



Product Approval
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OFFICE OF THE
SECRETARY

FL #	FL41650-R1
Application Type	Revision
Code Version	2023
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Eco Window Systems
Address/Phone/Email	8502 NW 80th Street Suite 103 Medley, FL 33166 (305) 885-5299 jrosowski@pgtindustries.com
Authorized Signature	Jens Rosowski jrosowski@pgtindustries.com
Technical Representative	Lynn Miller, P.E.
Address/Phone/Email	1070 Technology Dr N Venice, FL 34275 (941) 486-0100 Ext 21142 lmiller@pgtindustries.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Windows
Subcategory	Casement
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer ☐ Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	A. Lynn Miller, P.E.
Florida License	PE-58705
Quality Assurance Entity	Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date	12/31/2032
Validated By	Steven M. Urich, PE ☒ Validation Checklist - Hardcopy Received
Certificate of Independence	FL41650_R1_COI_Cert of Independence.pdf
Referenced Standard and Year (of Standard)	Standard TAS 201, 202 & 203 Year 1994
Equivalence of Product Standards Certified By	
Sections from the Code	

Product Approval Method

Method 1 Option D

Date Submitted 10/19/2023
 Date Validated 10/19/2023
 Date Pending FBC Approval 10/27/2023
 Date Approved 12/13/2023

Summary of Products

FL #	Model, Number or Name	Description
41650.1	Eco-Guard Series 500	Large Missile, Aluminum Casement Window
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL41650_R1_II_CA500FPA - LMI REV A.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL41650_R1_AE_ECO_CA500LMI ENG EVAL REV A.pdf Created by Independent Third Party: No
41650.2	Eco-Guard Series 500	Small Missile, Aluminum Casement Window
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the enclosed documents for product performance information, anchorage details, and anchor type, size, and spacing information.		Installation Instructions FL41650_R1_II_CA500FPA - SMI REV A.pdf Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No Evaluation Reports FL41650_R1_AE_ECO_CA500SMI ENG EVAL REV A.pdf Created by Independent Third Party: No

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Product Approval Accepts:



ECO-GUARD SERIES-500
ALUMINUM OUTSWING CASEMENT WINDOW

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE
COMBINATIONS OF CASMT/CASMT OR CASEMENT WITH OTHER
WINDOW TYPES IN MODULES OF TWO OR MORE WINDOWS USING
F.B..C HVHZ APPROVED MULLIONS IN BETWEEN.
LOWER DESIGN PRESSURE FROM WINDOWS OR MULLION APPROVAL
WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE
REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY
HURRICANE ZONE (HVHZ).

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE
DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS
TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS
AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE
MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT
COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE
REQUIREMENTS OF THE FLORIDA BLDG. CODE & ADOPTED STANDARDS.

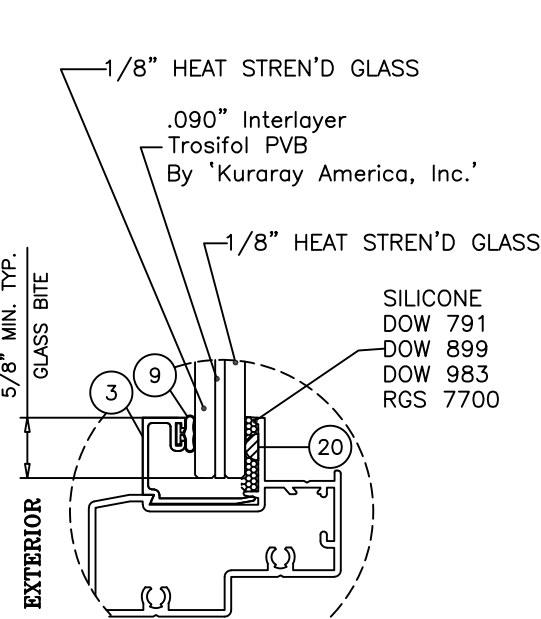
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION
FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY
OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR
WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,
AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOAD SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

