

RENAISSANCE WINDOWS AND DOORS

SERIES 8500 VINYL SINGLE HUNG WINDOW, TWIN AND TRIPLE

INSTALLATION ANCHORAGE DETAILS

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, EVALUATED AND DESIGNED TO THE 9th EDITION (2026) FLORIDA BUILDING CODE. TESTING WAS CONDUCTED IN ACCORDANCE WITH AAMA/WDMA/CSA 101/I.S.2/A440-08 AND 11.
2. THE PRODUCT DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED TEST REPORT NO. NCTL-210-4105-02A (WITH GATEWAY TESTING BASED ON NCTL-210-4105-02) AND NCTL-210-4105-04 AND ASSOCIATED LABORATORY DRAWINGS BY NATIONAL CERTIFIED TESTING LABORATORIES.
3. THIS PRODUCT EVALUATION DOCUMENT IS NOT FOR USE IN THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
4. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE / MASONRY AND 2X FRAMING FRAMING SUBSTRATES AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
5. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
6. WHEN INSTALLED IN LOCATIONS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST,THIS PRODUCT REQUIRES OPENING PROTECTION IN ACCORDANCE WITH THE 9th EDITION (2026) FLORIDA BUILDING CODE USING AN APPROVED IMPACT PROTECTION DEVICE.
7. SITE CONDITIONS NOT COVERED IN THIS PRODUCT EVALUATION DOCUMENT ARE SUBJECT TO ADDITIONAL ENGINEERING ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
8. WINDOW FRAME MATERIAL: VINYL (PVC).
9. GLASS MEETS THE REQUIREMENTS OF ASTM E1300-24.
10. DESIGNATIONS "X" STANDS FOR OPERABLE LITE/SASH AND "O" STANDS FOR FIXED LITE.
11. THESE DRAWINGS CERTIFY THE FENESTRATION ANCHORAGE INSTALLATION ONLY. WATER-RESISTIVE BARRIER DETAILING OF THE WINDOW IS NOT PART OF THIS INSTALLATION CERTIFICATION. DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. WATER-RESISTIVE BARRIER DETAILING SHALL BE THE RESPONSIBILITY OF THE INSTALLER. REFER TO THE REQUIREMENTS OF THE FLORIDA BUILDING CODE SECTION 1405.4 AND FLORIDA RESIDENTIAL CODE SECTION R703.4 FOR RECOMMENDATIONS. PER FBC SECTION 1405.4.1.4 AND FRC SECTION R703.4, FMA/AAMA 100-12 AND FMA/AAMA 200-12 CAN BE USED FOR GUIDANCE. ADDITIONALLY, ASTM E2112 CAN BE USED FOR GUIDANCE.

TABLE OF CONTENTS	
SHEET	SHEET DESCRIPTION
1	GENERAL NOTES, INSTALLATION NOTES, TABLE OF CONTENTS
2	ANCHOR SCHEDULE - EMBEDMENT AND EDGE DISTANCE
3	97" x 72" WINDOW ELEVATION/FIN ANCHORING LAYOUT
4	97" x 72" WINDOW ELEVATION/THRU FRAME ANCHORING LAYOUT
5	109" x 72" WINDOW ELEVATION/FIN ANCHORING LAYOUT
6	109" x 72" WINDOW ELEVATION/THRU FRAME ANCHORING LAYOUT
7	NAILING FIN (FIN FRAME) INSTALLATION
8	THROUGH FRAME INSTALLATION W/FLANGE
9	THROUGH FRAME INSTALLATION
10	INTEGRAL MULLION SECTIONS
11	GLAZING DETAILS AND BILL OF MATERIALS (BOM)

INSTALLATION NOTES:

1. PRODUCT ANCHORS SHALL BE AS DESIGNATED AND LOCATED AS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT. ANCHOR EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER AND SIDING.
2. SEE *INSTALLATION ANCHOR SCHEDULE* ON SHEET 2 FOR TYPE AND GRADE OF ANCHOR, AND/OR MANUFACTURER'S ANCHOR SPECIFICATIONS, INCLUDING MINIMUM NOMINAL SIZE, MINIMUM EMBEDMENT INTO SUBSTRATE AND MINIMUM EDGE DISTANCES.

2.1. EDGE DISTANCES SHALL BE MEASURED FROM CENTERLINE OF ANCHOR TO EDGE OF STRUCTURAL SUBSTRATE EITHER TO THE INTERIOR OR EXTERIOR OF THE FENESTRATION PRODUCT.

2.2. MINIMUM EMBEDMENT SHALL BE BASED ON PENETRATION INTO MAIN WIND FORCE RESISTING SYSTEM SUBSTRATE.
3. SEE SHEETS 7 THROUGH 9 FOR SPECIFIC ANCHOR INSTALLATION DETAILS.
4. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN.
5. ANCHOR QUANTITIES AND SPACING / EMBEDMENT AND EDGE DISTANCE

5.1. THE NUMBER OF INSTALLATION ANCHORS IS BASED ON THE MAXIMUM END DISTANCE (ED) AND THE MAXIMUM ON CENTER (O.C.) SPACING PLACEMENT OF ANCHORS IN ACCORDANCE WITH ELEVATIONS ON SHEETS 3 THRU 6.

5.2. END DISTANCES AND O.C. SPACINGS LESS THAN THAT SHOWN IN THE ELEVATIONS ON SHEETS 3 THRU 6 ARE ACCEPTABLE.

5.3. FOR WINDOW SIZES SMALLER THAN THOSE SHOWN, ANCHOR QUANTITIES CAN BE REDUCED WHILE MAINTAINING EDGE DISTANCE AND O.C. SPACING REQUIREMENTS.

5.4. ANCHOR QUANTITIES AND SPACINGS SHOWN ARE BASED ON THE LOWER OF ANCHOR SPACING USED IN TESTING OR REQUIRED BY LOADING AT DESIGN PRESSURE.

5.5. SEE EMBEDMENT AND EDGE DISTANCE DESCRIPTION ON SHEET 2.
6. MAXIMUM ALLOWABLE SHIM THICKNESS IS 1/4 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF WOOD COMPOSITE, HIGH DENSITY PLASTIC OR SIMILAR LOAD BEARING MATERIAL.
7. FOR CONCRETE BLOCK APPLICATIONS DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS.
8. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED IN THE *INSTALLATION ANCHOR SCHEDULE* ON SHEET 2.
9. ALL FASTENERS TO BE CORROSION RESISTANT, AND/OR HAVE A CORROSION RESISTANT COATING, OR WHEN EXPOSED TO SALTWATER ENVIRONMENTS WITHIN 3,000 FEET OF A SALTWATER COASTLINE MEET THE REQUIREMENTS OF SECTION 1711, 9TH EDITION (2026) FBC AND SECTION R332, 9TH EDITION (2026) FRC WHEN APPLICABLE.

