Architectural Testing

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

TUBELITE, INC.

SERIES/MODEL: Standard 2" Wide Stile Single Door
TYPE: Swinging Door - Single

Report No: **B3772.06-116-45**
Report Date: **10/27/11**

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
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www.archtest.com

Architectural Testing

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

TUBELITE, INC.
4878 Mackinaw Trail
Reed City, Michigan 49677

Report No:	B3772.06-116-45
Report Date:	10/27/11
Simulation Date:	10/27/11

Project Summary:

Architectural Testing, Inc. was contracted by Tubelite, Inc. to provide U-Factor and Solar Heat Gain Coefficient thermal performance ratings on the Standard 2" Wide Stile Single Door Swinging Door - Single. The thermal performance ratings were determined in accordance with AAMA 507-07, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Building.

Reference Documents:

AAMA 507-07, *Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings*

NFRC 100-2010, *Procedure for Determining Fenestration Product U-Factors*

NFRC 200-2010, *Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*

Simulation Specimen Description:

Series/Model:	Standard 2" Wide Stile Single Door
Product Groupings:	2" Wide w/o sweep grouped with 2" Wide w/ sweep.
Type:	Swinging Door - Single
Frame Material:	Aluminim Framing System
Material Finish:	Painted Aluminum
Specimen Size:	960mm wide by 2090mm high (37-3/4" by 82-3/8")
Configuration:	Single vision lIte
Drawing Reference:	Tubelite Standard Doors - 2" Frame Details

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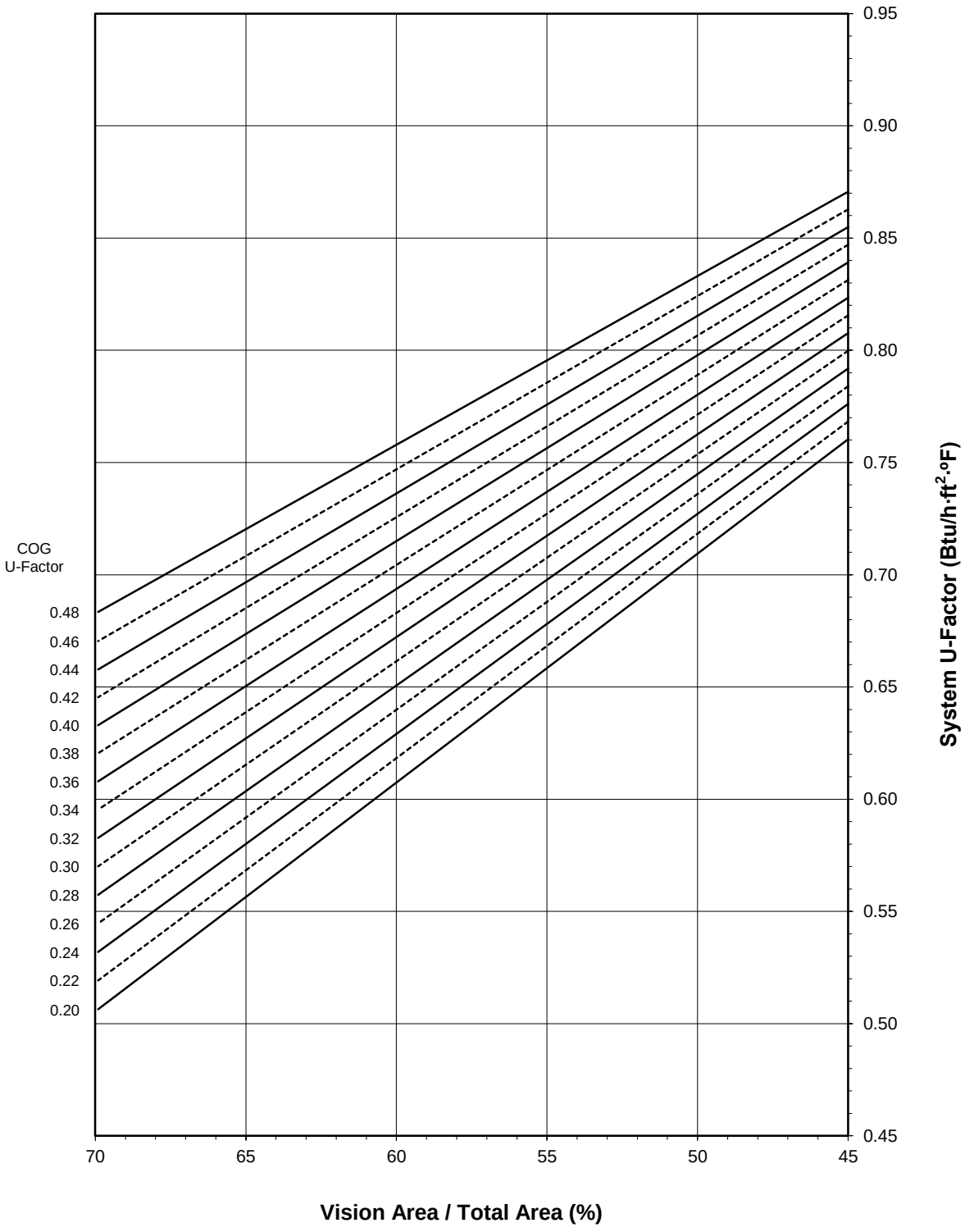
Tubelite, Inc.

Standard 2" Wide Stile Single Door - Swinging Door - Single

System U-Factor vs. Percentage of Vision Area

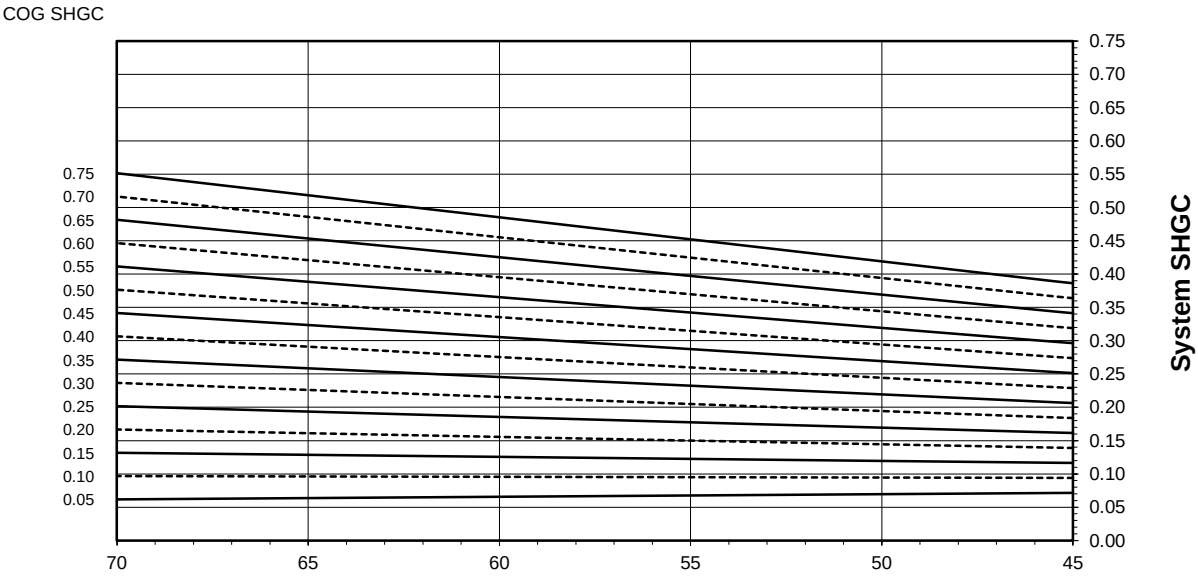


Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

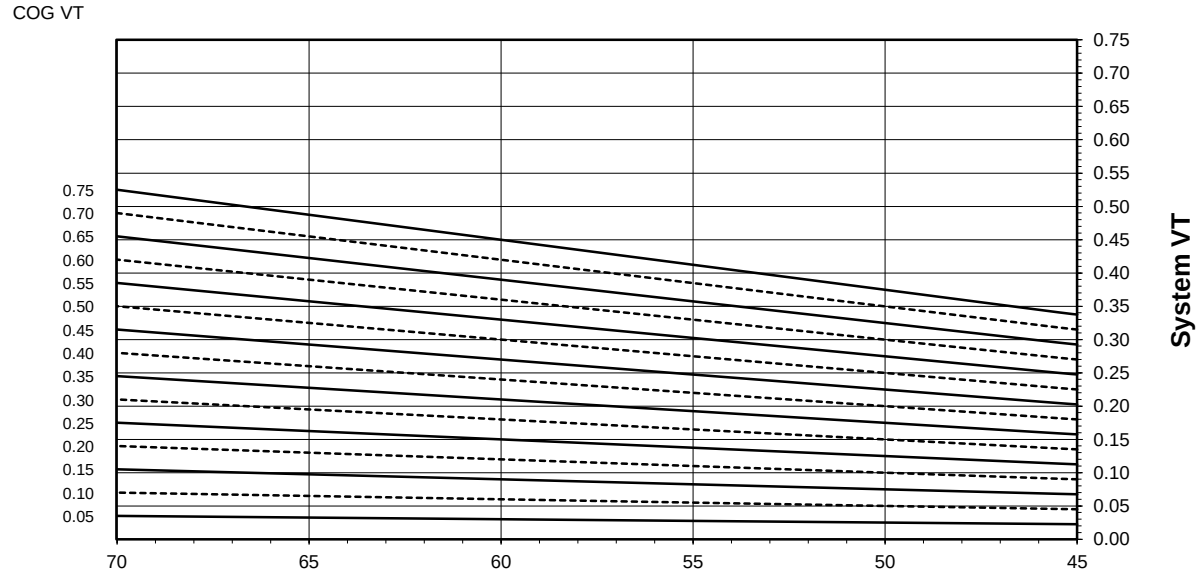
Tubelite, Inc.

Standard 2" Wide Stile Single Door - Swinging Door - Single

System SHGC vs. Percentage of Vision Area



System VT vs. Percentage of Vision Area



Tubelite, Inc.

Standard 2" Wide Stile Single Door - Swinging Door - Single

Size Specific U-Factor Matrix*

Glazing Option	Center of Glass U-Factor	Overall U-Factor
1	0.48	0.87
2	0.46	0.86
3	0.44	0.85
4	0.42	0.84
5	0.40	0.84
6	0.38	0.83
7	0.36	0.82
8	0.34	0.81
9	0.32	0.80
10	0.30	0.80
11	0.28	0.79
12	0.26	0.78
13	0.24	0.77
14	0.22	0.76
15	0.20	0.76

Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

Size Specific SHGC Matrix*

Center of Glass SHGC	Overall SHGC
0.75	0.39
0.70	0.37
0.65	0.34
0.60	0.32
0.55	0.30
0.50	0.28
0.45	0.25
0.40	0.23
0.35	0.21
0.30	0.18
0.25	0.16
0.20	0.14
0.15	0.12
0.10	0.09
0.05	0.07

Size Specific VT Matrix*

Center of Glass VT	Overall VT
0.75	0.34
0.70	0.32
0.65	0.30
0.60	0.27
0.55	0.25
0.50	0.23
0.45	0.20
0.40	0.18
0.35	0.16
0.30	0.14
0.25	0.11
0.20	0.09
0.15	0.07
0.10	0.05
0.05	0.02

*Size Specific U-Factor, SHGC, and VT Matrices are based on the standard Swinging Door - Single specimen size of 960mm wide by 2090mm high (37-3/4" by 82-3/8"). This represents 45.5% Vision Area / Total Area.