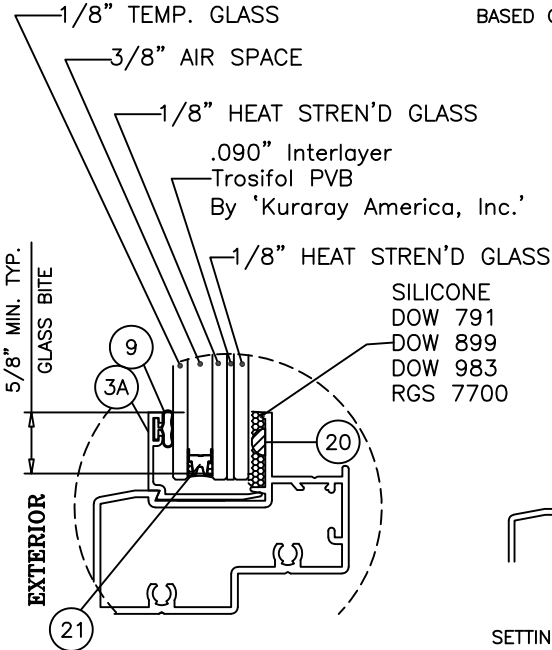
THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

MAXIMUM DESIGN LOAD RATING = + 70.0 PSF
(FOR SIZES SHOWN OR SMALLER) - 75.0 PSF

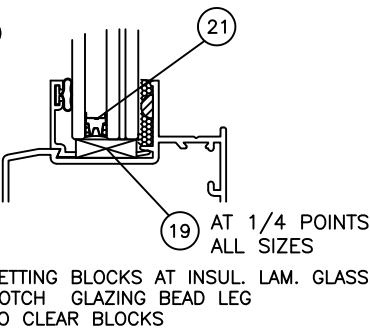
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS)



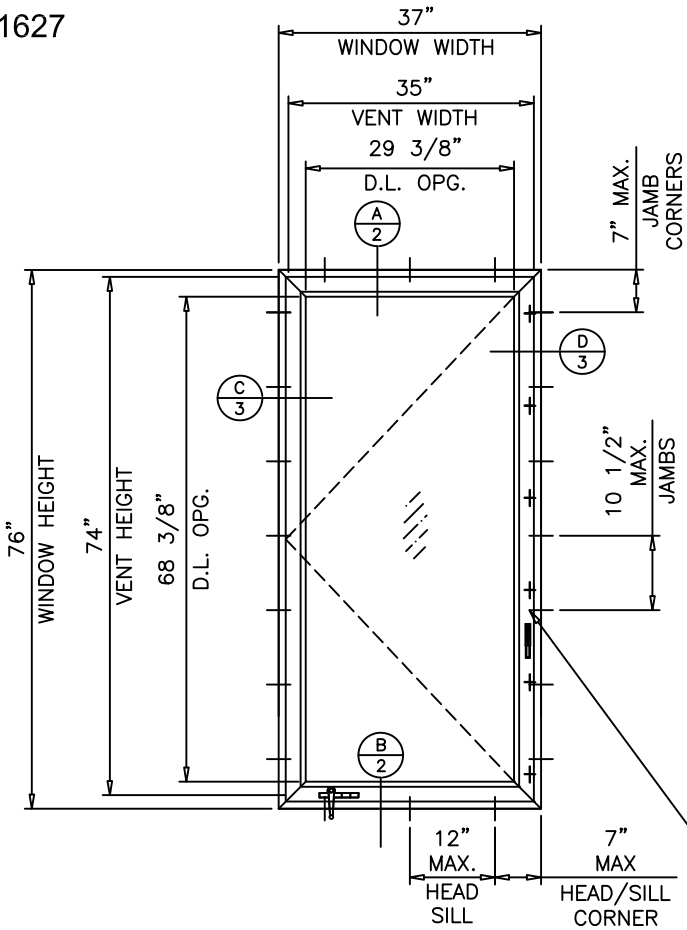
GLASS TYPE 'A'



GLASS TYPE 'AA'

