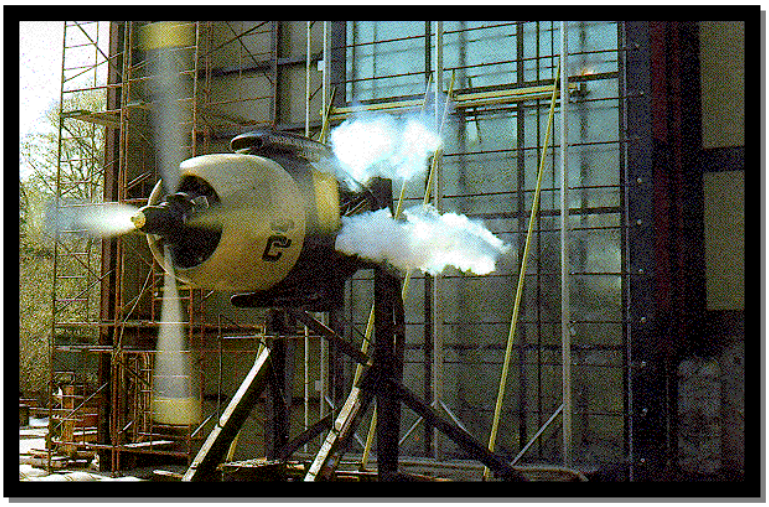
CONSTRUCTION CONSULTING LABORATORY



AAMA/WDMA/CSA 101/I.S.2/A440-17 Performance Test Report

Product/Type: PVC Single Slider Window
Series Model: 2700 Single Slider

Report: CCL 22-157.a (r)

September 13, 2022

Prepared for:
MASTER WINDOW SYSTEMS
5070 Nifda Drive SE
Atlanta, GA 30339

Product Type: Single Slider Window
Series / Model 2700 **Test Completion** 6-2-22
Specifications: AAMA/WDMA/CSA 101/I.S.2/A440-17

Specimen	Title	Summary of Results
1	Product Designator	R-PG 20 2743 x 1600 (108 x 63)-HS
	Operating Force	Open / 38 N (8.5 Lbs.)
	Latching Devices	Unlock / 6 N (1.4 Lbs.
	Design Pressure	+/- 960 Pa (20.05 Psf)
	Air Infiltration 1.57	0.55 L/s•m^2 (0.11 cfm/ ft^2)
	Water Resistance	150 Pa (3.13 Psf) Note 1
	150% Design Pressure	+/- 1440 Pa (30.08 Psf) Note 2
Note 1: With and without exterior screen		

TABLE OF CONTENTS

APPENDIX:

Refer to specimen drawings in **Appendix A**. This report is not complete unless these drawing are stamped and initialed by **CCL** as illustrated below.

Drawing	Part #	Rev / Date	Stamped as Illustrated
Assembly / BOM			CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL 1601 Luna Road Carrollton, Texas 75006 Phone (972) 242-0556 Report#22-157, Date 7-29-22 Reviewed BY EA
Main Frame	9214	10-17-13	
Fixed Interlock/ Meeting Stile	9257	9-29-11	
Fixed Interlock Stiffener	9252	9-06-11	
Sash Interlock / Meeting rail	9006	10-21-13	
Sash Interlock Stiffener	9071	3-17-06	
Sash Rail	9008	10-21-13	
Sash Pull Stile	9005	10-21-13	
Slider Sill Track	9247	11-04-04	
Glazing Bead	9216	6-20-13	
Glazing Bead	716 A	10-17-11	
Interlock Clip	VCP028	2-28-22	

1. PROJECT DATA

Project	Test Completed	Test Location
AAMA Performance Testing	6-2-22	CCL – Carrollton, Texas
Witnessed by	**All or Partial Viewing**	
CBP	Scott Cyphert	
Construction Consulting Laboratory	Edsson Alarcon	Juvenal Azua

2. SUMMARY

Series	Product Type	Test Size	*Positive DP*	Negative DP
2700	Single Slider	9'-0" x 5'-3"	960 pa (20.05 Psf)	960 pa (20.05 Psf)

3. TEST SPECIMEN

Product Type:	Single Slider Window, **Product Drawings, Appendix A**		
Series Model:	2700		
Specification:	AAMA/WDMA/CSA 101/I.S.2/A440-17 -R-PG20 / 2743 x 1600 (108 x 63)-H		
Frame Size:	2743 x 1600 mm (9'-0" x 5'-3")	**Fixed DLO**	845 x 1492 mm (33 ¼" x 58 ¾")
Operable Sash:	921 x 1549 mm (36 ¼" x 61.0")	**Sash DLO**	848 x 1473 mm (33 3/8" x 58.0")
Configuration:	X.O.X		

Weather Stripping: 4.75 mm (0.187") backing pile weather-strip with integral plastic fin: One (1) row 6.35 mm (0.250" thickness) at the interior face fixed interlocks and one (1) row at the exterior face of sash interlocks. One (1) row at the lateral face of sash top and bottom rails. One (1) row at the interior face of frame members, full perimeter

Weep Arrangement: One (1) 25.4 x 6.35 mm (1" x 1/4") weep slot with weep gate located at exterior face of frame sill spaced 76.2 mm (3") from each end (2-total). One (1) 25.4 x 4.76 mm (1" x 3/16") weep slot at sill slant leg spaced 4.45 mm (1 ¾") from each end and below frame fixed interlocks (4-total). One (1) 3/8" x 1/4" oval weep in top of frame sill spaced 63.5 mm (2 ½") from each frame jamb. One (1) 6.35 x 3.17 ¼" x 1/8" weep slot at top of frame sill inside glazing bead pocket spaced 3.75 mm (1/8") from each jamb (2-total). Roller track cut back from sill pocket 12.7 mm (1/2") from each end.

Glass: 19.05 mm (3/4") overall thickness Sealed Insulating Glass (SIG): Two (2) pieces, 2.38 mm (3/32") annealed glass with 14.28 mm (9/16") butyl air spacer.

Hardware: Plastic composite sweep lock located 177.8 mm (7") on center from each end of sash interlock stile attached with two (2), #6 x 19.05 mm (3/4") PH screws per lock. Locks engage a plastic composite keeper at fixed interlock stile attached with two (2) #6 x 19.05 mm (3/4") PH screws per keeper. One nylon roller housing with a pair of nylon rollers at each end of sash bottom rail.

Reinforcement: Extruded hollow aluminum part # 9071 at sash interlocks. Extruded solid aluminum part# 9252 at fixed interlocks

Glazing: Fixed lite is interior glazed with silicone sealant at exterior and PVC glazing bead part# 9216 at interior. Sash is exterior glazed, with silicone sealant at the interior and PVC glazing bead part# 716A at the exterior.

Sealant: See Glazing, see Installation

Test Buck Test fixture / buck included a nominal 50.8 x 101.6 mm (2" x 4") SPF lumber perimeter frame wrapped with a nominal 50.8 x 254 mm (2" x 10") SPF lumber perimeter frame The Max RO of the 2" x 4" buck was the specimen frame dimension plus 6.35 mm (¼"). The frame was sealed to the buck with silicone sealant.

Installation Features Installed from the exterior with the window mounting flange set in silicone and secured to the test buck with #8 x 63.5 mm (2 ½") washer head screws spaced 76.2 mm (3") from each end and on 304.8 mm (12") centers.

Other Features Frame and sash corners are mitered and welded. Fixed interlock attached at each end to frame head and sill using one (1) zinc clip attached to interlocks with two (2) #6 x 15.87 mm (5/8") countersunk screws and to frame member with two (2) #6 x 25.4 mm (1") countersunk screws.

