

ECO GLASS LLC

SERIES S-3770 SINGLE HUNG WINDOW

INSTALLATION ANCHORAGE DETAILS

GENERAL NOTES:

- THIS PRODUCT HAS BEEN EVALUATED TO COMPLY WITH THE CURRENT PROVISIONS OF THE FLORIDA BUILDING CODE (FBC) EXCLUDING THE HIGH VELOCITY HURRICANE ZONES (HVHZ) AND IS BASED ON TESTING CONDUCTED TO AAMA/WDMA/CSA 101/I.S.2/A440-11 DOCUMENTED IN TEST REPORT NO. A1-04671-11 BY UL CLEB.
- ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE, MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- 1X BUCK OVER MASONRY AND/OR CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED 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.
- 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.
- IN AREAS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST, USE OF AN IMPACT PROTECTIVE SYSTEM COMPLYING WITH THE FBC REQUIREMENTS FOR WINDBORNE DEBRIS REGIONS SHALL BE REQUIRED:
- MATERIALS:
 - FRAME: RIGID VINYL
- GLAZING:
 - INSULATING GLASS UNIT 22.2 MM (0.87") O.A. THICKNESS
 - FIXED GLAZING
 - GLASS THICKNESS 4MM (5/32") ANNEALED
 - AIR GAP 14.2MM (0.56")
 - SASH (OPERABLE) GLAZING
 - GLASS THICKNESS 3MM (1/8") ANNEALED
 - AIR GAP 16.2MM (0.64")
 - OVERALL (O.A.) THICKNESS AND AIR GAP CAN VARY BASED ON SPACER USED AND WILL NOT AFFECT GLAZING STRENGTH.
 - FOR PRODUCTS SMALLER THAN THE TESTED SPECIMEN, GLAZING IS PERMITTED TO BE THINNER AND/OR WEAKER THAN THAT SHOWN IN GENERAL NOTE 7.1 IN ACCORDANCE WITH AAMA/WDMA/CSA 101/I.S.2/A440-11, SECTION 10.2.3.4.1.
 - GLASS MEETS THE REQUIREMENTS OF ASTM E1300-12AE1.
- PANEL OPERABILITY DESIGNATIONS: X = OPERABLE AND O = FIXED
- 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:

- INSTALL ONE (1) ANCHOR AS INDICATED IN THE SECTION DETAILS ON SHEETS 4 THROUGH 7 AT EACH LOCATION SHOWN IN THE ELEVATION ON SHEET 2.
 - LOCATION TOLERANCE IS +/- 1/2".
 - FOR WINDOWS SMALLER THAN THAT SHOWN IN SHEET 2 ELEVATION, ANCHOR QUANTITIES CAN BE REDUCED WHILE MAINTAINING THE ANCHOR SPACING AND EDGE DISTANCE SHOWN.
- 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".
- SEE INSTALLATION ANCHOR SCHEDULE ON THIS SHEET FOR ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE REQUIREMENTS.
 - INSTALLATION ANCHORS SHALL BE CORROSION RESISTANT OR HAVE CORROSION RESISTANT COATING.
 - SEE INSTALLATION NOTE 4 FOR MINIMUM SUBSTRATE PROPERTIES.
- INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - WOOD - MINIMUM SPECIFIC GRAVITY OF 0.42 (NON-HVHZ).
 - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.
 - MASONRY - STRENGTH CONFORMANCE TO ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF).
 - STEEL STUD - STRENGTH CONFORMING TO MIN. Fu = 33 KSI AND Ft = 45 KSI. MINIMUM THICKNESS 20 GA.

PERFORMANCE RATING		
MAXIMUM WINDOW SIZE (IN)	DESIGN PRESSURE RATING (PSF)	IMPACT RATING
48 x 108	45	NONE

INSTALLATION ANCHORAGE SCHEDULE			
SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBED. (IN)	MIN. EDGE DIST. (IN)
WOOD (SG = 0.42 MIN.)	NO. 10 PAN HEAD WOOD SCREW, GR. 2 STRENGTH	1 3/8	3/4
CONCRETE (2.5 KSI MIN.)	3/16" HH ITW TAPCON	1 1/2	1 1/8
MASONRY (ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF))	3/16" HH ITW TAPCON	1	2
STEEL STUD, 20 GA OR GREATER THICKNESS, MIN. Fu = 33 ksi AND Ft = 45 ksi	NO. 10 SELF-DRILLING SHEET METAL SCREW	FULL THICKNESS OF MEMBER PLUS 3 FULL THREAD LENGTHS PAST INTERIOR	1/2

TABLE OF CONTENTS	
SHEET	DESCRIPTION
1	INSTALLATION AND GENERAL NOTES
2	EXTERIOR ELEVATION AND ANCHORAGE
3	INSTALLATION DETAILS A & B
4	VERTICAL SECTION A - THROUGH FRAME INSTALLATION
5	VERTICAL SECTION A - CLIP INSTALLATION
6	HORIZONTAL SECTION C - THROUGH FRAME INSTALLATION
7	HORIZONTAL SECTION C - CLIP INSTALLATION
8	BILL OF MATERIALS & VERTICAL COMPONENT CROSS-SECTION
9	HORIZONTAL COMPONENT CROSS-SECTIONS & CLIP

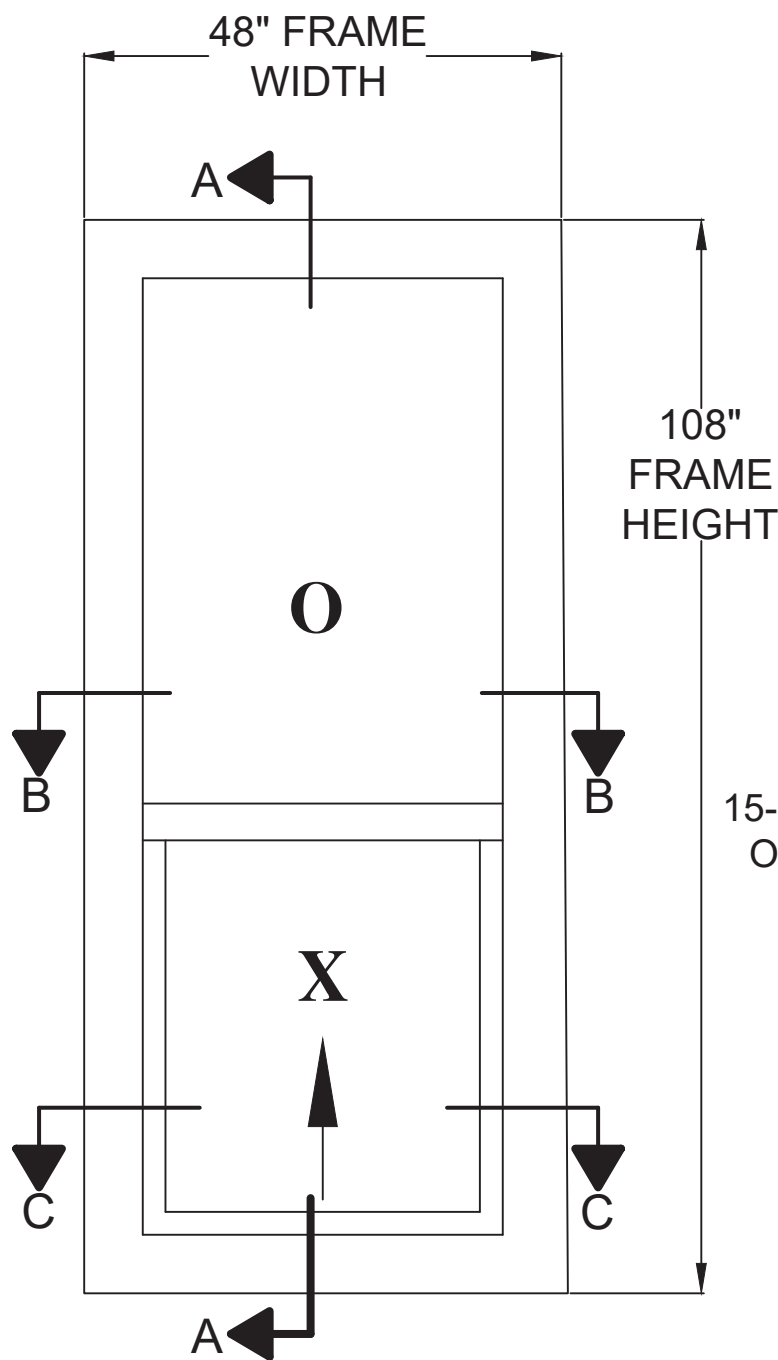
PROJECT NO. ACE-2020-106

ECO GLASS, LLC 144 HOPE STREET LONGWOOD, FL 32750		DRAWN BY: RJA	DATE: 8/20/20
SERIES S-3770 SINGLE HUNG WINDOW INSTALLATION AND GENERAL NOTES		SCALE: N.T.S.	DRAWING NO: ECOGLASS003
		REV: ---	SHEET: 1 OF 9