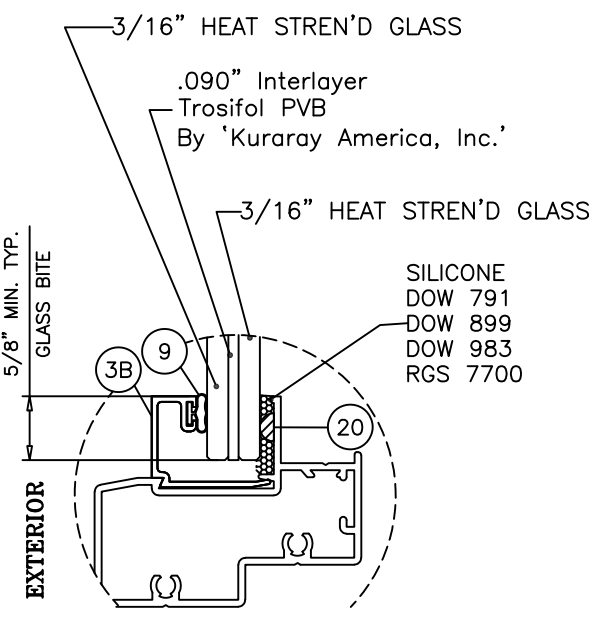


GLAZING OPTIONS

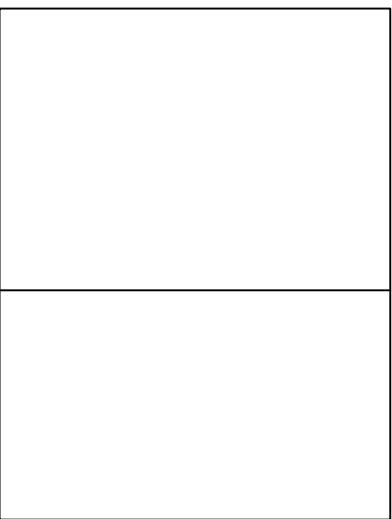


TYPICAL ELEVATION

WDW. HEIGHT UP TO	NO. OF KEEPERS AT SASH
26"	2
38 - 3/8"	3
50 - 5/8"	4