PERFORMANCE RATING			
MAXIMUM WINDOW SIZE	GLAZING DETAIL (SEE SHEET 11)	DESIGN PRESSURE (PSF)	IMPACT RATING
NOMINAL 97" x 72" (Twin Window)	A	+/- 35	NONE. SEE GENERAL NOTE 6.
NOMINAL 109" x 72" (Triple Window)	A	+/- 40	

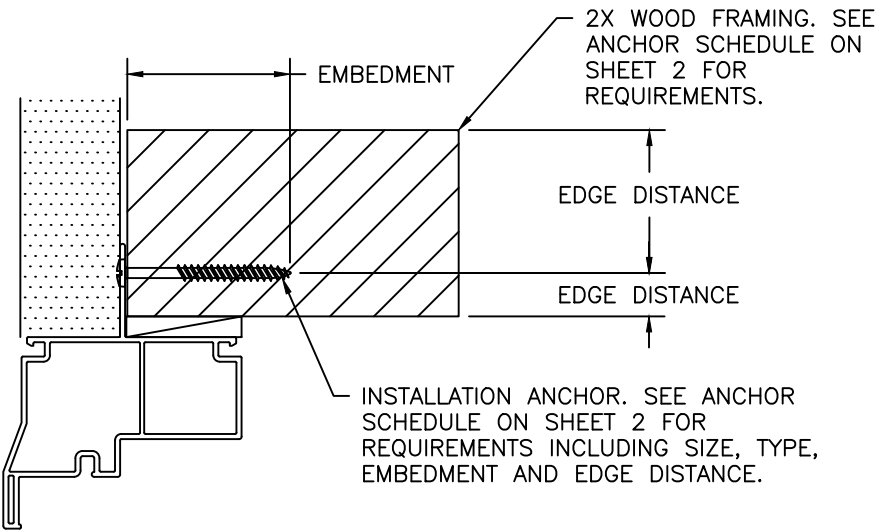
PROJECT # ACE-2025-127				RJA	BY
				8/4/26	DATE
			UPDATE TO THE 9TH EDITION (2026) FBC	A	REV
RENAISSANCE WINDOWS AND DOORS 13340 INTERNATIONAL PARKWAY JACKSONVILLE, FL 32218	TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE GENERAL NOTES, INSTALLATION NOTES & TABLE OF CONTENTS		DATE:	12/11/19	
			DRAWN BY:	RJA	
			SCALE:	N.T.S.	
PREPARED BY: AMORUSO CONSULTING ENG., LLC FBPE REGISTRATION NO. 38327 226 N NOVA RD, NO. 142 ORMOND BEACH, FL 32174 RIAENGPE@GMAIL.COM			DRAWING NO:	RWD0018	
			REV:	A	
			SHEET:	1 OF 11	

Robert J. Amoruso, P.E.
Florida P.E. No. 49752

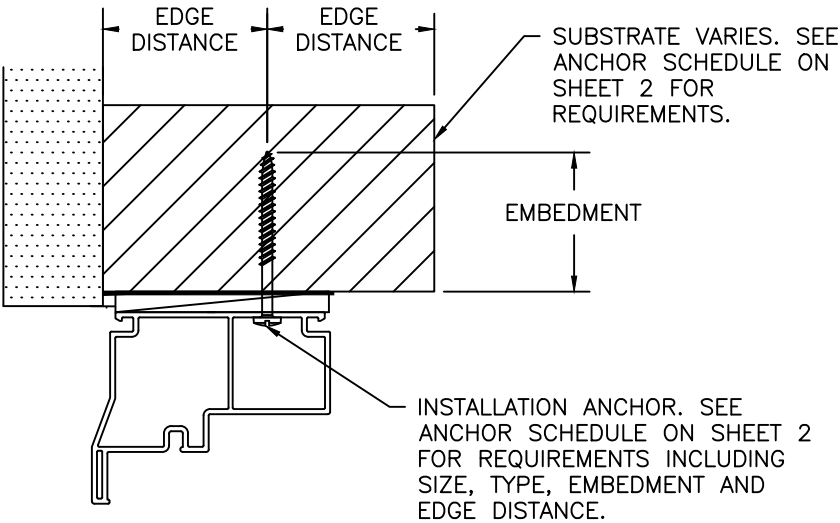


SIGNED/SEALED: 8/4/26

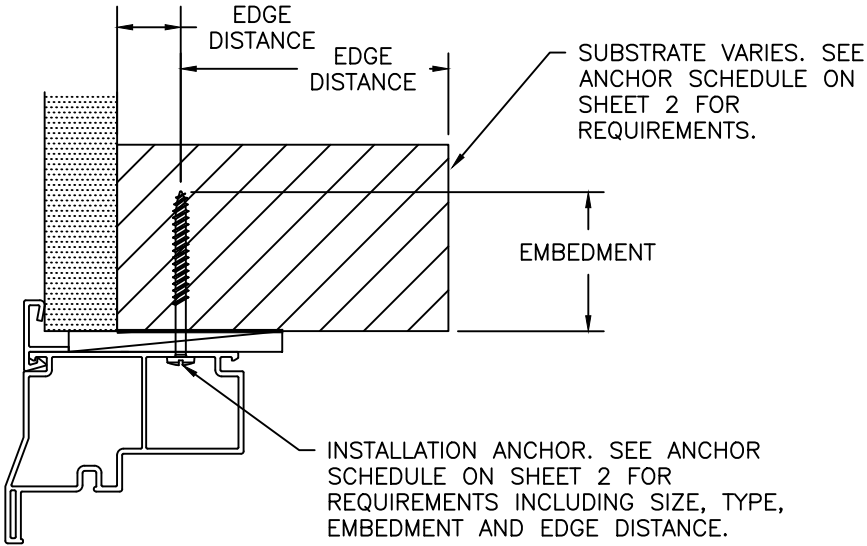
INSTALLATION ANCHOR SCHEDULE									
INSTALLATION TYPE	SECTION VIEW	FASTENER HEAD TYPE	FASTENER SIZE	SUBSTRATE	MANUFACTURER AND/OR SPECIFICATION	MIN. EMBEDMENT (IN)	MIN. EDGE DISTANCE (IN)	MIN. SPACING (IN) BETWEEN FRAME ANCHORS	ANCHOR CAPACITIES BASED ON
THROUGH FRAME ANCHOR	SECTION A, B & C (SHEETS 9)	HEX HEAD	3/16"	CONCRETE	ITW TAPCONS (1)	1	1-1/8	3	MIN. 2500 PSI CONCRETE
				MASONRY (BLOCK/CMU)	ITW TAPCONS (1)	1	2	3	STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT
		PAN HEAD	No. 10	WOOD	ANSI B18.6.1 (WOOD SCREW) (2) GRADE 2 EQUIVALENT	1-3/8	3/4	2 1/2	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42.
					ASME B18.6.4 (TAPPING SCREW) (2) GRADE 2 EQUIVALENT				
SNAP-ON FLANGE WITH THROUGH FRAME ANCHOR	SECTION A, B & C (SHEETS 8)	HEX HEAD	3/16"	CONCRETE	ITW TAPCONS (1)	1	1-1/8	3	MIN. 2500 PSI CONCRETE
				MASONRY (BLOCK/CMU)	ITW TAPCONS (1)	1	2	3	STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT
		PAN HEAD	No. 10	WOOD	ANSI B18.6.1 (WOOD SCREW) (2) GRADE 2 EQUIVALENT	1-3/8	3/4	2 1/2	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42.
					ASME B18.6.4 (TAPPING SCREW) (2) GRADE 2 EQUIVALENT				
NAILING FIN ANCHOR	SECTION A, B & C (SHEETS 7)	PAN HEAD	No. 8	WOOD	ANSI B18.6.1 (WOOD SCREW) (3) GRADE 2 EQUIVALENT	1-5/8	1/4	1	WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.42.
					ASME B18.6.4 (TAPPING SCREW) (3) GRADE 2 EQUIVALENT				
NOTES:									
1) WHEN ITW TAPCONS ARE USED FOR CONCRETE/MASONRY INSTALLATION, THEY SHALL BE THE ADVANCED THREADFORM TECHNOLOGY TYPE.									
2) FOR WOOD SCREW INSTALLATION INTO WOOD SUBSTRATE; IF SPLITTING IS A CONCERN, DRILL 0.090" PILOT HOLE (DRILL SIZE 43). FOR TAPPING SCREW INSTALLATION INTO WOOD SUBSTRATE; IF SPLITTING IS A CONCERN, DRILL 0.121" PILOT HOLE (DRILL SIZE 31).									
3) FOR WOOD OR TAPPING SCREW INSTALLATION INTO WOOD SUBSTRATE; IF SPLITTING IS A CONCERN, DRILL 0.082" PILOT HOLE (DRILL SIZE 45).									