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

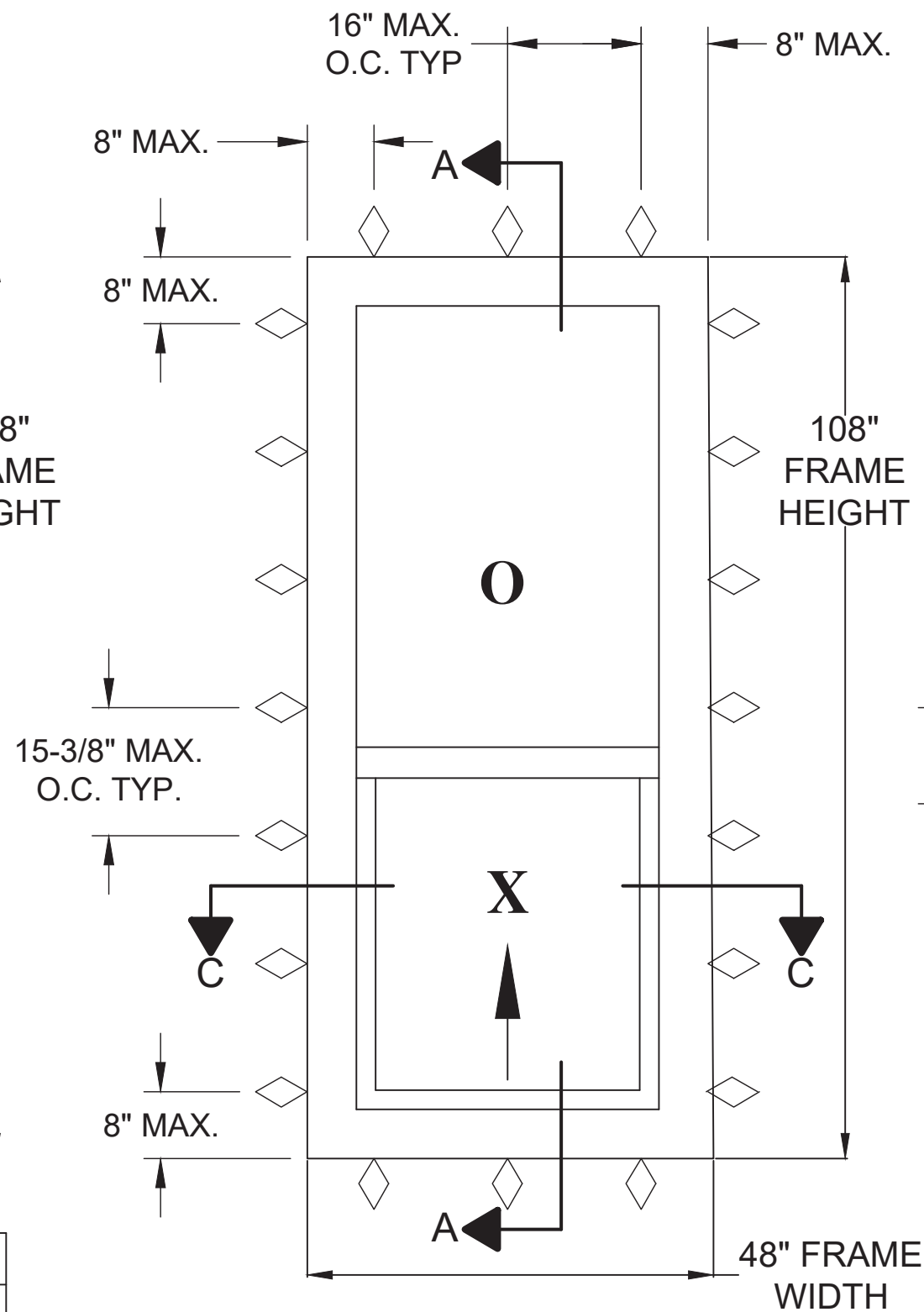
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SUITE NO. 148
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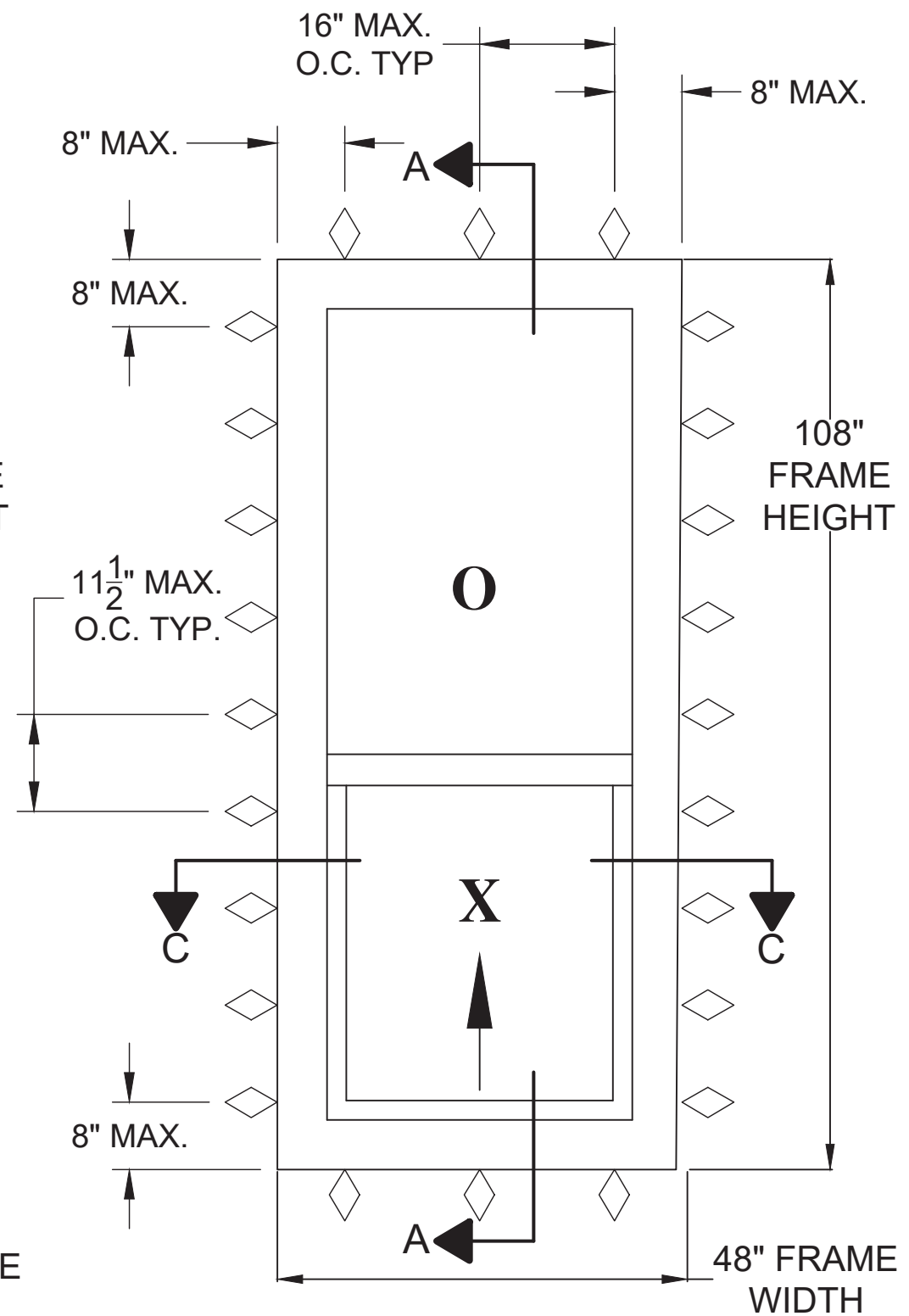
MAXIMUM SIZES	
FRAME	48" X 108"
SASH	45.27" X 35.82"
DLO - SASH	42.13" X 32.68"
DLO - FIXED	42.72" X 68.11"