Vision Area Data

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							45% Vision Area	*NFRC 100-2010*	*70% Vision Area*
							37.42" by 81.48"	*37.80" by 82.28"*	*74.05" by 159.44"*
1	0.48	43.7	Head	8.2145	1.1967	0.5769	0.8706	0.8673	0.6834
			L. Jamb	8.1557	1.1768	0.5786			
			R. Jamb	8.1557	1.1768	0.5786			
			Sill	8.2770	1.1346	0.5812			
2	0.46	44.8	Head	8.2145	1.1967	0.5633	0.8628	0.8593	0.6704
			L. Jamb	8.1557	1.1768	0.5650			
			R. Jamb	8.1557	1.1768	0.5650			
			Sill	8.2770	1.1344	0.5675			
3	0.44	45.8	Head	8.2145	1.1966	0.5497	0.8549	0.8514	0.6578
			L. Jamb	8.1557	1.1767	0.5515			
			R. Jamb	8.1557	1.1767	0.5515			
			Sill	8.2770	1.1343	0.5539			
4	0.42	46.8	Head	8.2145	1.1965	0.5363	0.8470	0.8434	0.6454
			L. Jamb	8.1557	1.1767	0.5381			
			R. Jamb	8.1557	1.1767	0.5381			
			Sill	8.2770	1.1342	0.5404			
5	0.40	47.9	Head	8.2145	1.1965	0.5229	0.8392	0.8355	0.6330
			L. Jamb	8.1557	1.1766	0.5248			
			R. Jamb	8.1557	1.1766	0.5248			
			Sill	8.2770	1.1341	0.5270			
6	0.38	48.9	Head	8.2145	1.1965	0.5098	0.8313	0.8275	0.6205
			L. Jamb	8.1557	1.1766	0.5116			
			R. Jamb	8.1557	1.1766	0.5116			
			Sill	8.2770	1.1340	0.5136			
7	0.36	50.0	Head	8.2145	1.1964	0.4965	0.8234	0.8196	0.6079
			L. Jamb	8.1557	1.1765	0.4984			
			R. Jamb	8.1557	1.1765	0.4984			
			Sill	8.2770	1.1338	0.5002			
8	0.34	51.0	Head	8.2145	1.1963	0.4834	0.8156	0.8116	0.5954
			L. Jamb	8.1557	1.1765	0.4853			
			R. Jamb	8.1557	1.1765	0.4853			
			Sill	8.2770	1.1337	0.4872			
9	0.32	52.0	Head	8.2145	1.1963	0.4703	0.8077	0.8036	0.5828
			L. Jamb	8.1557	1.1765	0.4721			
			R. Jamb	8.1557	1.1765	0.4721			
			Sill	8.2770	1.1336	0.4740			
10	0.30	53.1	Head	8.2145	1.1963	0.4573	0.7998	0.7957	0.5701
			L. Jamb	8.1557	1.1764	0.4592			
			R. Jamb	8.1557	1.1764	0.4592			
			Sill	8.2770	1.1335	0.4610			

Vision Area Data

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							45% Vision Area	*NFRC 100-2010*	*70% Vision Area*
							37.42" by 81.48"	*37.80" by 82.28"*	*74.05" by 159.44"*
11	0.28	54.2	Head	8.2145	1.1962	0.4443	0.7919	0.7877	0.5574
			L. Jamb	8.1557	1.1764	0.4462			
			R. Jamb	8.1557	1.1764	0.4462			
			Sill	8.2770	1.1334	0.4479			
12	0.26	55.2	Head	8.2145	1.1962	0.4314	0.7840	0.7797	0.5446
			L. Jamb	8.1557	1.1764	0.4333			
			R. Jamb	8.1557	1.1764	0.4333			
			Sill	8.2770	1.1333	0.4349			
13	0.24	56.3	Head	8.2145	1.1962	0.4185	0.7761	0.7717	0.5319
			L. Jamb	8.1557	1.1763	0.4205			
			R. Jamb	8.1557	1.1763	0.4205			
			Sill	8.2770	1.1332	0.4220			
14	0.22	57.3	Head	8.2145	1.1962	0.4058	0.7683	0.7638	0.5193
			L. Jamb	8.1557	1.1763	0.4077			
			R. Jamb	8.1557	1.1763	0.4077			
			Sill	8.2770	1.1331	0.4092			
15	0.20	58.4	Head	8.2145	1.1962	0.3930	0.7604	0.7558	0.5064
			L. Jamb	8.1557	1.1763	0.3949			
			R. Jamb	8.1557	1.1763	0.3949			
			Sill	8.2770	1.1331	0.3963			

Detailed drawings, datasheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are simulated values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client named herein and relates only to the specimen(s) simulated. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

Digitally Signed by: Eric Barilar

Eric Barilar
Simulation Technician

REVIEWED BY:

Digitally Signed by: Kevin Louder

Kevin S. Louder
Project Engineer

EAB:EAB
B3772.06-116-45

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

Appendix A: Drawings and Bills of Material (18)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
.01R0	10/27/2011	All	Original Report Issue

All drawings and Bills of Material used in simulating this product are enclosed in this Appendix.

Appendix A

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Barilla

STANDARD SINGLE DOOR BOM -2.0" Frame

FRAME:

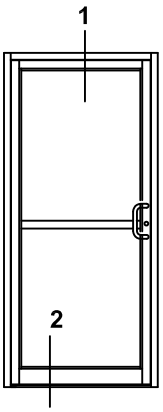
Description	QTY	Part number	Material
Jamb 2" x 4 1/2"	2	E14144	
Header 2" x 4 1/2"	1	E14124	
Door stops	3	E4531	
Weather pile	30 ft	P1098A	vinyl
closure open back plate	2	E4543	

DOOR:

Description	QTY	Narrow P/N	Medium P/N	Wide P/N	Material
Beveled Door Stiles	2	E0055 - 2 1/8"	E0086- 4"	E0416 - 5"	
Door Top Rail	1	E0255- 2 1/8"	E0054- 4"	E0318 - 5"	
Top Rail Lug	2	P168	P031	P339	AL
Door Botom Rail	1	E0054- 4"	E0419- 6 1/2"	E0419- 6 1/2"	
Bottom Rail Lug	2	P031	P341	P341	AL
Top Rail & Bottom Rail Tie Rods	2	P020	P020	P020	Steel
Washer for Tie Rods	4	P853	P853	P853	AL
Hex nuts for Tie rods	4	S071A	S071A	S071A	Steel
Exterior Glass Stop 1" glass	4	E0927	E0927	E0927	
Interior Glass Stop 1" glass	4	E0928	E0928	E0928	
Gasket	36 ft	P0017	P0017	P0017	EPDM
Adjutable Wedge Setting Blck	2	P1911	P1911	P1911	Polypropylene
Self Adhesive Setting Blck	3	P1912	P1912	P1912	EPDM
Threshold	1	E0019	E0019	E0019	
Threshold clip	2	P679	P679	P679	AL

MATERIAL:

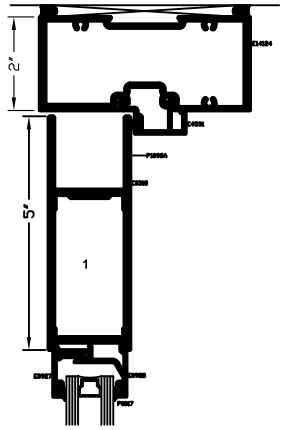
E - All E part numbers are AL extrusions

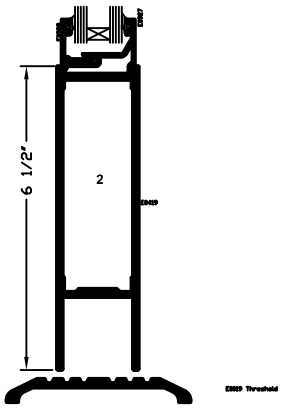


Standard Doors - Single
2" Frame
Elevations & 1/4 Size Details

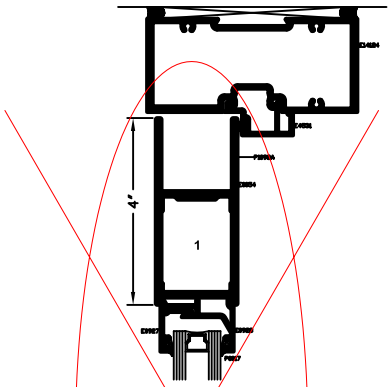
	ATI
Report #	B3772-116-45
Date	10/20/2011
Simulator	Eric Barilla

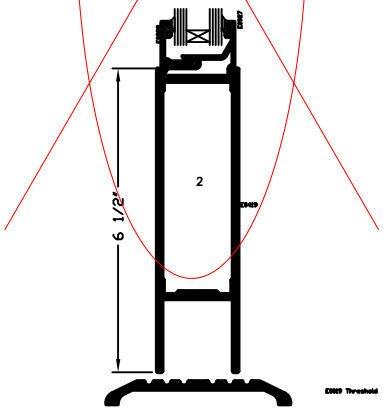
Wide



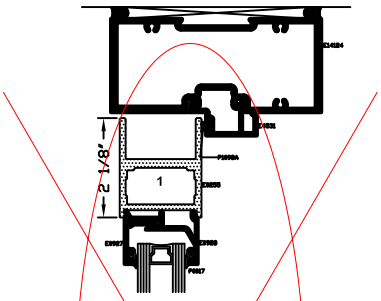


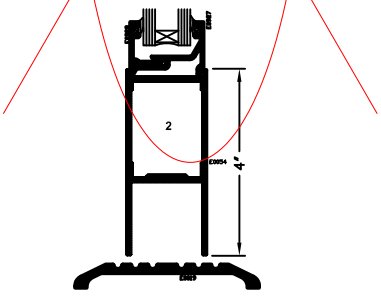
Medium





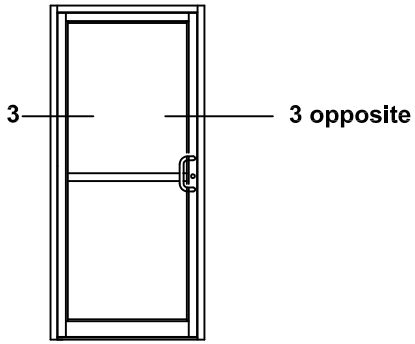
Narrow





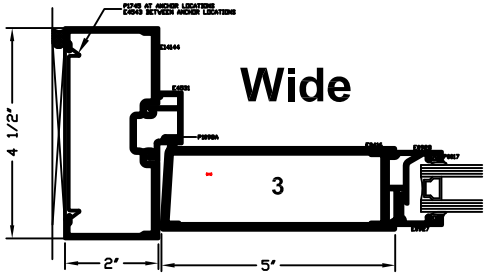
*SEALANT, ROD, & ANCHORS NOT BY TUBELITE

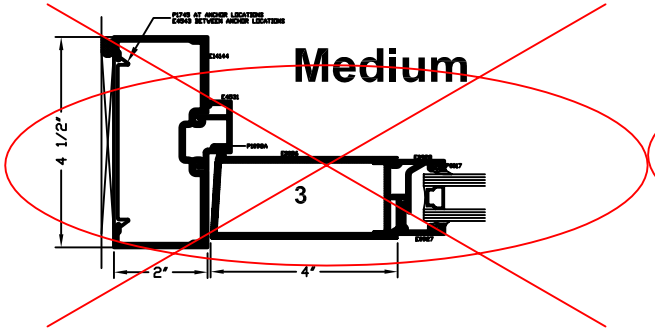
TUBELITE
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS
2011