EMBEDMENT AND EDGE DISTANCE
NAILING FIN FRAME INSTALLATION



EMBEDMENT AND EDGE DISTANCE
THROUGH-FRAME INSTALLATION

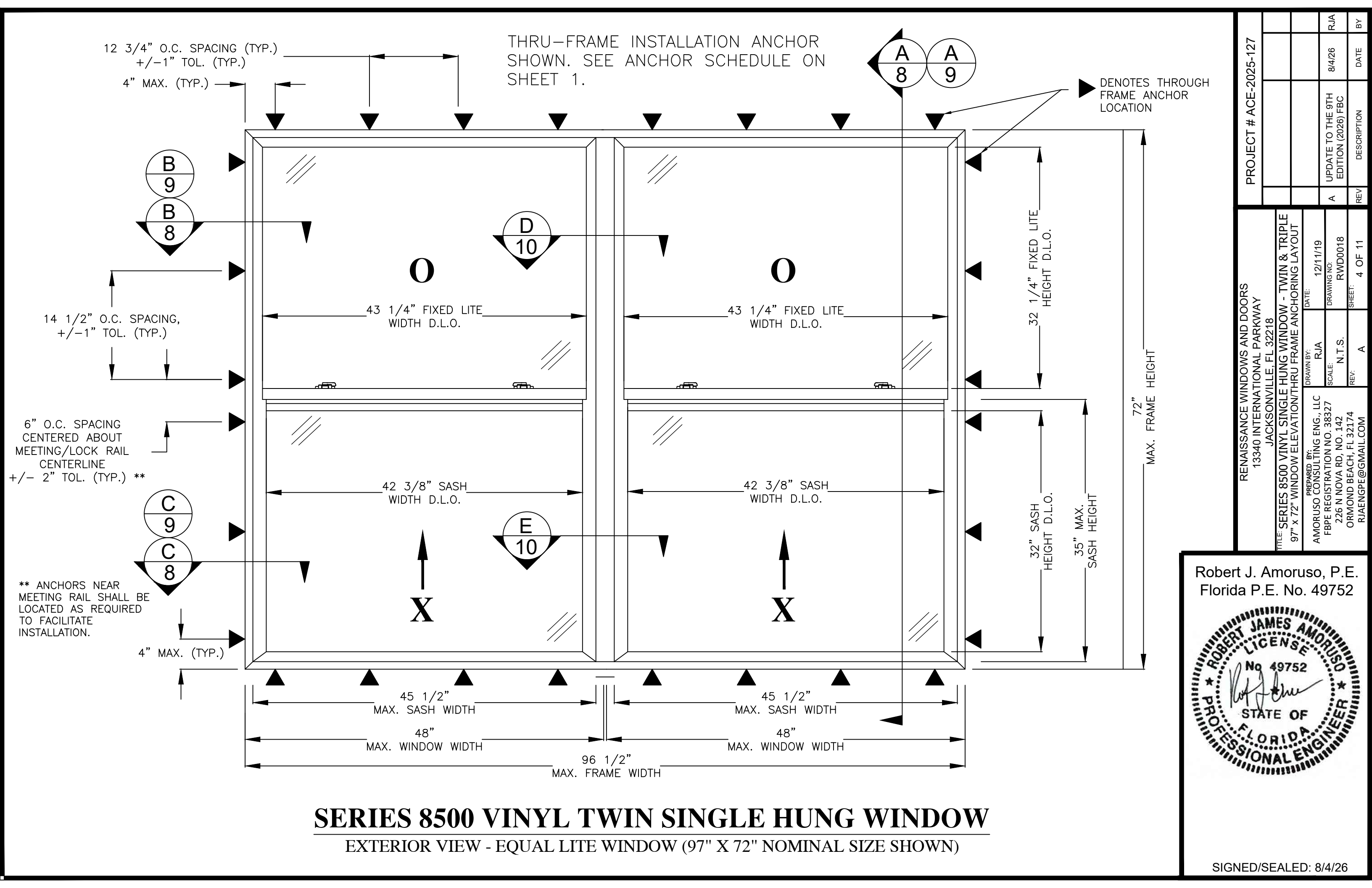


EMBEDMENT AND EDGE DISTANCE
SNAP-ON FLANGE THROUGH-FRAME INSTALLATION

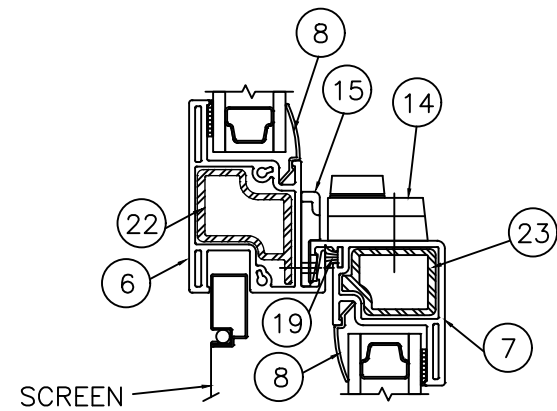
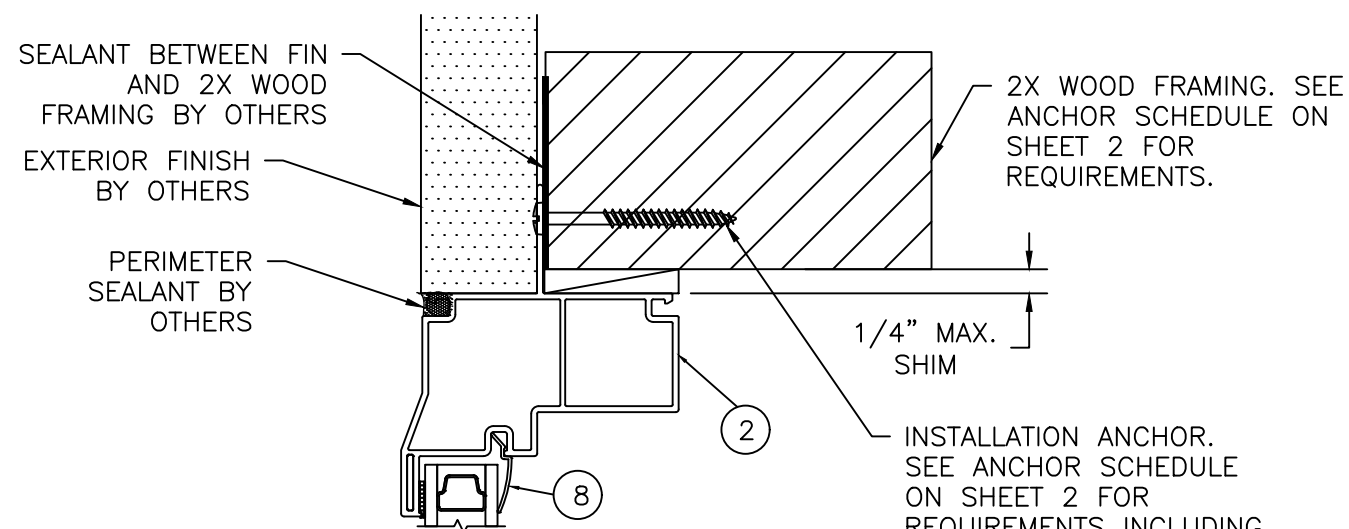
RENAISSANCE WINDOWS AND DOORS 13340 INTERNATIONAL PARKWAY JACKSONVILLE, FL 32218				PROJECT # ACE-2025-127						
TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE ANCHOR SCHEDULE - EMBEDMENT & EDGE DISTANCE				DRAWN BY:		RJA				
				SCALE:		N.T.S.	DRAWING NO:	RWD0018		
				REV:		A	SHEET:	2 OF 11		
				PREPARED BY:		AMORUSO CONSULTING ENG., LLC FBPE REGISTRATION NO. 38327 226 N NOVA RD, NO. 142 ORMOND BEACH, FL 32174 RIAENGPE@GMAIL.COM				
A	UPDATE TO THE 9TH EDITION (2026) FBC	8/4/26	RJA							
REV	DESCRIPTION	DATE	BY							