SERIES S-3770 SINGLE HUNG WINDOW
EXTERIOR VIEW



BLOCK/EQUAL LEG THROUGH FRAME INSTALLATION
EXTERIOR VIEW

◇ ANCHOR/FASTENER

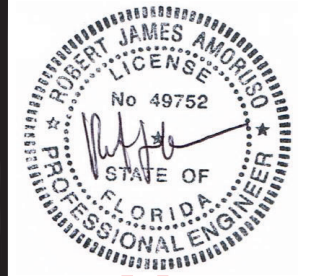


BLOCK/EQUAL LEG CLIP INSTALLATION
EXTERIOR VIEW

PROJECT NO. ACE-2020-106	REV	DESCRIPTION	DATE	BY

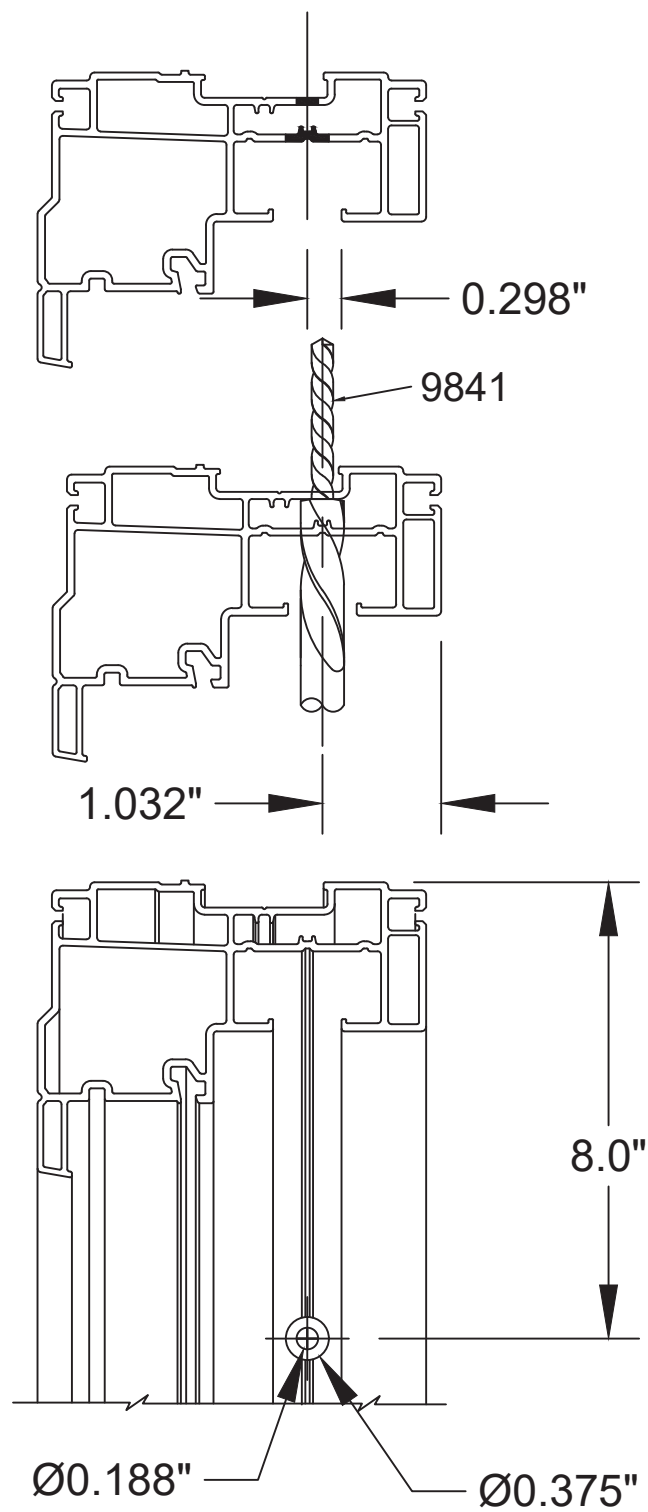
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	DRAWN BY:	RJA
	SCALE:	N.T.S.
	DATE:	8/20/20
	DRAWING NO.:	ECOGLOSS003
	REV:	---
	SHEET:	2 OF 9
321-207-0507 info@vk-ecoglass.com		

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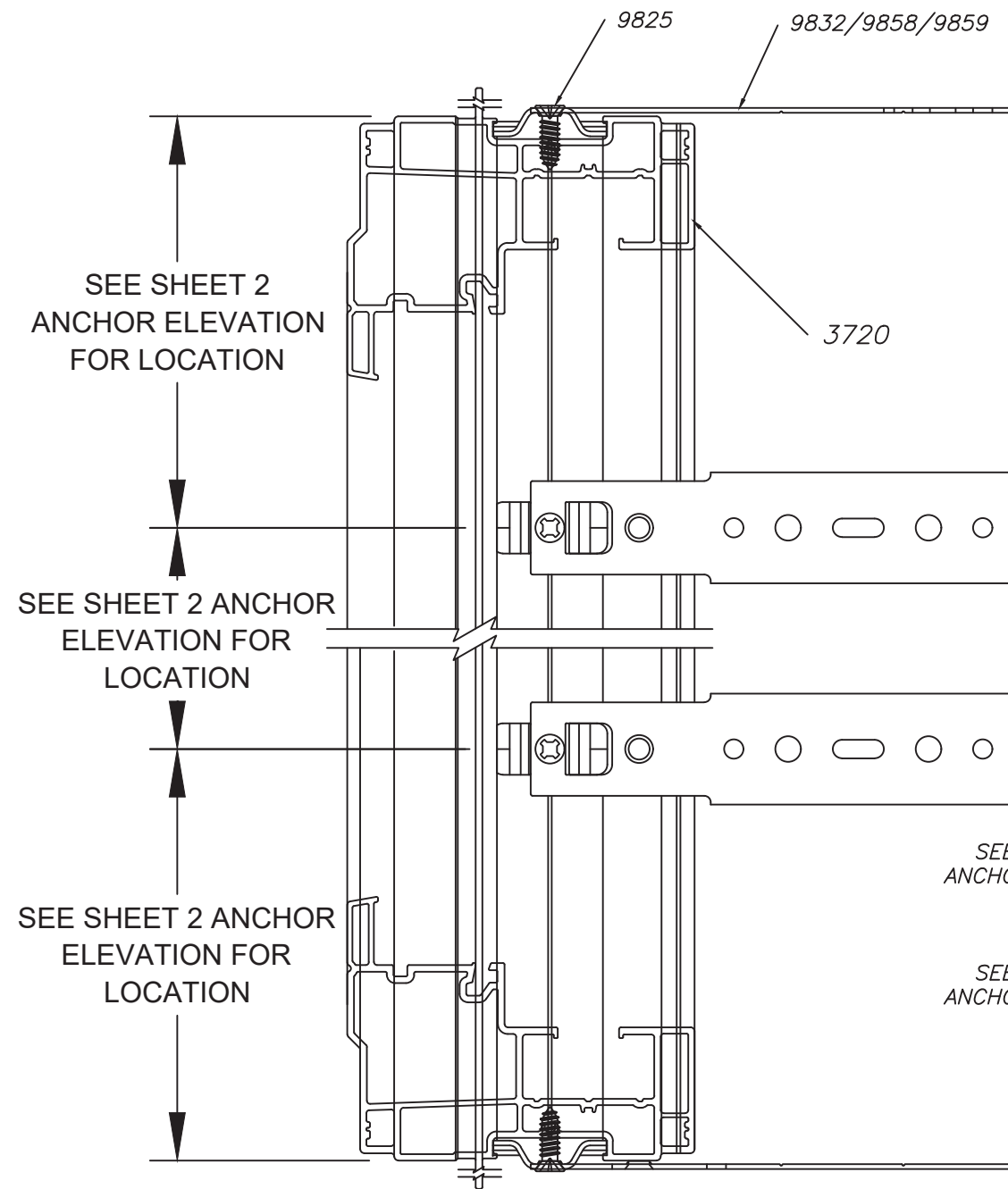