4. PERFORMANCE RESULTS

Test	Title of Test	Test Method	Measured	Allowed
9.3.1	Operating Force Break away		38 N (8.5 lbs.)	230 N (51.71 lbs.)
	Open		29 N (6.5 lbs.)	155 N (40.47 lbs.)
	Close		36 N (8.0 lbs.)	155 N (40.47 lbs.)
9.3.1.3	Latching Devices		6 N (1.4 lbs.)	100 N (22.48 lbs.)
9.3.2	Air Infiltration	ASTM E 283	0.55 L/s•m^2	1.5 L/s•m^2
	@ 75 Pa (1.57 Psf)		(0.11 cfm/ft^2)	(0.30 cfm/ft^2)
Test results reported at the request of the manufacture.				
9.3.3	Water Resistance	ASTM E 547	(With and without screen)	
	150 Pa (3.13 Psf)		No Leakage	No Leakage
9.3.4.2	Deflections @ Interlock	ASTM E 330	Span 1549.4 mm (61.0")	
	960 Pa (20.05 Psf) Positive		39.68 mm (1.25)	Reported
	960 Pa (20.05 Psf) Negative		38.1 mm (1.50")	Reported
9.3.4.3	Uniform Load Structural	ASTM E 330		
	@ 1440 Pa (30.08 Psf) Positive		No Damage	No Damage
	-Permanent Set		3.18 mm (.125")	5.91 mm (.233")
	@ 1440 Pa (30.08 Psf) Negative		No Damage	No Damage
	-Permanent Set		4.69 mm (.185")	5.91 mm (.233")
2-mil plastic used to seal against air loss during uniform loading. The plastic sheeting did not influence the structural performance of the test specimen				
9.3.5	Forced Entry Resistance	ASTM F 588-07		
	Grade 10		No Entry	No Entry
9.3.6.3	Deglazing Test			
	Rails @ 222 N (50 lbs.)		Pass	Movement <10%
	Stiles @ 311 N (70 lbs.)		Pass	Movement <10%
9.3.6.2	Thermoplastic Corner Weld Test	A440-17	Pass	Not extend down weld line

Detailed extrusion and assembly drawings indicating measured wall thickness and corner construction are on file and were compared to the test sample submitted. These records will be retained at **CCL** for a period of four years. The above results were obtained by using the designated test methods indicating compliance with the above specification

5. DISCLAIMER

This report does not constitute certification of this product, which may only be granted by the program administrator.

CONSTRUCTION CONSULTING LABORATORY

EDSSON ALARCON
QUALITY CONTROL MANAGER
SIGNED ELECTRONICALLY

WESLEY WILSON
LABORATORY MANAGER
SIGNED ELECTRONICALLY

APPENDIX

PRODUCT DRAWINGS

Drawing	Part #	Rev / Date	Stamped as Illustrated
Assembly / BOM			
Main Frame	9214F	10-17-13	
Main Frame / mounting flange	9214	7-30-13	
Fixed Interlock/ Meeting Stile	9257	9-29-11	
Fixed Interlock Stiffener	9252	9-06-11	
Sash Interlock / Meeting rail	9006	10-21-13	
Sash Interlock Stiffener	9071	3-17-06	
Sash Rail	9008	10-21-13	
Sash Pull Stile	9005	10-21-13	
Slider Sill Track	9247	11-04-04	
Glazing Bead	9216	6-20-13	
Glazing Bead	716 A	10-17-11	
Interlock Clip	VCP028	2-28-22	

CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

BILL OF MATERIALS
Model 9230-HS-T011
New Construction XOX Slider
Revised December 8, 2017

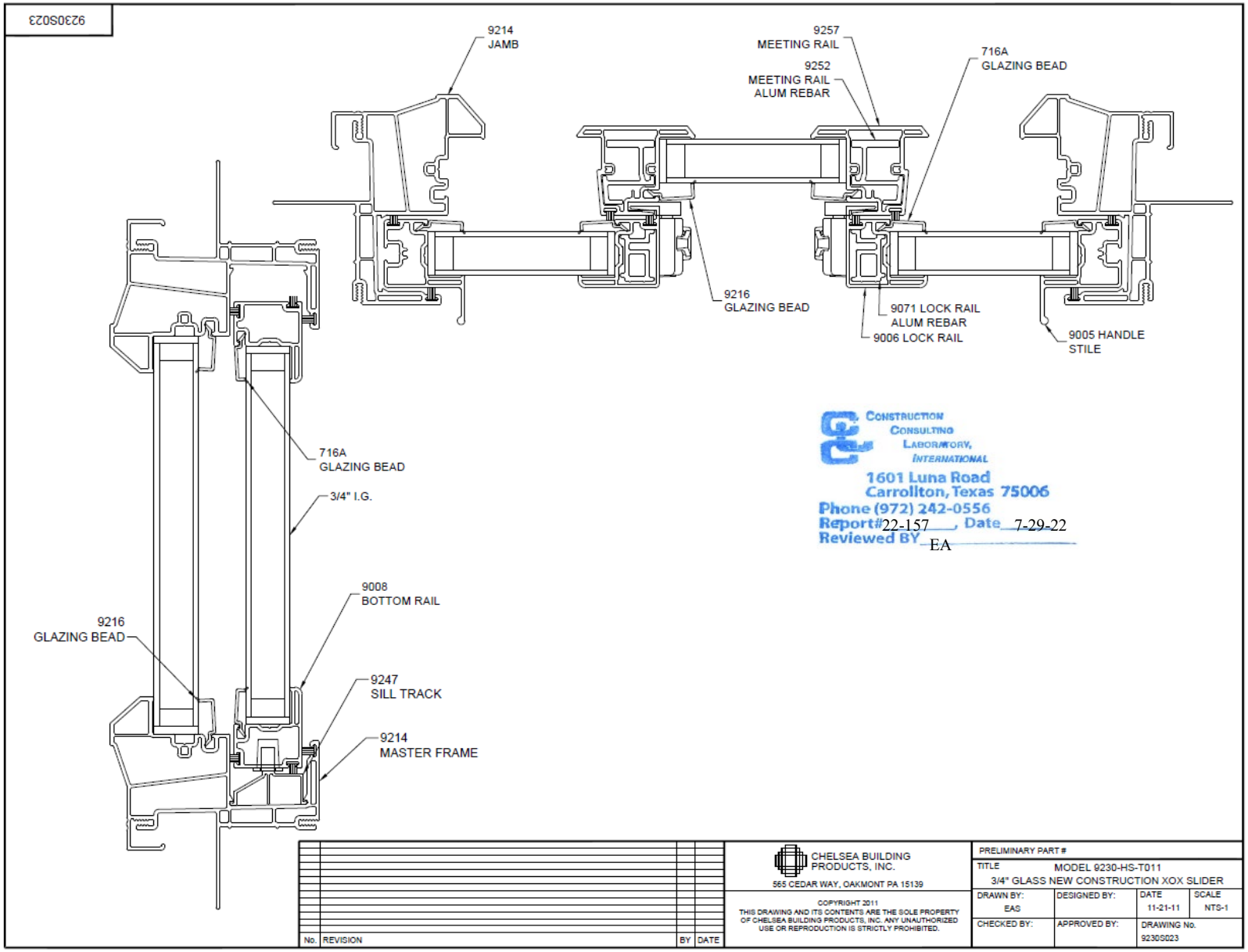
ITEM	DESCRIPTION	CBP PART#	QTY	MATERIAL/SOURCE	NOTES
1	Master Frame	9214	4	CBP	2
2	Rail	9008	4	CBP	2
3	Lock Stile	9006	2	CBP	2
4	Meeting Stile	9257	2	CBP	2
5	Pull Stile	9005	2	CBP	2
6	Glazing Bead (Fixed)	9216	4	CBP	2
7	Glazing Bead (Vent)	716A	8	CBP	2
8	Sill Track	9247	1	CBP	2
9	Aluminum Stiffener – Lock Stile	9071	2	Keymark	1
10	Aluminum Stiffener – Meeting Stile	9252	2	Keymark	1
11	Anti Lift	9247	2	CBP	2
12	Pass-thru Clip		4	Four-Jaks #VCP028	1
13	Weep Cover		2	Vision #1230	2
14	Roller		4	Vision #1173	1
15	Silicone Glazing Sealant		AR	Pecora #895	1
16	Glazing Block (3/4" x 3/4" x 1/8")		AR	Tremco	1
17	Keeper		2	Vision #9316-00	2,3
18	Lock		2	Vision #671-00	2,3
SCREWS (#410 Stainless Steel or Zinc Plated)					
19	Pass-thru Clip		16	#6 x 1" PH Flat HD Type AB, SMS	
20	Keeper		4	#6 x 3/4" PH Pan HD,Type A, 410 SS "Vyn-L-Hold Screw"	2,3
21	Lock		4	#6 x 3/4" PH Flat HD, Serrated Thread, AFC Industries #SPAX61-CW	2,3
22	Stiffener		AR	#6 x 1/2" PH Flat HD,Type A, 410 SS "Vyn-L-Hold Screw	
WEATHERSTRIPPING					
23	Center Fin Pile (Lock Rail, Meeting Rail)		AR	.187 x .220	
24	Center Fin Pile (Pull Stile, Rail, Frame)		AR	.187 x .250	
OPTIONAL					
25	Drip Cap	9239/ 9239M	AR	CBP	2
26	Drip Cap (J Removed)	9236	AR	CBP	2
27	Transom Clip	727	AR	CBP	2
28	1/2" Mullion Clip	749	AR	CBP	2
29	Drywall Receptor	722	AR	CBP	2
30	Jamb Extension Clip	723	AR	CBP	2
31	3/4" Wood Return	738	AR	CBP	2