Robert J. Amoruso, P.E.
Florida P.E. No. 49752



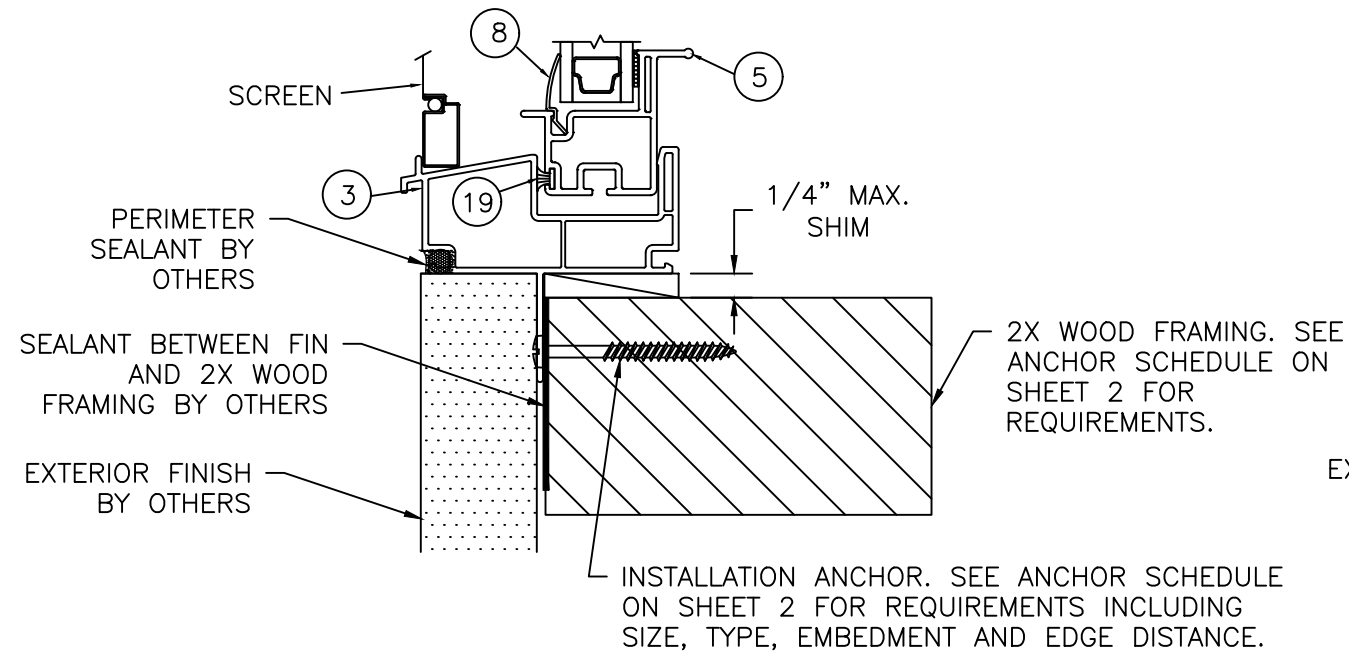


SERIES 8500 VINYL TWIN SINGLE HUNG WINDOW
EXTERIOR VIEW - EQUAL LITE WINDOW (97" X 72" NOMINAL SIZE SHOWN)