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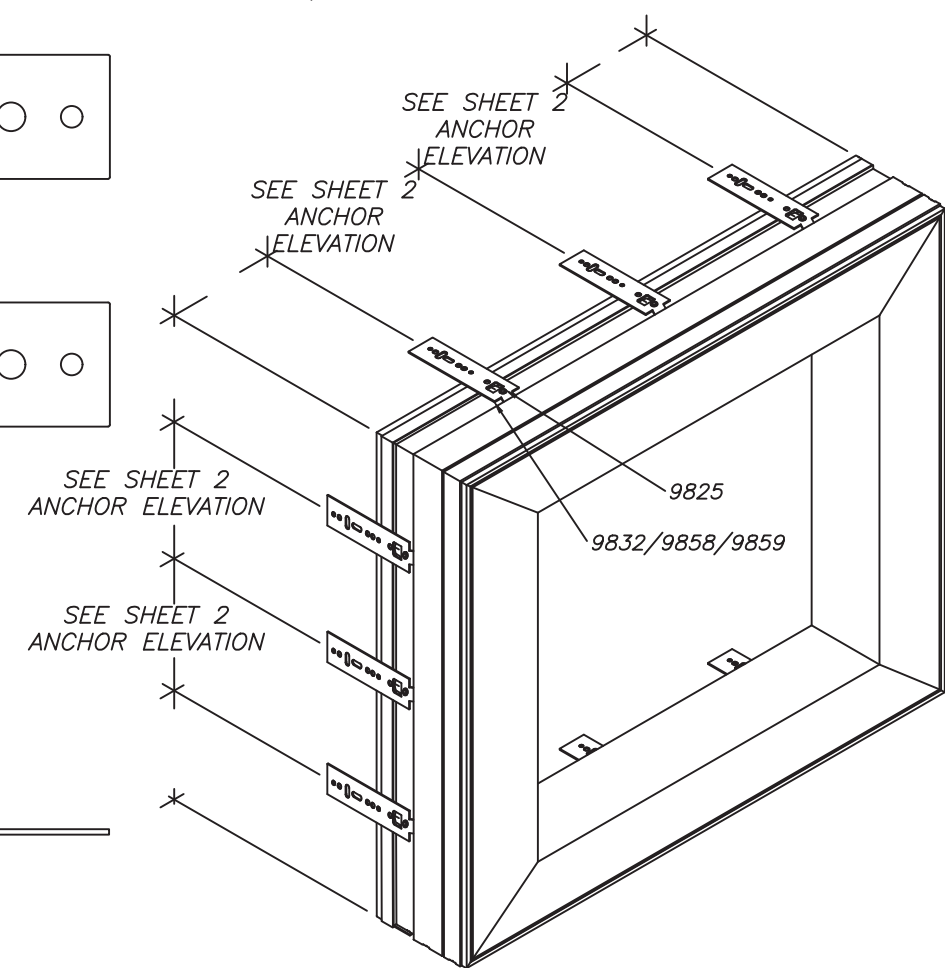
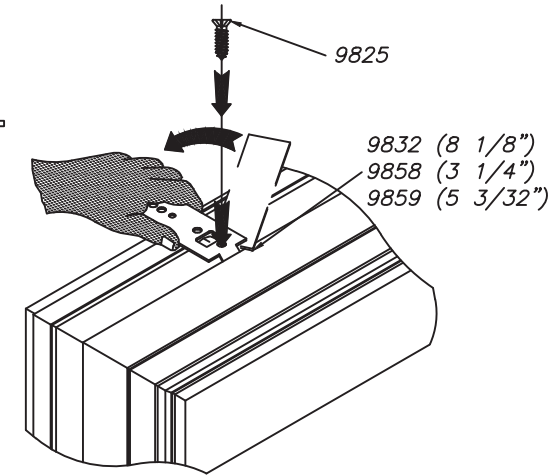
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**THROUGH-FRAME
INSTALLATION DETAIL A**



CLIP INSTALLATION DETAIL B



PROJECT NO. ACE-2020-106

ECO GLASS, LLC
144 HOPE STREET
LONGWOOD, FL 32750

TITLE: SERIES S-3770 SINGLE HUNG WINDOW
INSTALLATION DETAILS A & B

DRAWN BY: RJA

SCALE: N.T.S.

REV: ---



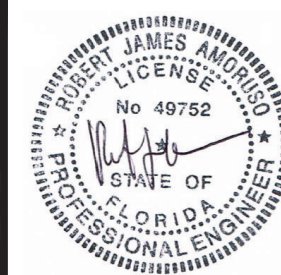
321-207-0507 | info@vk-ecoglass.com

DATE: 8/20/20

DRAWING NO: ECOGLASS003

SHEET: 3 OF 9

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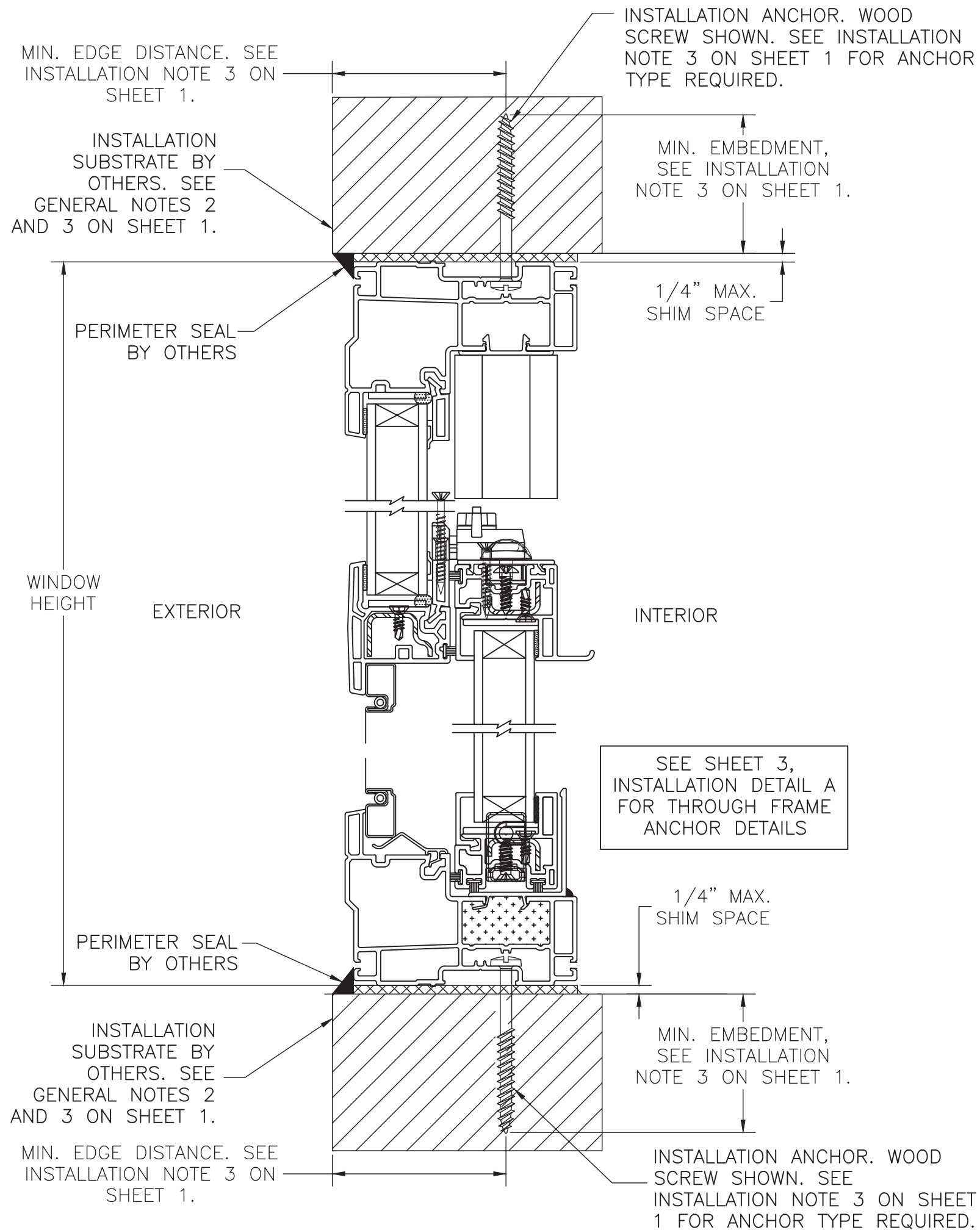


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REV	DESCRIPTION	DATE	BY

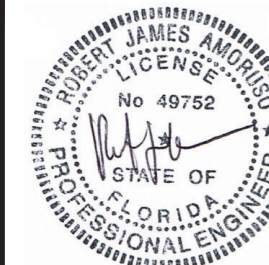
**VERTICAL CROSS SECTION A-A
THROUGH FRAME INSTALLATION**
WOOD FRAMING, 2X WOOD BUCK,
CONCRETE/MASONRY OR STEEL STUD APPROVED
(CROSS SECTION B-B INSTALLATION SAME)



PROJECT NO. ACE-2020-106

ECO GLASS, LLC 144 HOPE STREET LONGWOOD, FL 32750		DRAWN BY: RJA	DATE: 8/20/20	DESCRIPTION	BY
TITLE: SERIES S-3770 SINGLE HUNG WINDOW VERTICAL SECTION A - THROUGH FRAME INSTALLATION		SCALE: N.T.S.	DRAWING NO: ECOGLOSS003	REV	DATE
321-207-0507 info@vk-ecoglass.com		REV:	SHEET:	4 OF 9	

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INSTALLATION ANCHOR. WOOD SCREW SHOWN. SEE INSTALLATION NOTE 3 ON SHEET 1 FOR ANCHOR TYPE REQUIRED.