OPTIONAL (cont.)					
32	Structural Mullion	803	AR	CBP	2
33	Trim Kit	9269	AR	CBP	2
34	Screen Clip	9218	AR	CBP	2
35	Steel Stiffener – Lock Stile	9042	2	Elliot Manufacturing	1
36	Steel Stiffener – Meeting Stile		2	Elliot Manufacturing	1
37	Composite Stiffener – Lock Stile	9078	2	CBP	1
38	Composite Stiffener – Meeting Stile	9262	2	CBP	1
39	Non-removable Meeting Stile Screw		8	#6 x 2" PH Pan HD Type AB, SMS	
40	Keeper Screw (Alum or Steel Rebar)		AR	#6 x 3/4" PH Flat HD TEK (Self-drilling)	2,3
41	Lock Screw (Alum or Steel Rebar)		AR	#6 x 3/4" PH Flat HD TEK (Self-drilling)	2,3
42	Stiffener Screw (Alum or Steel Rebar)		AR	#6 x 1/2" PH Flat HD TEK (Self-drilling)	
43	Glazing Tape (1/16" x 3/8")		AR	Lamatek HGT	1
44	Lock		2	Lawrence Industries #2802 Requires fab tooling change	2,3
45	Keeper		2	Lawrence Industries #2600-402 Requires fab tooling change	2,3
46	Weep Cover		2	Gaer #98-03-00-00	1,2
47	Screen Frame		AR	3/8"	2

NOTES:
1 = Or Approved Equivalent
2 = Specify color (White, Beige, Brown)
3 = For windows over 32" double amount used

No.	Revision	By	Date	Checked By	Approved By
5	Added Vision lock & keeper as standard WO#17292	BLG	12/08/17		
4	Added Lawrence lock & keeper as standard	BLG	09/27/16		
3	Added 9236 Drip Cap	BLG	07/31/13		
2	Revised Truth lock part # from A09000425	DW	9-28-12		
1	BOM Created	EAS	12-05-11		

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER



CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9214FQC	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9214F	XO SLIDER FRAME	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .062 ±.006
7. RADIUS = .020 R
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

VISION PASS-THRU CLIP #VCP028

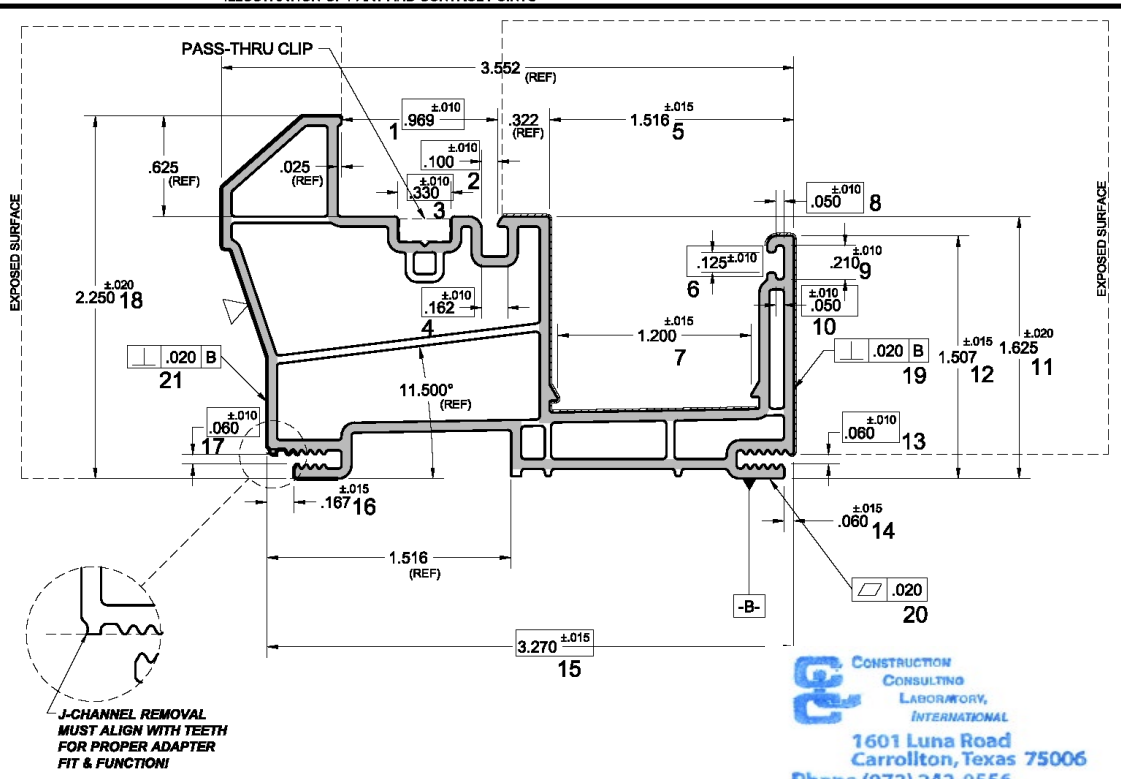
9216 GLAZING BEAD (3/4" GLASS)

9016 GLAZING BEAD (7/8" GLASS)

WOOLPILE .187 BACK

9247 SILL TRACK

DRAWN DATE: 12-09-11



NO.	REVISION	BY	DATE
4	ADDED NAIL FIN CUT-OFF NUB, WO#13185	BLG	10/17/13
3	REVISED DIMS & TOLS; WO#13153	EAS	07-30-13
2	REVISED DIMS & TOLS; WO#13136	EAS	07-15-13
1	ADDED J-CHANNEL REMOVAL NOTE	EAS	01-28-13

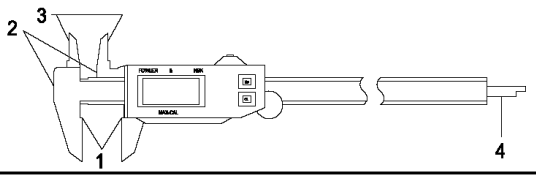
CUSTOMER LEN

CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report#22-157 , Date 7-29-22
Reviewed BY EA

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



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CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9214QC	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION
PART NAME: 9214	DESCRIPTION: XO SLIDER FRAME	SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS				

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

NOTES:
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5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .062 ±.006
7. RADIUS = .020 R
8. LOCATION FOR IMPACT TEST S2
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
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WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