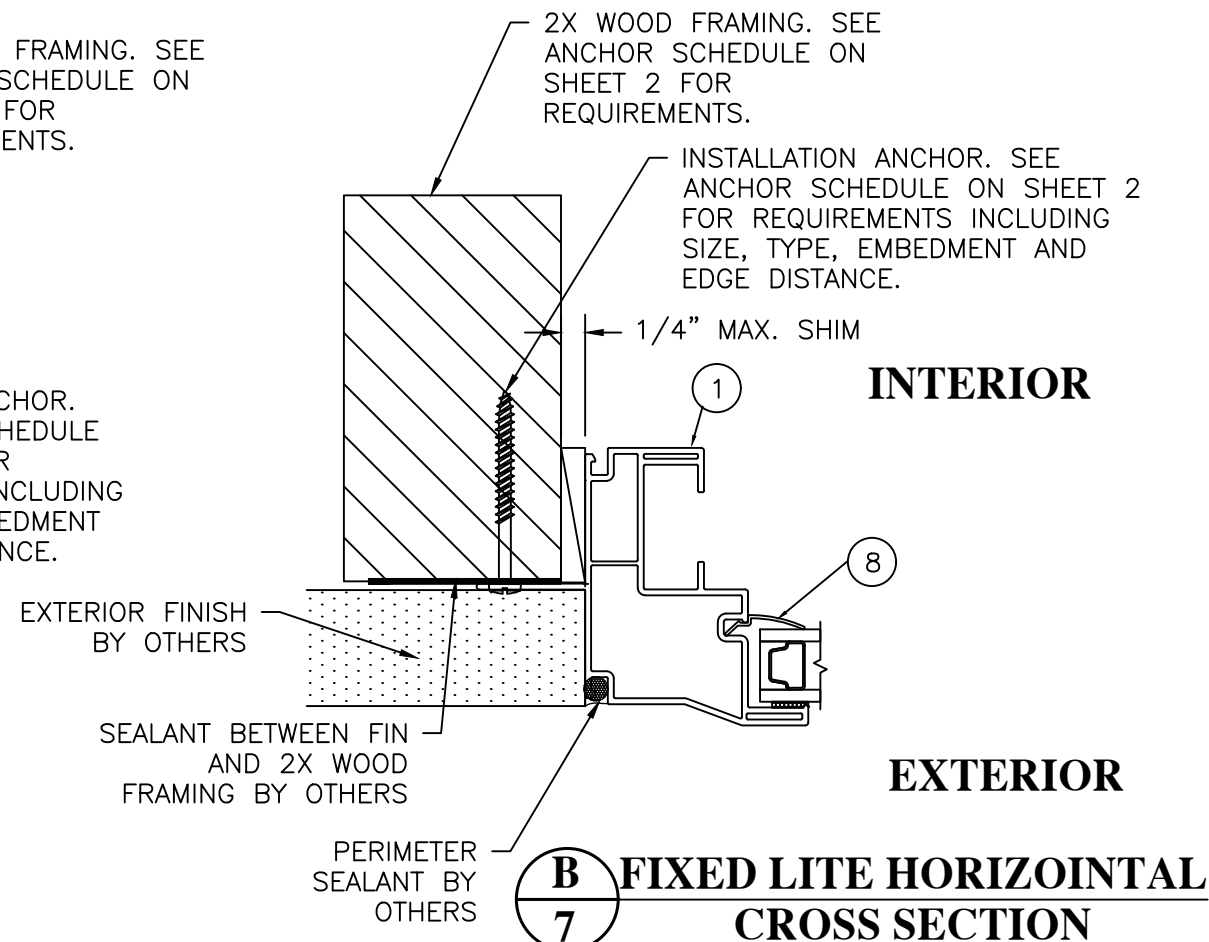


EXTERIOR

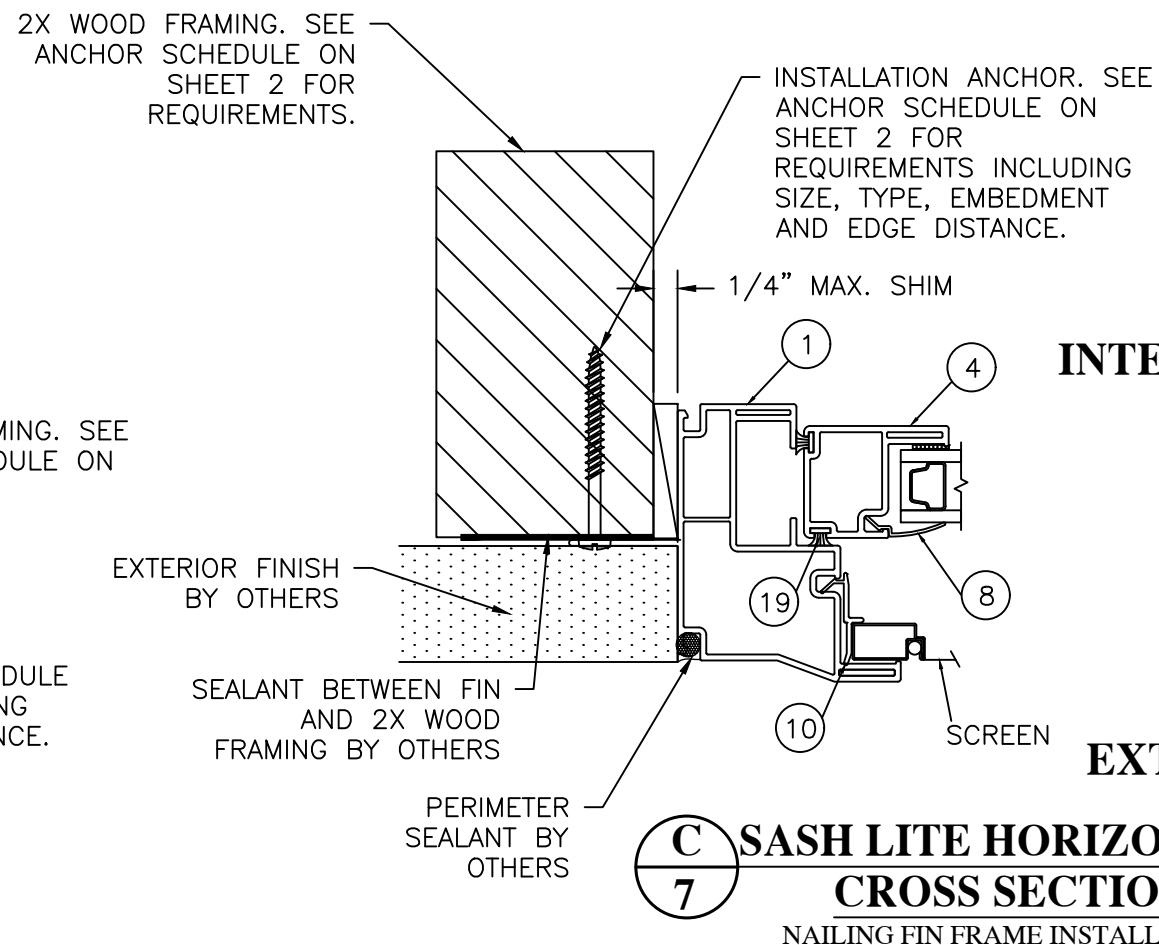
INTERIOR



A VERTICAL CROSS SECTION
7
NAILING FIN FRAME INSTALLATION



EXTERIOR



INTERIOR

EXTERIOR

PROJECT # ACE-2025-127

RENAISSANCE WINDOWS AND DOORS
13340 INTERNATIONAL PARKWAY
JACKSONVILLE, FL 32218

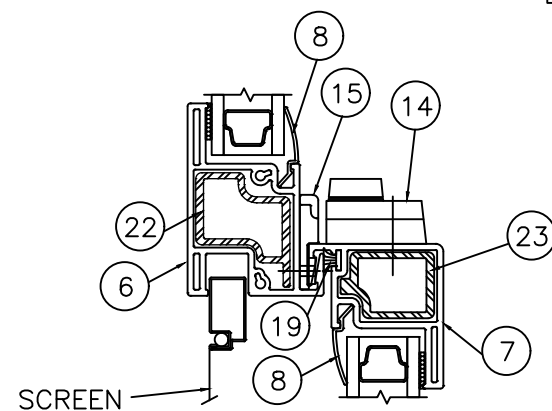
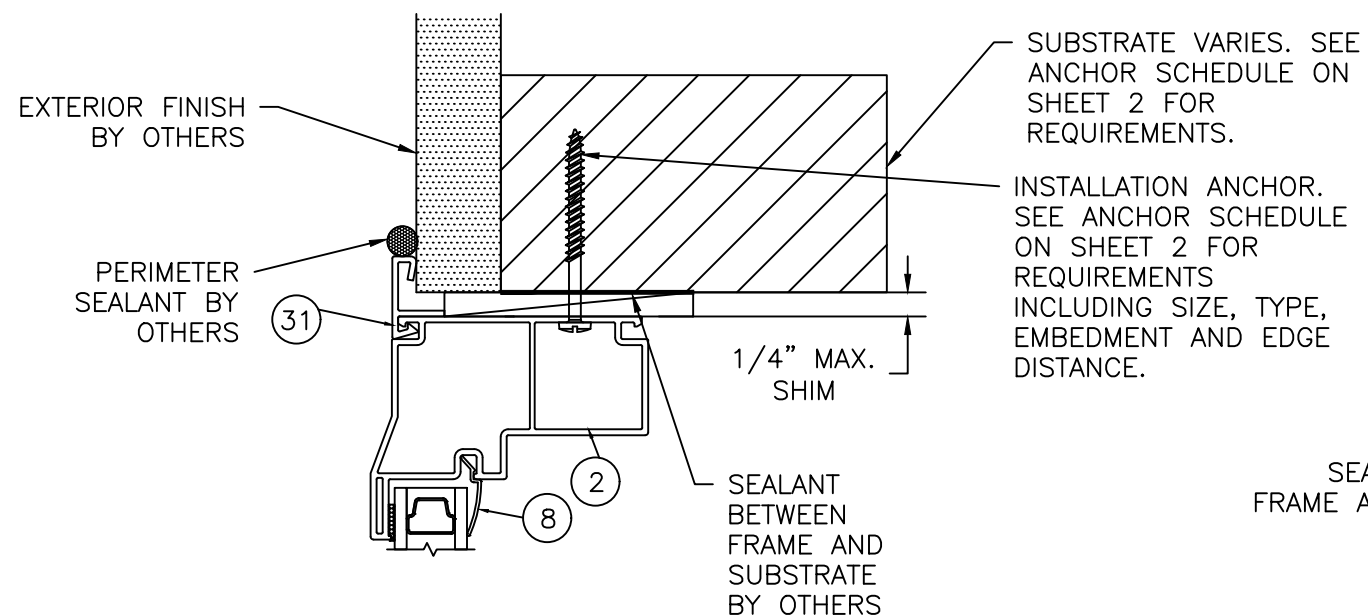
TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE
NAILING FIN (FIN FRAME) INSTALLATION