MIN. EDGE DISTANCE. SEE INSTALLATION NOTE 3 ON SHEET 1.

MIN. EMBEDMENT, SEE INSTALLATION NOTE 3 ON SHEET 1.

NOTE 1: INSTALLATION CLIP MAY BE TRIMMED TO ACCOMMODATE INTERIOR FINISHING.
NOTE 2: INSTALLATION CLIP MAY BE BENT TO ACCOMMODATE INTERIOR FINISHING.

INSTALLATION SUBSTRATE BY OTHERS. SEE GENERAL NOTES 2 AND 3 ON SHEET 1.

INSTALLATION ANCHOR. WOOD SCREW SHOWN. SEE INSTALLATION NOTE 3 ON SHEET 1 FOR ANCHOR TYPE REQUIRED.

INSTALLATION SUBSTRATE BY OTHERS. SEE GENERAL NOTES 2 AND 3 ON SHEET 1.

WINDOW HEIGHT

PERIMETER SEAL BY OTHERS

1/4" MAX. SHIM SPACE
9832/9858/9859 INSTALLATION CLIP

MIN. EMBEDMENT, SEE INSTALLATION NOTE 3 ON SHEET 1.

MIN. EDGE DISTANCE. SEE INSTALLATION NOTE 3 ON SHEET 1.

SEE SHEET 3, INSTALLATION DETAIL B FOR CLIP ANCHOR DETAILS

EXTERIOR
PERIMETER SEAL BY OTHERS

1/4" MAX. SHIM SPACE

9832/9858/9859 INSTALLATION CLIP

INTERIOR

EXTERIOR

INTERIOR

INSTALLATION ANCHOR. WOOD SCREW SHOWN. SEE INSTALLATION NOTE 3 ON SHEET 1 FOR ANCHOR TYPE REQUIRED.

**VERTICAL CROSS SECTION A-A
ALTERNATE CLIP INSTALLATION
(HEAD SHOWN, SILL SAME)**

WOOD FRAMING, 2X WOOD BUCK OR STEEL STUD APPROVED (CONCRETE/MASONRY NOT RECOMMENDED)
(CROSS SECTION B-B INSTALLATION SAME)
(SEE NOTE 1 & 2 THIS SHEET)

PERIMETER SEAL BY OTHERS

9832/9858/9859 INSTALLATION CLIP

1/4" MAX. SHIM SPACE

MIN. EMBEDMENT, SEE INSTALLATION NOTE 3 ON SHEET 1.

INSTALLATION SUBSTRATE BY OTHERS. SEE GENERAL NOTES 2 AND 3 ON SHEET 1.

MIN. EDGE DISTANCE. SEE INSTALLATION NOTE 3 ON SHEET 1.

**VERTICAL CROSS SECTION A-A
CLIP INSTALLATION**

WOOD FRAMING, 2X WOOD BUCK, CONCRETE/MASONRY OR STEEL STUD APPROVED
(CROSS SECTION B-B INSTALLATION SAME)
(SEE NOTE 1 THIS SHEET)

PROJECT NO. ACE-2020-106

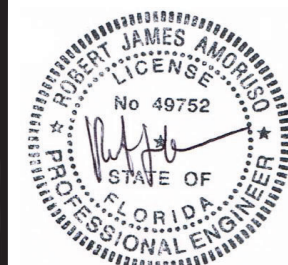
ECO GLASS, LLC
144 HOPE STREET
LONGWOOD, FL 32750

TITLE: SERIES S-3770 SINGLE HUNG WINDOW
VERTICAL SECTION A - CLIP INSTALLATION

DATE:	8/20/20
DRAWN BY:	RJA
SCALE:	N.T.S.
DRAWING NO.:	ECOGLOSS003
REV.:	---
SHEET:	5 OF 9

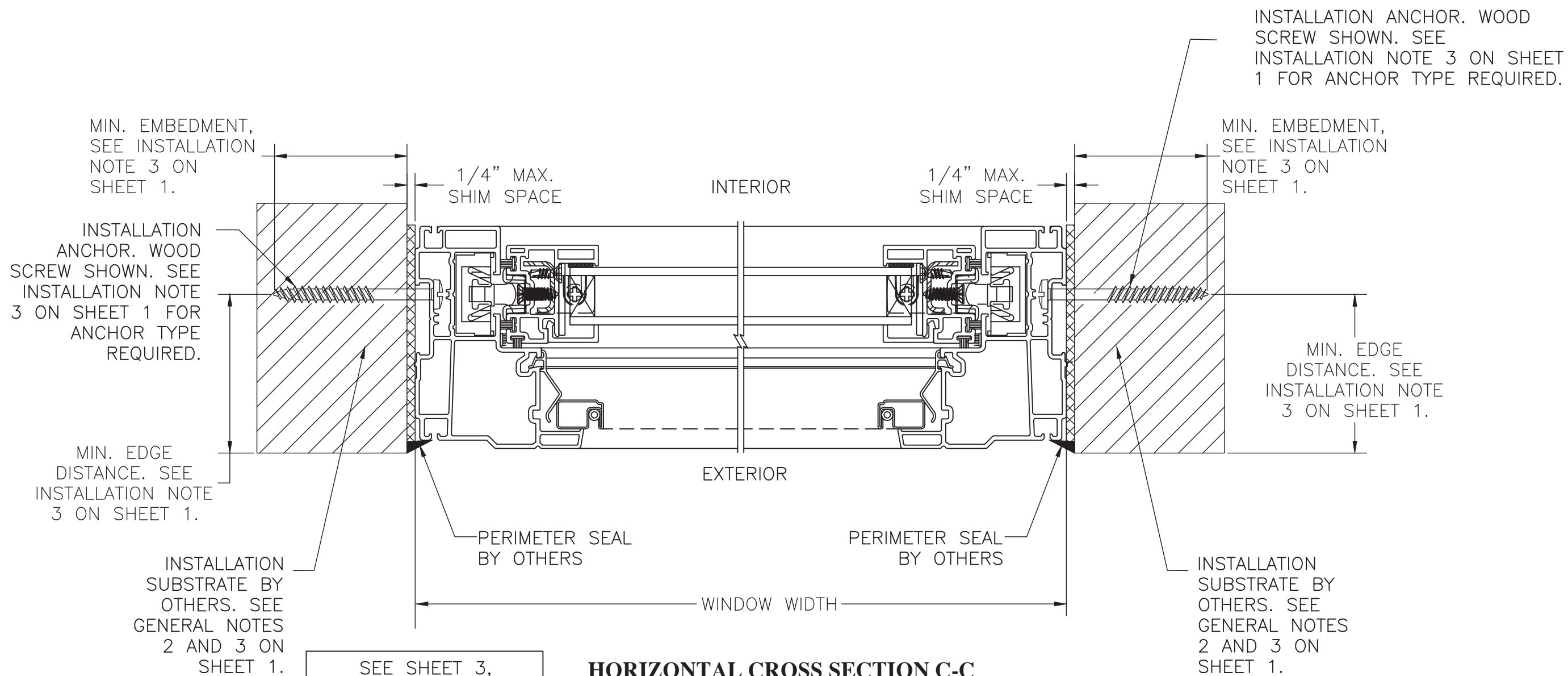


Robert J. Amoruso, P.E.
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Amoruso
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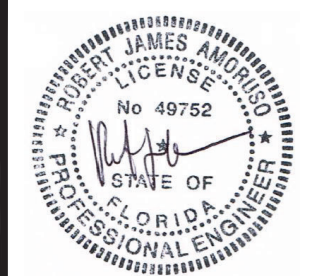
SEE SHEET 3, INSTALLATION DETAIL A FOR THROUGH FRAME ANCHOR DETAILS

