

ECO GLASS

SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ

INSTALLATION ANCHORAGE DETAILS

GENERAL NOTES:

1.

THIS PRODUCT HAS BEEN EVALUATED TO COMPLY WITH THE CURRENT PROVISIONS OF THE 8TH EDITION (2023) FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONES (HVHZ) AND IS BASED ON TESTING CONDUCTED TO TAS 201-94, TAS202-94 AND TAS 203-94 DOCUMENTED IN PROJECT NO. 1924T0008.1, DATED 02/25/2025 TEST REPORT BY PRI CONSTRUCTION MATERIALS TECHNOLOGIES LLC.
2.

2X WOOD FRAMING, 1X OR 2X WOOD BUCK, METAL FRAMING AND CONCRETE/MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3.

1X BUCK OVER CONCRETE/MASONRY OR OTHER SUBSTRATE MATERIALS IS OPTIONAL. WHEN 1X BUCK IS USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME AND 1X BUCK INTO SUPPORTING SUBSTRATE. WHEN USED, 1X BUCKS SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE AND IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD. DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4.

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF THE INSTALLATION METHODS DEVIATE FROM THESE APPROVED DETAILS THIS WOULD REQUIRE FURTHER INVESTIGATION BY A LICENSED OR REGISTERED DESIGN PROFESSIONAL.
5.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED FOR IMPACT PROTECTION. THEREFORE, IN AREAS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST, USE OF AN IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED:
6.

MATERIALS:

6.1.

FRAME: EXTRUDED RIGID PVC BY PH TECH, INC. PER CURRENT MIAMI-DADE NOA.

6.2.

LAMINATE GLASS INTERLAYER: SAFLEX PVB INTERLAYER BY EASTMAN CHEMICAL CO. PER CURRENT MIAMI-DADE NOA.
7.

GLAZING:

7.1.

INSULATING GLASS UNIT 25 MM (1.0") O.A. THICKNESS

7.2.

SASH AND FIXED GLAZING CONFIGURATION

7.2.1.1.

GLASS THICKNESS:

7.2.1.1.1.

EXTERIOR: 3MM (1/8") ANNEALED X 2.3MM (0.090") SAFLEX PVB X 3MM (1/8") ANNEALED

7.2.1.1.2.

INTERIOR: 3MM (1/8") ANNEALED

7.2.1.2.

AIR GAP 16 MM (0.63")

7.2.1.3.

GLAZING BITE 1/2"

7.2.1.4.

IGU SPACER: RAMAPO LP BEND ALUMINUM SPACER

7.2.1.

GLAZING METHOD

7.2.2.

THE IGU WAS SET FROM THE INTERIOR, ONTO A BED SIKAFLEX 552, BACKFILLED, AND SECURED WITH RIGID PVC GLAZING .

7.3.

ALL SETTING BLOCKS SHALL BE IN COMPLIANCE WITH THE 8TH EDITION (2023) FLORIDA BUILDING CODE. SETTING BLOCKS SHALL BE NEOPRENE WITH A 70 TO 90 SHORE A DUROMETER.

7.4.

GLASS MEETS THE REQUIREMENTS OF ASTM E1300-16.
8.

PANEL OPERABILITY DESIGNATIONS: X = OPERABLE AND O = FIXED
9.

PERIMETER AND JOINT SEALANT BY OTHERS TO BE DETAILED IN ACCORDANCE WITH THE FBC, RESIDENTIAL AND BUILDING VOLUMES AND WITH FMA/AAMA/WDMA PROTOCOLS. PERIMETER AND JOINT SEALANT IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT PART OF THIS PRODUCT APPROVAL DOCUMENT.

INSTALLATION NOTES:

1.

INSTALL ONE (1) ANCHOR AS INDICATED IN THE SECTION DETAILS ON SHEETS 3 AND 4 AT EACH LOCATION SHOWN IN THE ELEVATION ON SHEET 2.

1.1.

LOCATION TOLERANCE IS +/- 1".

1.2.

FOR WINDOWS SMALLER THAN THAT SHOWN IN SHEET 2 ELEVATION, ANCHOR SPACING CAN BE REDUCED WHILE MAINTAINING THE ANCHOR QUANTITIES AND EDGE DISTANCE SHOWN.
2.

SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH A LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
3.

SEE INSTALLATION ANCHOR SCHEDULE ON SHEET 4 FOR ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE REQUIREMENTS.

3.1.

INSTALLATION ANCHORS SHALL BE CORROSION RESISTANT OR HAVE CORROSION RESISTANT COATING.

3.2.

SEE INSTALLATION NOTE 4 FOR MINIMUM SUBSTRATE PROPERTIES.

4.

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 BELOW:

4.1.

WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.

4.2.

CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

4.3.

MASONRY - STRENGTH CONFORMANCE TO ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF).

4.4.

STEEL STUD - STRENGTH CONFORMING TO MIN. Fty = 33 KSI AND Ftu = 45 KSI. MINIMUM THICKNESS 20 GA.

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2	EXTERIOR ELEVATION AND ANCHORAGE
3	VERTICAL SECTIONS - THROUGH FRAME INSTALLATION (WITH SILL CLIP)
4	HORIZONTAL SECTIONS - THROUGH FRAME INSTALLATION
5	COMPONENTS - BILL OF MATERIALS & VERTICAL SECTION
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7	COMPONENTS - CORNER CONSTRUCTION DETAIL, WEEP HOLES, SILL CLIP
8	COMPONENTS - PVC EXTRUSIONS
9	COMPONENTS - HARDWARE

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PROJECT NO. ACE-2025-303				BY
				DATE
				DESCRIPTION
				REV

ECO GLASS

144 HOPE STREET

LONGWOOD, FL 32750

TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ

INSTALLATION AND GENERAL NOTES

DRAWN BY: RJA

DATE: 4/1/2025

SCALE: N.T.S.

SHEET: 1 OF 9



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Digitally signed by Robert J Amoruso

Date: 2025.07.04 13:02:14 -04'00'

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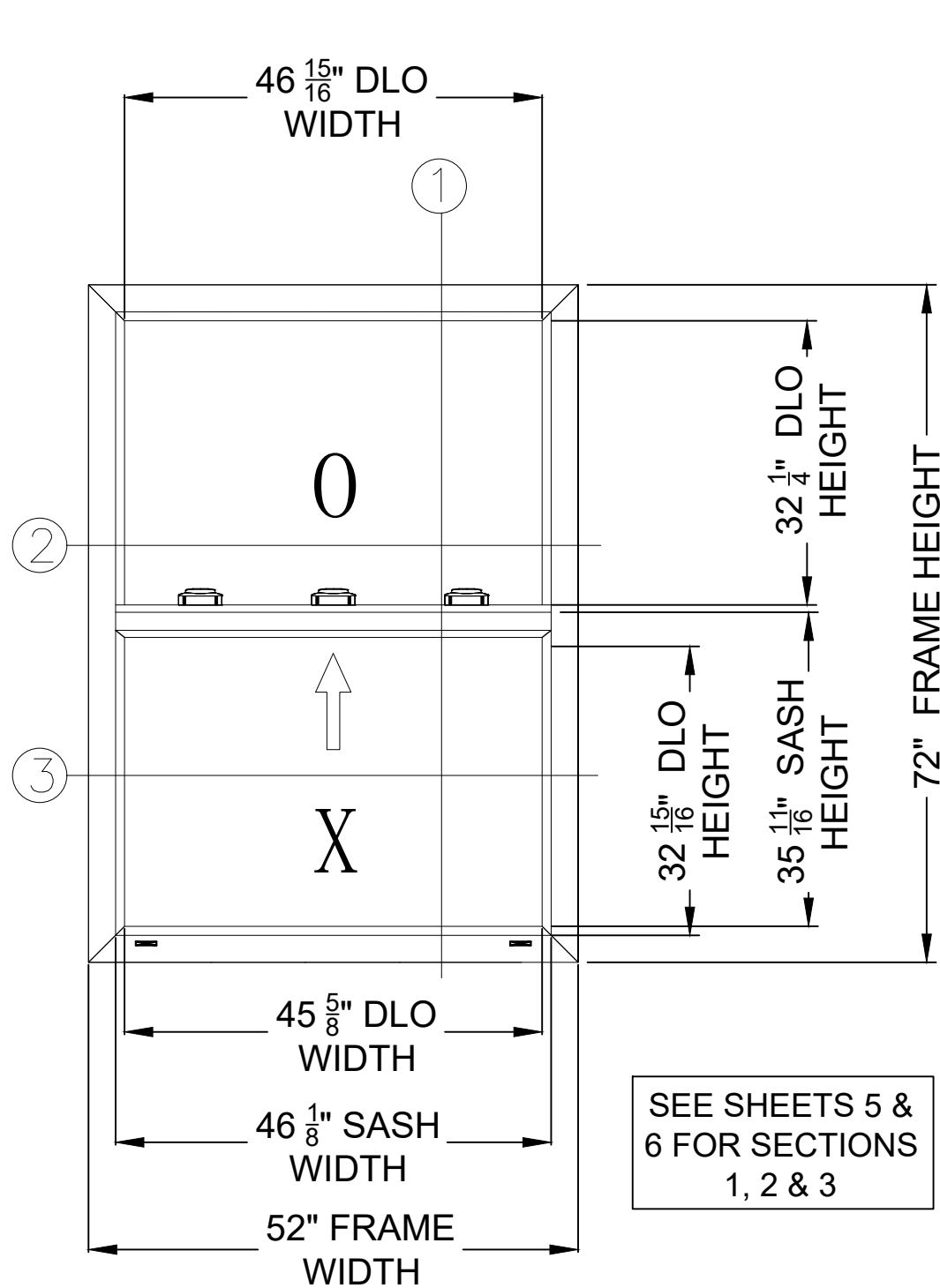
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FBPE REGISTRATION NO. 38327

