

	PROJECT: 3010i-A4 CA Impact - Product Evaluation	BY: JAR DATE: 06/26/2024
	PROJECT NO.: R5120.02-122-34	CKD: TAD SHEET: 1 OF 5

Product Evaluation

3010i-A4 Outswing Casement Window – Impact

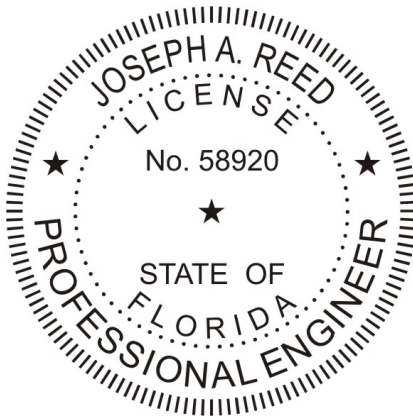
Project R5120.02-122-34

Rendered to:

ST. CLOUD WINDOW
390 Industrial Boulevard
Sauk Rapids, Minnesota 56379

Prepared by:

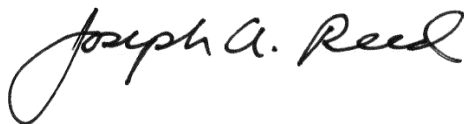
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June 26, 2024
Revision 1: November 21, 2024

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Joseph A. Reed, P.E.
Senior Project Engineer
FL PE 58920



Digitally Signed by: Tanya Dolby

Tanya A. Dolby, P.E.
Manager – Engineering Service

	PROJECT: 3010i-A4 CA Impact – Product Evaluation	BY: JAR DATE: 06/26/2024
	PROJECT NO.: R5120.02-122-34	CKD: TAD SHEET: 2 OF 5

Subject: 3010i-A4 Outswing Casement Window – Impact
St. Cloud Window
390 Industrial Boulevard
Sauk Rapids, Minnesota 56379

Scope: Product Evaluation per Chapter 61G20-3.005(1)(d) Florida Administrative Code, Evaluation report from a Florida Registered Architect or a Licensed Florida Professional Engineer.

Building Code Compliance: This product has demonstrated compliance with the Florida Building Code, Building, 8th Edition (2023):
§1609.1.2 Protection of openings
§1709.5 Exterior window and door assemblies
§2404 Wind, Snow, Seismic and Dead Loads on Glass

Performance Standards: TAS 201, TAS 202, TAS 203
ASTM F588-17
ASTM E1300-12ae1

Product Window Frame Aluminum (6063-T6)

Description: Thermally strutted, miter cut corners with internal aluminum corner keys.

Window Sash Aluminum (6063-T6)

Thermally strutted, miter cut corners with internal aluminum corner keys.

Glazing Validate Glazing with ASTM E1300

Glazing Type	Glazing Construction
1-1/4" IG	(2) 1/8" Annealed + 0.030" PVB Interlayer (Exterior) 9/16" Air Space with Stainless Steel Spacer 1/8" Annealed + 0.090" PVB Interlayer + 1/4" Annealed (Interior)

Note: PVB = Eastman Chemical Company *Saflex* PVB (NOA 23-0713.18)

Exterior glazed against a screw-applied aluminum glazing stop. Bedded in Dow 995 structural silicone retained by 1/8" POLYshim glazing tape and a cap bead of Dow 791 silicone. Exterior snap-on aluminum glazing bead with 5/16" dartwedge glazing gasket. 3/4" Bite.

Anchorage Various anchorages (see *Installation*)

For additional product information see Appendix A and attached product drawings.

	PROJECT: 3010i-A4 CA Impact – Product Evaluation	BY: JAR DATE: 06/26/2024
	PROJECT NO.: R5120.02-122-34	CKD: TAD SHEET: 3 OF 5

Installation:

Wood: Minimum Southern Yellow Pine 2x (G = 0.55).
#10 Wood Screw (Shall conform to ANSI/ASME B18.6.1 and be corrosion resistant).