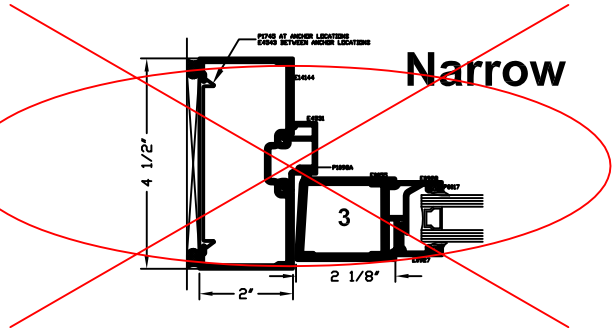


Standard Doors - Single
2" Frame Jamb detail
Elevations & 1/4 Size Details

ATI	
Report #	B3772-116-45
Date	10/20/2011
Simulator	Eric Babilon







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2011

*SEALANT, ROD, & ANCHORS NOT BY TUBELITE

E0019

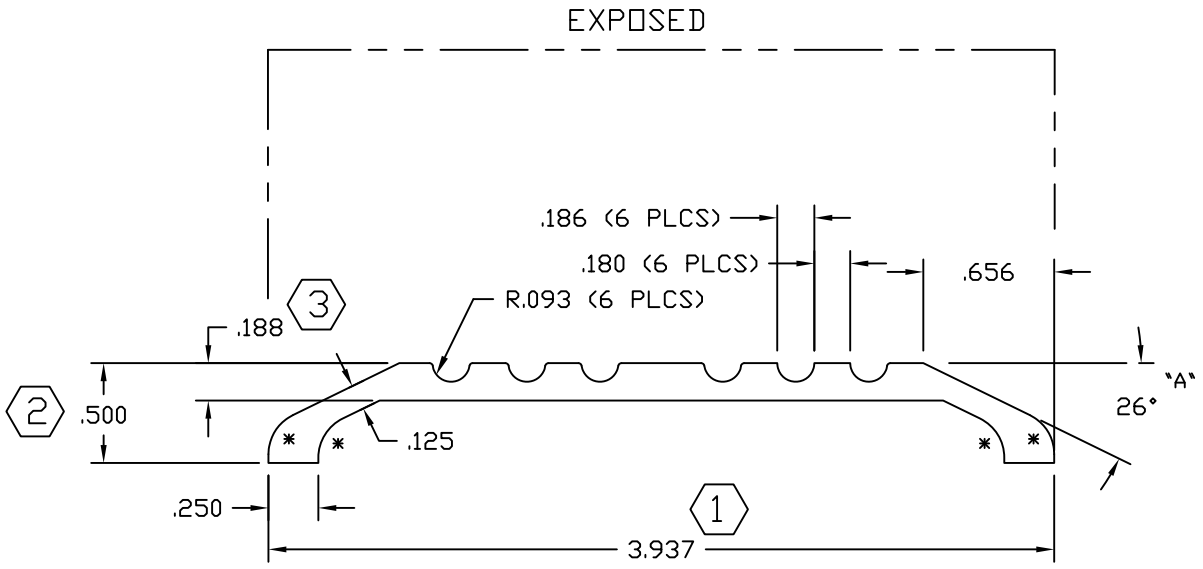
A

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bakilas



ACTUAL SIZE

INDICATES .218 RAD (4 PLCS)

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE®

DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	3/4/92	REVISE AND RELEASE TO PROD. WAS 29°38'	KMH

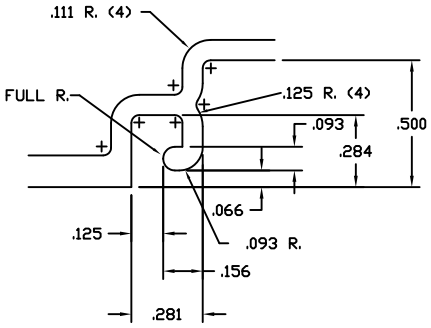
WALL THK. .125	SECTION CLASS S	MAT'L 6063-T5	RATIO 85:1
PERIMETER OUT (TOTAL) 9.249		AREA .649	WGT/FT .763
FACTOR 12	CIRCLE SIZE 3.937		INFILL VOLUME N/A

RXX .119	SXX .055	IXX .009	CXX .333
RYY 1.183	SYY .461	IYY .907	CYY 1.969

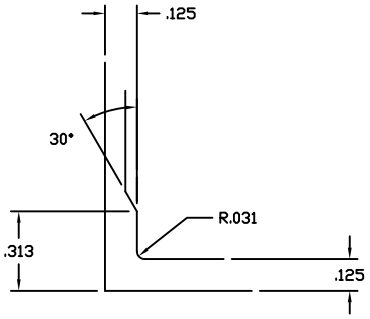
THRESHOLD 1/2" X 4" STOCK FRAMES

DRAWN BY DH	DRWG DATE 03/16/84	APPV'D BY	DATE APPV'D
DWG SCALE NOTED	PRODUCT CODE 090	E0019	REV A

E14144



TWO TIMES SIZE



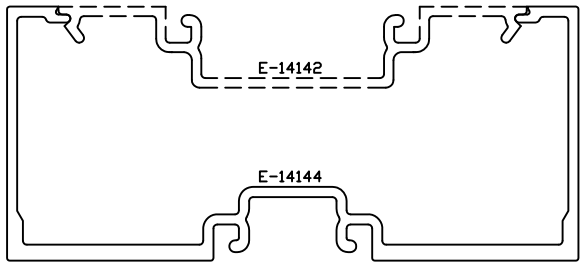
TWO TIMES SIZE

ATI

Report # B3772-116-45

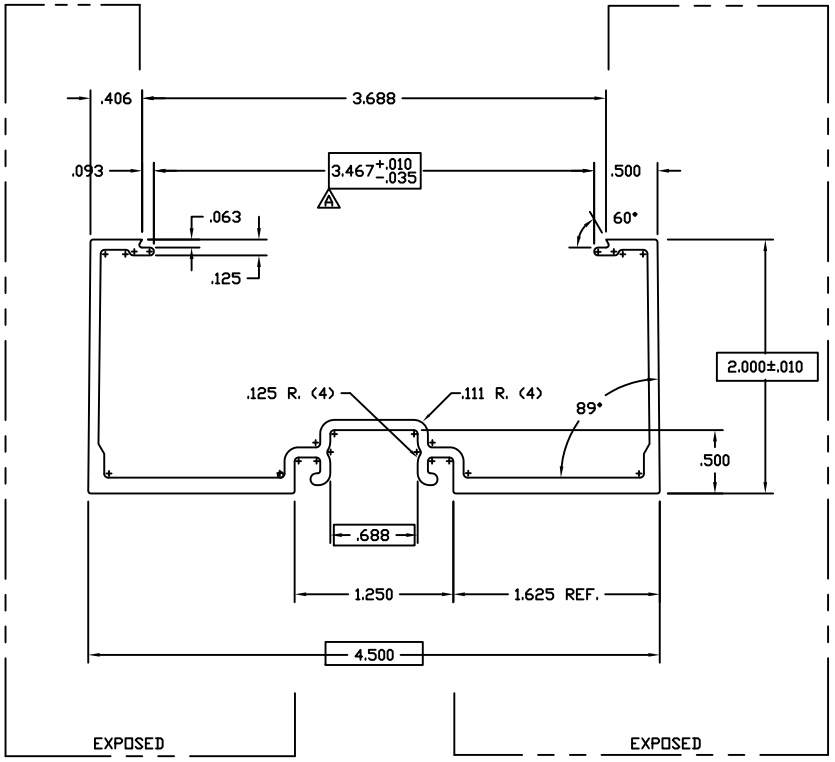
Date 10/20/2011

Simulator Eric Bahilo



ASSEMBLY

ALSO MATES WITH E-4543 FLAT CLOSURE



ACTUAL SIZE

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

* INDICATES .031 RADIUS

☐ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE® DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

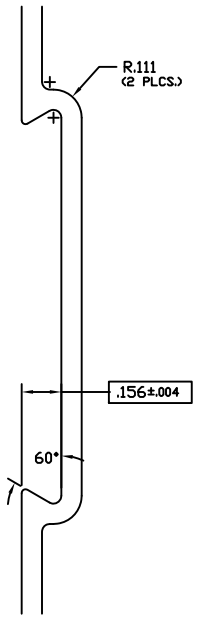
REV	DATE	DESCRIPTION	INTL
	5-13-93	RELEASE TO TOOLING	KMH
	7-7-93	REVISE EXTR. # WAS E-14006	KMH
	7-29-93	RELEASE TO PRODUCTION	KMH
	10-28-96	REVISE EXTR. # E-14144 TO BE SYMMETRICAL	SRK
	12-12-96	RE-RELEASE TO PRODUCTION	SRK
A	03/28/07	REDUCED OPENING FOR BETTER FIT	NIK

WALL THK. .080		SECTION CLASS S		MAT'L 6063-T5		RATIO 59:1	
PERIMETER OUT (TOTAL) 21.100				AREA 1.001		WGT/FT 1.178	
FACTOR 19		CIRCLE SIZE 4.924				INFILL VOLUME N/A	
RXX 1.672	SXX 1.245	IXX 2.801	CXX 2.250				
RYY .643	SYY .287	IYY .414	CYY 1.444				

DOOR JAMB 2" X 4 1/2"
E14000 NON THERMAL STOREFRONT

DRAWN BY KMH	DRWG DATE 05/13/93	APP'D BY	DATE APP'D	
DWG SCALE NOTED	PRODUCT CODE 190	E14144		REV

E14124 A



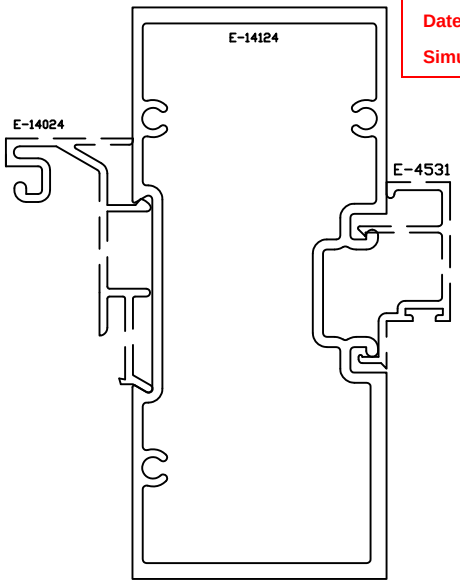
TWO TIMES SIZE

ATI

Report # B3772-116-45

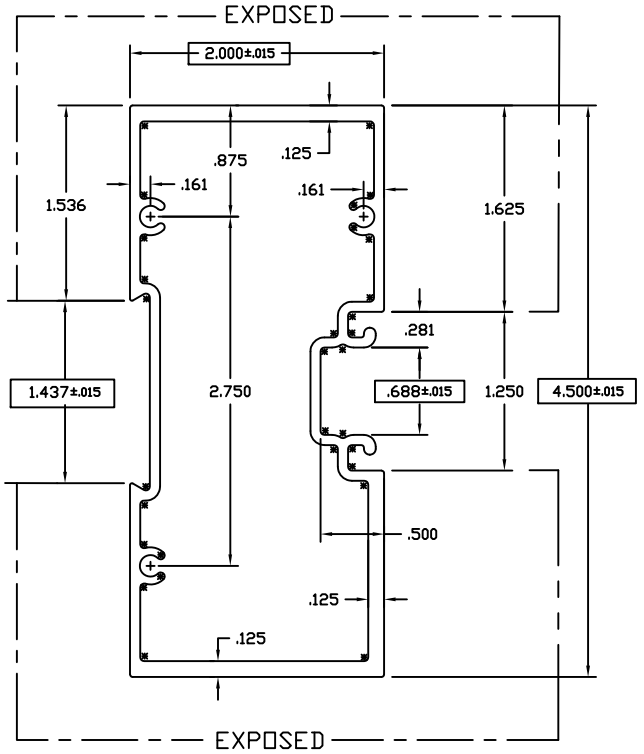
Date 10/20/2011

Simulator Eric Bakilas

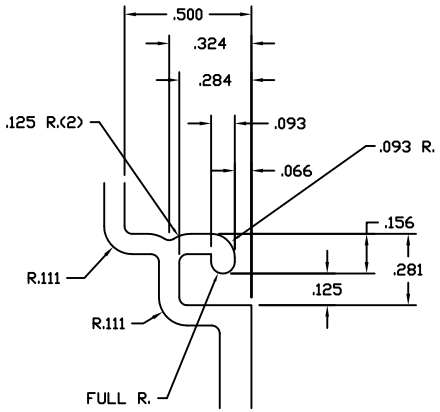


ASSEMBLY

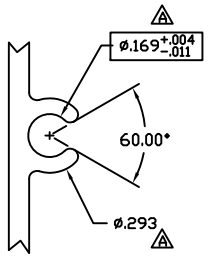
MATES W/ E-4532, E-4026 & E-14024



ACTUAL SIZE



TWO TIMES SIZE



TWO TIMES SIZE

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✱ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE® DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
	5-11-93	RELEASE TO TOOLING	KMH
	7-7-93	REVISE EXTR. # WAS E-14023	KMH
	7-28-93	RELEASE TO PRODUCTION	KMH
A	1/17/2011	.169 +.004/-.011 was .162+/-.004, .293 WAS .322	CRH