VISION PASS-THRU CLIP #VCP028

9216 GLAZING BEAD (3/4" GLASS)

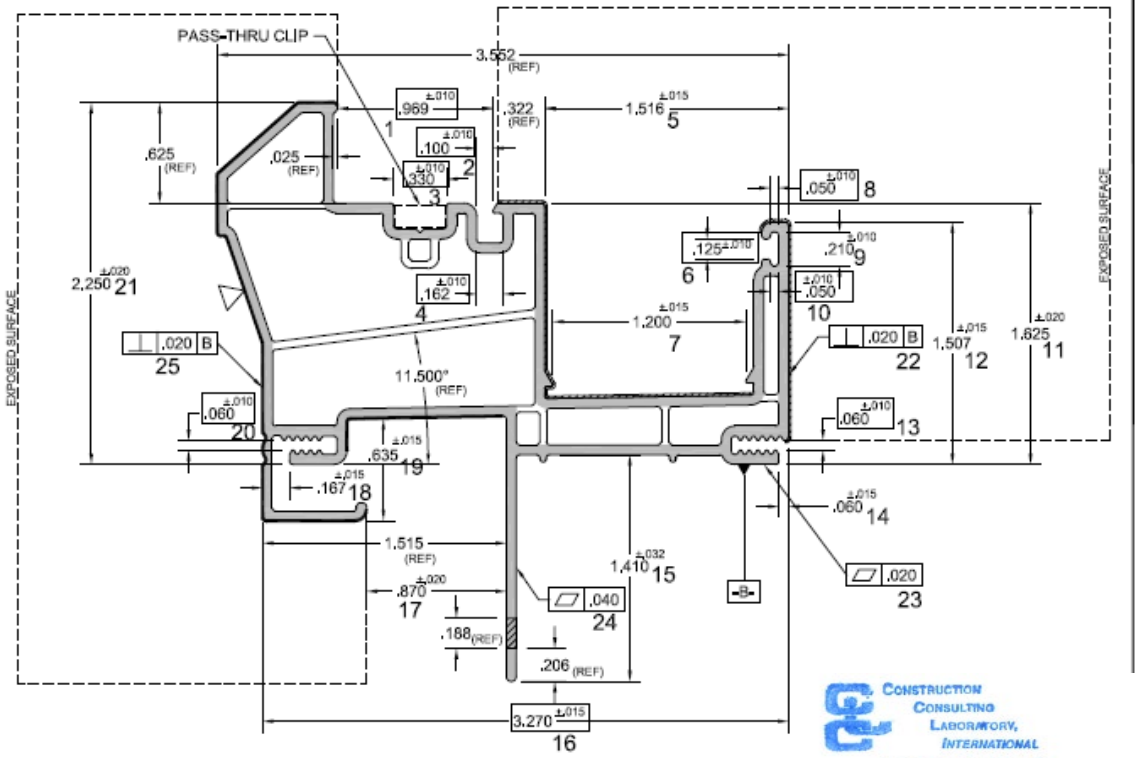
9016 GLAZING BEAD (7/8" GLASS)

WOOLPILE .187 BACK

9247 SILL TRACK

723 JAMB EXTENSION CLIP (INTERIOR POCKET ONLY)

DRAWN DATE: 12-09-11



NO.	REVISION	BY	DATE
2	REVISED DIMS & TOLS: WO#13153	EAS	07-30-13
1	REVISED DIMS & TOLS: WO#13136	EAS	07-15-13

CUSTOMER LENGTH

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

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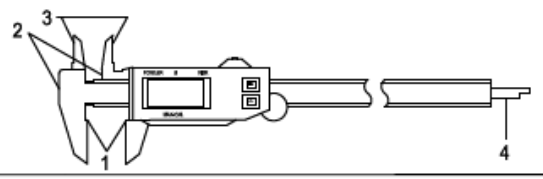

CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report#22-157, Date 7-29-22
Reviewed BY EA

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9257QC	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9257	FIXED MEETING RAIL	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
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4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .062 ±.006
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WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

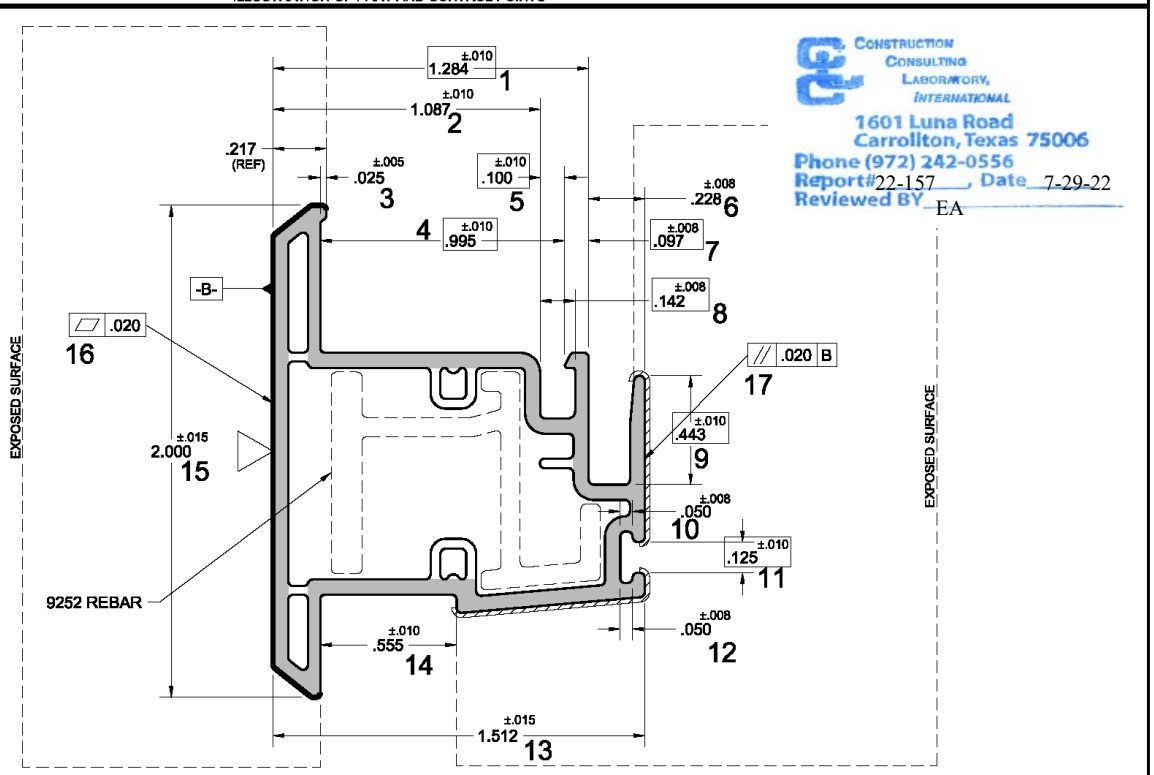
9216 GLAZING BEAD (3/4" GLASS)

9016 GLAZING BEAD (7/8" GLASS)

716A GLAZING BEAD (7/8" GLASS)

✱ 9252 ALUMINUM REBAR

DRAWN DATE: 09-27-11



Construction Consulting Laboratory, International
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

NO.	REVISION	BY	DATE
2	REVISED SCREWBOSS SIZE	EAS	09-29-11
1	ADDED SCREWBOSS NUBS; ADDED CRIT DIMS; DIM 1.512 TOL WAS ±.018	EAS	09-29-11

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

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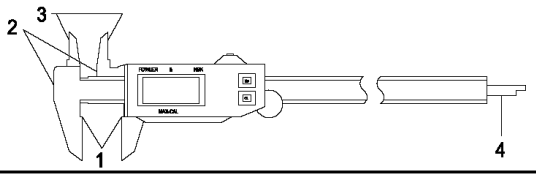
Auditor- 1 sample per shift recorded 1 hour after shift start.