DATE:	12/11/19
DRAWING NO:	RWD0018
SCALE:	N.T.S.
REV:	A
DESCRIPTION	7 OF 11

Robert J. Amoruso, P.E.
Florida P.E. No. 49752

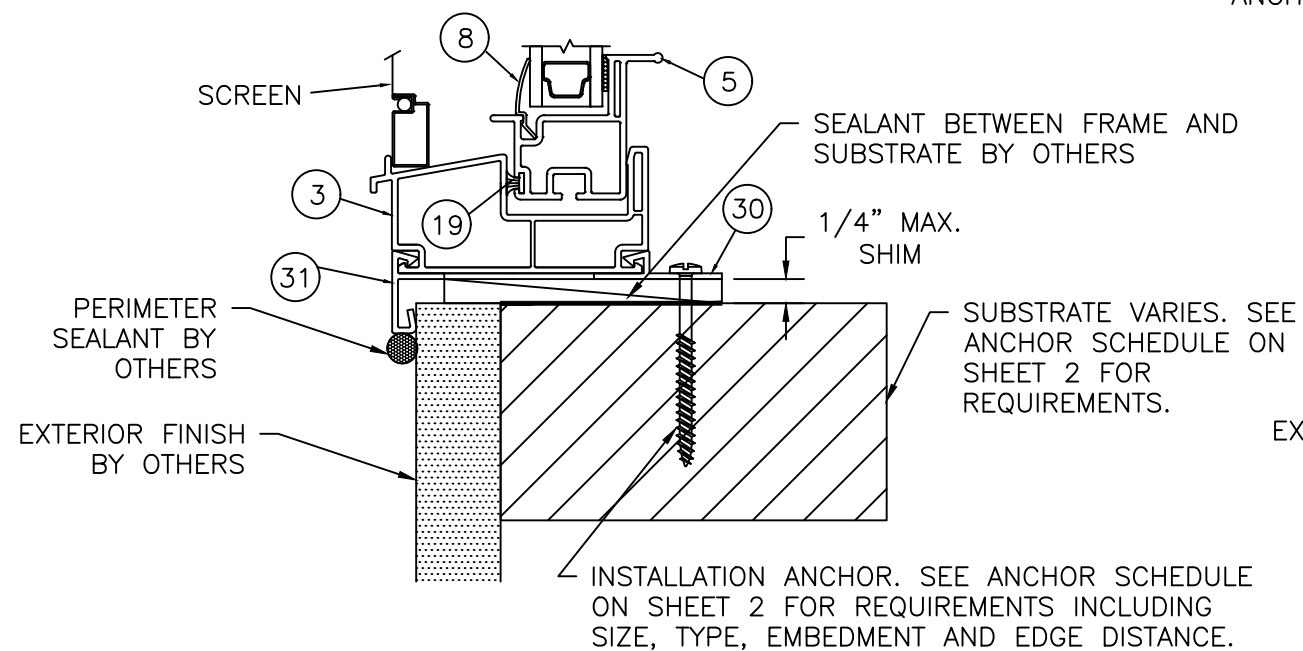


SIGNED/SEALED: 8/4/26

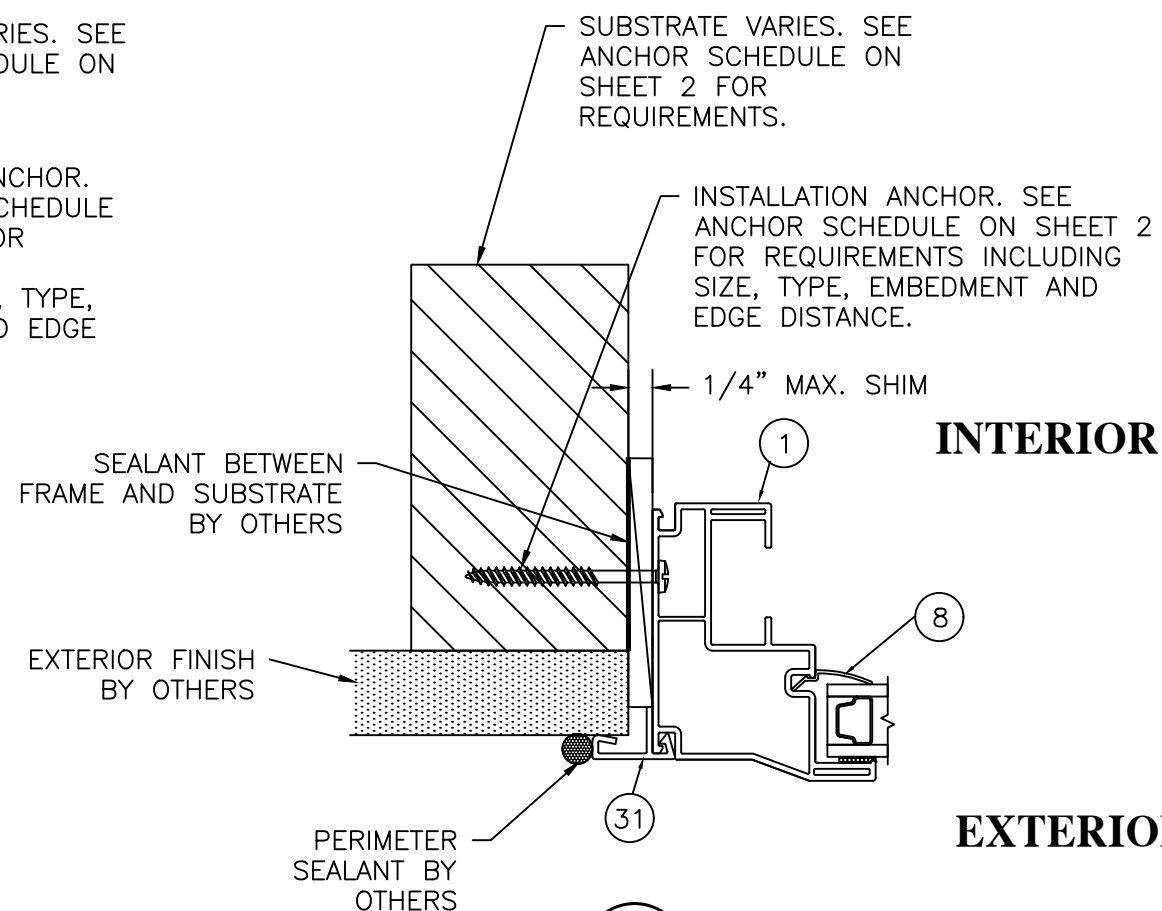


EXTERIOR

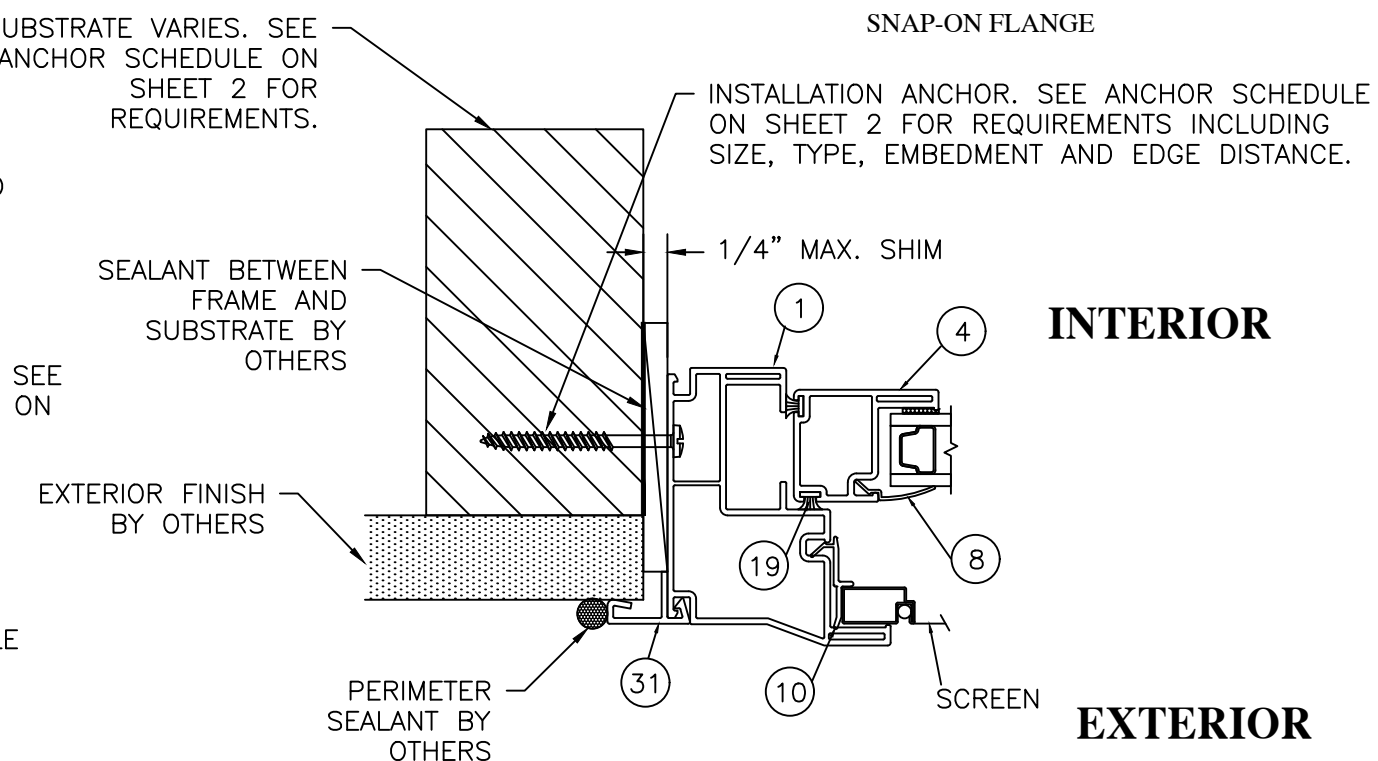
INTERIOR



A VERTICAL CROSS SECTION 8 THROUGH-FRAME INSTALLATION SNAP-ON FLANGE



B **8** **FIXED LITE HORIZOINTAL** **CROSS SECTION** THROUGH-FRAME INSTALLATION SNAP-ON FLANGE



C SASH LITE HORIZONTAL 8 CROSS SECTION THROUGH-FRAME INSTALLATION SNAP-ON FLANGE

PROJECT # ACE-2025-127

RENAISSANCE WINDOWS AND DOORS