63"	5
76"	6

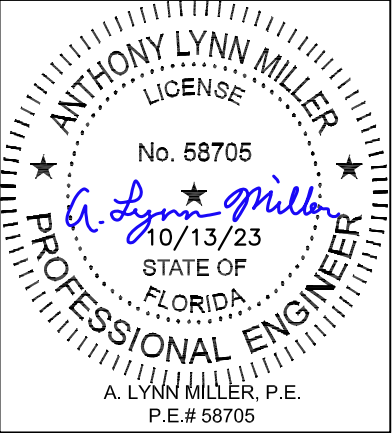


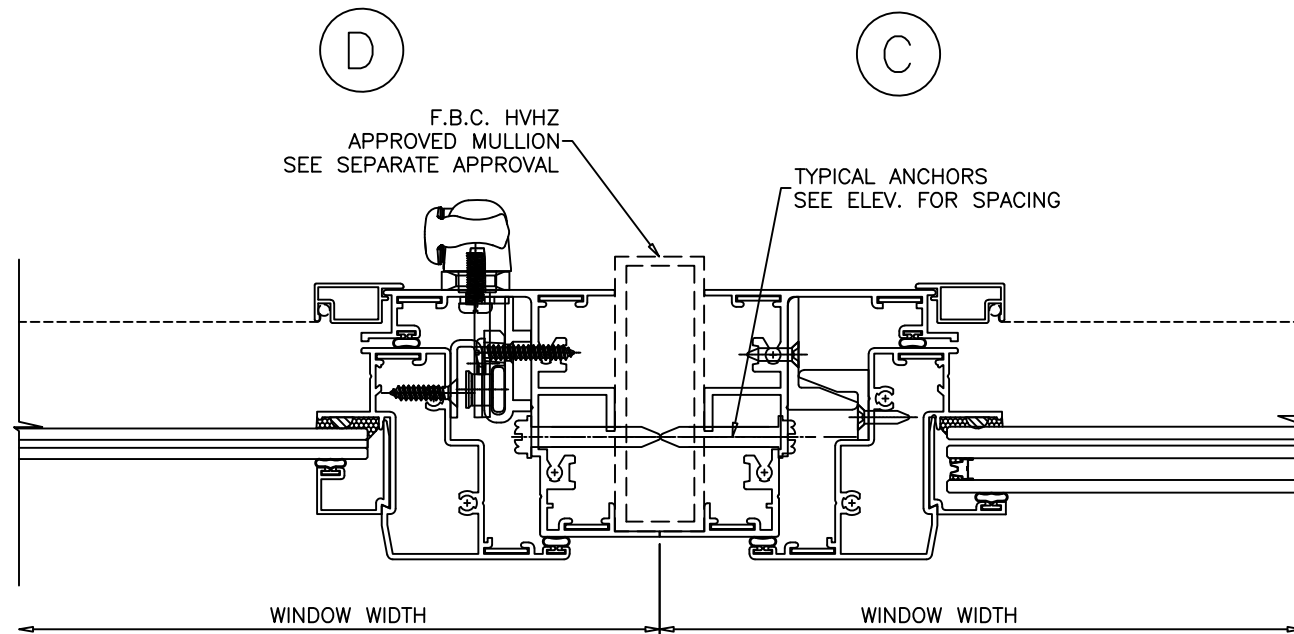
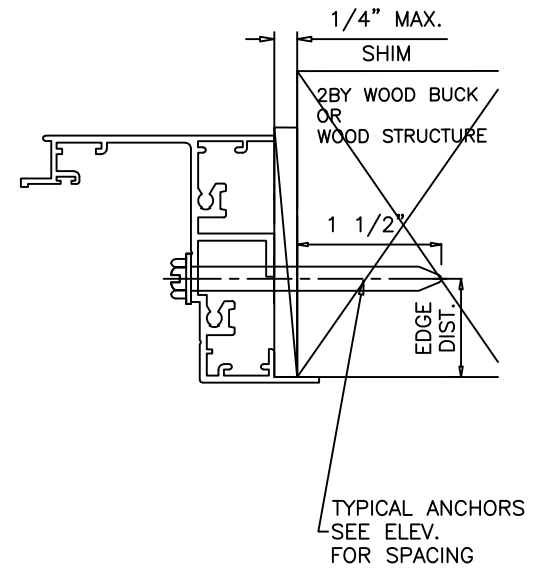
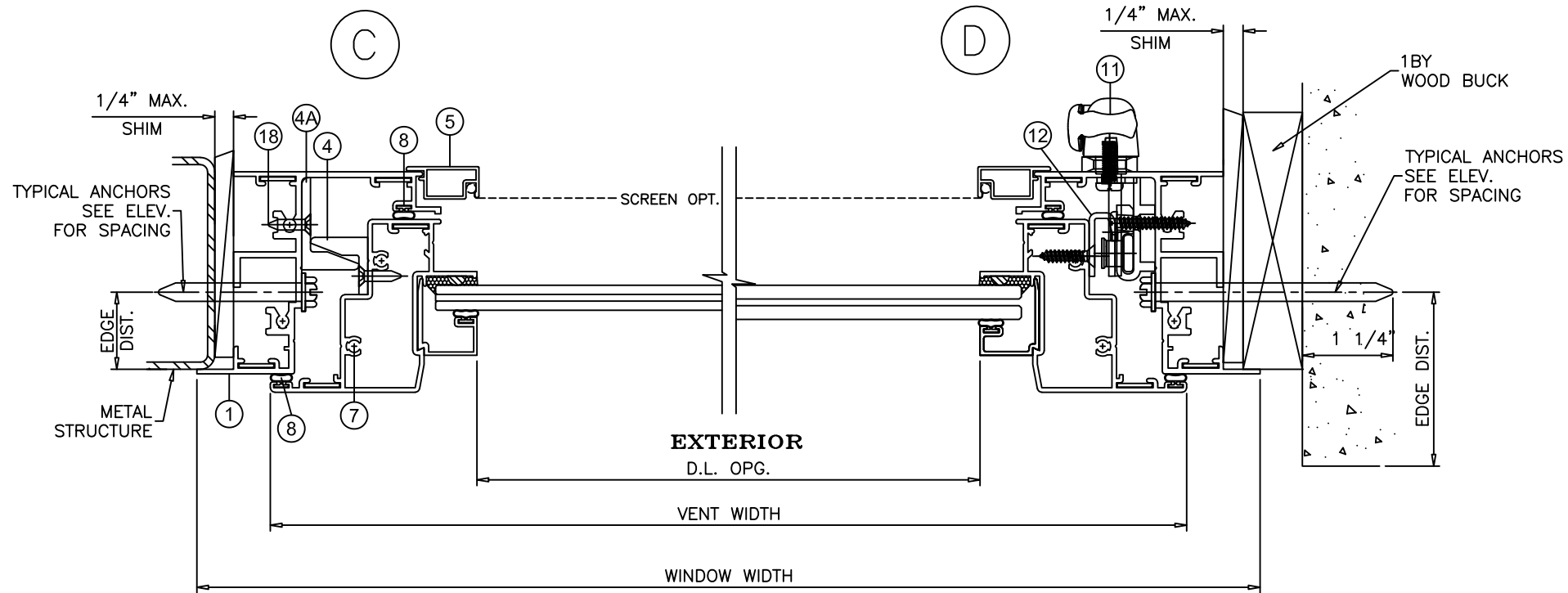
GLASS TYPE 'B'



