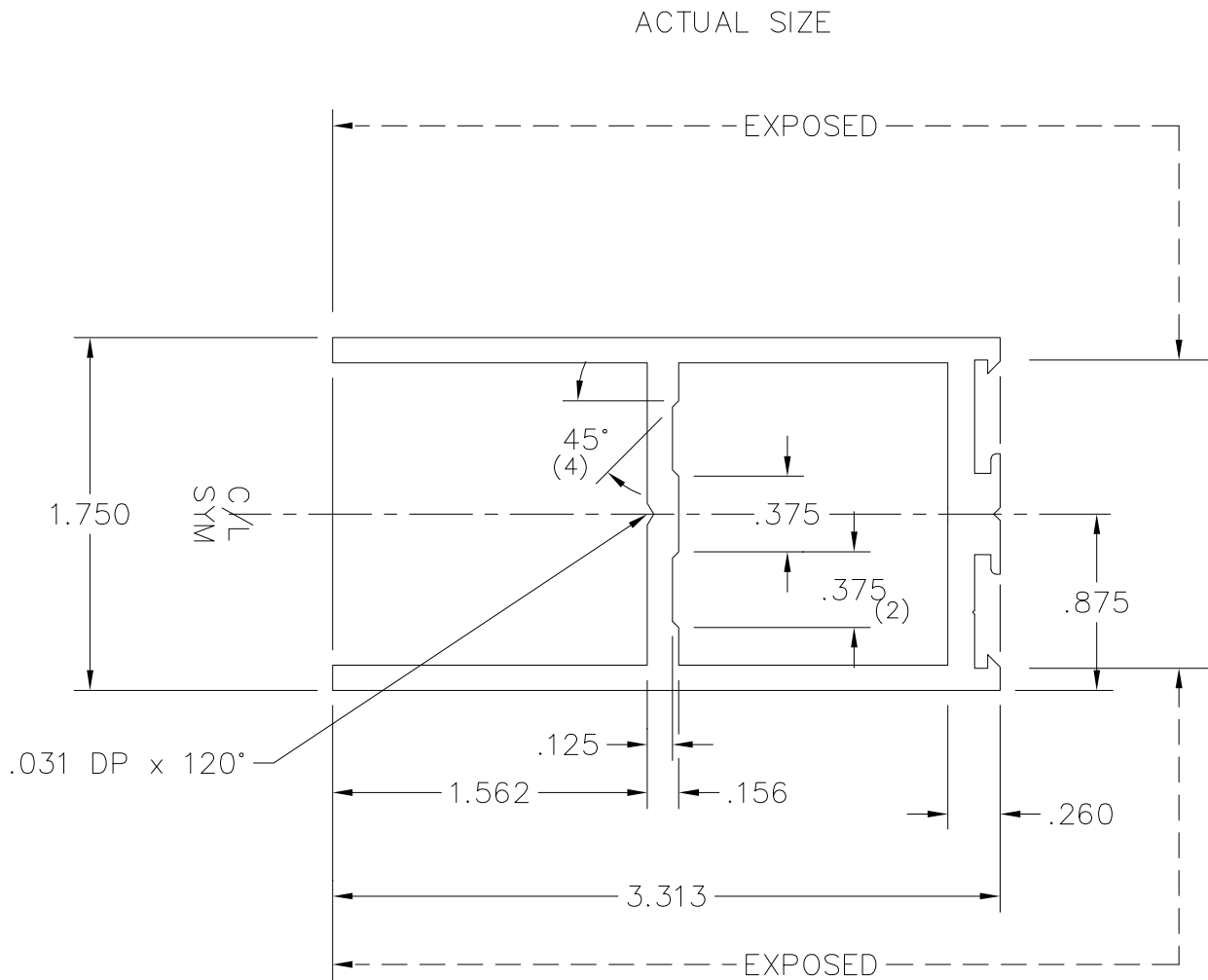
PRINT REVISIONS		DATE

12568

Die Number

1349M

Customer Number



STRAIGHTNESS & TWIST ARE CRITICAL!

BREAK UNSPECIFIED CORNER: .015 R. TYPICAL WALL UNLESS OTHERWISE NOTED: .125



Report #: **N8137.02-201-45**

Date: **8/29/22**

Verified by: 

STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

ESTIMATED DIE DATA			 Crown Extrusions, Inc. 122 Columbla Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328	DIE #	
ALLOY/TEMPER:		6063-T5		12568	SCALE
AREA	1.298	WT/FT	1.558	FULL & NOTED	
PERIMETER	20.109	CIRCLE SIZE	3 - 4	DATE	12-11-08
OUTSIDE PERIMETER	14.363	FACTOR	13	LAST REVISION	
EXPOSED PERIMETER	6.858	HOLLOW		DRAWN	TCG
PRESS SIZE	LEGEND		DIE REVISIONS		CUSTOMER NUMBER
	• = .031 R.				1349M
	o = .062 R.				
	x = .125 R.				
	⊗ = .250 R.				
	* =				
			PART NAME:	NARROW BOTTOM RAIL	