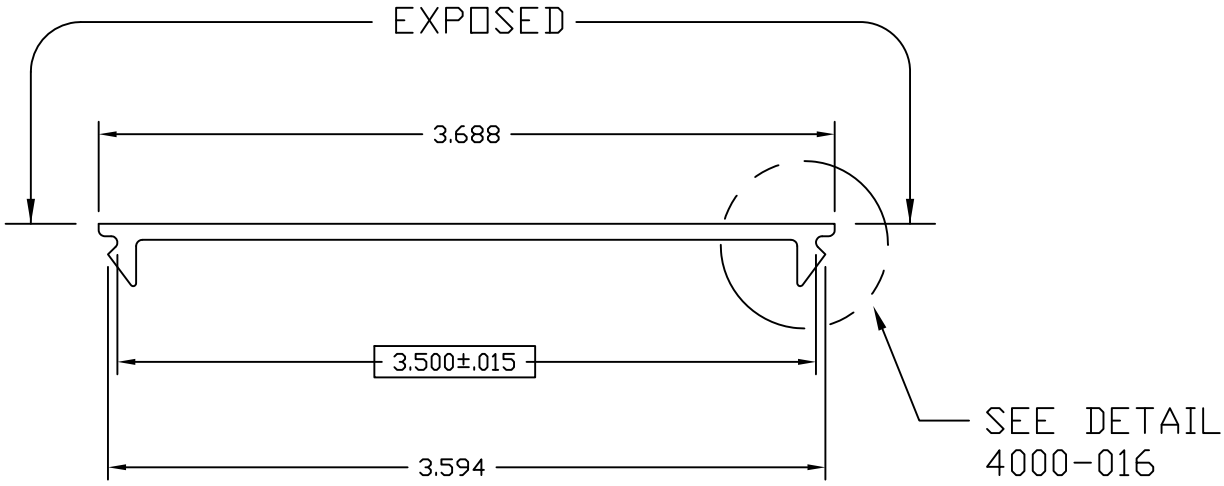
WALL THK.	.080	SECTION CLASS	H	MAT'L	6063-T5	RATIO	38:1
PERIMETER OUT (TOTAL)	15.371(29.969)			AREA	1.464	WGT/FT	1.722
FACTOR	17	CIRCLE SIZE	4.924			INFILL VOLUME	N/A

RXX	1.601	SXX	1.640	IXX	3.751	CXX	2.287
RYY	.780	SYY	.849	IYY	.890	CYY	1.049

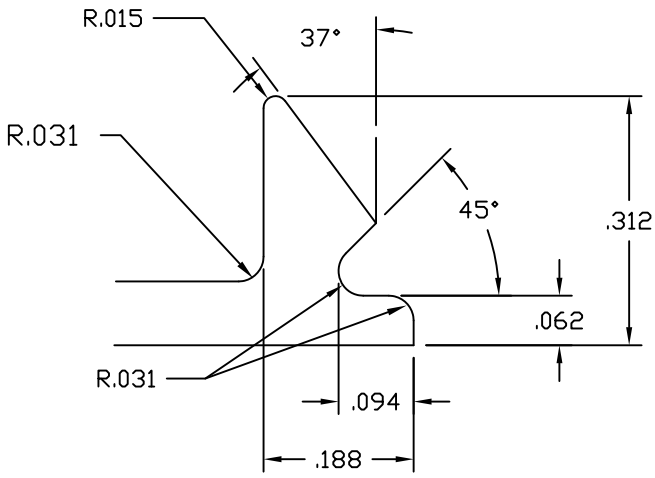
DOOR HEADER 2" X 4 1/2"
E14000 NON THERMAL STOREFRONT

DRAWN BY	SMH	DRWG DATE	05/11/93	APPV'D BY	DATE APPV'D
DWG SCALE	NOTED	PRODUCT CODE	190	E14124	REV A

E4543



ACTUAL SIZE



4000-016

FOUR TIMES SIZE

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bardine

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

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DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
		RELEASE TO TOOLING	
	6/26/86	RELEASE TO PRODUCTION	

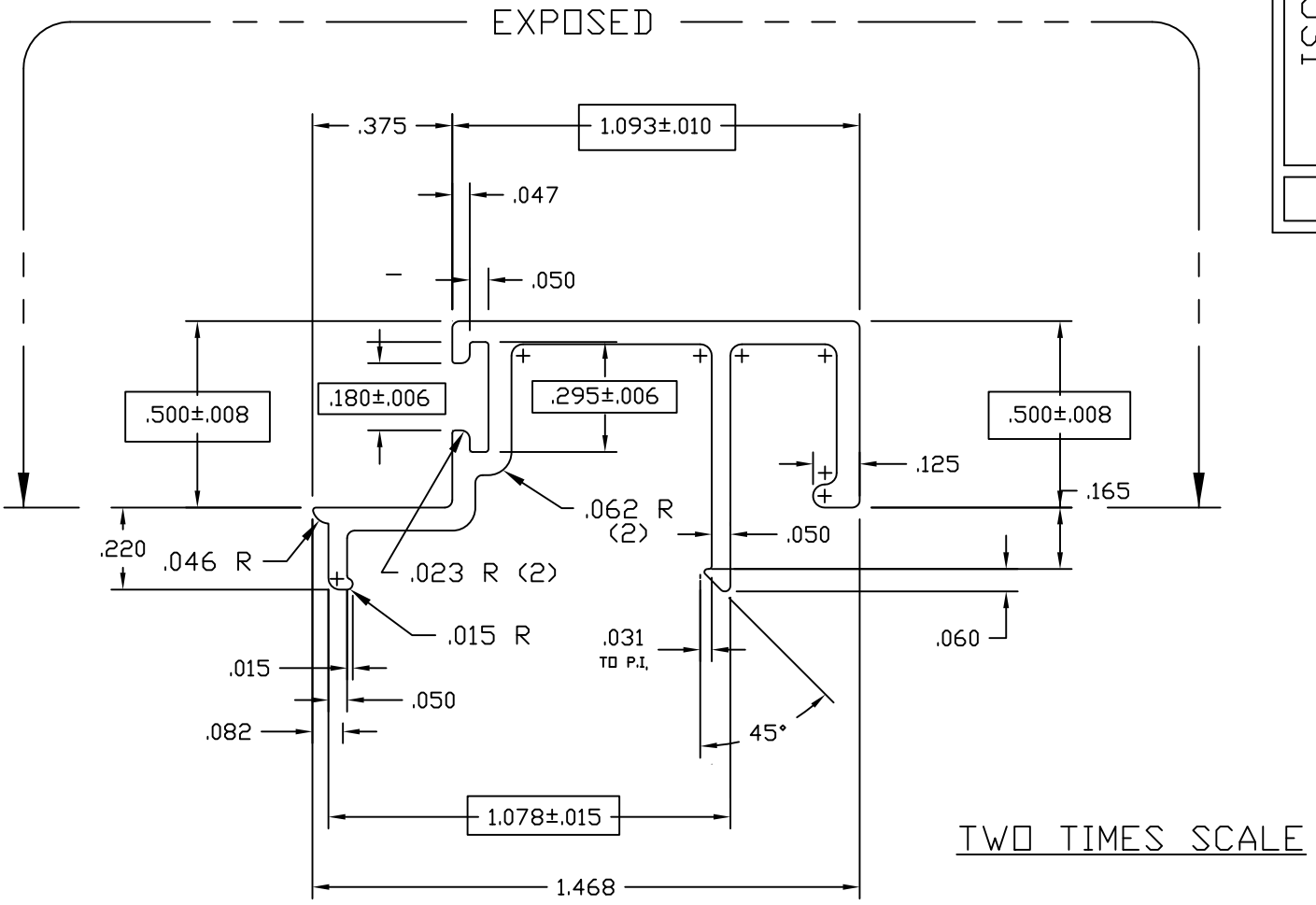
WALL THK. .080	SECTION CLASS S	MAT'L 6063-T5	RATIO 165:1
PERIMETER OUT (TOTAL) 8.341		AREA .334	WGT/FT .393
FACTOR 21	CIRCLE SIZE 3.688	INFILL VOLUME N/A	

RXX 1.156	SXX .242	IXX .447	CXX 1.844
RYY .054	SYY .004	IYY .001	CYY .255

FLAT SNAP-IN FILLER
E4500 STOREFRONT

DRAWN BY LS	DRWG DATE 10/22/85	APPV'D BY	DATE APPV'D
DWG SCALE FULL	PRODUCT CODE 160	E4543	REV

E4531



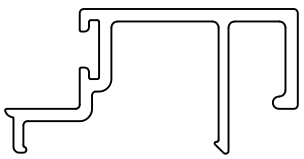
TWO TIMES SCALE

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bakilas



ACTUAL SIZE

USED WITH 4500 SERIES
REPLACES E-4510
USE WITH P-1098A WEATHERING

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE®
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
	3/28/94	UPDATED SECTION PROPERTIES	TPB
	4/12/99	UPDATED EXPOSED	JEK

WALL THK. .062	SECTION CLASS S	MAT'L 6063-T5	RATIO 90
PERIMETER OUT (TOTAL) 6.966		AREA .203	WGT/FT .238
FACTOR 29	CIRCLE SIZE 1.58	INFILL VOLUME N/A	