Steel Stud: Minimum 18 gauge (0.043" thick) 33 KSI steel stud.
#12-14 TEKS screw (see ICC ESR 1976).

Concrete: Minimum $f'_c = 3,000$ psi.
3/16" ITW Tapcon with Advanced Threadform Technology
Concrete and Masonry Anchors (see NOA 22-0524.04).

Concrete: ASTM C90, minimum $f'_m = 1,500$ psi.
Masonry: 3/16" ITW Tapcon with Advanced Threadform Technology
Concrete and Masonry Anchors (see NOA 22-0524.04).

Installation shall follow manufacturer's instructions, product approvals and the referenced installation drawings.

Limitations of Use:

Product	Maximum Design Pressures	Impact Resistance	Maximum Overall Size	Maximum Glazing Size
3010i-A4 Outswing Casement Window	+/-70 psf	Large Missile Wind Zone 4	40" x 60"	33-3/4" x 53-3/4"

Products have been tested for windborne debris resistance and do not require protective devices (i.e. shutters) if installed in a windborne debris region.

Products are approved for use in High Velocity Hurricane Zone (HVHZ).

	PROJECT: 3010i-A4 CA Impact – Product Evaluation	BY: JAR DATE: 06/26/2024
	PROJECT NO.: R5120.02-122-34	CKD: TAD SHEET: 4 OF 5

Supporting Evidence: Test Report QCT24-7230.01 (TAS 201, TAS 202, TAS 203, ASTM F588)
Revision -, 04/09/24
Quast Consulting and Testing. Mosinee, Wisconsin (TST8039)
Arlen Fisher, PE (FL PE 87795)

Calculation Report R5120.01-122-34
Revision -, 06/18/24
Joseph A. Reed, PE (FL PE 58920)

Certification of Independence: In accordance with Rule 61G20-3 Florida Administrative Code,
Architectural Testing, Inc. hereby certifies the following:

1. Architectural Testing, Inc. does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products tested or labeled by the agency.
2. Architectural Testing, Inc. is not owned, operated or controlled by any company manufacturing or distributing products it tests or labels.
3. Joseph A. Reed, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.
4. Joseph A. Reed, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

Reference Drawings: *3010i-A4 Outswing Casement Window – Impact.*
Drawing No. R5120-1001 Rev. 1, 11/21/24.

Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	06/18/24	Not Applicable
Revision 1	11/21/24	Drawings Added spacer detail

	PROJECT: 3010i-A4 CA Impact – Product Evaluation	BY: JAR DATE: 06/26/2024
	PROJECT NO.: R5120.02-122-34	CKD: TAD SHEET: 5 OF 5

Appendix A – Detailed Product Description

Glazing Details: Exterior glazed against a screw-applied aluminum glazing stop secured with #6x5/8" screws 10-1/2" on center. Bedded in Dow 995 structural silicone retained by 1/8" POLYshim glazing tape and a cap bead of Dow 791 silicone. Exterior snap-on aluminum glazing bead with 5/16" dartwedge glazing gasket. 3/4" Bite.

Weatherstripping: 3/8" Dartwedge Gasket
 Glazing perimeter on screw-applied glazing stop

 5/16" Hollow Bulb Gasket
 Exterior perimeter of sash and interior perimeter of sash