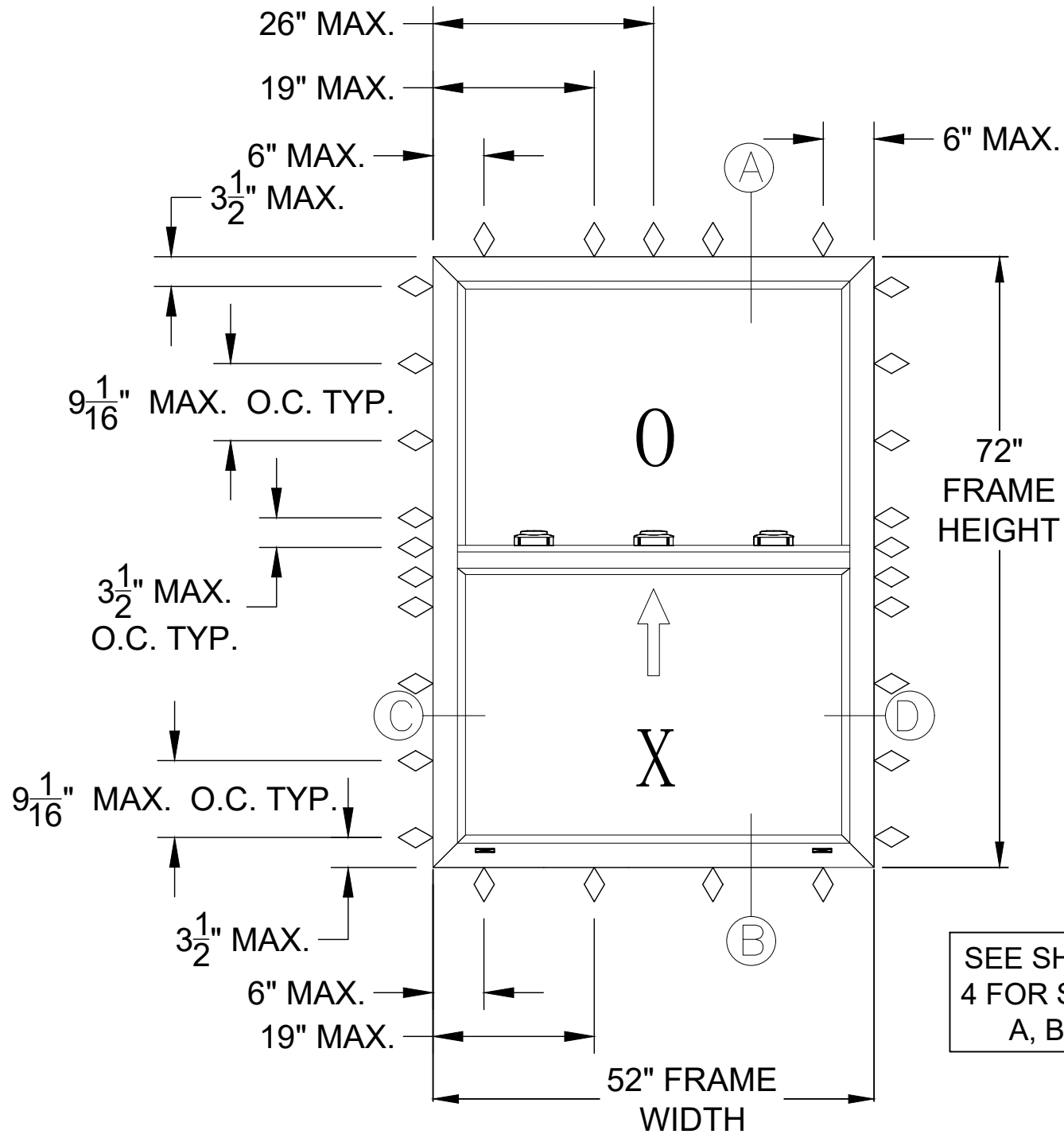
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**SERIES S-3450 PVC VINYL
SINGLE HUNG WINDOW
EXTERIOR VIEW**



**BLOCK/EQUAL LEG THROUGH FRAME
(HEAD & JAMBS) AND CLIP (SILL)
INSTALLATION
EXTERIOR VIEW**

SEE SHEETS 5 &
6 FOR SECTIONS
1, 2 & 3

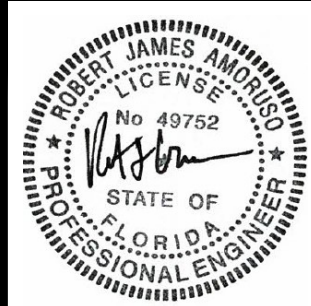
SEE SHEETS 3 &
4 FOR SECTIONS
A, B, C & D

PERFORMANCE RATING		
MAXIMUM WINDOW SIZE (IN)	DESIGN PRESSURE RATING (PSF)	IMPACT RATING
52 x 72	50	HVHZ - LARGE MISSILE IMPACT WIND ZONE 4, MISSILE LEVEL D