13340 INTERNATIONAL PARKWAY

JACKSONVILLE, FL 32218

TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE THROUGH FRAME INSTALLATION W/FLANGE

PREPARED BY:

AMORUSO CONSULTING ENG., LLC

FBPE REGISTRATION NO. 38327
226 N NOVA RD. NO. 142

ORMOND BEACH, FL 32174

RJAENGPE@GMAIL.COM

DRAWN BY: _____ DATE: _____

RJA	12/11/19
-----	----------

SCALE:	DRAWING NO:
NTS	BWD00018

DATE:

12/11/19

DRAWING NO: BWD0018

8 OF 11

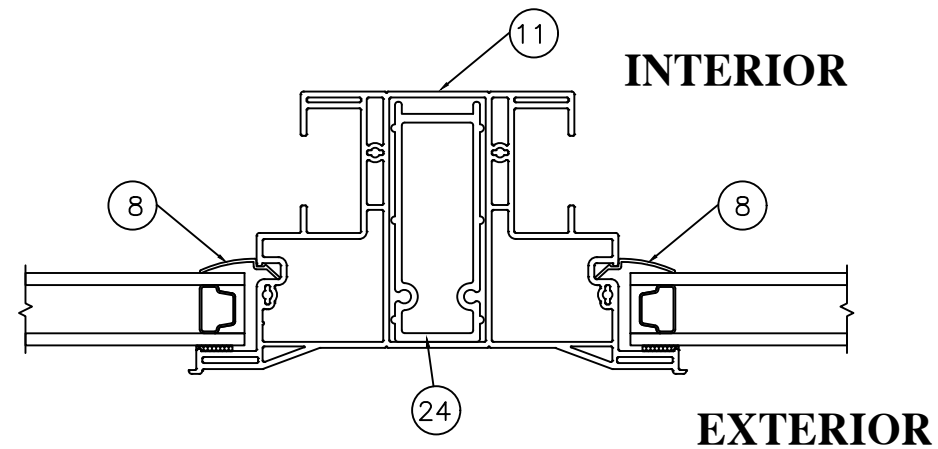
UPDATE TO THE 9TH
EDITION (2026) EBC

DESCRIPTION

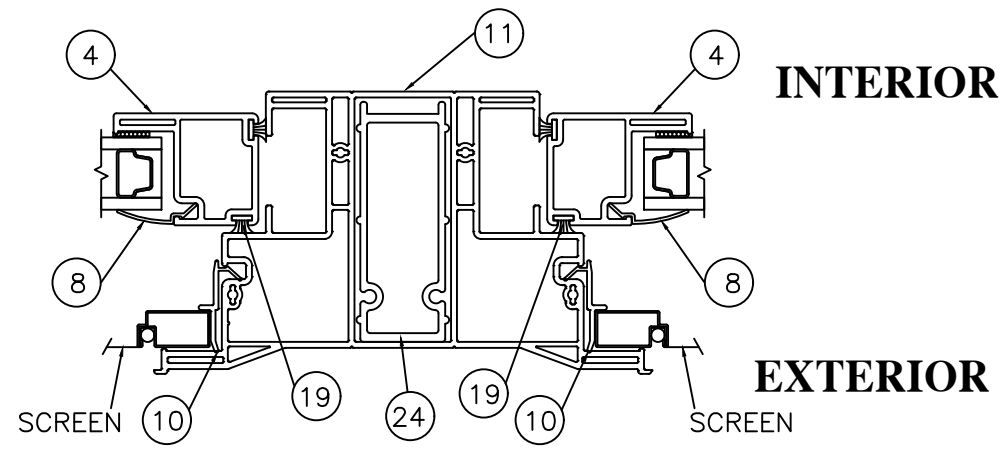
Robert J. Amoruso, P.E.
Florida P.E. No. 49752