RXX .446	SXX .049	IXX .040	CXX .824
RYY .218	SYY .021	IYY .010	CYY .461

DOOR STOP 1/2" X 1 3/32"
E4500 STOREFRONT

DRAWN BY LS	DRWG DATE 02/07/85	APPV'D BY	DATE APPV'D
DWG SCALE NOTED	PRODUCT CODE 160	E4531	REV

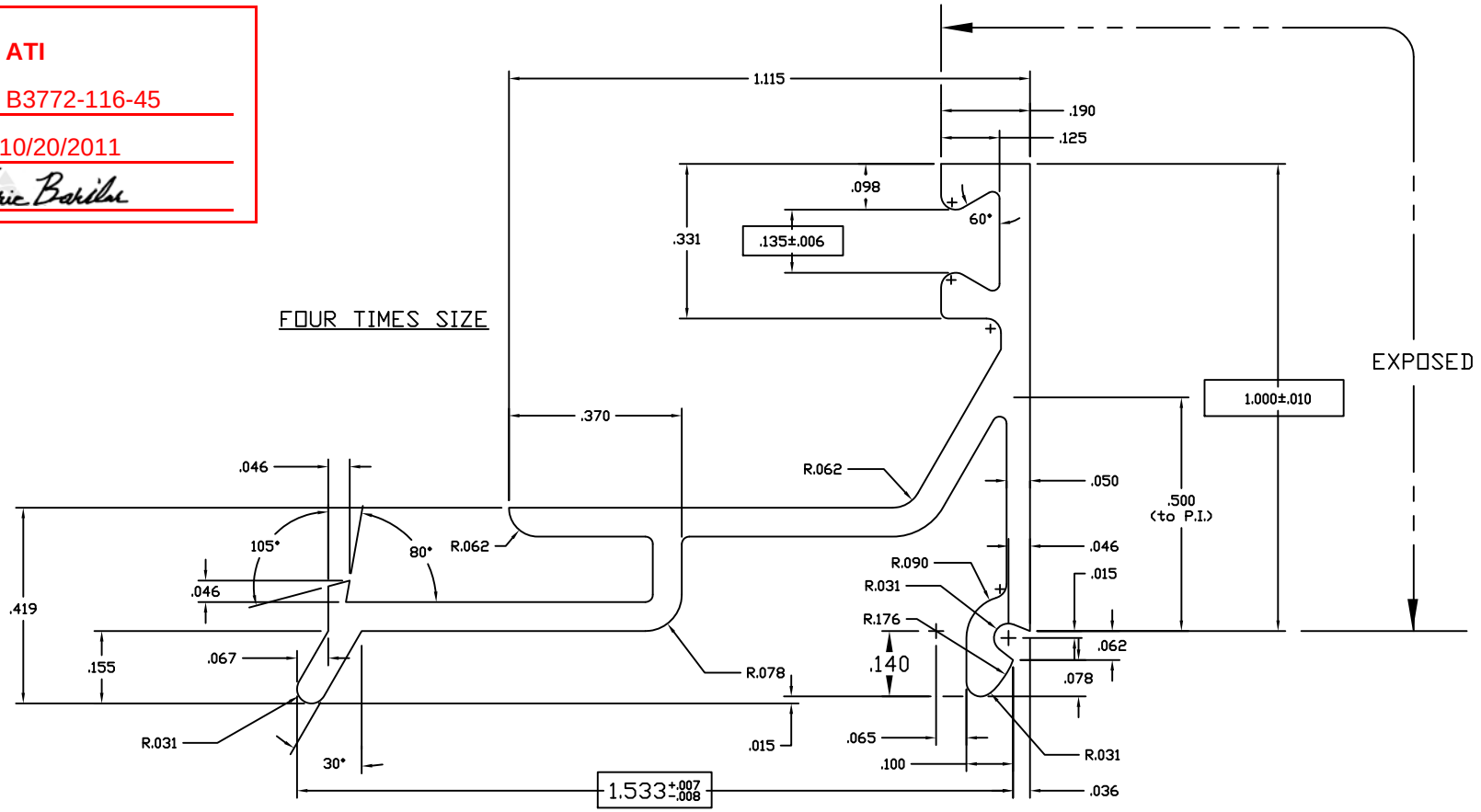
ATI

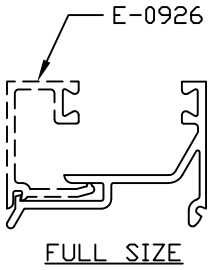
Report # B3772-116-45

Date 10/20/2011

Simulator Eric Barila

E0928





FULL SIZE

NOTES:

1) USE E-0927/0928 FOR 1" MAT'L
2) USE E-0926/0928 FOR 5/8" MAT'L
3) USE GLAZING BEAD P-302 FOR BOTH SIDES OF GLASS OR PANEL

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED
ALL UNSPECIFIED RADII .015
* INDICATES .031 RADIUS
DENOTES CRITICAL DIMENSION
ALL DIES PROPERTY OF TUBELITE

TUBELITE® DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
	10/12/87	REMOVED LEG	RW

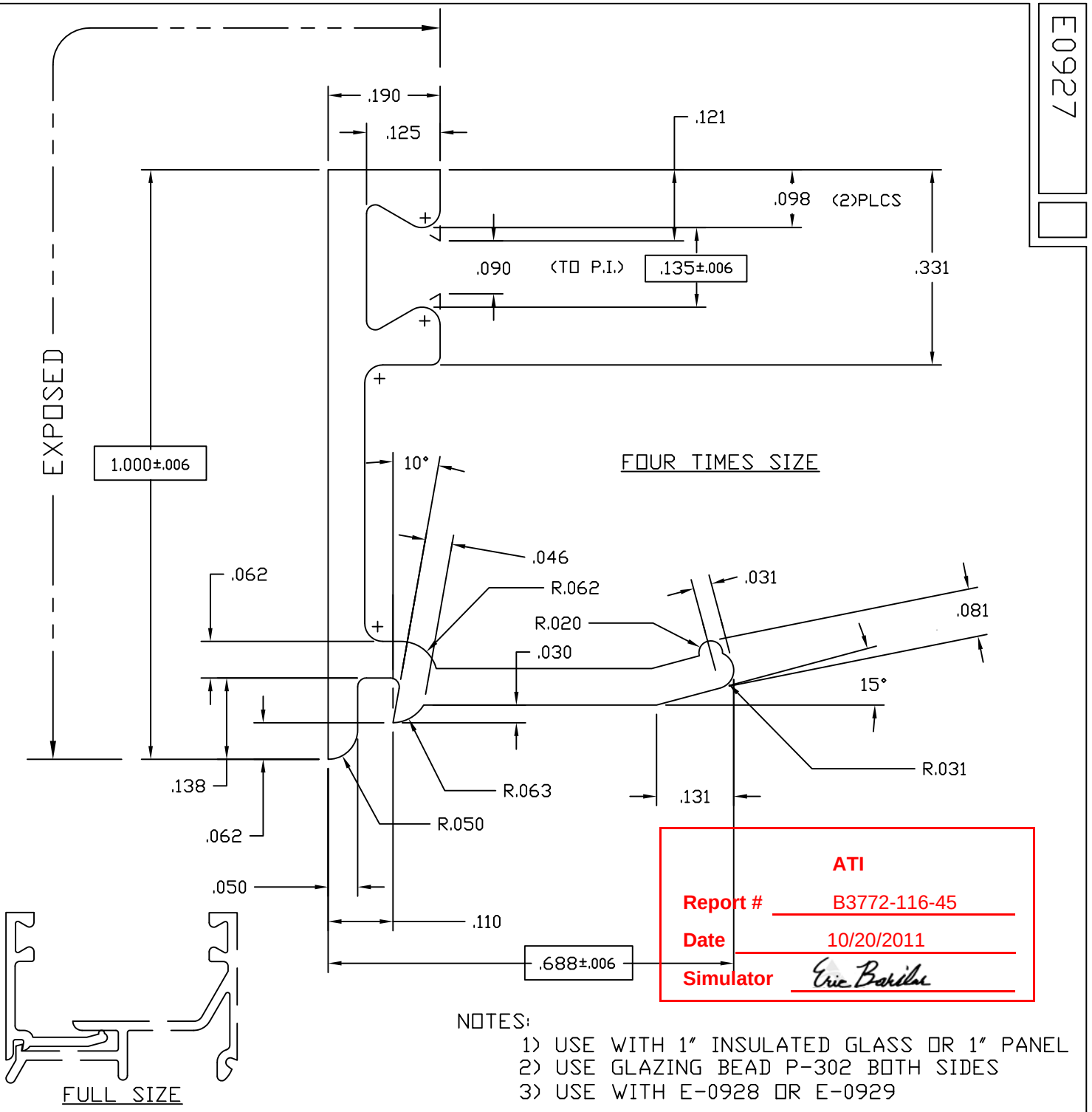
WALL THK. .062	SECTION CLASS S	MAT'L 6063-T5	RATIO 59:1
PERIMETER OUT (TOTAL) 7.540		AREA .234	WGT/FT .275
FACTOR 27	CIRCLE SIZE 1.938	INFILL VOLUME N/A	

RXX .302	SXX .030	IXX .021	CXX .701
RYY .501	SYY .113	IYY .059	CYY 1.049

GLASS STOP, 1" HIGH FOR 1" GLASS STOCK DOORS

DRAWN BY DH	DRWG DATE 07/03/84	APPV'D BY	DATE APPV'D	
DWG SCALE NOTED	PRODUCT CODE 100	E0928		REV

E0927



ATI	
Report #	B3772-116-45
Date	10/20/2011
Simulator	Eric Bakilas

NOTES:
1) USE WITH 1" INSULATED GLASS OR 1" PANEL
2) USE GLAZING BEAD P-302 BOTH SIDES
3) USE WITH E-0928 OR E-0929

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE®
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
X	XX/XX/XX	XXXXXXXXXXXXX	XXX

WALL THK. .062	SECTION CLASS S	MAT'L 6063-T5	RATIO 74:1
PERIMETER OUT (TOTAL) 4.001		AREA .124	WGT/FT .146
FACTOR 27	CIRCLE SIZE 1.120	INFILL VOLUME N/A	

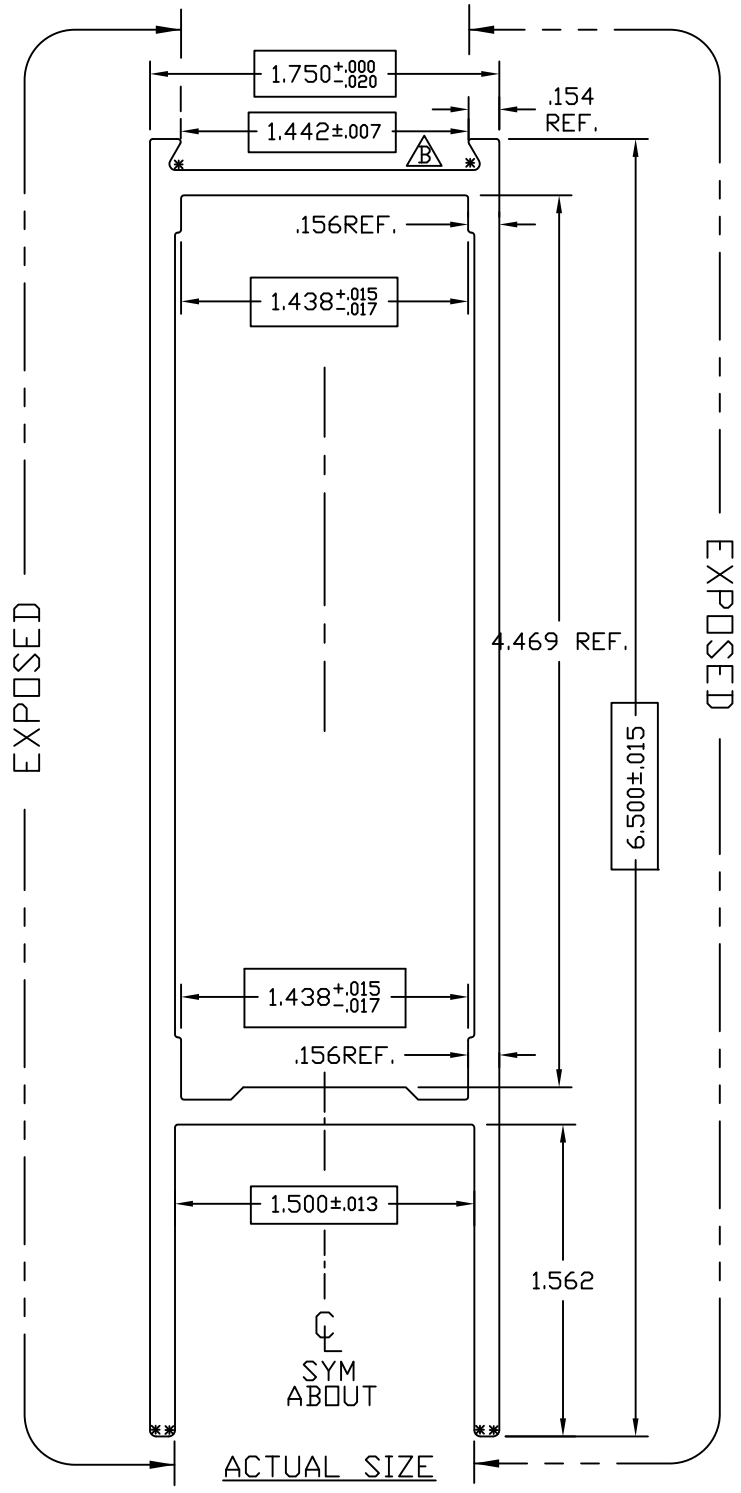
RXX .321	SXX .023	IXX .013	CXX .321
RYY .185	SYY .008	IYY .004	CYY .185