ANCHOR/FASTENER

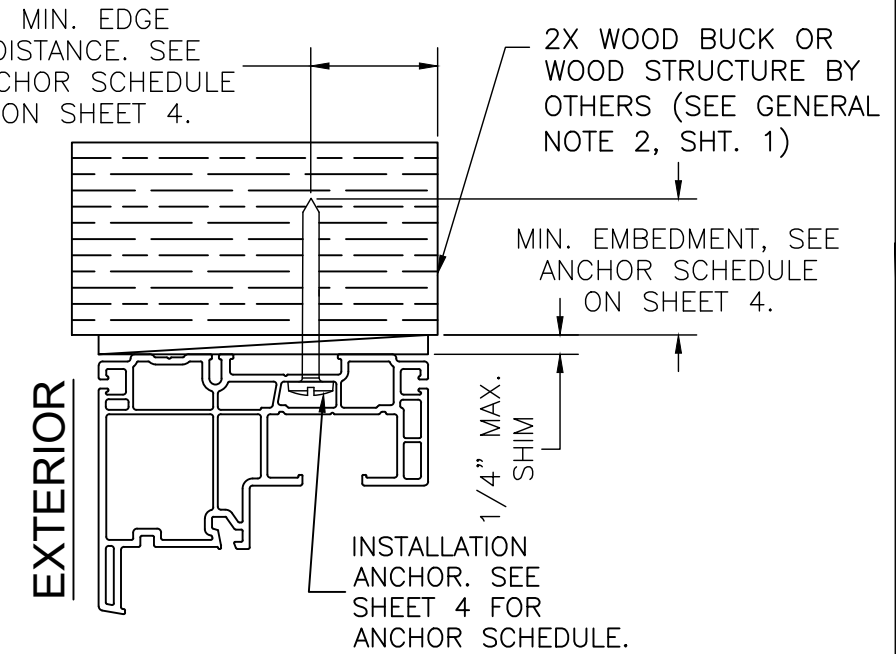
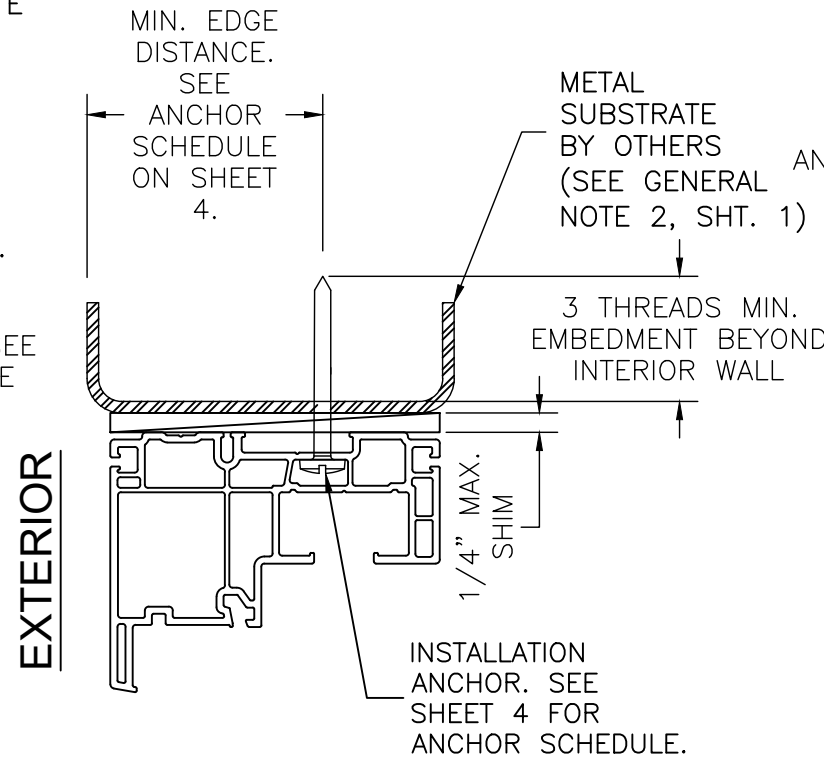
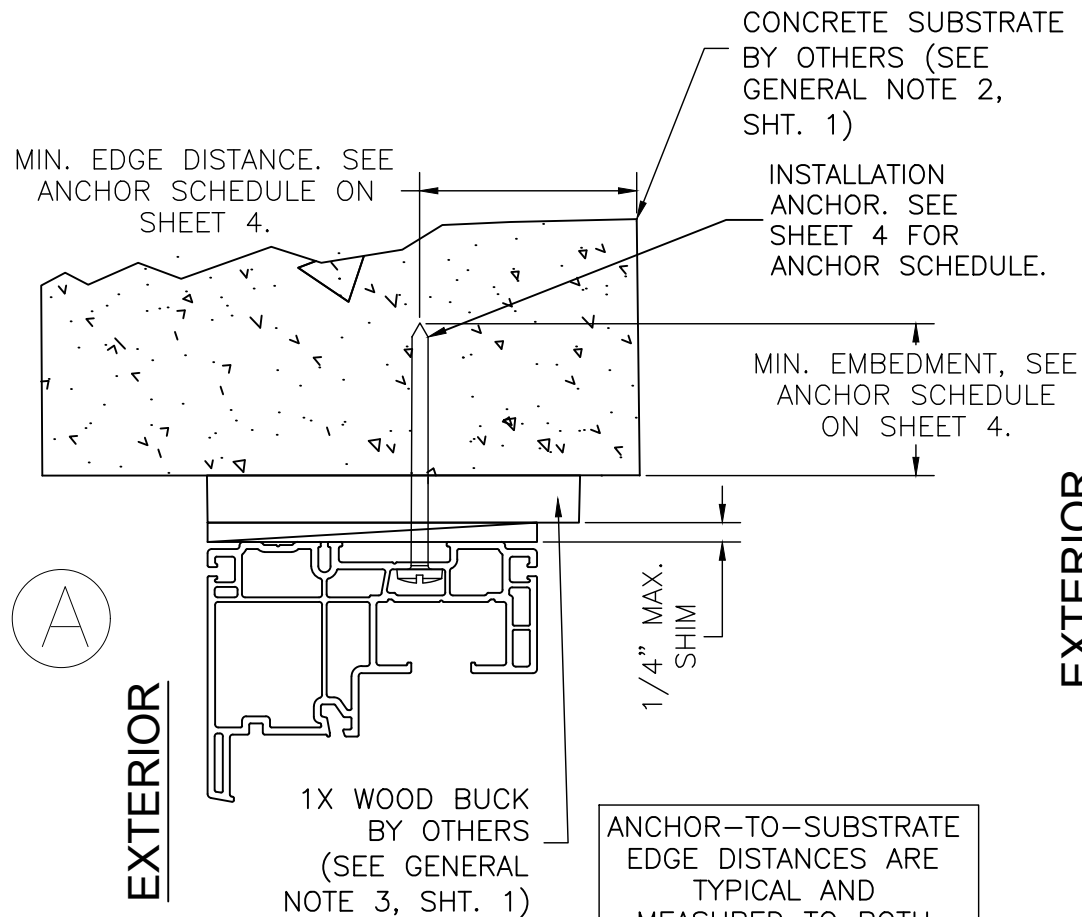
PROJECT NO. ACE-2025-303				DATE	BY

ECO GLASS 144 HOPE STREET LONGWOOD, FL 32750 TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ EXTERIOR ELEVATION AND ANCHORAGE	DRAWN BY: RJA	SCALE: N.T.S.	DATE: 4/1/2025	DRAWING NO: ECOGLOSS018-HVHZ	SHEET: 2 OF 9



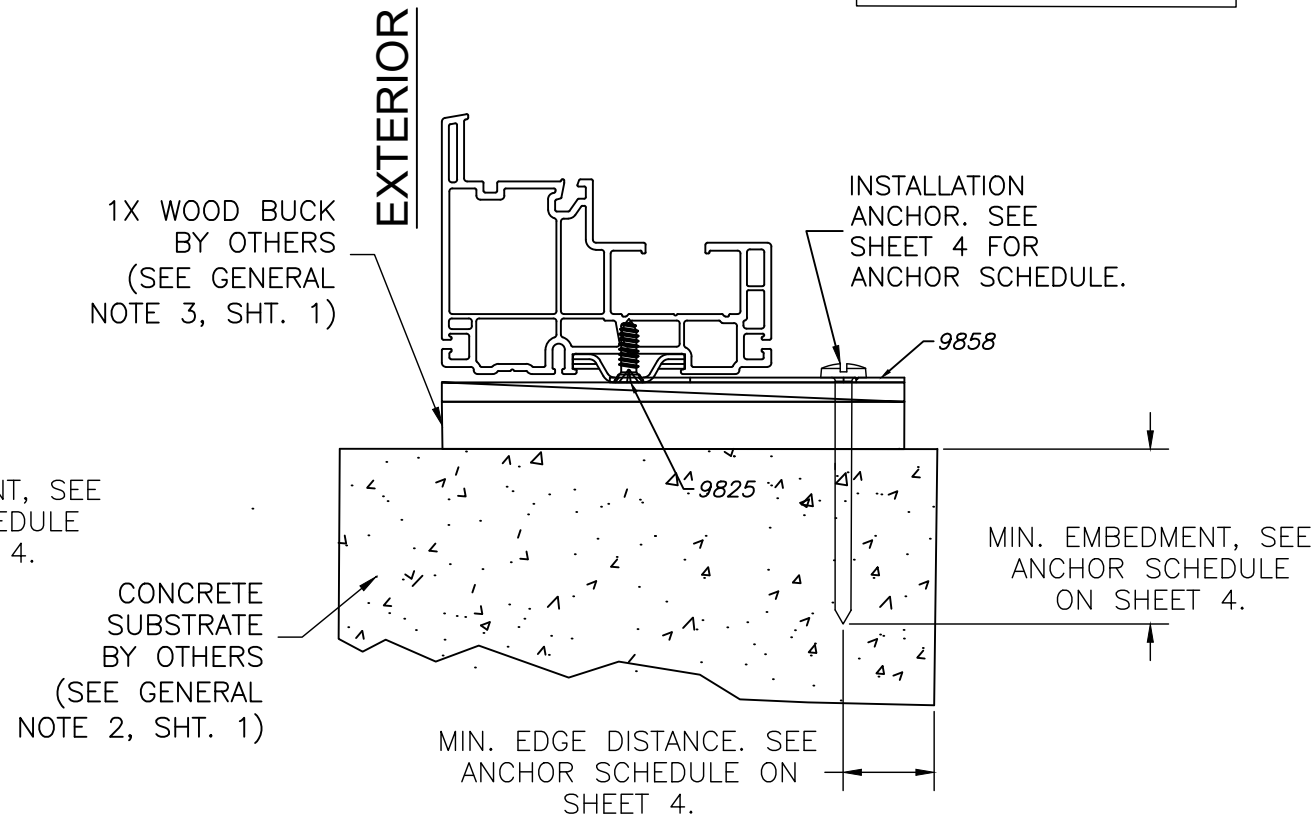
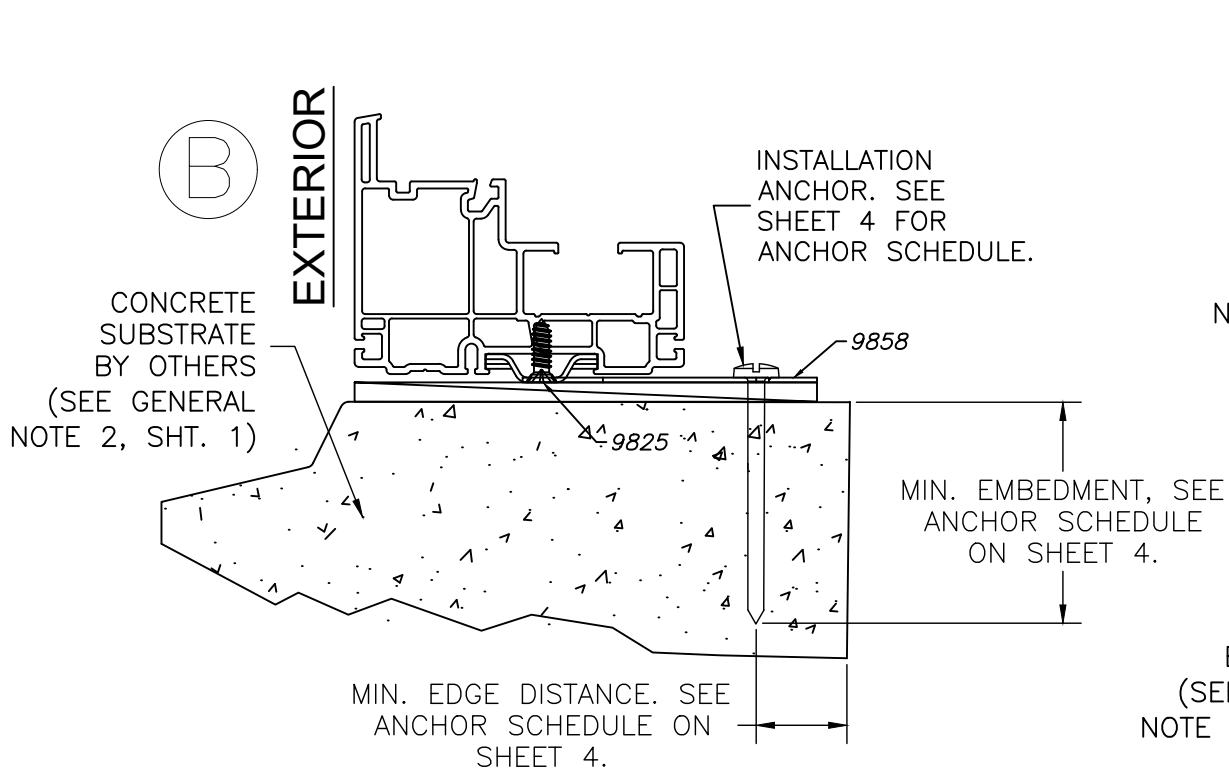
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CONCRETE, CMU, WOOD BUCKS AND METAL STRUCTURE BY OTHERS MUST SUSTAIN LOADS IMPOSED BY THE FENESTRATION SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