Revision:
PLACED ANCHORS IN TABLE FORMAT, ADDED ANCHOR HEAD TYPE NOTE, REMOVED SILICONE AND BACKSTOP ON INSTALL DETAIL

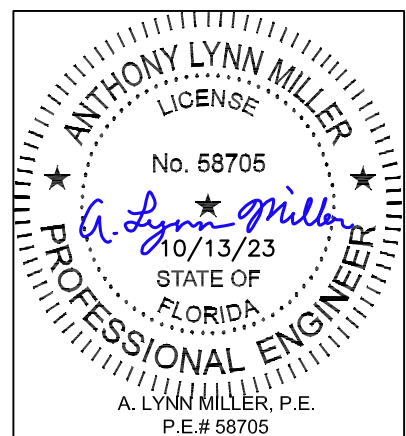
PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	8/1/2022	A
ECO WINDOW SYSTEMS, LLC. 8502 N.W. 80th ST., MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902	SERIES 500 ALUMINUM OUTSWING CASEMENT WDW. (L.M.I.)	DATE	Rev.
ECO window systems	GENERAL INFORMATION, ELEVATION DESIGN LOAD CAPACITY & GLASS TYPES	By A. M.	CA500FPA - LMI
1 OF 6	Sheet	No.	DWG
SERIES 500	1	6	6