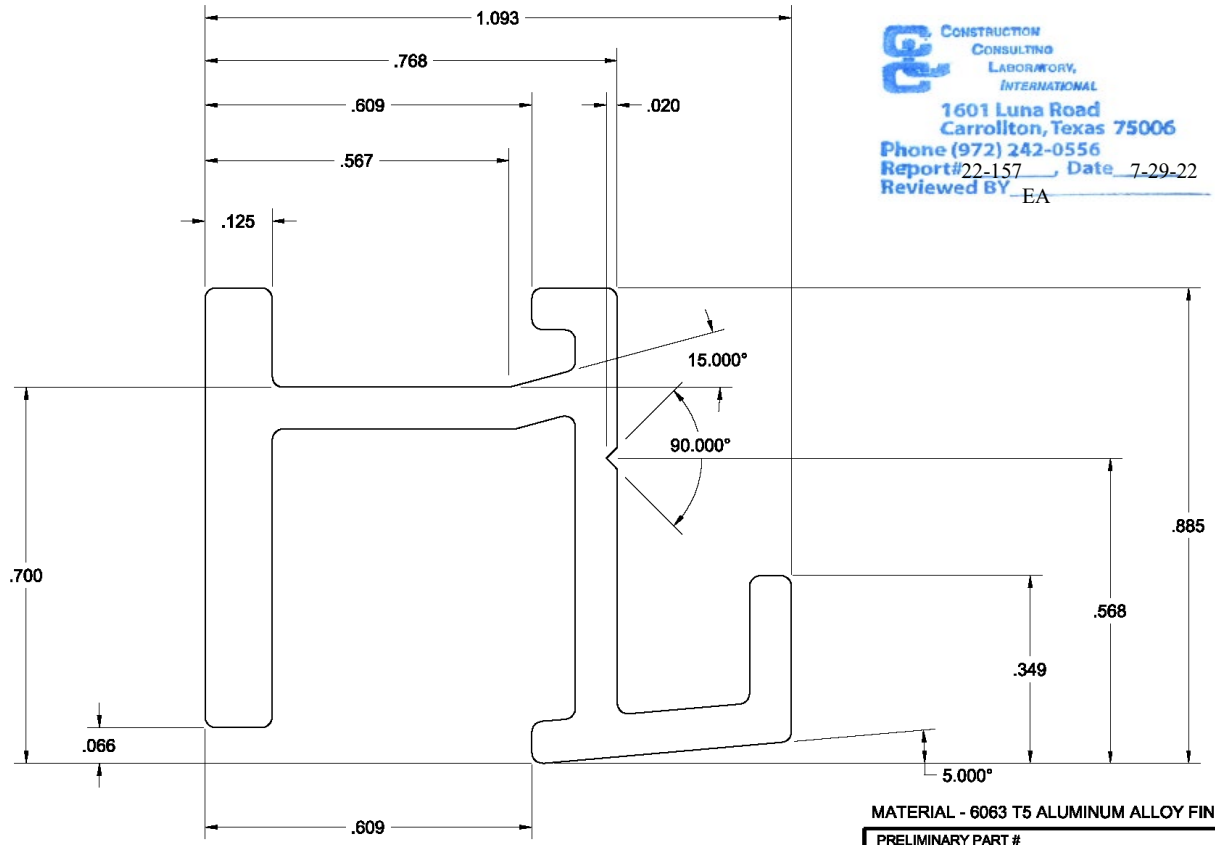
IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



SINCE 1974

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

9252



CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

MATERIAL - 6063 T5 ALUMINUM ALLOY FINISH - MILL

PRELIMINARY PART #

UNLESS OTHERWISE SPECIFIED

MATERIAL	ALUMINUM	WALLS	.078
EXTERIOR COATING		RADII	.020 R
FLEXIBLE P.V.C.		ANGULARITY	±1°
TOTAL AREA	.2708		
STANDARD WT/FT	.3185		

No.	REVISION	BY	DATE
1	ADDED NOTCH	EAS	11-04-11

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

TITLE
ALUMINUM REBAR FOR 9257 MEETING RAIL

DRAWN BY:	DESIGNED BY:	DATE	SCALE
EAS	EAS	09-06-11	NTS-1
CHECKED BY:	APPROVED BY:	DRAWING No.	
		9252	

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9006qc	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9006	LOCK RAIL/STILE	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

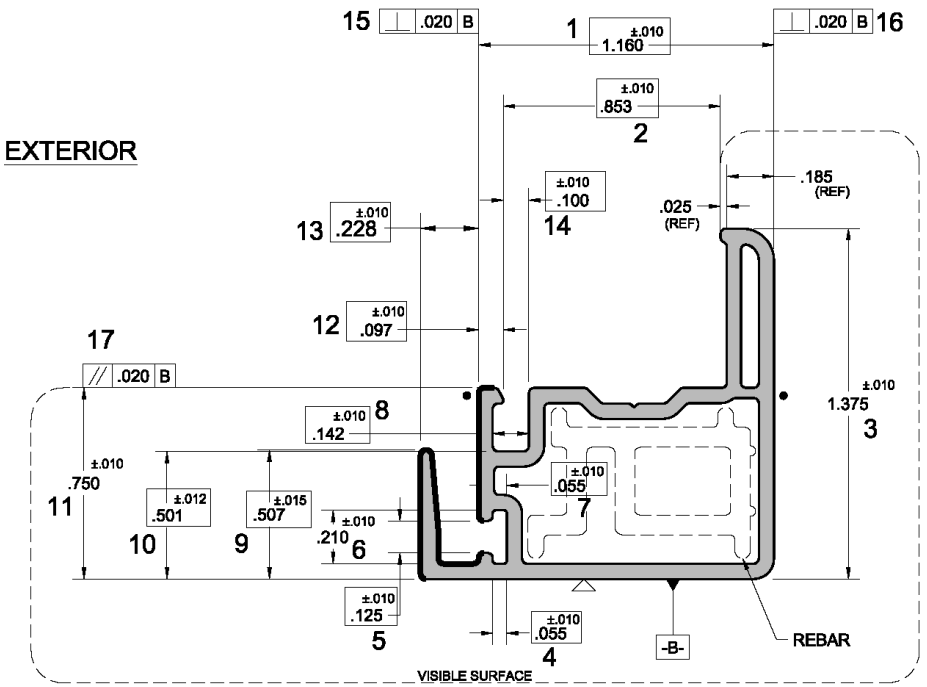
NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .060 ±.006
7. RADIUS = .020
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/6"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

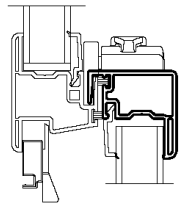
POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
WOOLPILE (.187 BACK)
716A GLAZING BEAD
3/4" GLASS BLOCK
9078 COMPOSITE REBAR
9071 ALUMINUM REBAR
9042 STEEL REBAR

DRAWN DATE: 06-25-03



NOTE: REBAR USED IN EVERY WINDOW!
REBAR MUST SLIDE FREELY



INTERLOCK DETAIL
SCALE = .25X

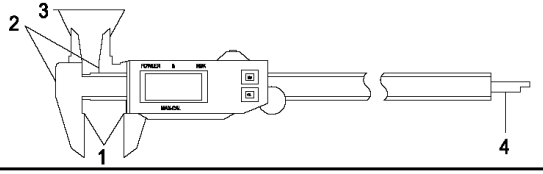
NO.	REVISION	BY	DATE
7	ADDED DIM .501 (#10), WO#13188	BLG	10/21/13
6	REVISED FOR NEW TOOL, REVISED DIMS AND TOLS, WO#13141	EAS	07-16-13
5	MADE DIM 15 CRITICAL; WO#1293	JPP	05-13-11
4	UPDATED DIM 4 TO MATCH TOP HALF	JPP	05-07-09
3	.878 DIM WAS .853 TO NUB; ADDED .100 DIM; .050 DIMS WERE ±.010; RENUMBERED	EAS	06-11-07
2	REVISED TOLS ON 12,13	JPP	02-02-05