INTERIOR/EXTERIOR FINISHING AND PERIMETER SEALANT DETAILING NOT SHOWN. SEE GENERAL NOTE 9 ON SHEET 1.



PROJECT NO. ACE-2025-303

ECO GLASS
144 HOPE STREET
LONGWOOD, FL 32750

TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ
VERTICAL SECTIONS - THROUGH FRAME INSTALLATION (WITH SILL CLIP)



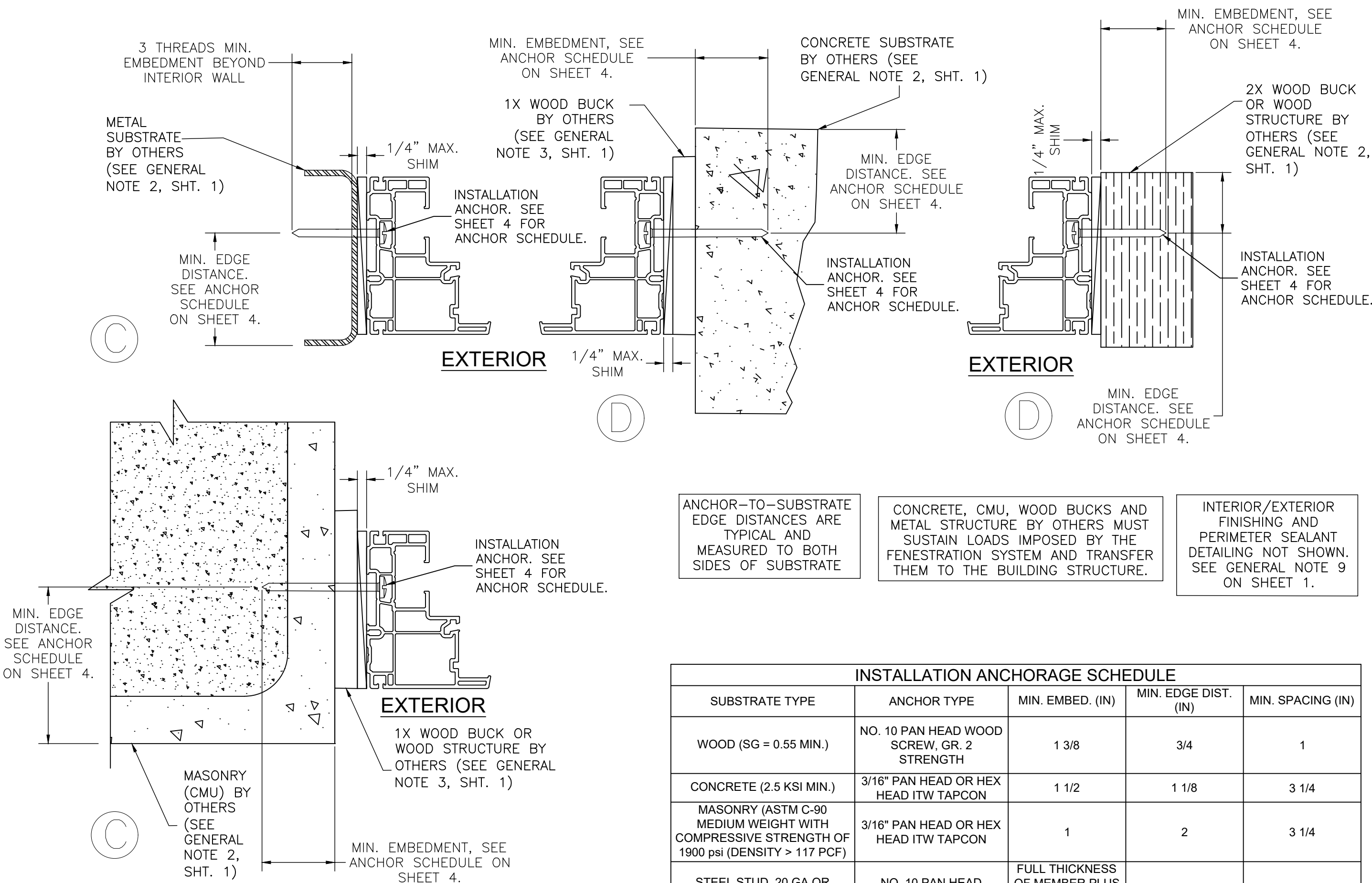
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SCALE: N.T.S.
REV: ---

DATE: 4/1/2025
DRAWING NO: ECOGLASS018-HVHZ
SHEET: 3 OF 9



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ANCHOR-TO-SUBSTRATE
EDGE DISTANCES ARE
TYPICAL AND
MEASURED TO BOTH
SIDES OF SUBSTRATE

CONCRETE, CMU, WOOD BUCKS AND
METAL STRUCTURE BY OTHERS MUST
SUSTAIN LOADS IMPOSED BY THE
FENESTRATION SYSTEM AND TRANSFER
THEM TO THE BUILDING STRUCTURE.

INTERIOR/EXTERIOR
FINISHING AND
PERIMETER SEALANT
DETAILING NOT SHOWN.
SEE GENERAL NOTE 9
ON SHEET 1.

INSTALLATION ANCHORAGE SCHEDULE				
SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBED. (IN)	MIN. EDGE DIST. (IN)	MIN. SPACING (IN)
WOOD (SG = 0.55 MIN.)	NO. 10 PAN HEAD WOOD SCREW, GR. 2 STRENGTH	1 3/8	3/4	1
CONCRETE (2.5 KSI MIN.)	3/16" PAN HEAD OR HEX HEAD ITW TAPCON	1 1/2	1 1/8	3 1/4
MASONRY (ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF)	3/16" PAN HEAD OR HEX HEAD ITW TAPCON	1	2	3 1/4
STEEL STUD, 20 GA OR GREATER THICKNESS, MIN. Fty = 33 ksi AND Ftu = 45 ksi	NO. 10 PAN HEAD SELF-DRILLING SHEET METAL SCREW, GRADE 5	FULL THICKNESS OF MEMBER PLUS 3 FULL THREAD LENGTHS PAST INTERIOR	1/2	1/2

PROJECT NO. ACE-2025-303	REV	DESCRIPTION	DATE	BY

ECO GLASS

144 HOPE STREET

LONGWOOD, FL 32750

TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ

HORIZONTAL SECTIONS - THROUGH FRAME INSTALLATION

DRAWN BY: RJA

DATE: 4/1/2025

SCALE: N.T.S.