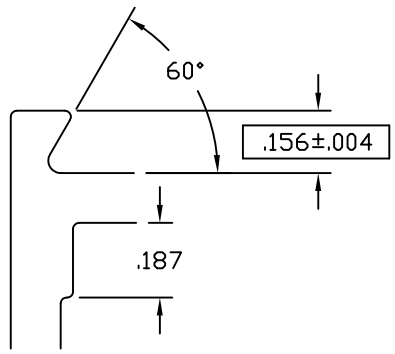
GLASS STOP, 1" HIGH FOR 1" GLASS STOCK DOORS

DRAWN BY CRH	DRWG DATE 04/21/99	APPV'D BY	DATE APPV'D
DWG SCALE NOTED	PRODUCT CODE 100	E0927	REV

E0419

B





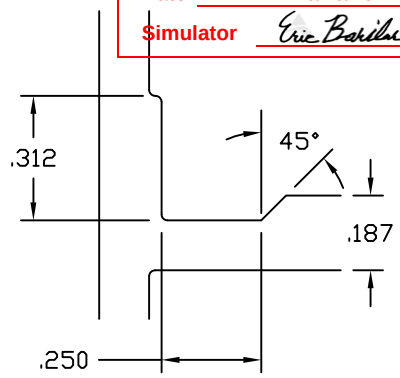
TWO TIMES SCALE

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bartilson



TWO TIMES SCALE

.125 +.003 -.011 TYP WALL UNLESS NOTED

SNAP FIT W/E-0437

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

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DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	11/16/00	1.449 WAS 1.438	CRH
B	07/08/03	1.449 +/-.007 WAS 1.449 +.000/-.010	CRH

WALL THK.	NOTED	SECTION CLASS	H	MAT'L	6063-T5	RATIO	26:1
PERIMETER OUT (TOTAL)	19.959(26.440)			AREA	2.084	WGT/FT	2.451
FACTOR	11	CIRCLE SIZE	6.720			INFILL VOLUME	N/A

RXX	.747	SXX	1.330	IXX	1.164	CXX	.875
RYY	1.980	SYY	2.447	IYY	8.175	CYY	3.340

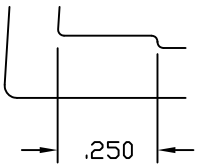
HORIZONTAL RAIL 6 1/2" X 1 3/4"
CUSTOM DOORS/FRAMES

DRAWN BY	DH	DRWG DATE	04/19/84	APPV'D BY	CRH	DATE APPV'D	12/08/00
DWG SCALE	NOTED	PRODUCT CODE	110	E0419		REV	B

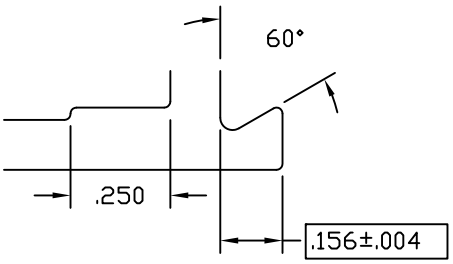
E0416

D

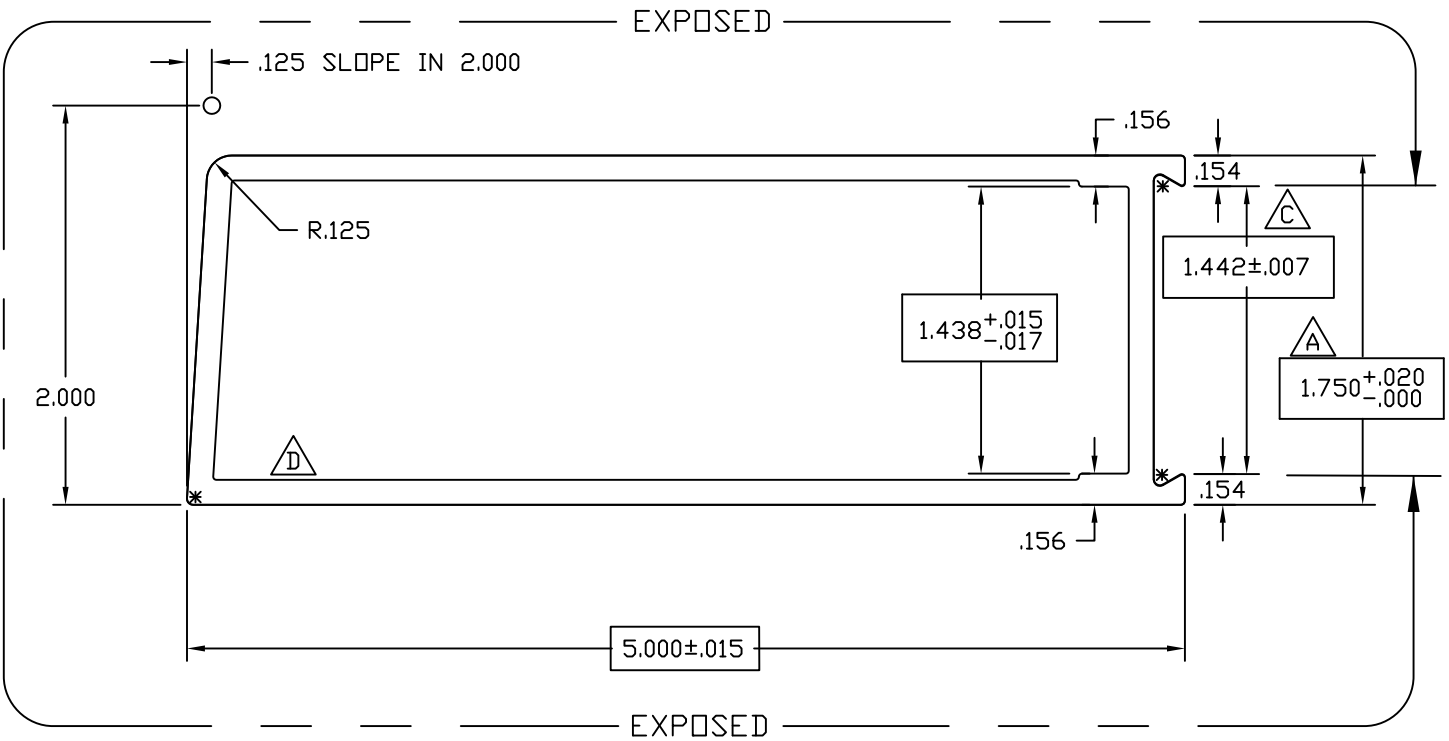
ATI
Report # B3772-116-45
Date 10/20/2011
Simulator Eric Barila



TWO TIMES SIZE



TWO TIMES SIZE



ACTUAL SIZE

.125 +.003 −.011 TYP WALL UNLESS NOTED

SNAP FIT W/E-0437

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE®
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	1/21/92	+.020/−.000 WAS +/−.010	KMH
B	04/10/01	1.449 +.000/−.010 WAS 1.438 +.002/−.013	CRH
C	10/15/02	1.442+/−.007 WAS 1.449 +.000/−.010	CRH
D	12/08/10	RMV .030 step in innser lower left cornner	TT

WALL THK. NOTED	SECTION CLASS H	MAT'L 6063-T5	RATIO 34:1
PERIMETER OUT (TOTAL) 13.733		AREA 1.623	WGT/FT 1.909
FACTOR 13	CIRCLE SIZE 5.293		INFILL VOLUME N/A

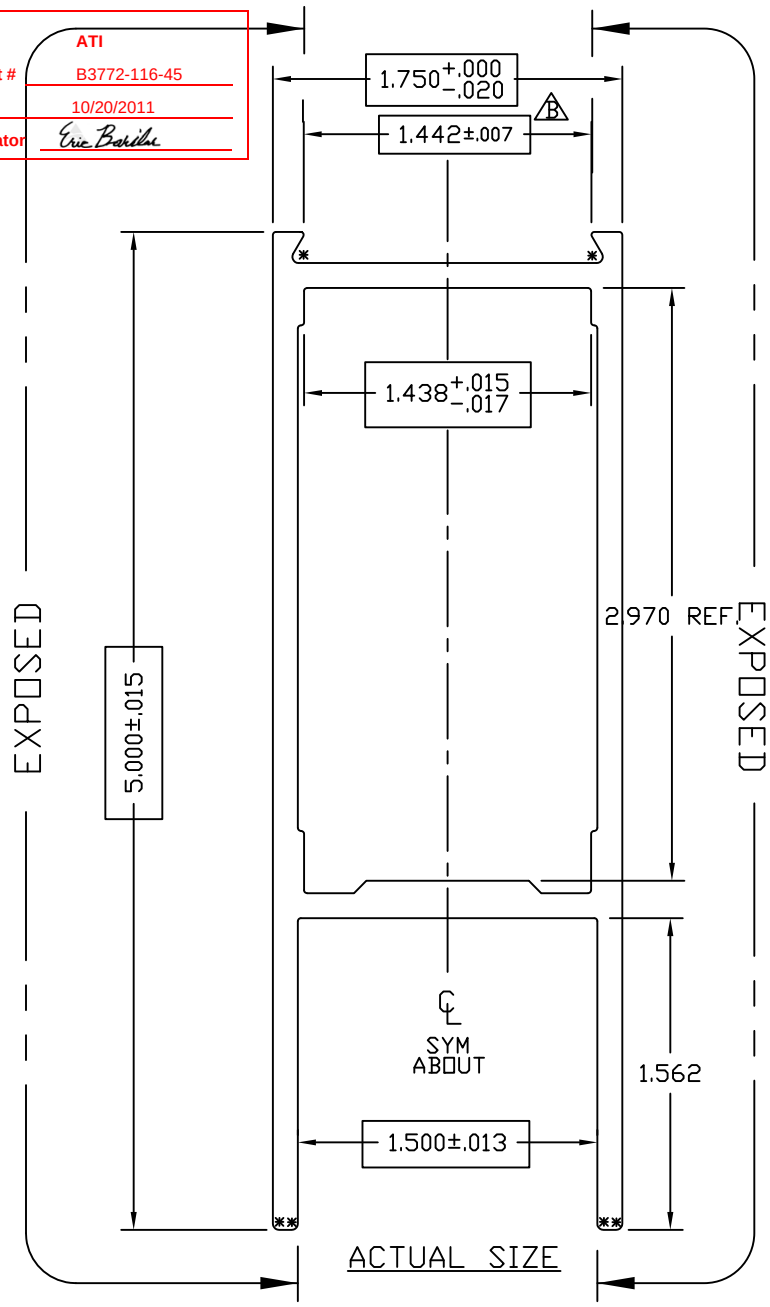
RXX .742	SXX 1.012	IXX .893	CXX .883
RYY 1.686	SYY 1.823	IYY 4.611	CYY 2.529