HORIZONTAL CROSS SECTION C-C
 WOOD FRAMING, 2X WOOD BUCK,
 CONCRETE/MASONRY OR STEEL STUD APPROVED

PROJECT NO. ACE-2020-106

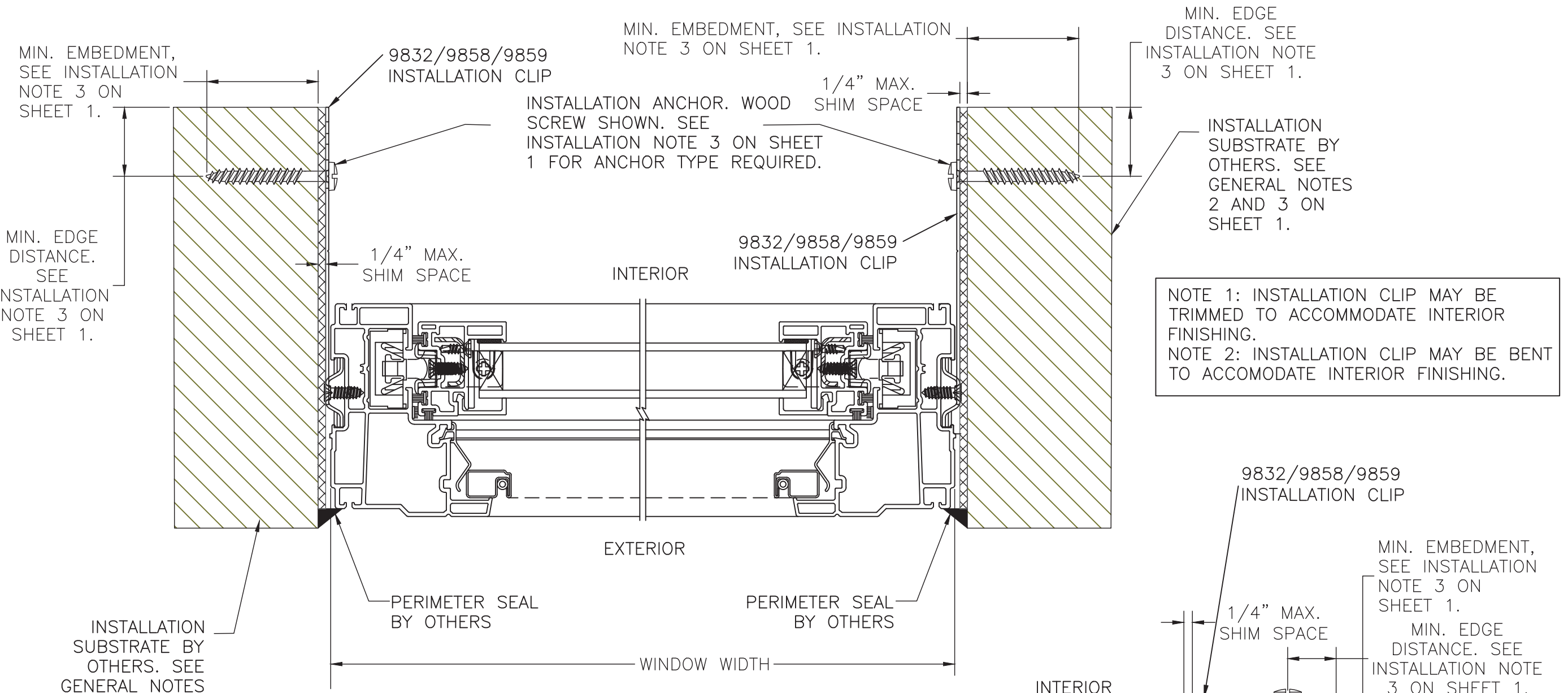
ECO GLASS, LLC 144 HOPE STREET LONGWOOD, FL 32750		DATE: 8/20/20	DRAWING NO: ECOGLASS003	REV: 6 OF 9
TITLE: HORIZONTAL SECTION C - THROUGH FRAME INSTALLATION		DRAWN BY: RJA	SCALE: N.T.S.	REV: ---
 <small>ADVANCED FLORIDA WINDOW SOLUTION</small> <small>321-207-0507 info@vk-ecoglass.com</small>				

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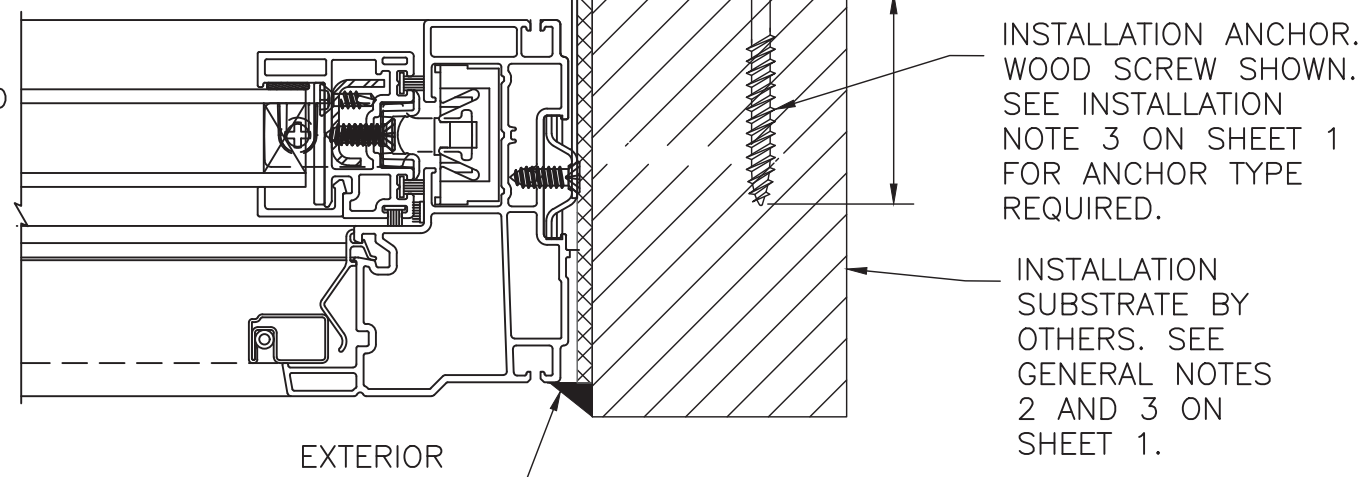
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NOTE 1: INSTALLATION CLIP MAY BE TRIMMED TO ACCOMMODATE INTERIOR FINISHING.
 NOTE 2: INSTALLATION CLIP MAY BE BENT TO ACCOMMODATE INTERIOR FINISHING.

HORIZONTAL CROSS SECTION C-C
 WOOD FRAMING, 2X WOOD BUCK,
 CONCRETE/MASONRY OR STEEL STUD APPROVED

SEE SHEET 3,
 INSTALLATION DETAIL
 B FOR CLIP ANCHOR
 DETAILS



HORIZONTAL CROSS SECTION C-C
ALTERNATE CLIP INSTALLATION
(RIGHT JAMB SHOWN, LEFT JAMB SAME)
 WOOD FRAMING, 2X WOOD BUCK OR STEEL STUD
 APPROVED (CONCRETE/MASONRY NOT RECOMMENDED)
 (SEE NOTE 1 & 2 THIS SHEET)