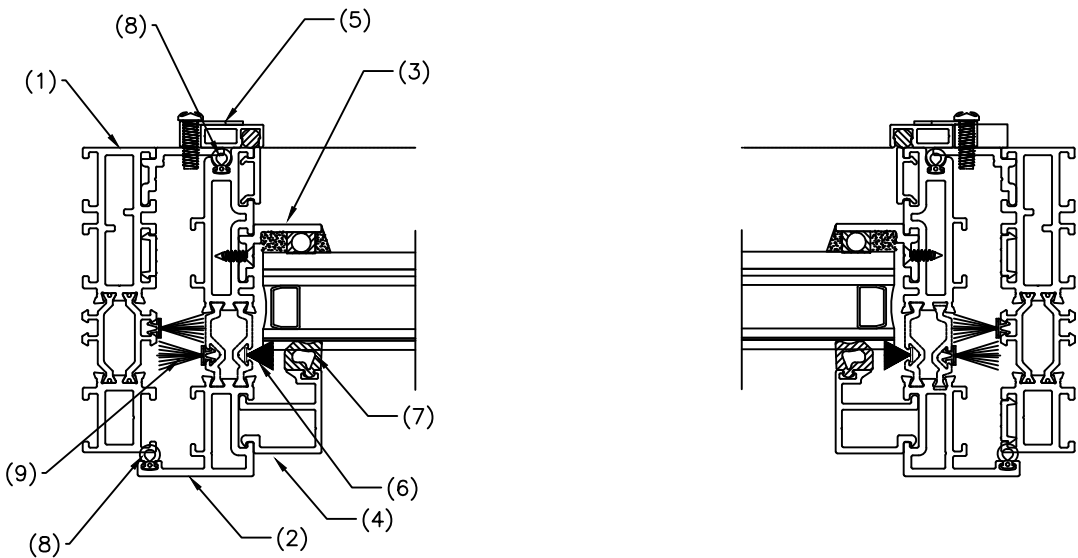
 19/32" Pile Weatherstripping
 Sash perimeter at thermal break; Frame perimeter at thermal break

Frame Construction: Thermally strutted, miter cut corners with internal aluminum corner keys.

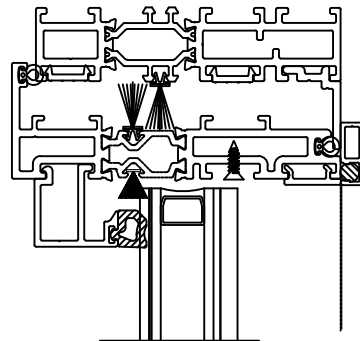
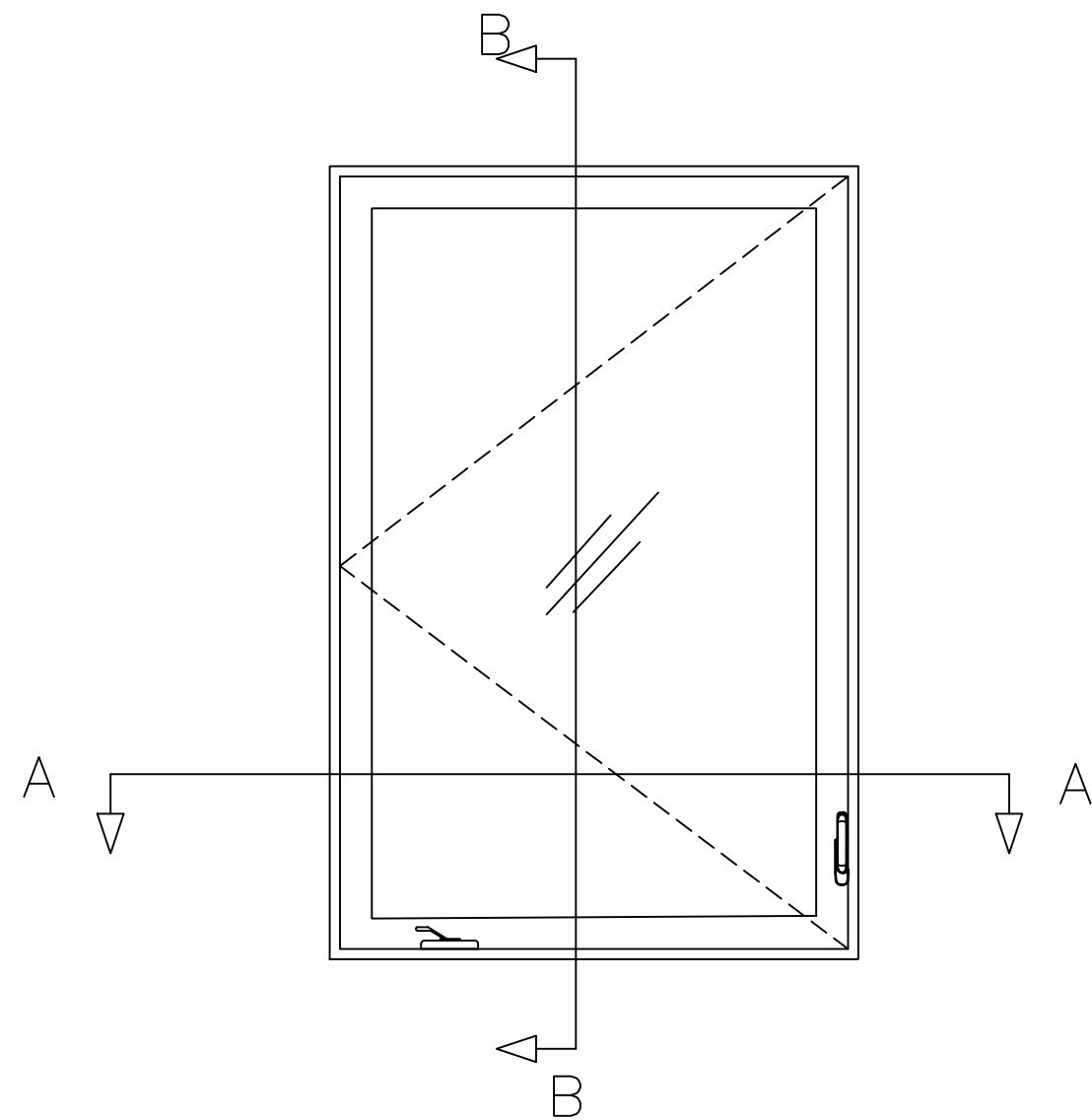
Sash Construction: Thermally strutted, miter cut corners with internal aluminum corner keys.