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

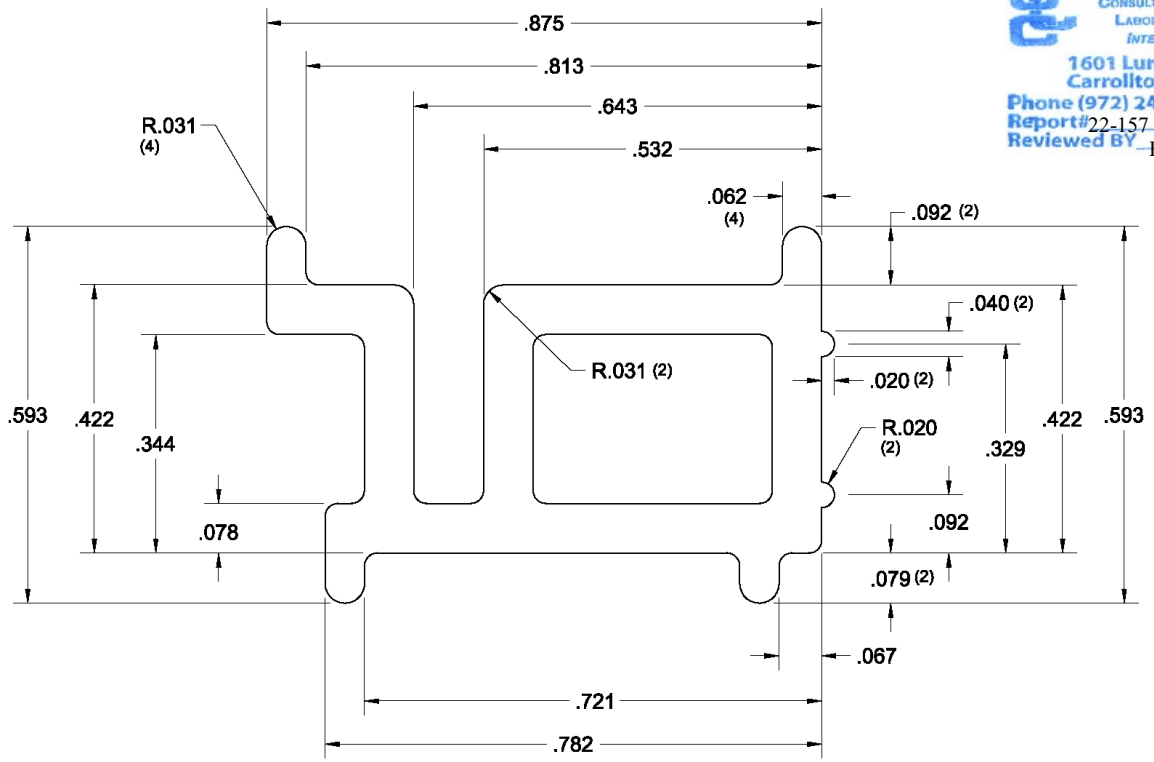
IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



SINCE 1974

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

9071



CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

MATERIAL: 6063 T5 ALUMINUM	
USE DECO LOCK #677206	
PRELIMINARY PART #	
UNLESS OTHERWISE SPECIFIED	
MATERIAL ALUMINUM	WALLS .078
EXTERIOR COATING	RADII .020 R
FLEXIBLE P.V.C.	ANGULARITY ±1°
TOTAL AREA .2041	
STANDARD WT/FT .2400	

No.	REVISION	BY	DATE

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

TITLE: ALUMINUM LOCK RAIL STIFFENER

DRAWN BY:	DESIGNED BY:	DATE	SCALE
BLG	BLG	03/17/06	NTS-1
CHECKED BY:	APPROVED BY:	DRAWING No. 9071	

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9008qc	DRAWN BY: JPP	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9008	RAIL/STILE	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

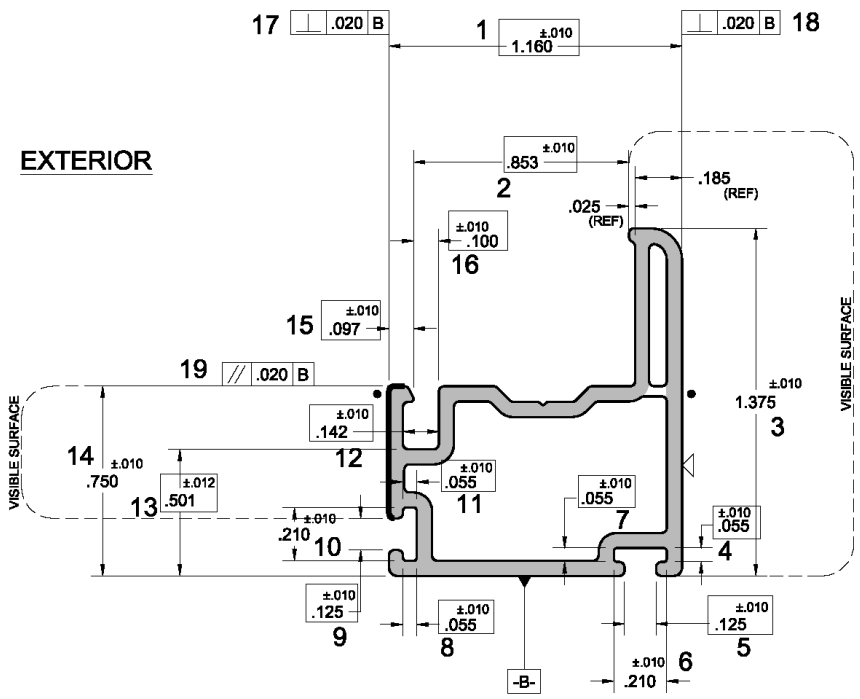
CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .060 ±.006
7. RADIUS = .020
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
.187 WOOLPILE
716A GLAZING BEAD
3/4" GLASS BLOCK
9041 STEEL REBAR
9074 ALUMINUM REBAR
9078 COMPOSITE REBAR
DRAWN DATE: 06-25-03



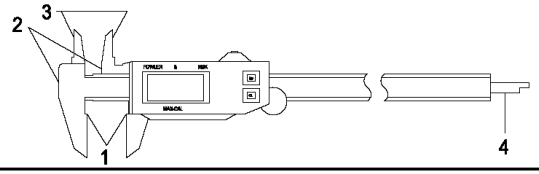
NO.	REVISION	BY	DATE
7	ADDED DIM .501 (#13), WO#13188	BLG	10/21/13
6	REVISED FOR NEW TOOL, REVISED DIMS AND TOLS, WO#13141	EAS	07-16-13
5	ADDED UPDATED PROFILE, WO#13052	BLG	03/15/13
4	MADE DIM 17 CRITICAL; WO#1293	JPP	05-13-11
3	MOVED IMPACT; ADDED .100 DIM; TOLS ON .050 DIMS WERE ±.010; RENUMBERED	EAS	05-14-07
2	.878 DIM WAS .853 TO NUB	EAS	04-17-07

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

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CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9005qc	DRAWN BY: JPP	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9005	HANDLE RAIL	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

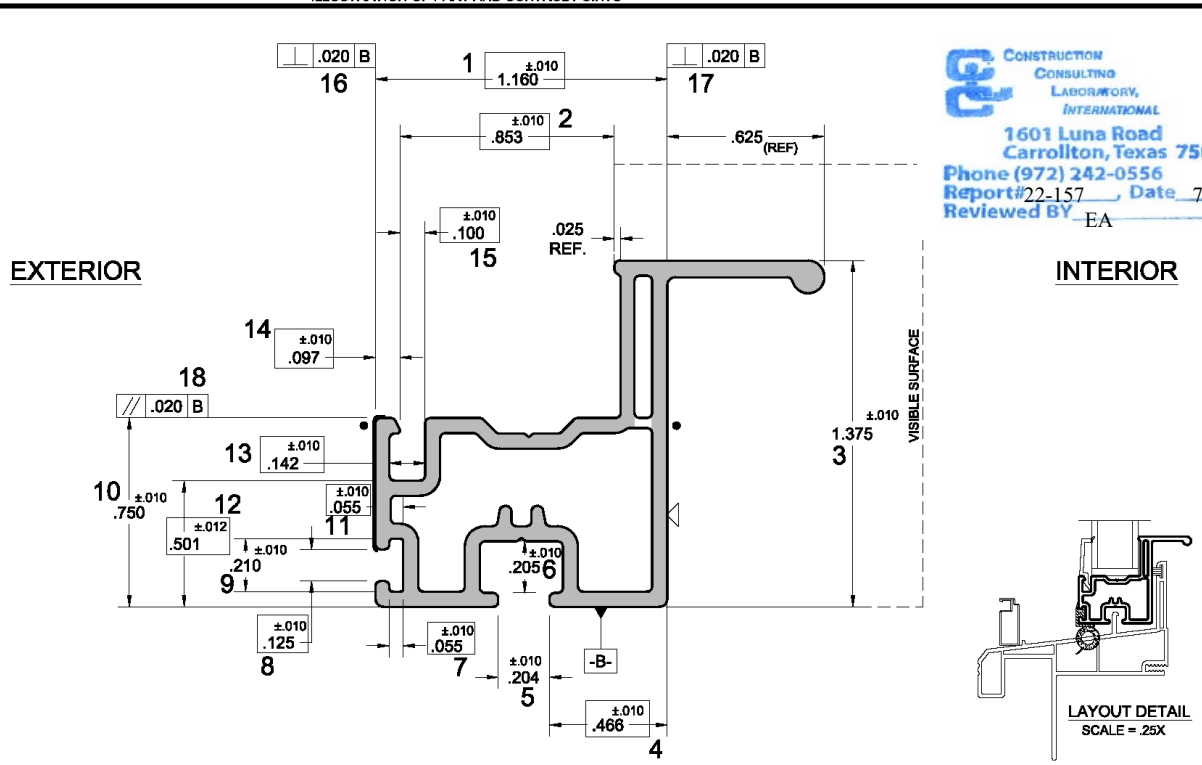
NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .060 ±.006
7. RADIUS = .020
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
.187 WOOLPILE
716A GLAZING BEAD
3/4" GLASS BLOCK
BSI PIVOT BAR
AMESBURY #32692 SASH SEAL