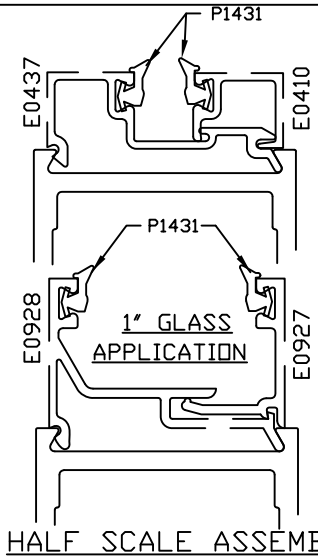
BEVELED VERTICAL RAIL 1 3/4" X 5"
CUSTOM DOORS/FRAMES

DRAWN BY DH	DRWG DATE 04/08/84	APPV'D BY	DATE APPV'D
DWG SCALE NOTED	PRODUCT CODE 110	E0416	REV D

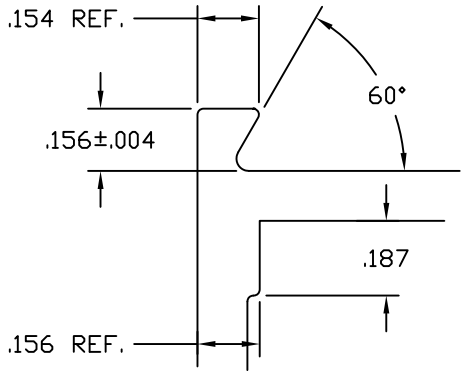
ATI
Report # B3772-116-45
Date 10/20/2011
Simulator Eric Bashline

E0318 B

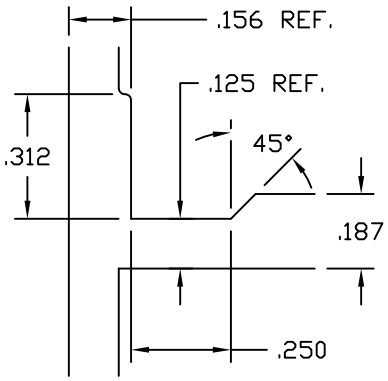




HALF SCALE ASSEMBLY



TWO TIMES SCALE



TWO TIMES SCALE

.125 +.003/-.011 TYP WALL UNLESS NOTED

SNAP FIT W/E0437(1/4"GLASS) AND E0928(1"GLASS)

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS NOTED

ALL UNSPECIFIED RADII .015

✳ INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

ALL DIES PROPERTY OF TUBELITE

TUBELITE®
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	11/07/00	+.000/-.010 WAS ±.012	CRH
B	04/10/02	±.007 WAS +.000/-.010	CRH

WALL THK. NOTED	SECTION CLASS H	MAT'L 6063-T5	RATIO 32:1
PERIMETER OUT (TOTAL) 16.983(26.047)		AREA 1.708	WGT/FT 2.008
FACTOR 13	CIRCLE SIZE 5.282	INFILL VOLUME N/A	

RXX .732	SXX 1.046	IXX .916	CXX .875
RYY 1.486	SYY 1.432	IYY 3.773	CYY 2.365

HORIZONTAL RAIL 5" X 1 3/4"
CUSTOM DOORS/FRAME

DRAWN BY DLH	DRWG DATE 04/26/84	APPV'D BY	DATE APPV'D
DWG SCALE NOTED	PRODUCT CODE 110	E0318	REV B

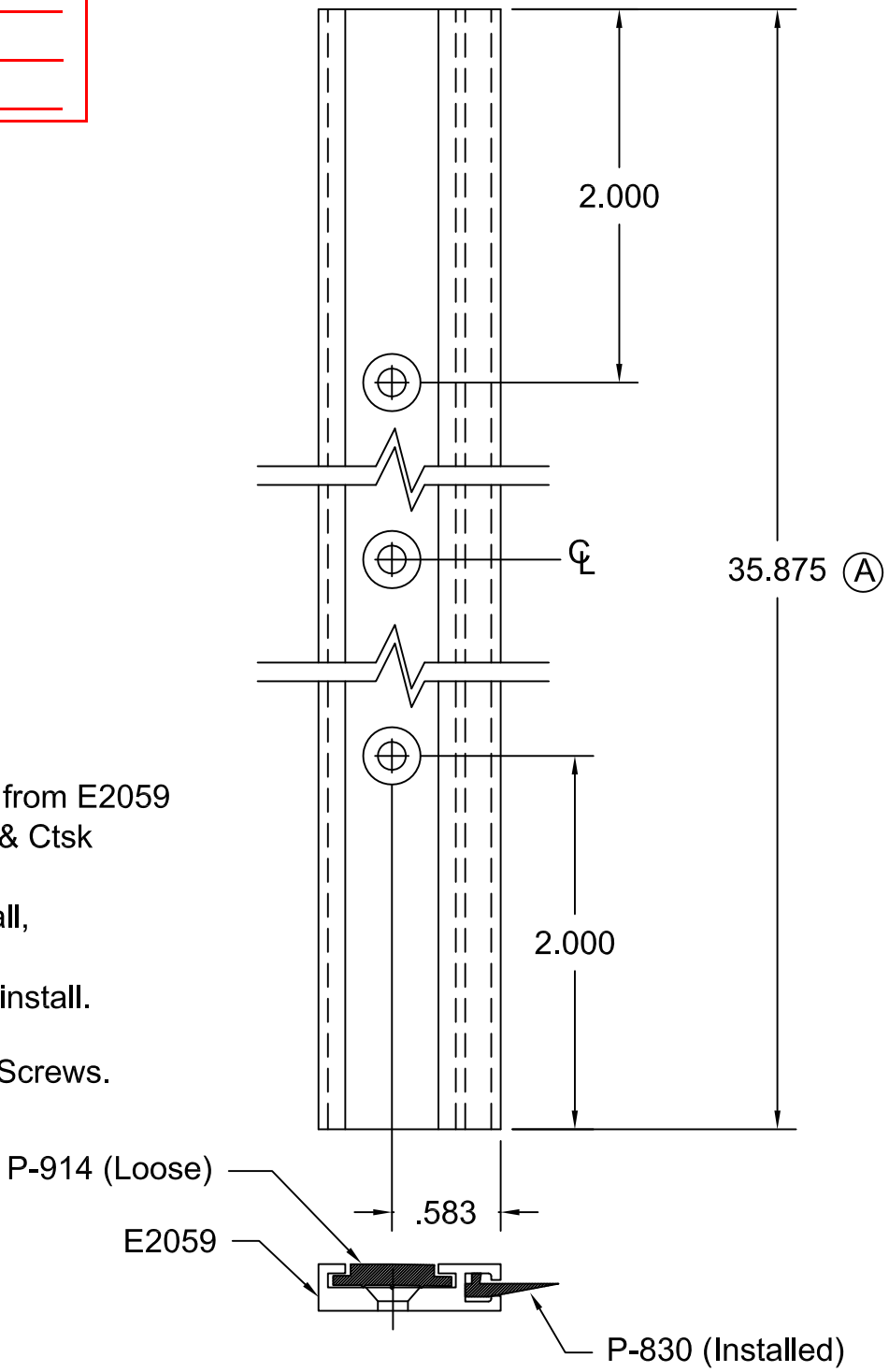
P1275 C

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bakilas



Operations:

1. Cut to length as required from E2059
2. Drill 3 holes with #25 Drl & Ctsk for S-064 (#6 FHCS)
3. Cut P-830 to length, Install, & Crimp ends
4. Cut P-914 to length, and install.
5. Paint ends as required
6. Ship with three (3) S064 Screws.

ALL UNSPECIFIED RADII .015

* INDICATES .031 RADIUS

DENOTES CRITICAL DIMENSION

TUBELITE DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
	7/29/83	Released Part per ED 128	PJ
A	05/17/90	ED #1222 Dim was 34.875	KMH
B	8/24/01	Redrawn for CAD	DMT
C	06/19/03	OUTSOURCE - ADD S064 SCREWS	SRD

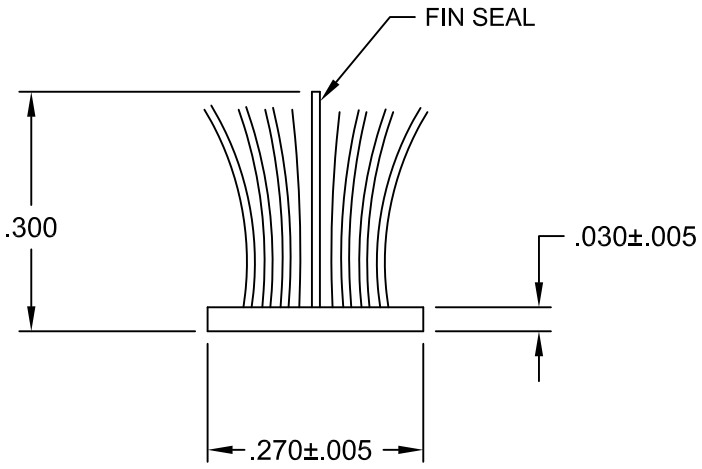
Door Seal to use with
E2058 Threshold

DRAWN BY	DRWG DATE	APPV,D BY	DATE APPV'D
PJ	05/09/83		

DRWG SCALE	PRODUCT CODE		REV
Full	380	P1275	C

P1098A

B



Actual Size

ATI

Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bakilas

ALL UNSPECIFIED RADII .015

* INDICATES .031 RADIUS

DENOTES CRITICAL DIMENSION

TUBELITE
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	03/08/83	Release Part per ED 109	
B	05/29/02	Redrawn for CAD	DMT