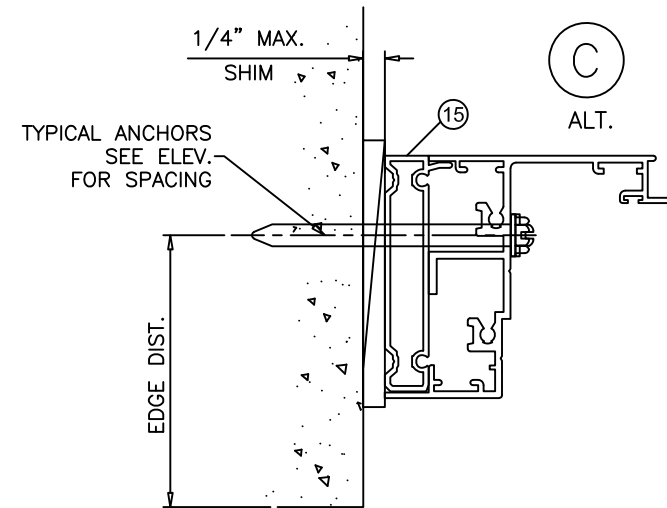
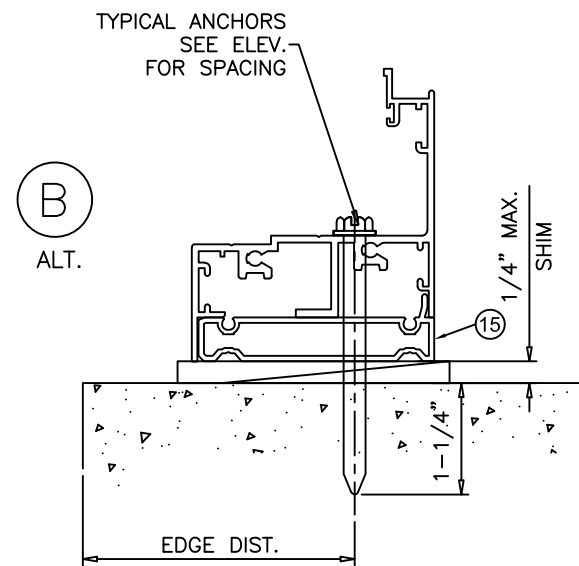
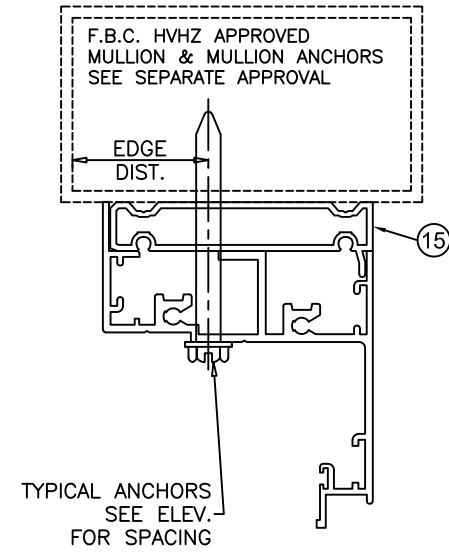
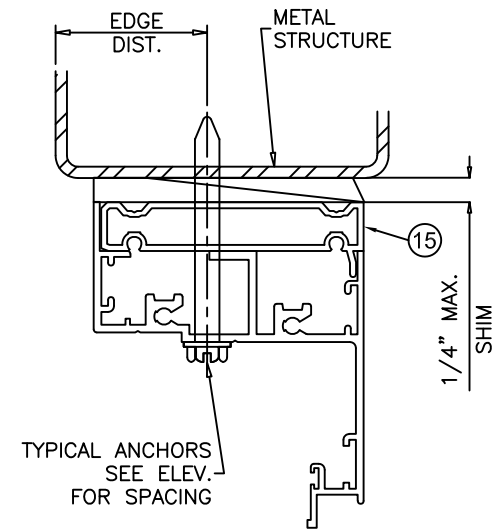
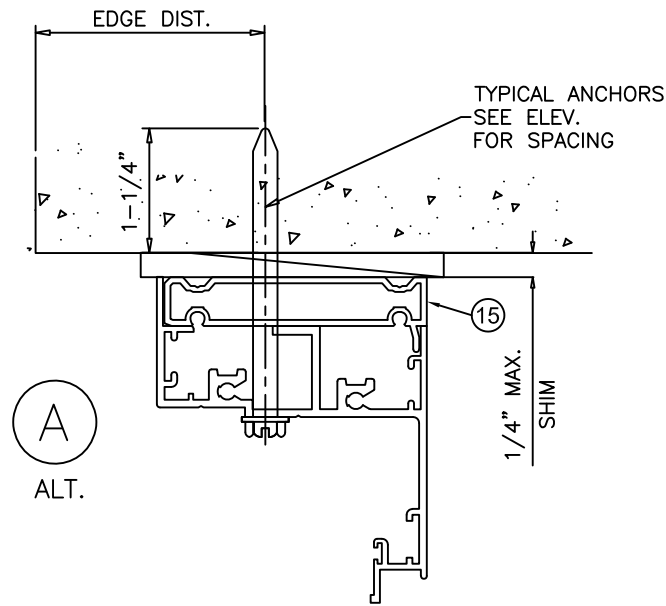




Revision:
PLACED
ANCHORS IN
TABLE
FORMAT,
ADDED
ANCHOR HEAD
TYPE NOTE,
REMOVED
SILICONE AND
BACKSTOP ON
INSTALL
DETAIL

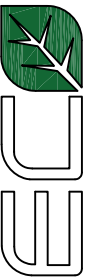
		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		
ECO WINDOW SYSTEMS, LLC. 8502 N.W. 80th ST., MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902		REGISTRATION #29296		
Title		SERIES 500 ALUMINUM OUTSWING CASEMENT WDW. (L.M.I.)		Date 8/1/2022
Horizontal Section Details		A. M.		
Series		Desc.	By	Rev.
SERIES 500	3 OF 6	DWG No.	CA500FPA - LMI	A
Sheet				