DRAWING NO: ECOGLASS018-HVHZ

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SHEET: 4 OF 9

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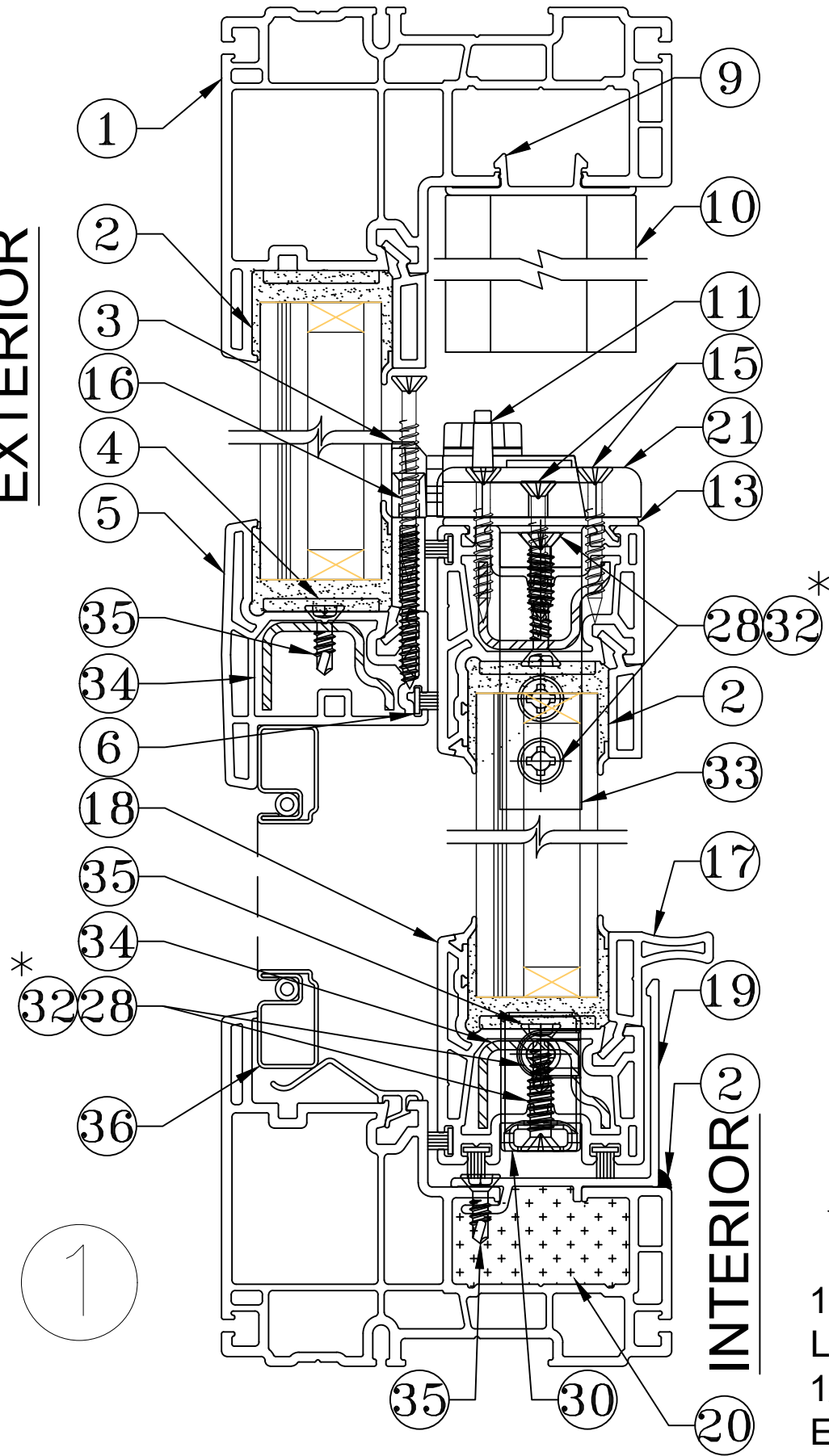
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Item	PART No.	ITEM DESCRIPTION	MANUFACTURERS
1	3420	Main frame	P.H. Tech
2		Sealant	Various
3	9771	Keeper (1 at 9" of the both sash ends, and 1 in at the center of the sash)	P.H. Tech #9771 Truth #45070
4	9828	Setting block	P.H. Tech
5	5960	Fixed meeting rail	P.H. Tech
6	9774	Weatherstrip	NAP #RPHF018726 Schlegel #HF-7625-187
7	EGMRA1-L	Meeting Rail Anchor (Left)	Eco Glass
8	EGMRA1-R	Meeting Rail Anchor (right)	Eco Glass
9	5832	Covering cap	P.H. Tech
10	5872	Sash stopper	P.H. Tech
11	9778	Cam lock (1 at 9" of the both sash ends, and 1 in at the center of the sash)	P.H. Tech #9778 Truth #17.35.xx.xxxx
12	5872	SILL CLIP	
13	5826	Meeting rail covering cap	P.H. Tech
14			
15	8943	No. 6 x 1 1/8", flat head, Quadrex, wood screw.	P.H. Tech
16	9752	No. 6 x 1 1/2", flat head, Quadrex, wood screw.	P.H. Tech
17	5810	Handle glazing bead	P.H. Tech
18	5752 (5751 with coex cu)	Sash profile	P.H. Tech
19	EGSR1	Sash retainer	Eco Glass
20	9873	Corner block	P.H. Tech
21	SR-300-ZD mod Part #1	Tilt latch assembly (Eco Glass modified)	Sullivan & Associates
22	SR-300-ZD Part #2	Tilt latch assembly / Retainer Bloc	Sullivan & Associates
23	9756	No. 8-18 x 1", flat head, Quadrex, SMS, Type AB, screw.	P.H. Tech
24	5828	Balance cover	P.H. Tech
25		Balance	Various
26	8932, x	Pivot shoe	P.H. Tech or Various
27	9738	Sliding shoe	P.H. Tech
28	9825	No. 8 x 1/2" Bugle Head Screw	P.H. Tech
29	5800	Glazing bead	P.H. Tech
30	9514	Pivot bar	P.H. Tech
31		LAMINATED INSULATING GLASS	SEE DETAIL 1
32	9854	No. 10-12 x 1/2", special No. 7 flat head, Quadrex screw.	P.H. Tech
33	ECSCB1	Sash corner bracket	Eco Glass
34	9536	Steel reinforcement	P.H. Tech
35	9753	No. 7-19 x 1/2", flat head, Quadrex, type camtap Z, screw.	P.H. Tech
36		Screen	Various
37	5959	Screen clip	P.H. Tech

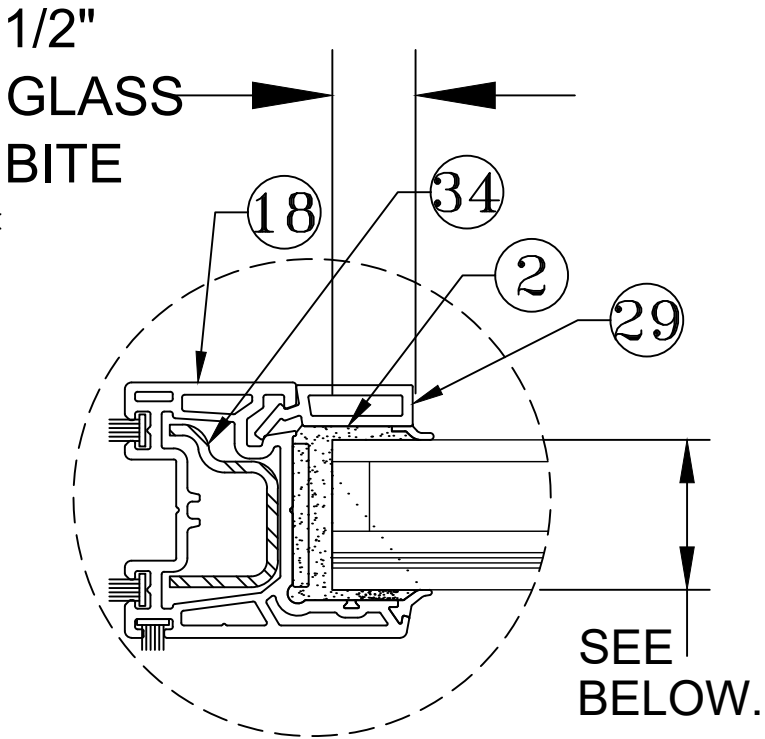
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EXTERIOR



IGU GLAZING SHOWN. SEE
GENERAL NOTE 7 & DETAIL 1 FOR
GLAZING REQUIREMENTS.