Drainage:	(2) 1-1/2" x 5/16" weep slot with cover	Sill, 3-1/2" from each jamb
	(2) Ball Valves	Sill, 3-1/2" from each jamb
Hardware:	Multi-point Handle One (1) total	Jamb
	Locking Lugs Three (3) total	Jamb, center and 11" from each end
	Keeper Three (3) total	Sash stile, center and 11" from each end
	Roto Operator One (1) total	Sill, 5" from hinge stile
	Sash Bracket One (1) total	Sash
	Snubber One (1) total	Center of hinge stile
	Hinges Two (2) total	Top and bottom of hinge stile

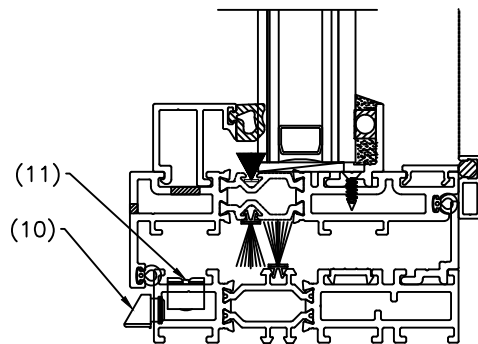
Reinforcement: None



SECTION A-A



SECTION B-B



ITEM NO.	NAME	MATERIAL	DESCRIP.
1	Master Frame	6063-T6	EXTRUSION
2	Sash Frame	6063-T6	EXTRUSION
3	Applied Glazing Stop	6063-T6	EXTRUSION
4	Exterior Glazing Bead	6063-T6	EXTRUSION
5	Screen Assembly	--	ASSEMBLY
6	Weatherstripping	--	PILE WITH FIN
7	Dartwedge Gasket	EPDM	EXTRUSION
8	Bulb Gasket	VINYL	EXTRUSION
9	Weatherstripping	--	PILE WITH FIN
10	Weep Cover	PVC	INJ. MOLDED
11	Ball Valve	PVC	INJ. MOLDED