DRAWN DATE: 06-25-03



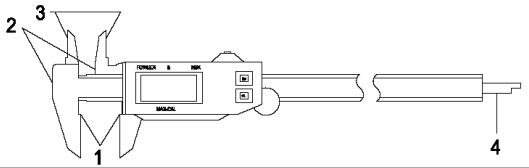
NO.	REVISION	BY	DATE
10	ADDED DIM .501 (#14) & UPDATED TO NEW TOLERANCE STANDARDS, WO#13188	BLG	10/21/13
9	REVISED FOR NEW TOOL, REVISED DIMS AND TOLS, WO#13147	EAS	07-31-13
8	REVISED FUNCTIONAL CHECK AMESBURY SASH SEAL NO.	EAS	07-05-12
7	MADE DIM 16 CRITICAL; WO#1293	JPP	05-13-11
6	ADDED .020 R	JPP	02-14-11
5	.878 DIM WAS .853 TO NUB; ADDED .100 DIM; .050 DIMS WERE ±.010; RENUMBERED	EAS	06-11-07

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram:
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9247QC	DRAWN BY: JPP	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
9247	SILL TRACK	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

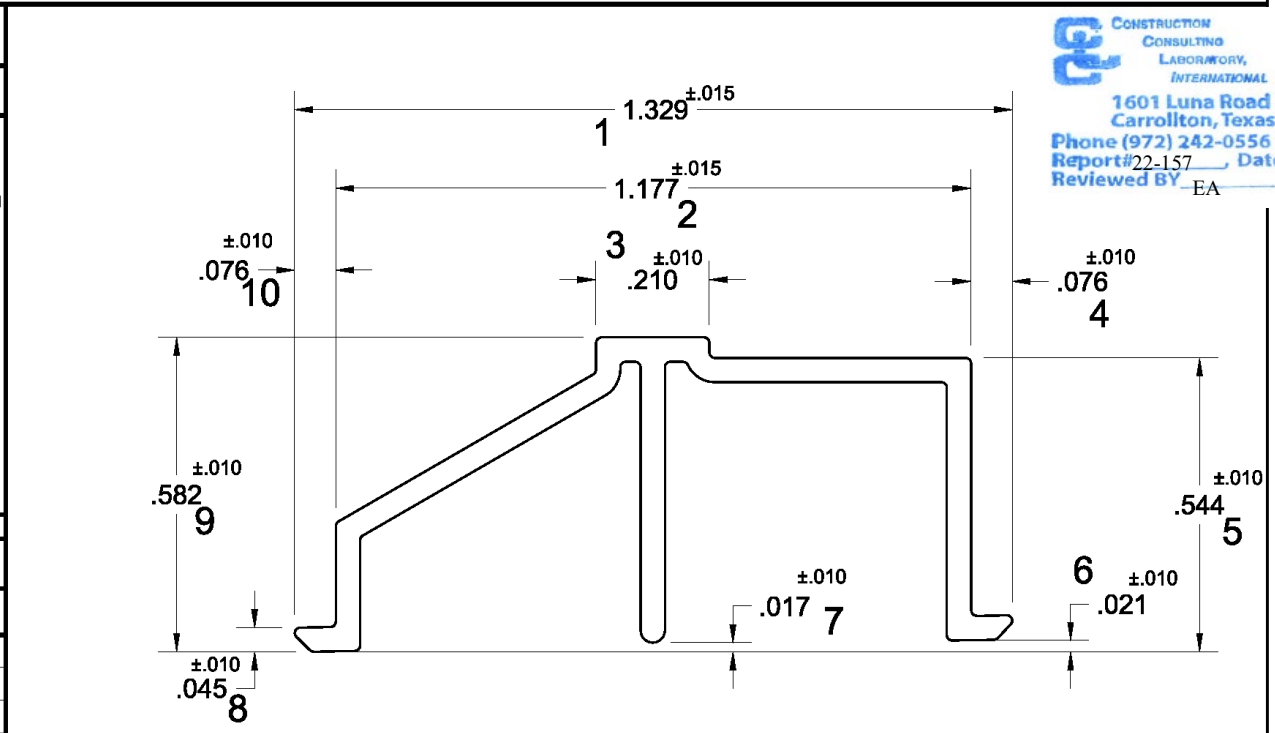
NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS =
7. RADIUS =
8. LOCATION FOR IMPACT TEST
9. ANGULARITY
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS ±3/8"
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
9204 SLIDER FRAME
9224 SLIDER FRAME

DRAWN DATE: 11-04-04



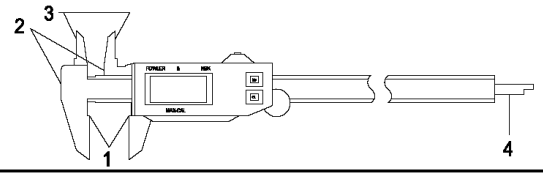
NO.	REVISION	BY	DATE

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,2,3,8,9
Measure the following control points using #2 on the caliper diagram: 4,10
Measure the following control points using #3 on the caliper diagram:
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 716AQC	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
716A	GLAZING BEAD	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .045 ±.005
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS ±3/8"
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

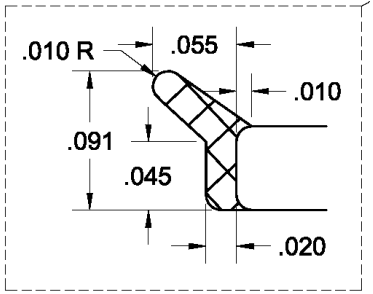
POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
705 LIFT RAIL
706 LOCK RAIL
707 KEEPER RAIL

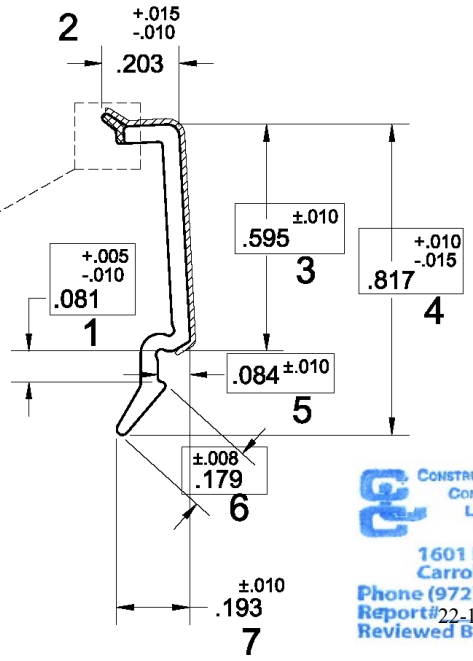
DRAWN DATE: 04-24-07

ALL PARTS ARE TO BE PACKED IN SAME DIRECTION

FLEX
W, OW, CW - USE WHITE FLEX
B, SND - USE BEIGE FLEX



FLEX DETAIL
SCALE = 4X



CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL
1601 Luna Road
Carrollton, Texas 75006
Phone (972) 242-0556
Report# 22-157, Date 7-29-22
Reviewed BY EA