INTERIOR



EXTERIOR
GLAZING DETAIL 1

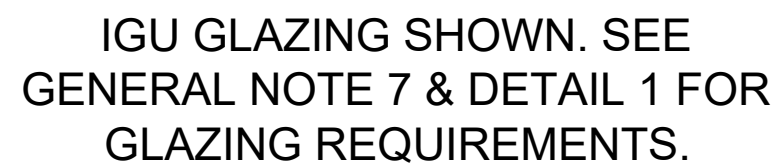
1" O.A LAMINATED IGU: EXTERIOR
LAMINATED GLASS - (2) NOMINAL
1/8" ANNEALED GLASS W/ 0.090"
EASTMAN CHEMICAL SAFLEX PVB
INTERLAYER, 5/8" AIRSPACE W/
SPACER (RAMAPO LP BEND
ALUMINUM SPACER), INTERIOR
1/8" ANNEALED GLASS

PROJECT NO. ACE-2025-303					BY
					DATE
					DESCRIPTION
					REV

ECO GLASS 144 HOPE STREET LONGWOOD, FL 32750	DRAWN BY: RJA	DATE: 4/1/2025	5 OF 9
TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ COMPONENTS - BILL OF MATERIALS & VERTICAL SECTION	SCALE: N.T.S.	DRAWING NO: ECOGLASS018-HVHZ	
	REV: ---		



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**ECO GLASS
144 HOPE STREET
LONGWOOD, FL 32750**

**TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ
COMPONENTS - HORIZONTAL SECTIONS**



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	4/4/2006

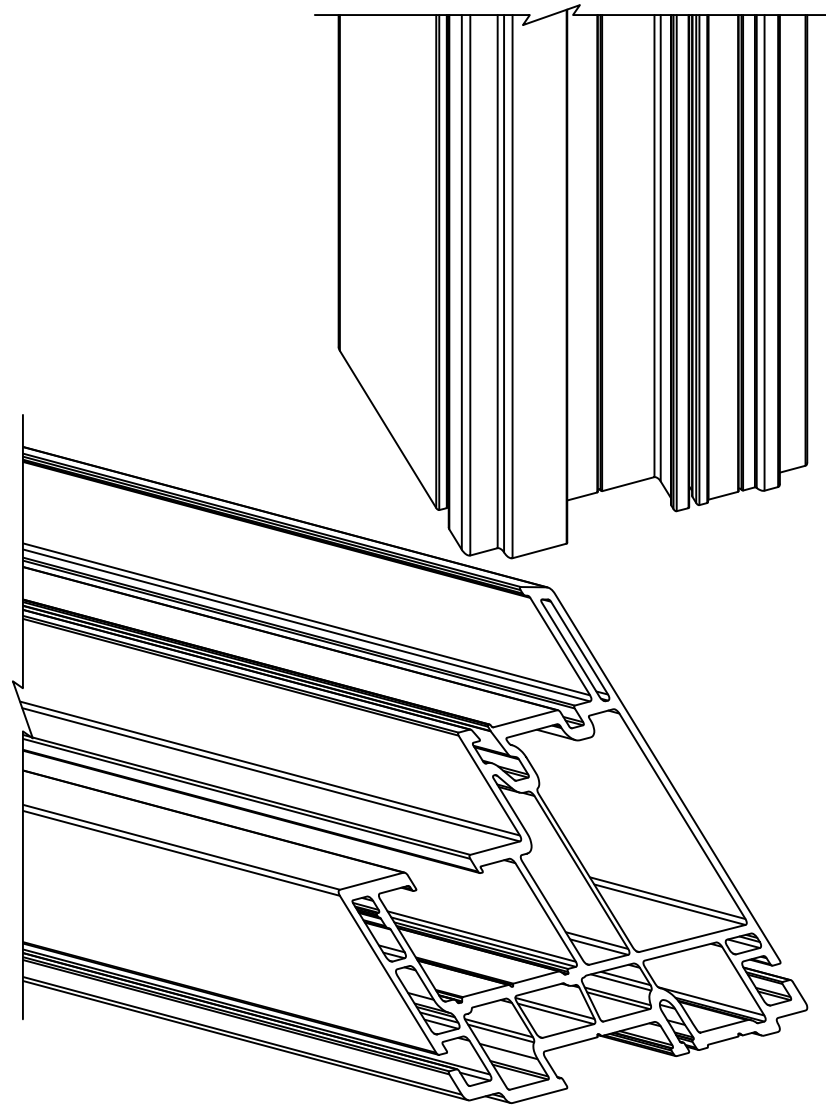
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REV	DESCRIPTION
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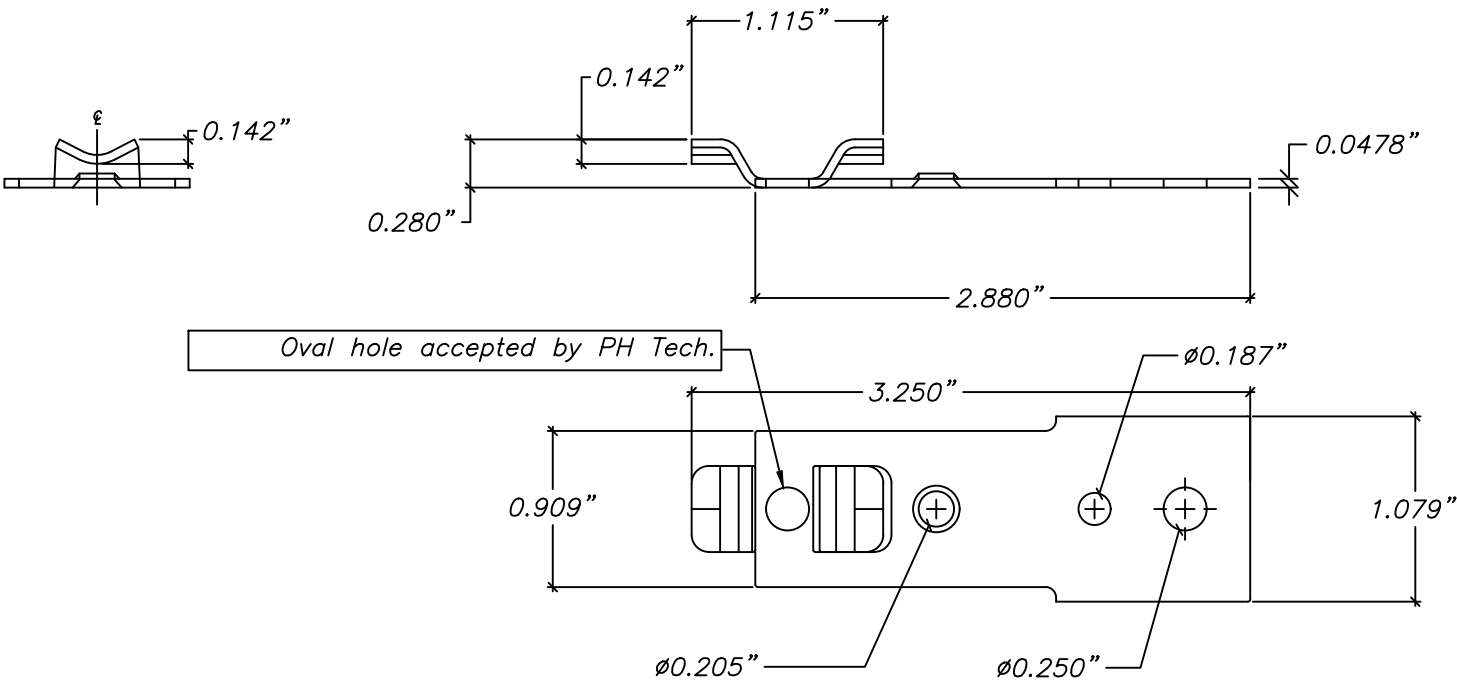
DESCRIPTION

DESCRIPTION



EXTRUDED PVC MITERED
AND THERMALLY WELDED
AT EACH CORNER.

Drainage Type	Member Location	Location on Frame Member	Drainage Size	Quantity
Weep Slot	Sill exterior face draining to the exterior.	4-1/2" (114mm) from each end, draining to the exterior.	1" long x 0.09" tall (25mm x 2mm)	1 per end (2 Total)
Weep Slot	Sill intermediate wall. (Thru 2 walls)	4-1/2" (114mm) from each end, draining into the adjacent cavity.	5/16" wide x 0.09" tall (8mm x 2mm)	1 per end (2 Total)
Weep Slot	Sill sash pocket	4-1/2" (114mm) from each end, draining to the cavity below.	3/16" long x 1/8" wide (5mm x 3mm)	1 per end (2 Total)
Weep Slot	Sill sash pocket	4-1/2" (114mm) from each end, draining to the cavity below.	3/16" long x 1/8" wide (5mm x 3mm)	1 per end (2 Total)
Weep Slot	Screen pocket	4-1/2" (114mm) from each end, draining to the cavity below.	3/16" long x 1/8" wide (5mm x 3mm)	1 per end (2 Total)



12

SILL CLIP (9858)
GALVANIZED STEEL
TYP. WALL THICKNESS 0.060"

PROJECT NO. ACE-2025-303				BY
				DATE
				DESCRIPTION
			REV	

ECO GLASS

144 HOPE STREET

LONGWOOD, FL 32750

TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ

COMPONENTS - CORNER CONSTRUCTION DETAIL, WEEP HOLES, SILL CLIP

DRAWN BY: RJA

SCALE: N.T.S.