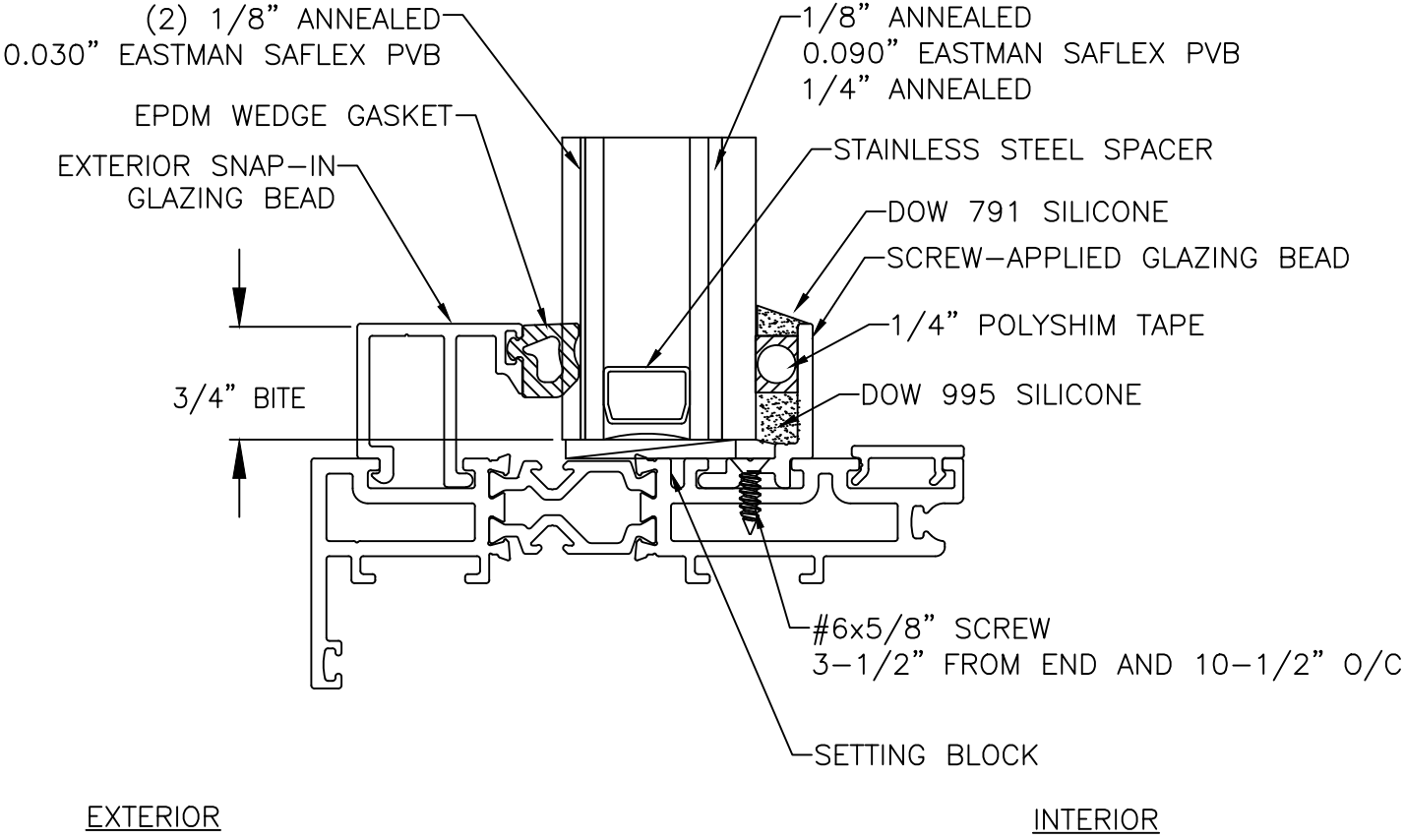
HARDWARE		
ITEM	NUMBER	LOCATION
MULTI-POINT HANDLE	1	JAMB
LOCKING LUGS	3	SILL, 3-1/2" FROM EACH JAMB
KEEPER	3	SASH STILE
ROTO OPERATOR	1	SILL, 5" FROM HINGE STILE
SASH BRACKET	1	SASH
SNUBBER	1	CENTER OF HINGE STILE
HINGES	2	TOP/BOTTOM OF HINGE STILE
WEATHERSTRIPPING		
ITEM	NUMBER	LOCATION
3/8" DARTWEDGE GASKET	1 ROW	EXTERIOR GLAZING STOP
5/16" HOLLOW BULB GASKET	2 ROWS	EXTERIOR AND INTERIOR PERIMETER OF SASH FRAME
19/32" PILE WEATHERSTRIPPING	1 ROW	SASH PERIMETER
19/32" PILE WEATHERSTRIPPING	1 ROW	FRAME PERIMETER
3/16" PILE WEATHERSTRIPPING	1 ROW	SASH PERIMETER AT GLAZING EXTERIOR