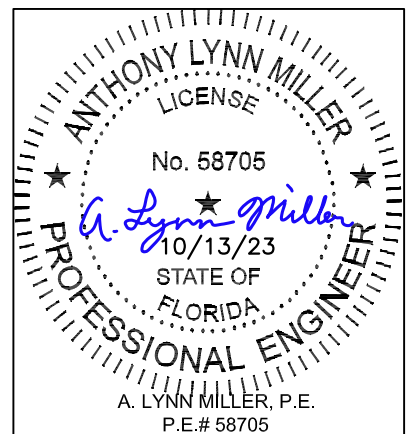


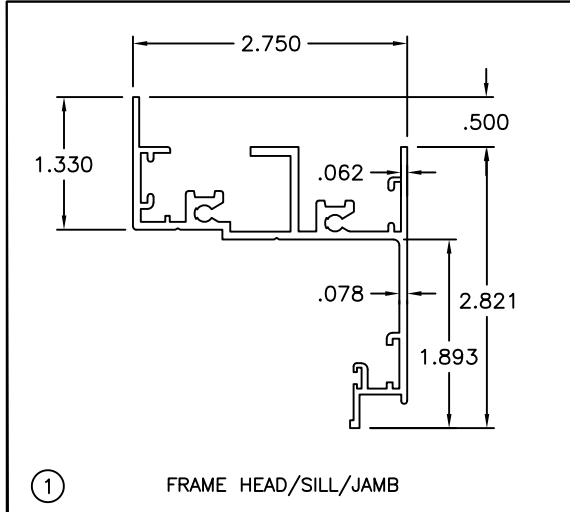


INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER

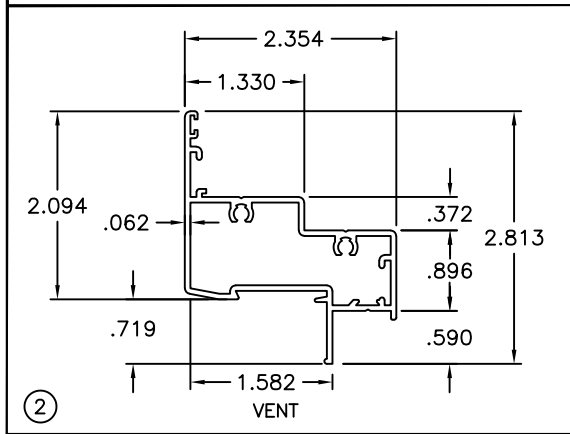
Revision:
PLACED ANCHORS IN TABLE FORMAT, ADDED ANCHOR HEAD TYPE NOTE, REMOVED SILICONE AND BACKSTOP ON INSTALL DETAIL

 ECO window systems		PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600				
ECO WINDOW SYSTEMS, LLC. 8502 N.W. 80th ST., MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902		REGISTRATION #29296				
Title		Series 500 ALUMINUM OUTSWING CASEMENT WDW. (L.M.I.)		Date	8/1/2022	
Desc.		FLUSH FRAME INSTALLATION DETAILS		Drawn By	A. M.	
Series		SERIES 500	Sheet	4 OF 6	DWG No.	
		CA500FPA - LMI			Rev.	A