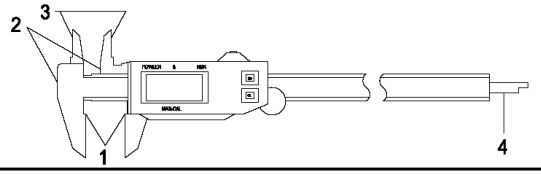
NO.	REVISION	BY	DATE
6	ADDED PACK NOTE; WO#13130	EAS	06-20-13
5	REVISED DIM 6; ADDED CRITICALS PER PLANT MANAGER REQUEST	EAS	06-11-13
4	REVISED BORDER	DRN	05-21-13
3	ADDED FLEX NOTE	DRN	05-21-13
2	REVISED DIM .193 TOL & DIM .128 TOL	EAS	05-12-08
1	REVISED SNAP IN LEG; DIM .193 WAS .198; DIM .128 WAS .138	EAS	06-04-07

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 2,3,4,6,7
Measure the following control points using #2 on the caliper diagram: 5
Measure the following control points using #3 on the caliper diagram: 1
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



SINCE 1974

CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER

QC PRINT NUMBER: 9216QC	DRAWN BY: EAS	CHECKED BY:	APPROVED BY:	DEVELOP	INPROCESS	PRODUCTION

PART NAME: 9216	DESCRIPTION: GLAZING BEAD	SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA BUILDING PRODUCTS, INC.
565 CEDAR WAY, OAKMONT PA 15139

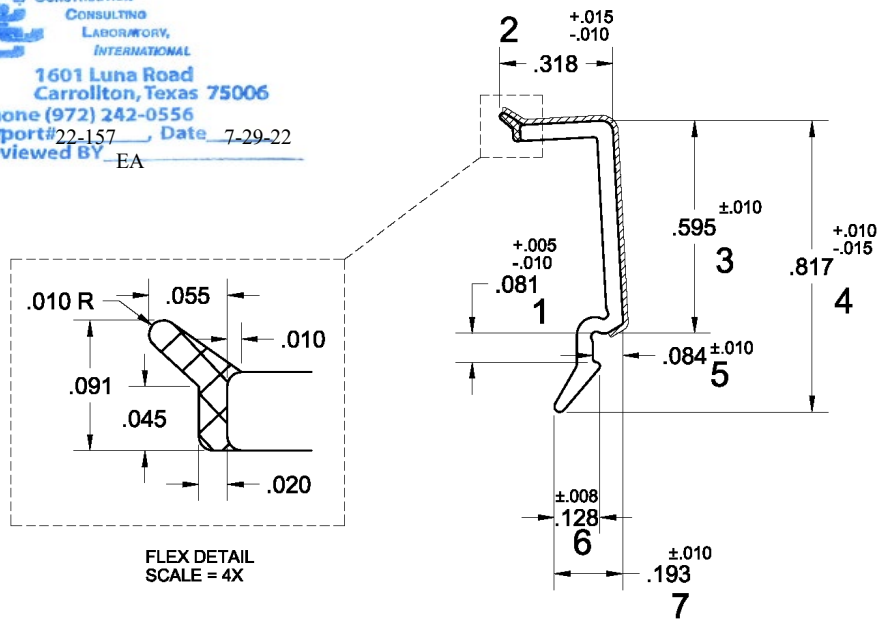
NOTES:
1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .045 ±.005
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS
19. MAX BOW .046in PER 3ft LENGTH
20. INTERNAL WALL THICKNESS ±.010 UNLESS OTHERWISE SPECIFIED

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
705 LIFT RAIL
706 LOCK RAIL
707 KEEPER RAIL
9210 SH HEAD/PW FRAME
9213 SH JAMB

DRAWN DATE: 10-07-11



FLEX DETAIL
SCALE = 4X

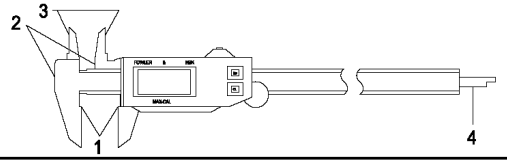
NO.	REVISION	BY	DATE

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

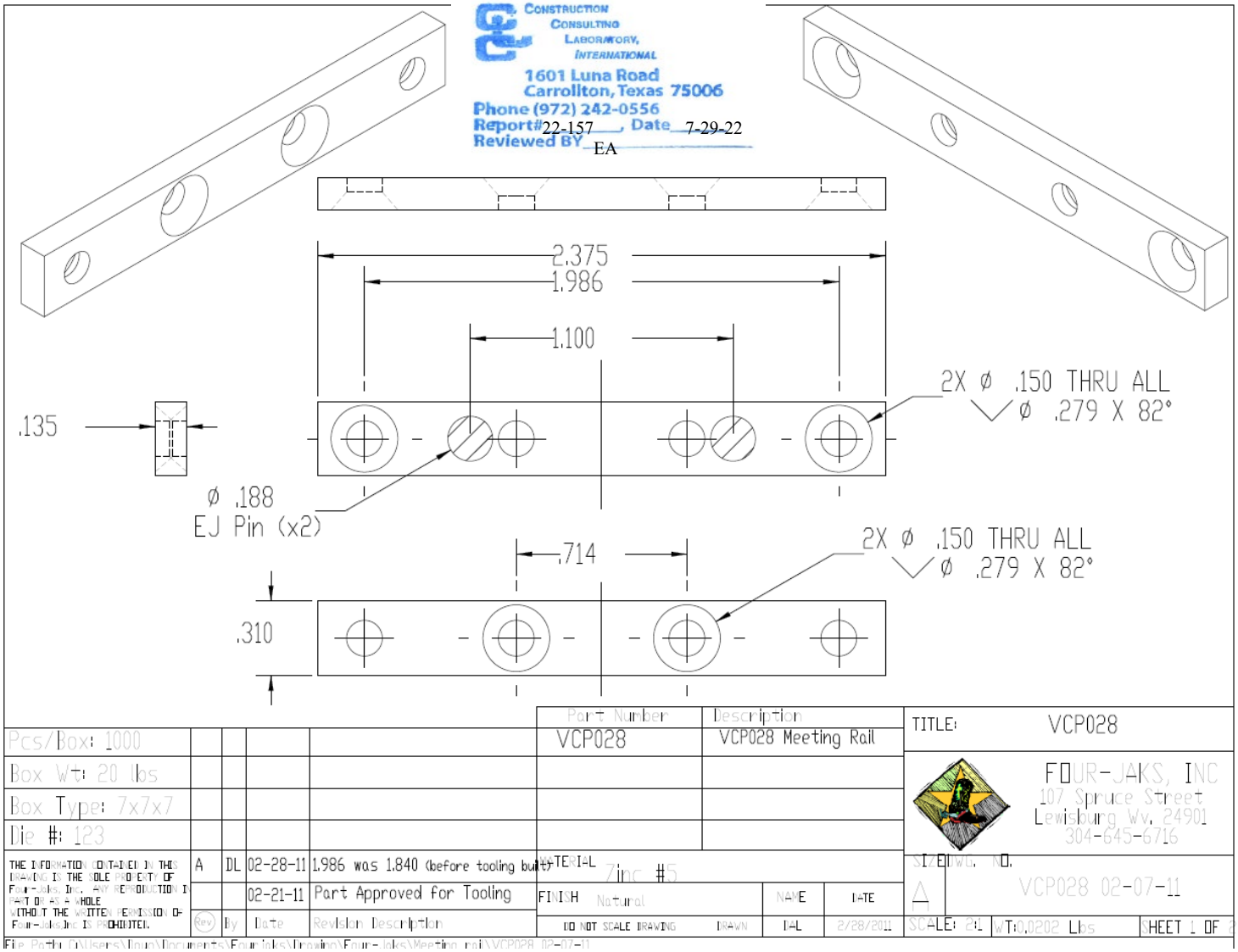
Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 2,3,4,6,7
Measure the following control points using #2 on the caliper diagram: 5
Measure the following control points using #3 on the caliper diagram: 1
Measure the following control points using #4 on the caliper diagram:

Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.
CORRECTIVE ACTION REQUIRED



CONSTRUCTION CONSULTING LABORATORY	REPORT: CCL 22-157.A (R)
AAMA/WDA/DMA/CSA 101/I.S.2/A440-17 PERFORMANCE TESTING	DATE: 9-13-2022
CLIENT: CHELSEA BUILDING PRODUCTS	PROJECT: 2700 SINGLE SLIDER



END OF REPORT -