3010i A4 Casement - Impact
Sections and Bill of Materials

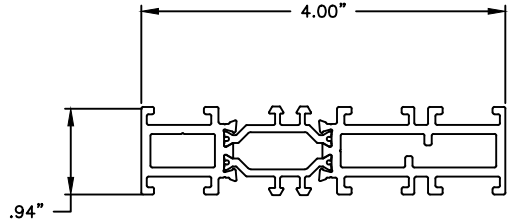
St. Cloud Window
390 Industrial Boulevard
Sauk Rapids, MN 56379

Drawing No.: R5120-1001
Project No.: R5120.01-122-34
Drawn By: JAR Rev: 1 Date: 11/21/24

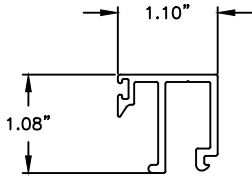
GLAZING DETAIL
1-1/4" INSULATING GLASS



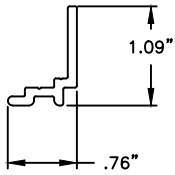
3010i A4 Casement - Impact Glazing Details	
St. Cloud Window 390 Industrial Boulevard Sauk Rapids, MN 56379	
Drawing No.: R5120-1001 Project No.: R5120.01-122-34 Drawn By: JAR Rev: 1 Date: 11/21/24	
Scale: NTS	Sheet 8 of 10



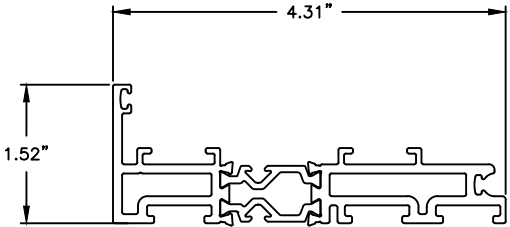
MASTER FRAME
6063-T6



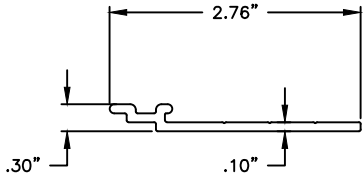
GLAZING STOP
6063-T6



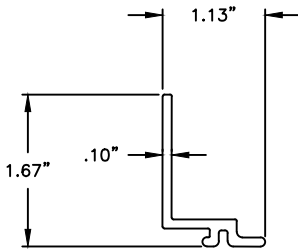
VENT STOP LEG
6063-T6



VENT
6063-T6



STRAP ANCHOR
6063-T6



NAIL FIN
6063-T6

**3010i A4 Casement - Impact
Components**

St. Cloud Window

390 Industrial Boulevard
Sauk Rapids, MN 56379

Drawing No.: R5120-1001
Project No.: R5120.01-122-34
Drawn By: JAR Rev: 1 Date: 11/21/24

Scale: NTS

Sheet 10 of 10