REV: --

DATE: 4/1/2025

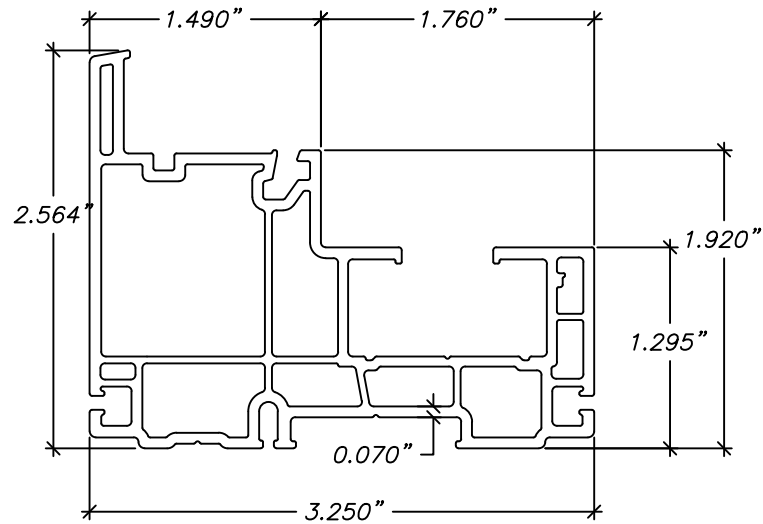
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SHEET: 7 OF 9

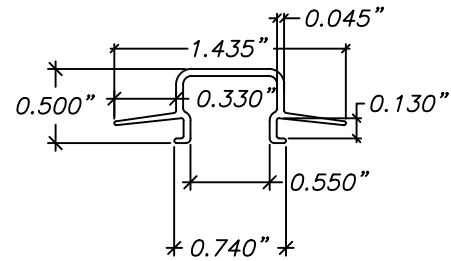
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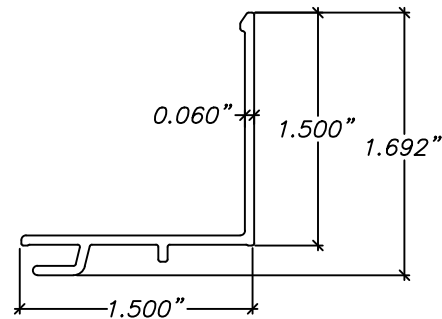
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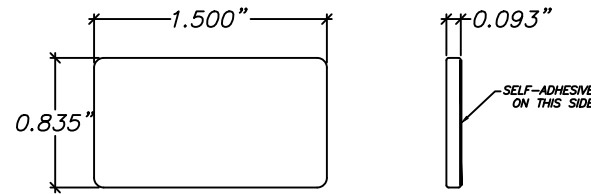
① **MAIN FRAME (3420)**
RIGID PVC
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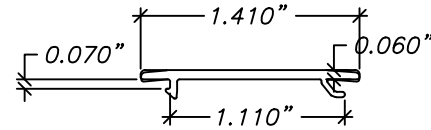
⑩ **SASH STOPPER (5872)**
RIGID PVC
TYP. WALL THICKNESS 0.045"



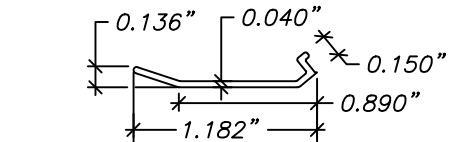
⑪ **SASH RETAINER (EGSR1)**
RIGID PVC
TYP. WALL THICKNESS 0.060"



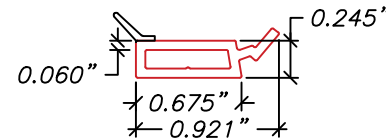
④ **SETTING BLOCK (9828)**
NEOPRENE
DURO 85 +/- 5



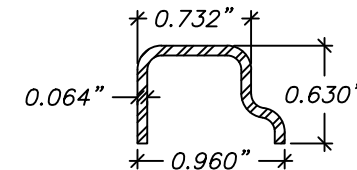
⑬ **MEETING RAIL
COVERING CAPE (5826)**
RIGID PVC
TYP. WALL THICKNESS 0.060"



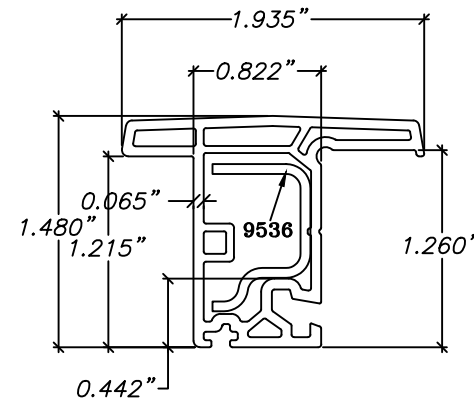
⑭ **BALANCE COVER (5828)**
RIGID PVC
TYP. WALL THICKNESS 0.040"



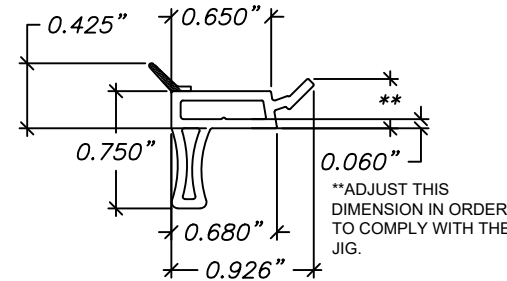
⑲ **GLAZING BEAD (5800)**
RIGID PVC
TYP. WALL THICKNESS 0.060"



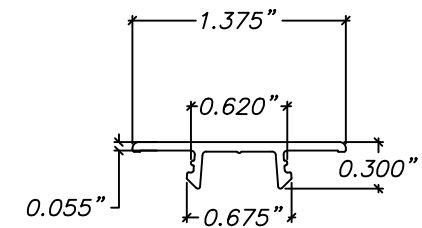
⑳ **REINFORCEMENT (9536)**
STEEL
TYP. WALL THICKNESS 0.064"



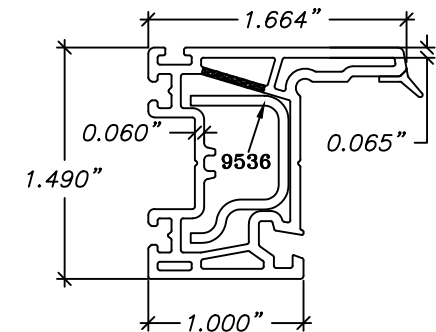
⑤ **FIXED MEETING RAIL (5960)**
RIGID PVC
TYP. WALL THICKNESS 0.065"
(REINFORCEMENT #9536 SHOWN)



⑰ **HANDLE GLAZING BEAD
(5810)**
RIGID PVC
TYP. WALL THICKNESS 0.060"



⑨ **COVERING CAP (5832)**
RIGID PVC
TYP. WALL THICKNESS 0.055"



⑱ **SASH FRAME (5752)**
RIGID PVC
TYP. WALL THICKNESS 0.060", 0.065"
(REINFORCEMENT #9536 SHOWN)

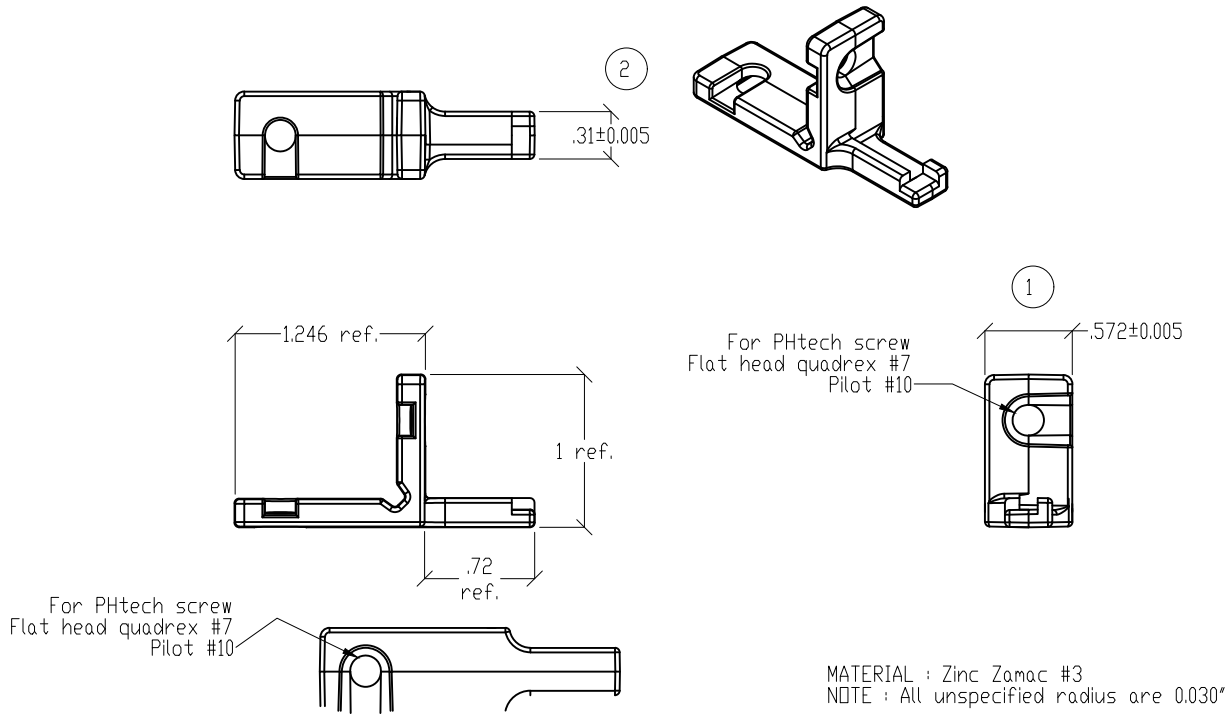
PROJECT NO. ACE-2025-303				BY
				DATE
				DESCRIPTION
				REV