Poly Bond Fin-Seal Weathering
use with Door Stop E1377

DRAWN BY	DRWG DATE	APPV,D BY	DATE APPV'D	
Don H	06/03/83			
DRWG SCALE	PRODUCT CODE			REV
Noted	380	P1098A		B

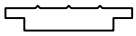
P914 A

ATI

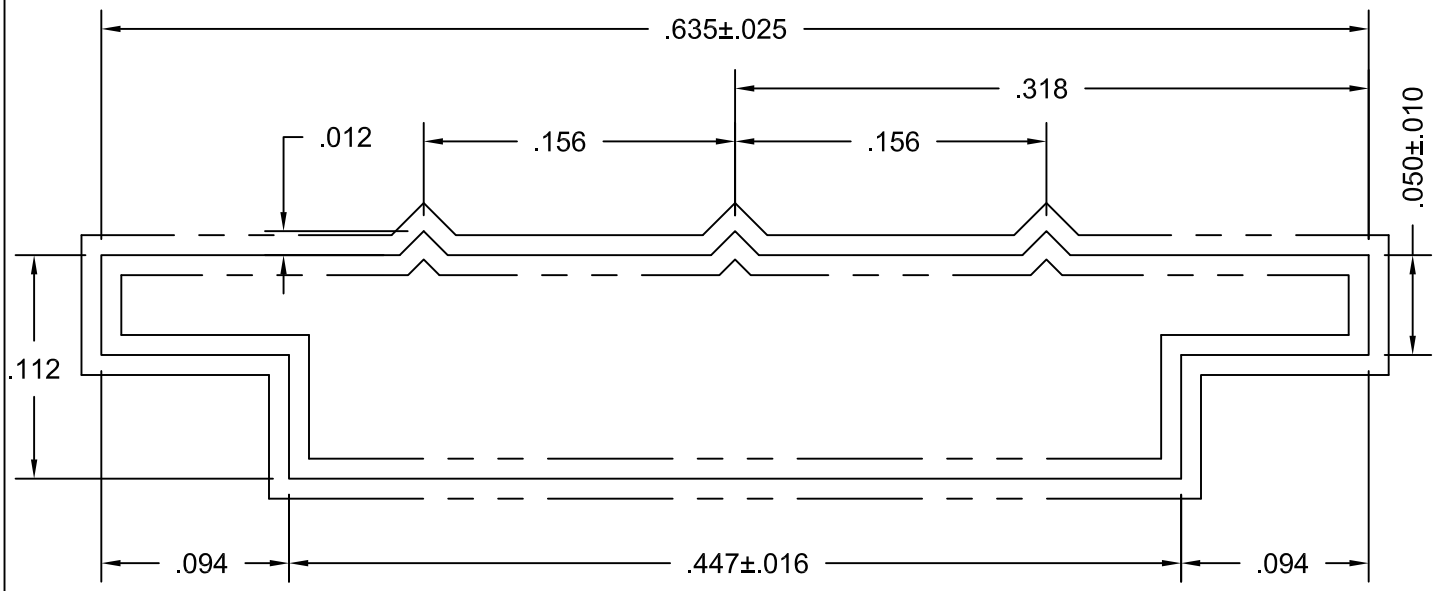
Report # B3772-116-45

Date 10/20/2011

Simulator Eric Bakilas



ACTUAL SIZE



Ten Times Size

NOTE: Part to receive Silicone Bath after Extruding

Purchased Part
Avon Rubber
90 Durometer
250' Rolls

ALL UNSPECIFIED RADII .015

* INDICATES .031 RADIUS

DENOTES CRITICAL DIMENSION

TUBELITE
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

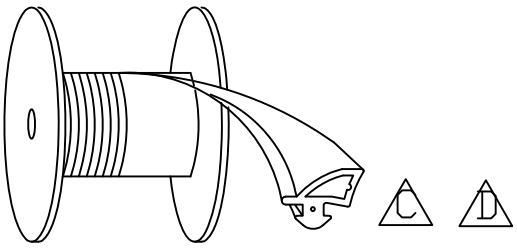
3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	01/19/96	Redrawn for AutoCAD	DMT

EPDM Rubber Glazing

Use with M1061, M1063, M1202

DRAWN BY	KMH	DRWG DATE	01/19/96	APPV,D BY		DATE APPV'D	
DRWG SCALE	Noted	PRODUCT CODE	380	P914		REV	A

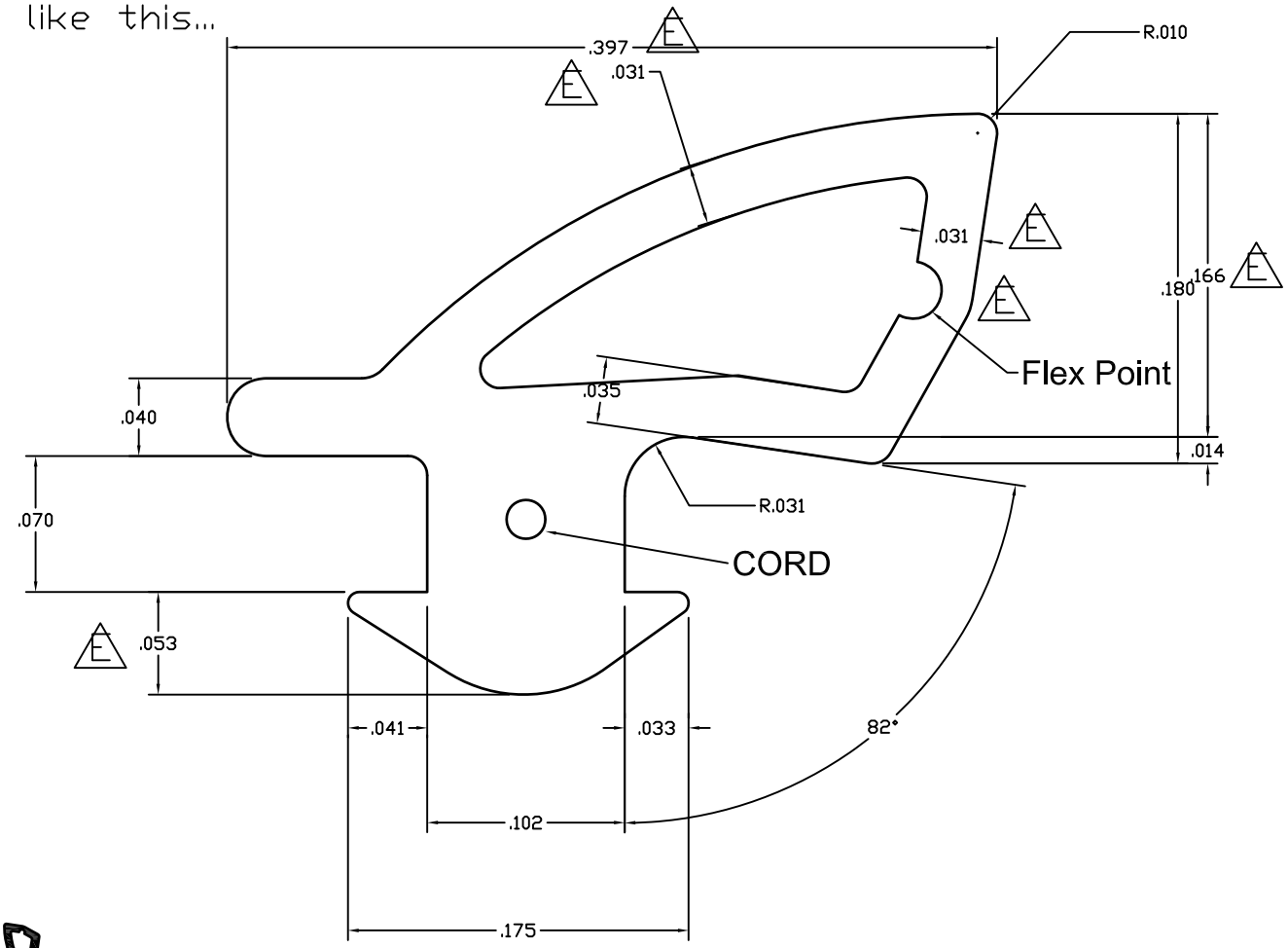


ATI	
Report #	B3772-116-45
Date	10/20/2011
Simulator	Eric Bakilas

P0017

E

Material must
UNREEL like this...



ACTUAL SIZE

MATERIAL: EPDM 60 DUROMETER WITH CORD

ALL UNSPECIFIED RADII .015

* INDICATES .031 RADIUS

▭ DENOTES CRITICAL DIMENSION

TUBELITE
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS

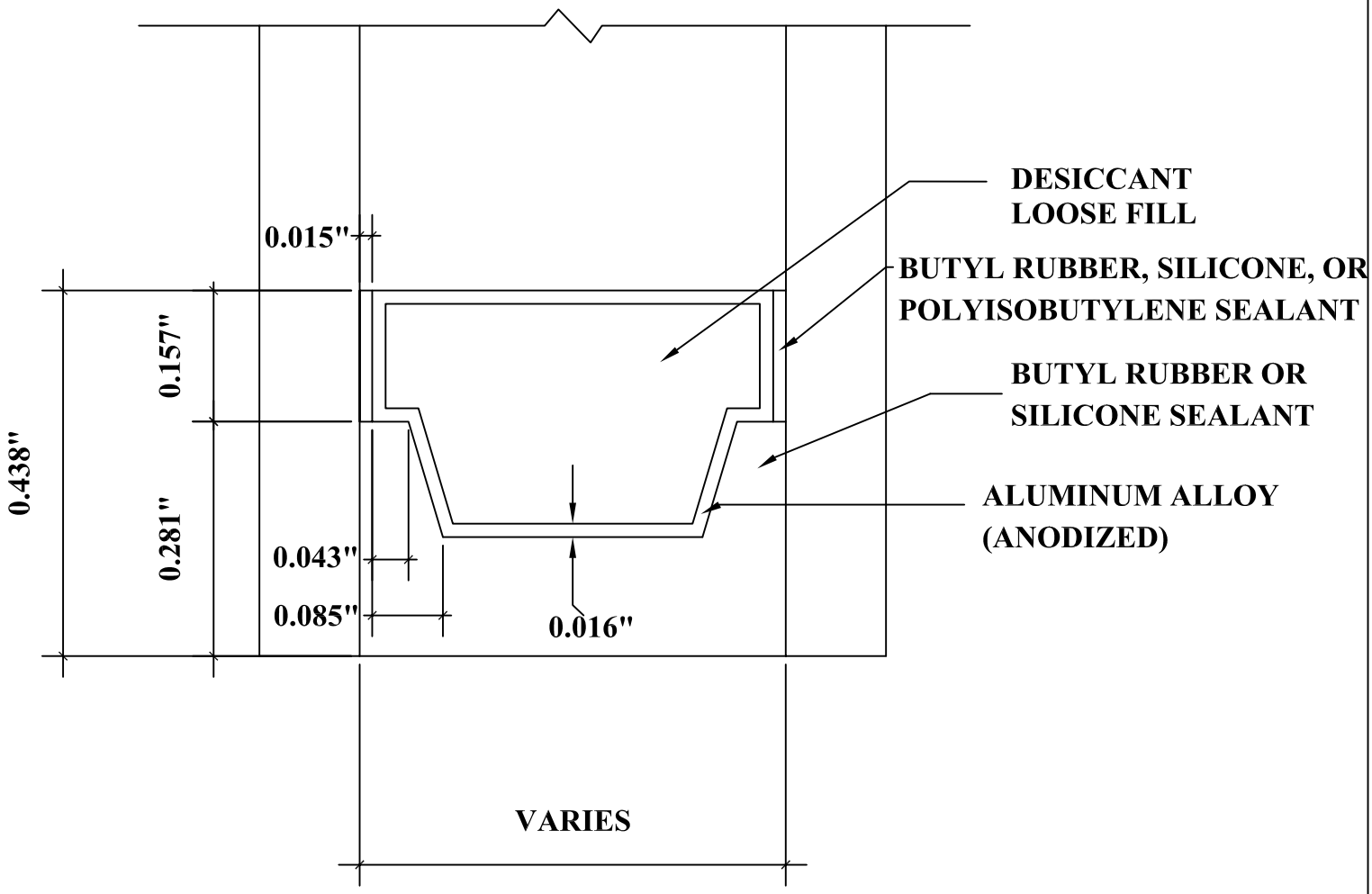
3056 WALKER RIDGE NW, SUITE G
WALKER, MICHIGAN 49544

REV	DATE	DESCRIPTION	INTL
A	08/20/07	MODIFIED DART: .070 WAS .060 AND .051 WAS .061 ADDED CORD	NIK
B	10/16/08	ADDED MANUFACTURER'S TOLERANCES FOR REFERENCE	SRD
C	10/22/10	Modified gasket position of how the reel should roll	TT
D	12/16/10	Modified gasket position of how the reel should roll	TT
E	02/15/11	Rev flex pt, thickness was .032, .180 was .188	TT

1/4"-1" DOOR GLAZING GASKET
500' ROLLS

DRAWN BY	NIK	DRWG DATE	4-17-07	APPV,D BY		DATE APPV'D	
DRWG SCALE	10X	PRODUCT CODE	100	P0017		REV	E

ATI	
Report #	B3772-116-45
Date	10/20/2011
Simulator	Eric Bakke



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