PROJECT NO.	DATE	DESCRIPTION	REV	BY
ACE-2020-106				

ECO GLASS, LLC 144 HOPE STREET LONGWOOD, FL 32750	DRAWN BY: RJA SCALE: N.T.S. REV: ---	DATE: 8/20/20 DRAWING NO: ECOGLASS003 SHEET: 7 OF 9
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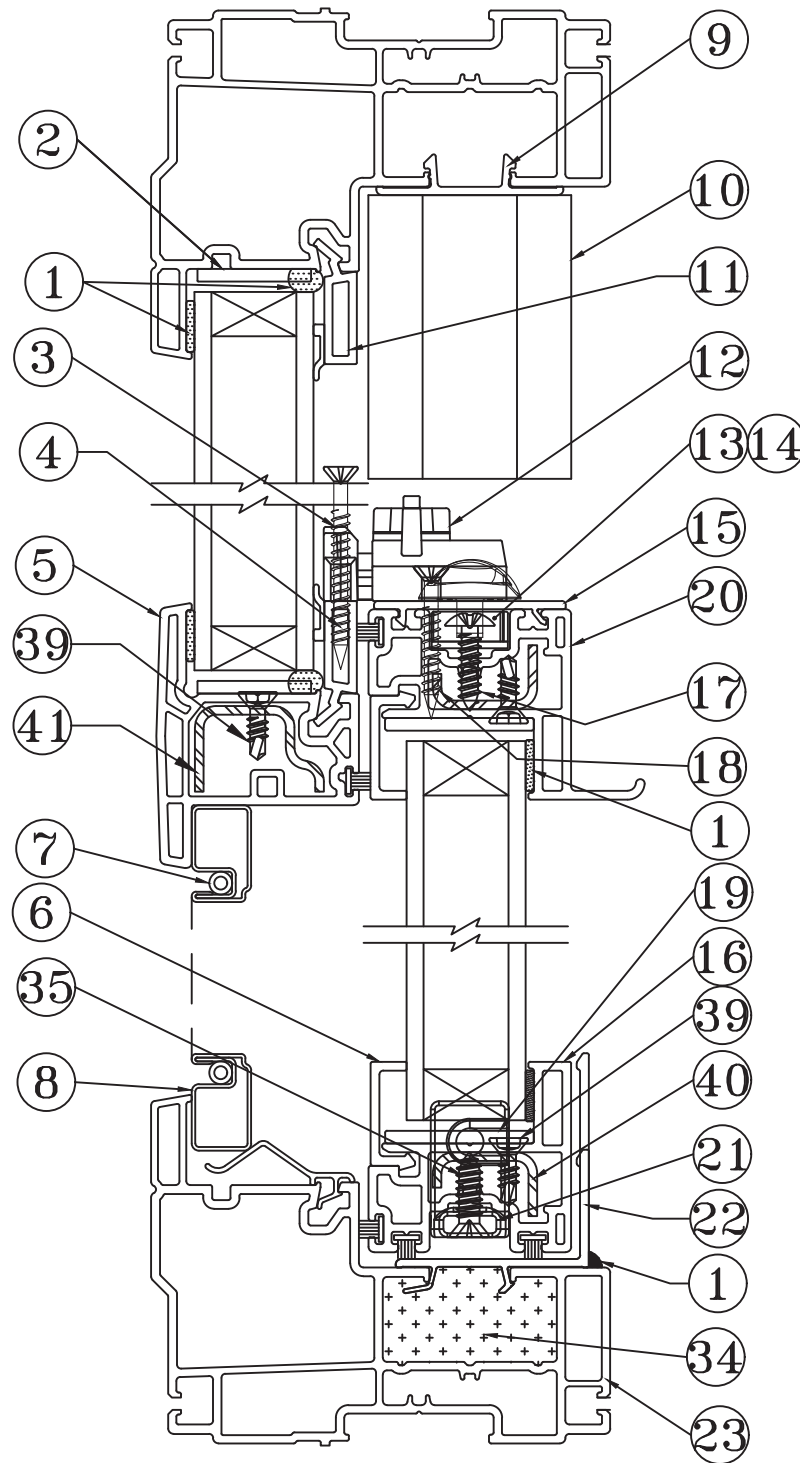


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Item	PART No.	ITEM DESCRIPTION	MANUFACTURERS
1		Sealant	Various
2	9828	Setting block	P.H. Tech
3	45070	Keeper	Truth
4	9752	No. 6 x 1 1/2", flat head, Quadrex screw	P.H. Tech
5	5960	Fixed meeting rail	P.H. Tech
*	5770/5772/ 5793/5794/ 5796	Glazing bead	P.H. Tech
7	9679	Screen spline	Various
8	9680	Screen frame	Various
*	5827/5832	Covering cap	P.H. Tech
10	5872	Sash stopper	P.H. Tech
*	5800/5801/ 5803/5804	Glazing bead	P.H. Tech
12	17.65.xx.xxx	Cam lock	Truth
13	8855-R	Tilt latch assembly (Right)	P.H. Tech
14	8855-L	Tilt latch assembly (Left)	P.H. Tech
15	5826	Meeting rail covering cap	P.H. Tech
16	5760	Sash profile	P.H. Tech
17	9755	No. 8 x 5/8", truss head, Quadrex screw.	P.H. Tech
18	8943	No. 6 x 1 1/8", flat head, Quadrex screw	P.H. Tech
19	8851	Setting block	P.H. Tech
20	5762	Sash handle profile	P.H. Tech
*	8931/9514	Pivot bar	P.H. Tech
22	5865	Sash retainer "HP"	P.H. Tech
23	3723	Main frame	P.H. Tech
24	9502	Button	P.H. Tech
25	9756	No. 8-18 x 1", flat head, Quadrex screw	P.H. Tech
26	5828	Balance cover	P.H. Tech
27		Balance	Various
28	9774	Weatherstrip	Schlegel No. HF-7625-187
29	8932	Pivot shoe	P.H. Tech
30	9738	Sliding shoe	P.H. Tech
31	9854	No. 10-12 x 1/2", special No. 7 flat head, Quadrex screw.	P.H. Tech
32	5959	Screen clip	P.H. Tech
33		Glass	Various
34	9873	Corner block	P.H. Tech
35	9825	No. 10-12 x 5/8", special No. 7 flat head, Quadrex screw.	P.H. Tech
36	9820-L	Anchor (left)	P.H. Tech
37	9820-R	Anchor (Right)	P.H. Tech
38	8868	Weatherstrip	Schlegel No. PBAB-8325-187
39	9753	No. 7-19 x 1/2", flat head, Quadrex, type camtap Z, screw.	P.H. Tech
40	8854	Sash steel reinforcement (bottom, top, sides)	P.H. Tech
41	9536	Mullion steel reinforcement	P.H. Tech

* = Options



**VERTICAL CROSS
SECTION A-A**

PROJECT NO. ACE-2020-106

ECO GLASS, LLC
144 HOPE STREET
LONGWOOD, FL 32750

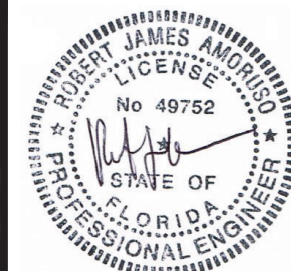
TITLE: SERIES S-3770 SINGLE HUNG WINDOW
BILL OF MATERIALS & VERTICAL COMPONENT CROSS-SECTION

DRAWN BY: RJA
SCALE: N.T.S.
REV: ---

DATE: 8/20/20
DRAWING NO: ECOGLASS003
SHEET: 8 OF 9



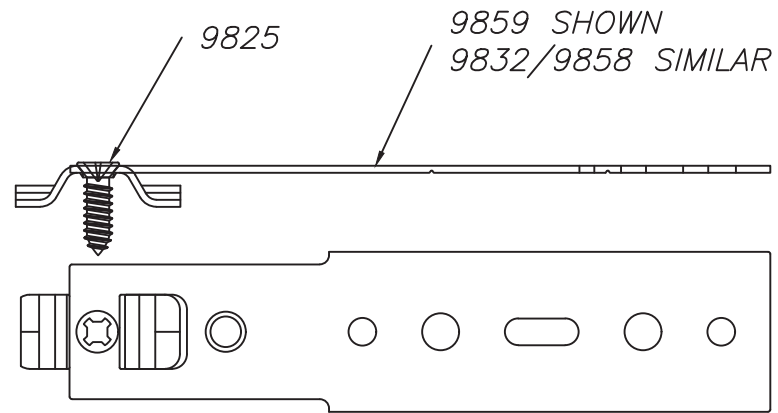
Robert J. Amoruso, P.E.
Florida P.E. No. 49752