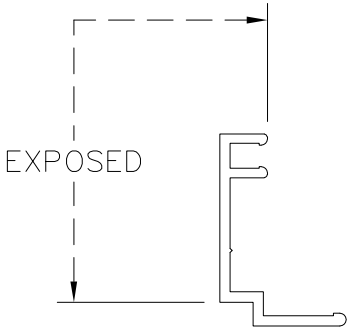
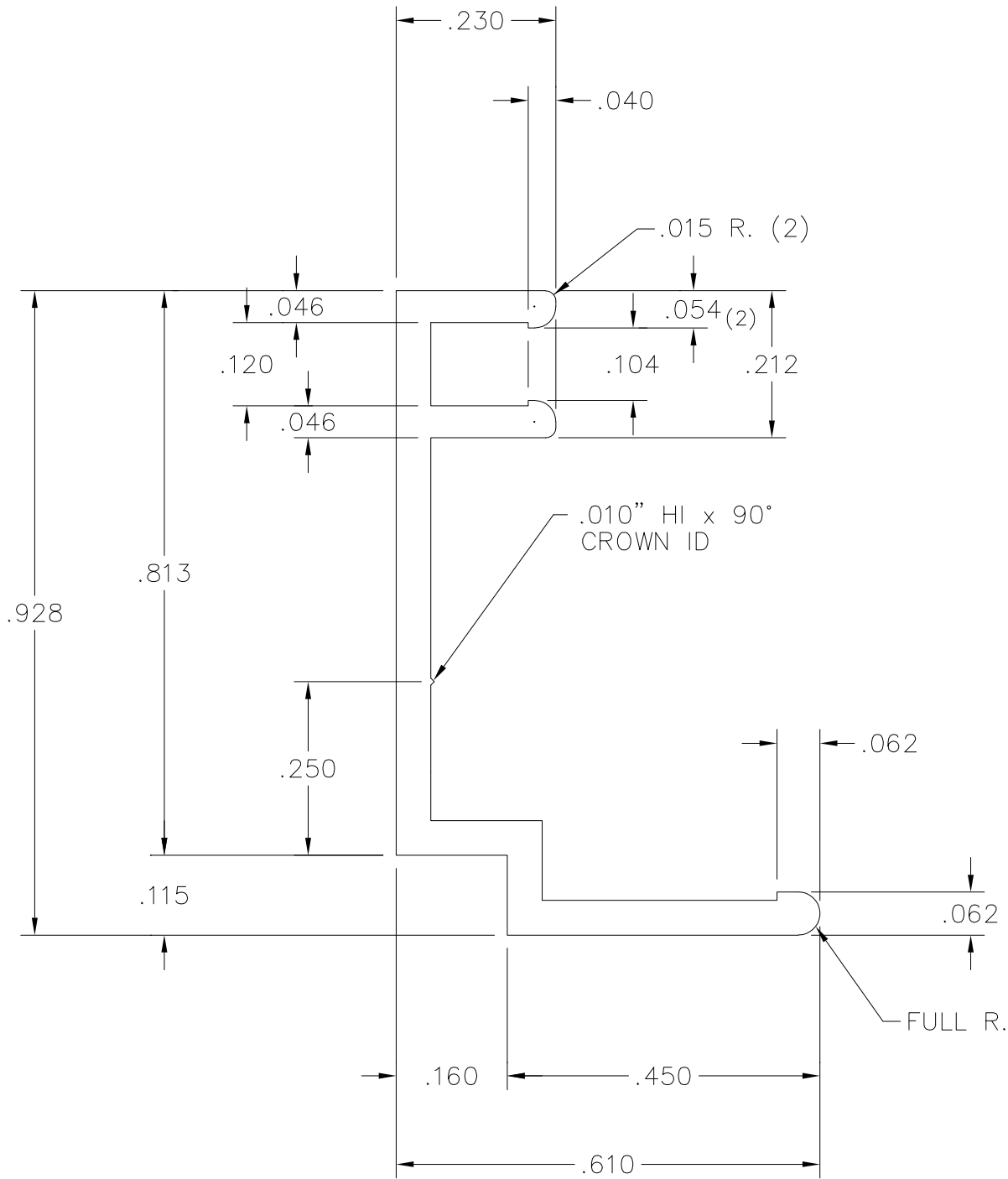
PRINT REVISIONS		DATE

5514

Die Number

51-020

Customer Number



ACTUAL SIZE

2X SIZE



Report #:

N8137.02-201-45

Date:

8/29/22

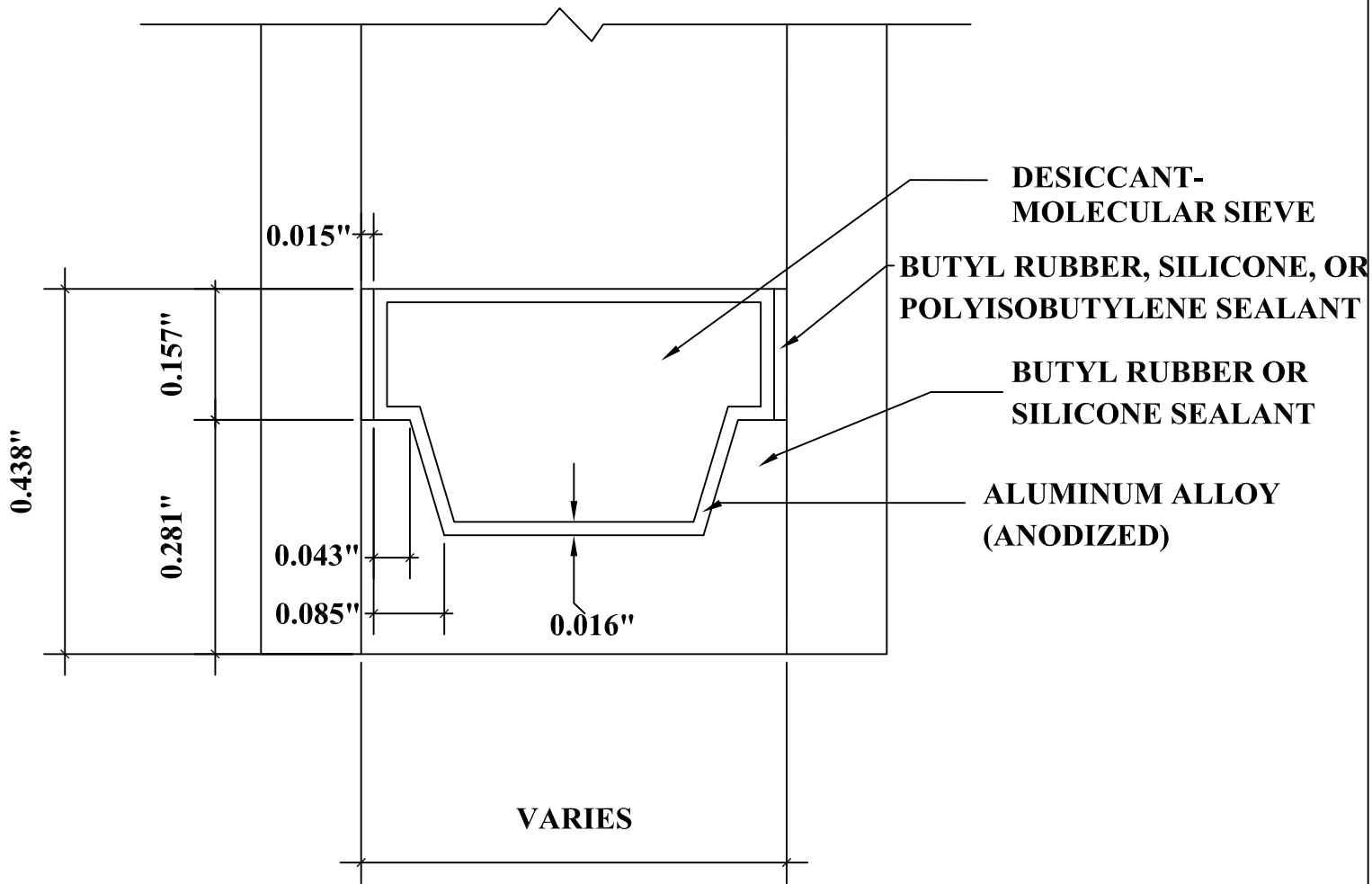
Verified by:



STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

BREAK UNSPECIFIED CORNER: .010 R. TYPICAL WALL UNLESS OTHERWISE NOTED: .050

	ESTIMATED DIE DATA			 Crown Extrusions, Inc. 122 Columbla Court N. Chaska, MN 55318 952-448-3533 Fax: 952-448-5328	DIE #	5514
	ALLOY/TEMPER: 6063-T5				SCALE	4x & NOTED
	AREA .091	WT/FT .110			DATE	12-11-08
	PERIMETER 3.786	CIRCLE SIZE 1 - 2			LAST REVISION	
	OUTSIDE PERIMETER	FACTOR 35			DRAWN	TCG
PRESS SIZE	EXPOSED PERIMETER 1.043	SOLID		CUSTOMER NUMBER	51-020	
LEGEND	DIE REVISIONS			CUSTOMER		
• = .031 R.				 CMI Architectural Products, Inc. 20621 SD Highway 25 DeSmet, SD 57231-5827 605-854-3326 Fax: 605-854-3620		
◦ = .062 R.						
× = .125 R.						
⊗ = .250 R.						
* =						
				PART NAME:	GLASS STOP	



DETAIL FOR THERMAL MODELING OF
ALUMINUM SPACER (A1-D)



Total Quality. Assured.

40 51st Way NE, Suite 100
Fridley, Minnesota 55421

Telephone: 651-636-3835
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR CMI ARCHITECTURAL PRODUCTS, INC.

Report No: N3187.02-201-45 R0

Date: 08/25/22

SECTION 8

REVISION LOG

REVISION #	DATE	PAGES	REVISION
.01 R0	08/25/22	N/A	Original report issue. Work requested by Ms. Ashley Alt of CMI Architectural Products, Inc.