SIGNED/SEALED: 8/4/26



D
10 **FIXED LITE HORIZOINTAL**
CROSS SECTION
INTERMEDIATE JAMB - TSH T-BAR



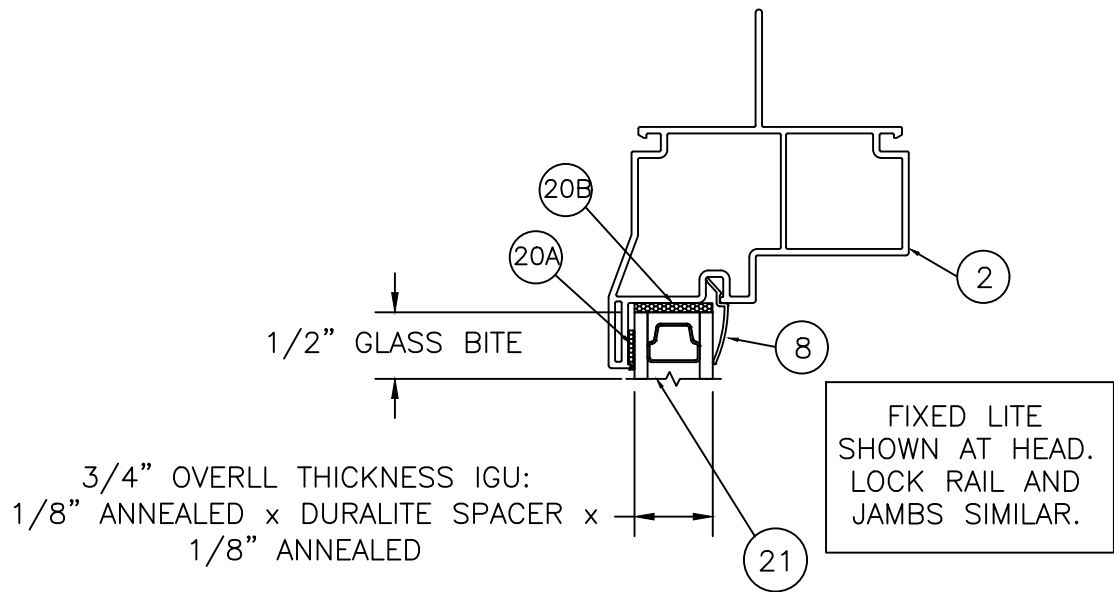
E
10 **SASH LITE HORIZOINTAL**
CROSS SECTION
INTERMEDIATE JAMB - TSH T-BAR

PROJECT # ACE-2025-127							
RENAISSANCE WINDOWS AND DOORS 13340 INTERNATIONAL PARKWAY JACKSONVILLE, FL 32218		TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE INTEGRAL MULLION SECTIONS		DRAWN BY: RJA	DATE: 12/11/19	PREPARED BY: AMORUSO CONSULTING ENG., LLC FBPE REGISTRATION NO. 38327 226 N NOVA RD, NO. 142 ORMOND BEACH, FL 32174 RIAENGPE@GMAIL.COM	BY RJA
				SCALE: N.T.S.	DRAWING NO: RWD0018	UPDATE TO THE 9TH EDITION (2026) FBC	8/4/26
				REV: A	DESCRIPTION 10 OF 11	DATE	BY

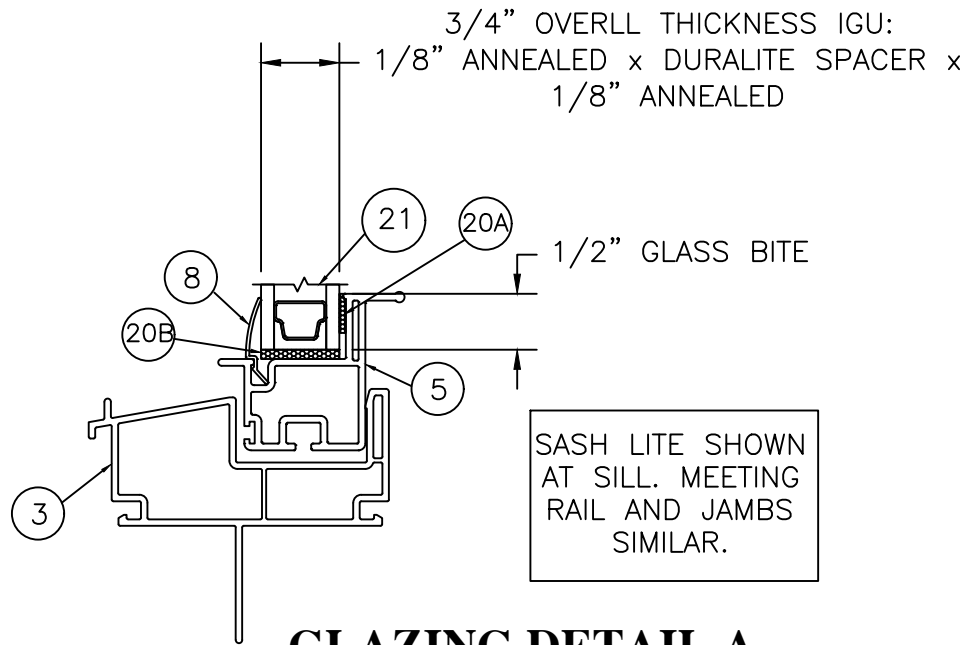
Robert J. Amoruso, P.E.
Florida P.E. No. 49752



SIGNED/SEALED: 8/4/26



GLAZING DETAIL A



GLAZING DETAIL A

NOTES:

- 1. A MINIMUM OF TWO (2) NEOPRENE SETTING BLOCKS WITH 70 TO 90 SHORE A DUROMETER HARDNESS ARE REQUIRED AT BOTTOM (SILL) OF GLAZING LITES MORE THAN 3 FEET IN WIDTH.
- 2. AS-TESTED IGU SYSTEM SHOWN. SUBSTITUTIONS ARE ALLOWED IN ACCORDANCE WITH AAMA/WDMA/CSA 101/I.S. 2/A440-11, SECTIONS 10.2.3.2 AND 10.2.3.4. SEE SHEET 1 FOR DETAILS RELATED TO WINDOW SIZE / GLAZING DETAIL / DESIGN PRESSURE.

BILL OF MATERIALS 8500 SERIES SH - TWIN AND TRIPLE			
BOM NO.	PART NO.	DESCRIPTION	REMARKS
1	7867	JAMB	PVC
2	7868	HEAD	PVC
3	7869	SILL	PVC
4	7863	VENT STILE	PVC
5	7866	VENT RAIL - SILL	PVC
6	7864	FIXED INTERLOCK	PVC
7	7865	VENT INTERLOCK	PVC
8	6177	GLAZING BEAD	PVC
9	6555	SETTING BLOCK	NOT SHOWN
10	7871	SCREEN LOCK	PVC
11	7988	TSH T-BAR	PVC
HARDWARE			
12	9208	BASE	NOT SHOWN
13	9202	LEVER	NOT SHOWN
14	9203	CAM	
15	9659	KEEPER	
16	677204	CAM LOCK (OPTIONAL)	NOT SHOWN
17	677133	KEEPER (OPTIONAL)	NOT SHOWN
18	110-5/MRBLCK	MEETING RAIL BLOCK	Apply 7864 to 7988 T-Bar
WEATHERSTRIPPNG			
19		WEATHERSTRIP	.187 x .230 FIN PILE
GLAZING			
20A		FOAM TAPE BACK-BEDDING	
20B		SILICONE	
21	GLAZING DETAIL A	3/4" OVERLL THICKNESS IGU	
REINFORCEMENT			
22	RNFCHK	FIXED REINFORCEMENT	ALUMINUM 6063-T5
23	RNFVNT	VENT REINFORCEMENT	ALUMINUM 6063-T5
24	8632.1	TSH T-BAR REINFORCEMENT	ALUMINUM 6063-T5
BALANCE AND TILT COMPONENTS			
25	700 SERIES	BALANCE (CONSTANT FORCE)	NOT SHOWN
26	728	PIVOT LOCK SHOE (1.292" x .562")	NOT SHOWN
27	275	PIVOT BAR	NOT SHOWN
28	9637	ANCHOR	NOT SHOWN
29	76800/76900	TILT LATCH ASSEMBLY	NOT SHOWN
INSTALLATION COMPONENTS			
30	6384	SILL CLIP	PVC
31	8864	SNAP-ON FLANGE	PVC

PROJECT # ACE-2025-127

RENAISSANCE WINDOWS AND DOORS
13340 INTERNATIONAL PARKWAY
JACKSONVILLE, FL 32218

TITLE: SERIES 8500 VINYL SINGLE HUNG WINDOW - TWIN & TRIPLE
GLAZING DETAILS AND BILL OF MATERIALS (BOM)

DATE: 12/11/19
DRAWING NO: RWD0018
SHEET: 11 OF 11

BY: RJA
8/4/26
UPDATE TO THE 9TH EDITION (2026) FBC
A
DESCRIPTION
REV

PREPARED BY: AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RIAENGPE@GMAIL.COM

Robert J. Amoruso, P.E.
Florida P.E. No. 49752



SIGNED/SEALED: 8/4/26