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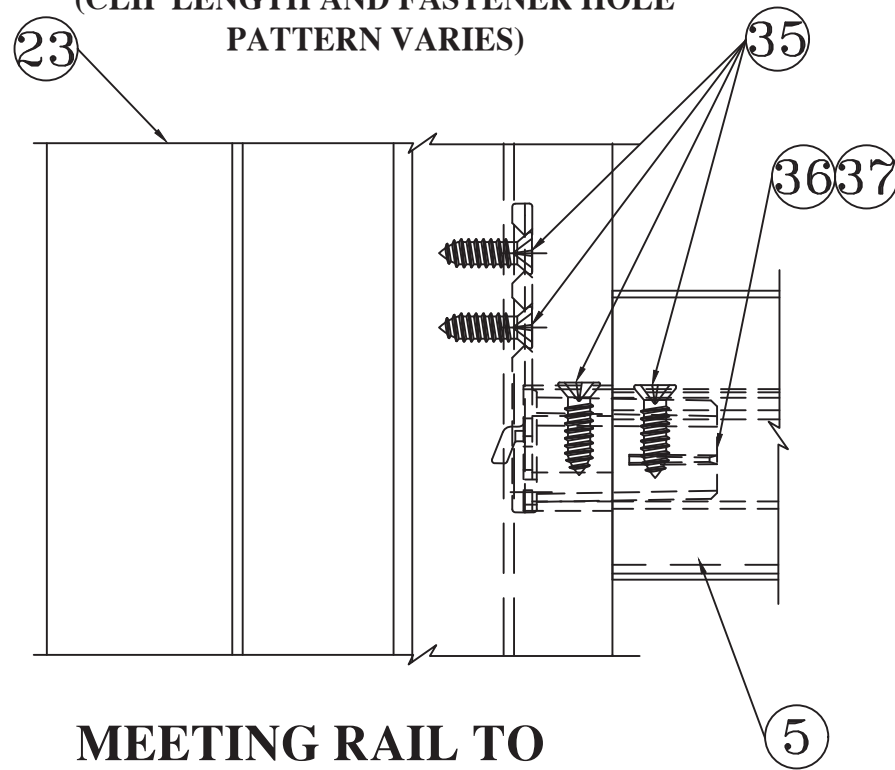
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SUITE NO. 148
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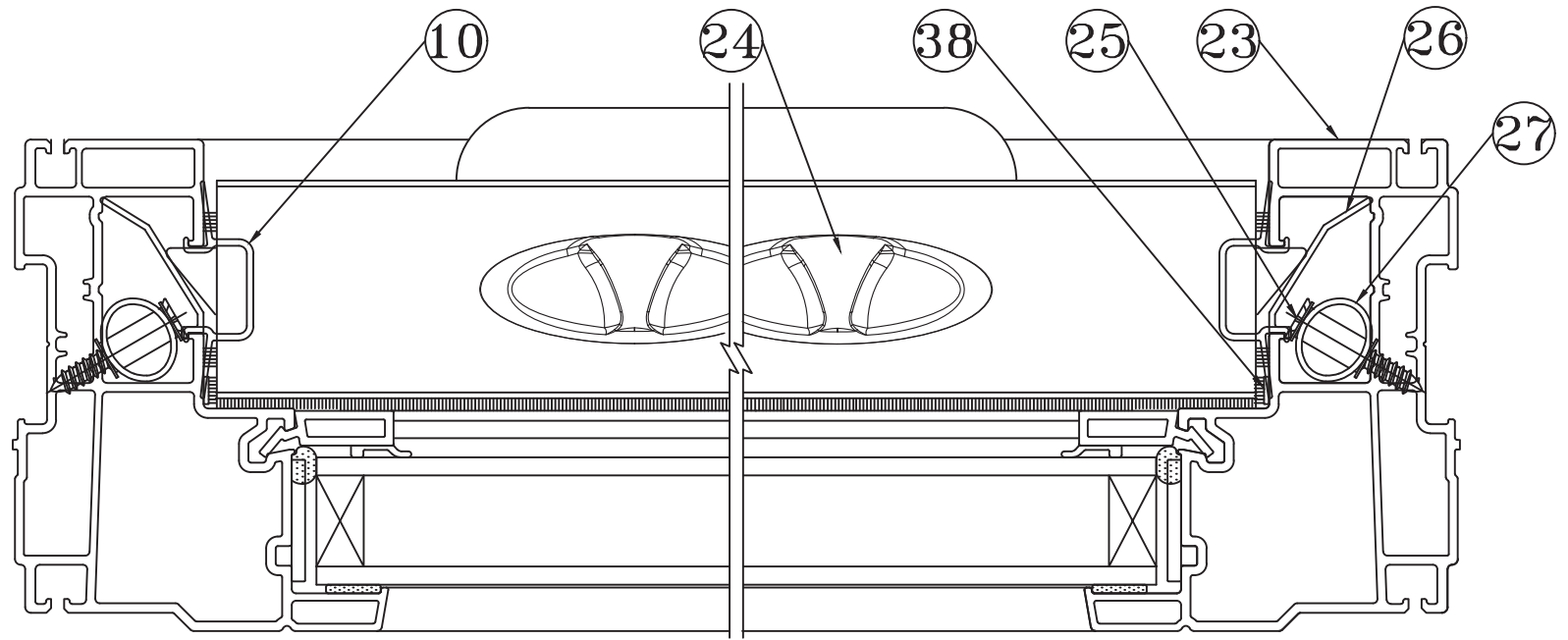


INSTALLATION CLIP
9859 SHOWN
9832 & 9858 SIMILAR

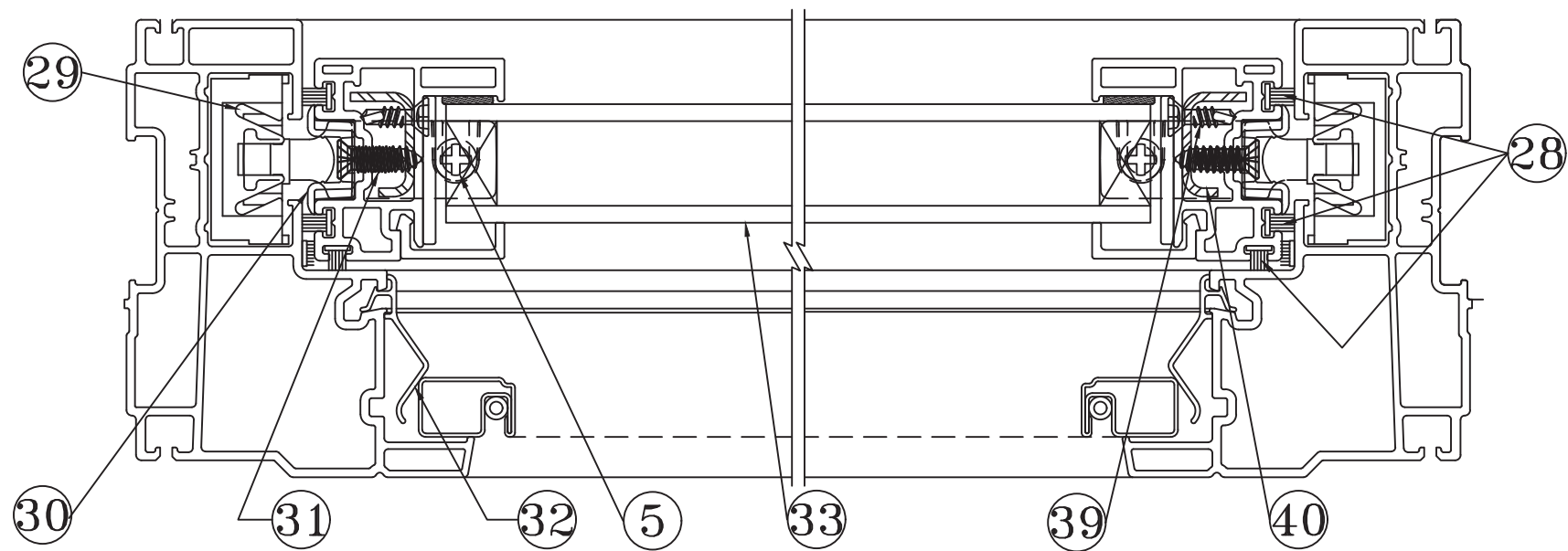
(CLIP LENGTH AND FASTENER HOLE
 PATTERN VARIES)



MEETING RAIL TO
FRAME
ANCHOR DETAIL



HORIZONTAL
CROSS SECTION B-B

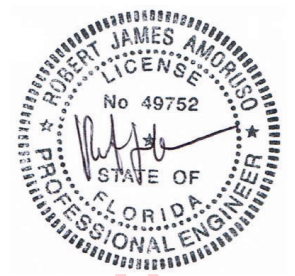


HORIZONTAL
CROSS SECTION C-C

PROJECT NO. ACE-2020-106

ECO GLASS, LLC 144 HOPE STREET LONGWOOD, FL 32750		DRAWN BY: RJA		DATE: 8/20/20	BY
TITLE: SERIES S-3770 SINGLE HUNG WINDOW HORIZONTAL COMPONENT CROSS-SECTIONS & CLIP		SCALE: N.T.S.	DRAWING NO: ECOGLASS003	REV	DATE
321-207-0507 info@vk-ecoglass.com		REV: --	SHEET: 9 OF 9		

Robert J. Amoruso, P.E.
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 Date: 2020.10.02
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