ECO GLASS 144 HOPE STREET LONGWOOD, FL 32750 TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ COMPONENTS - PVC EXTRUSIONS	DRAWN BY:	RJA	DATE:	4/1/2025
	SCALE:	N.T.S.	DRAWING NO.:	ECOGLOSS018-HVHZ
	REV:	---	SHEET:	8 OF 9
	321-207-0507 info@vk-ecoglass.com			

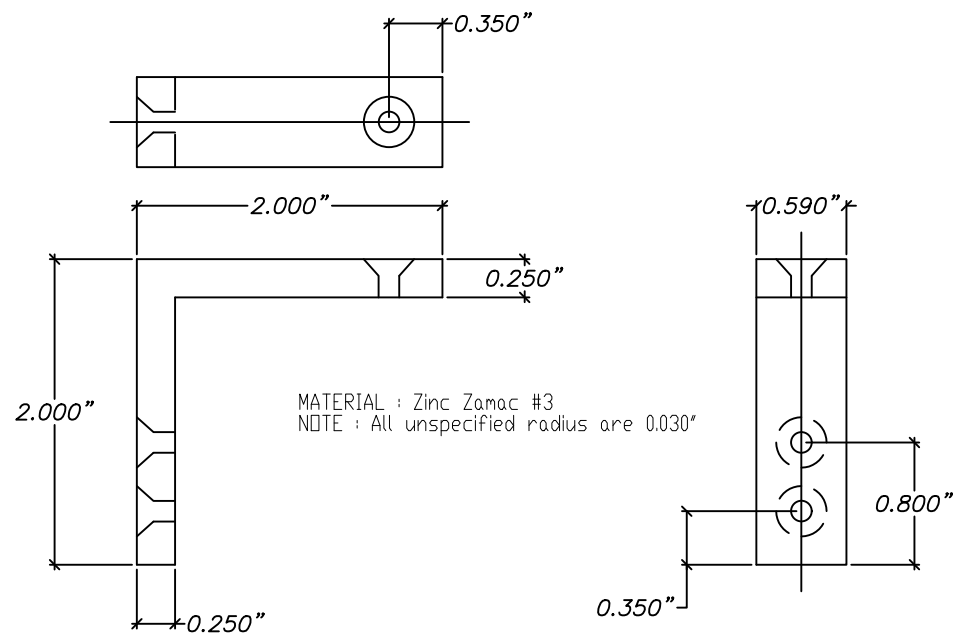


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by Robert J
Amoruso
Date: 2025.07.04
13:04:09 -04'00'

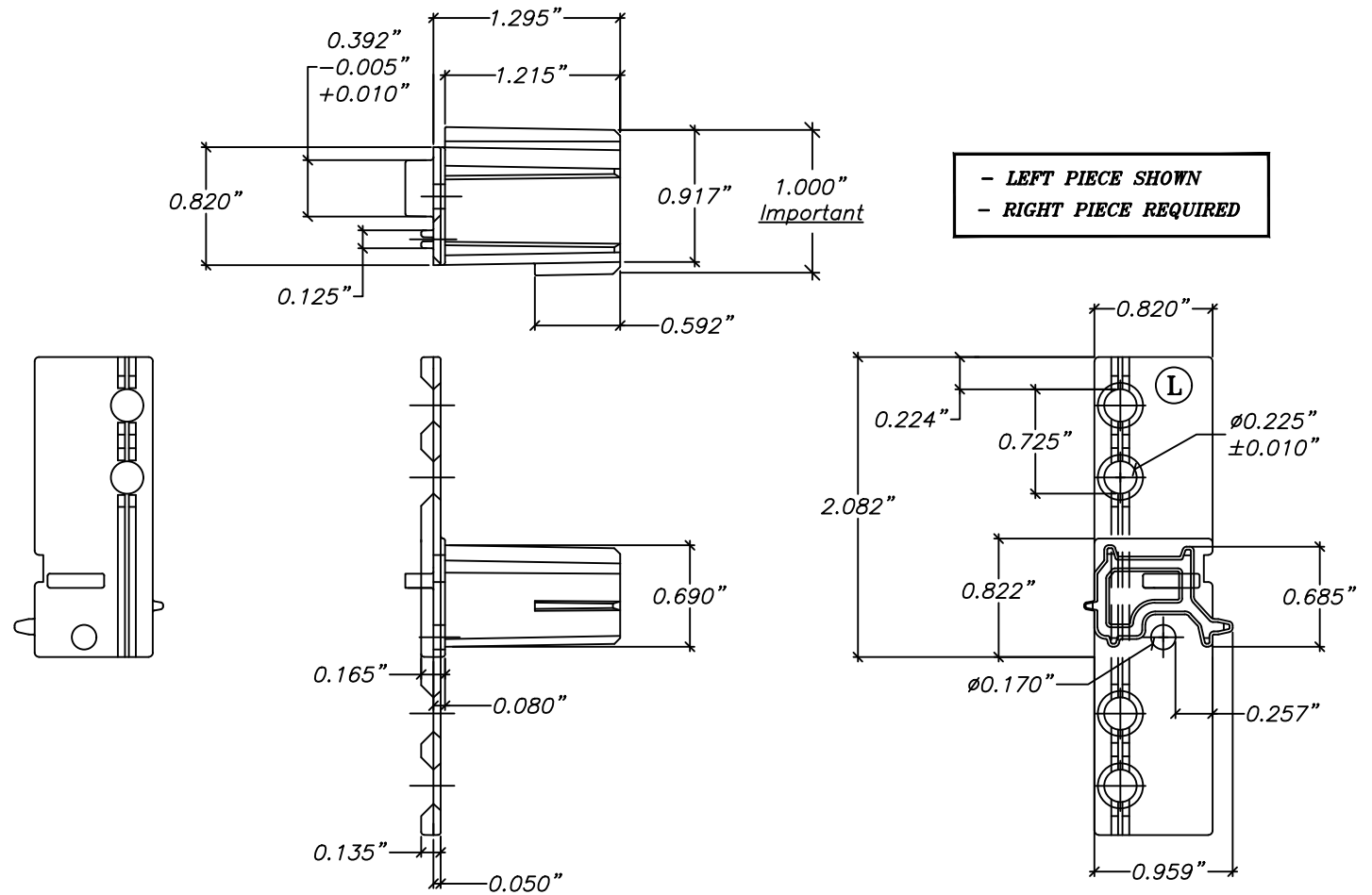
ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM



30 PIVOT BAR (9514)



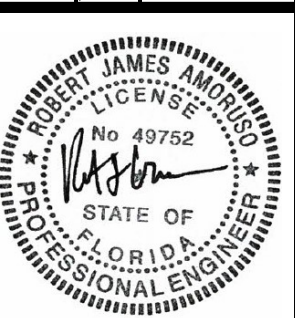
33 SASH CORNER BRACKET (EGSCB1)



78 MEETING RAIL ANCHOR (EGMRA1)

PROJECT NO.	ACE-2025-303	REV	DESCRIPTION	DATE	BY

ECO GLASS 144 HOPE STREET LONGWOOD, FL 32750	DRAWN BY: RJA	DATE: 4/1/2025	DRAWING NO: ECOGLASS018-HVHZ	SHEET: 9 OF 9
TITLE: SERIES S-3450 PVC SINGLE HUNG WINDOW, IMPACT, HVHZ COMPONENTS - HARDWARE	SCALE: N.T.S.	REV: ---		



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Amoruso
Date: 2025.07.04
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