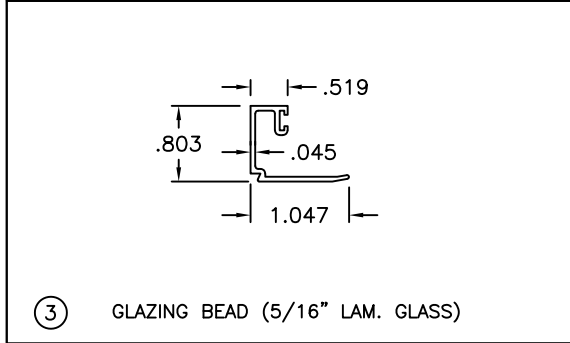




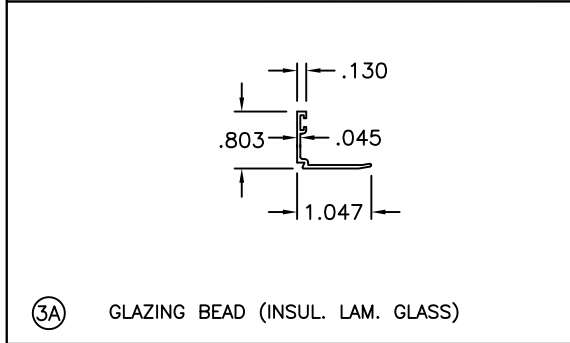
① FRAME HEAD/SILL/JAMB



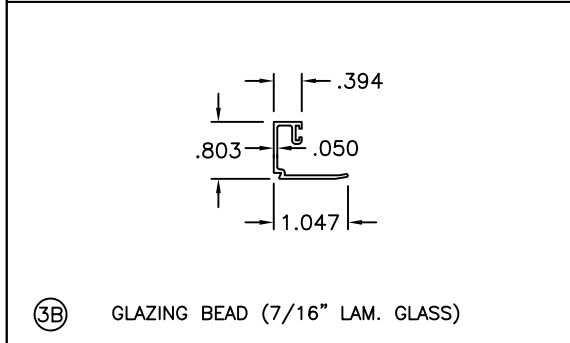
② VENT



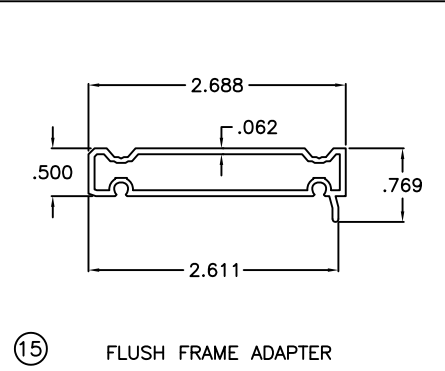
③ GLAZING BEAD (5/16" LAM. GLASS)



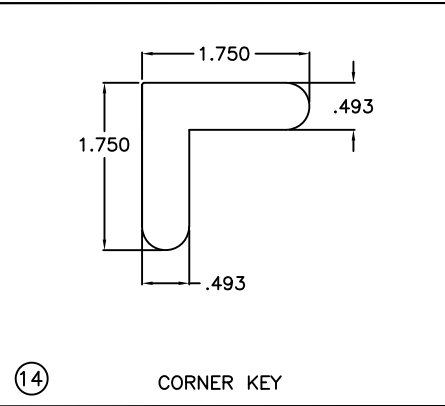
③A GLAZING BEAD (INSUL. LAM. GLASS)



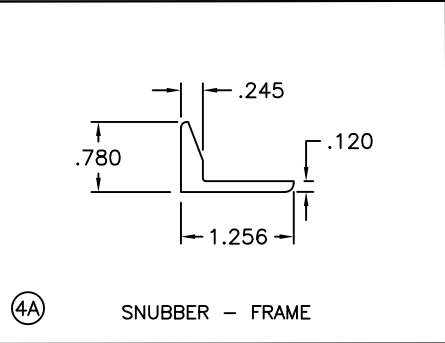
③B GLAZING BEAD (7/16" LAM. GLASS)



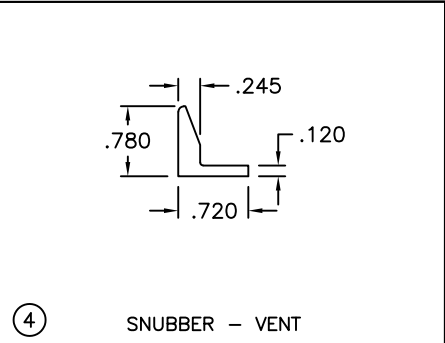
⑮ FLUSH FRAME ADAPTER



⑭ CORNER KEY



④A SNUBBER - FRAME



④ SNUBBER - VENT

ITEM #	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E501	4	FRAME HEAD/SILL/JAMB	6063 - T6	-
2	E502	4	VENT	6063 - T6	-
3	FY108	AS REQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063 - T6	-
3A	E505	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063 - T6	-
3B	FY109	AS REQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063 - T6	-
4	E508	AS REQD.	SNUBBER - VENT, FULL LENGTH	6063 - T6	-
4A	E509	AS REQD.	SNUBBER - FRAME, FULL LENGTH	6063 - T6	-
5	E506	OPTIONAL	SCREEN FRAME	6063 - T5	-
7	#10 X 1-1/4"	AS REQD.	FRAME AND VENT ASSEMBLY SCREWS	-	H WH SMS
8	E203	AS REQD.	BULB WEATHERSTRIPPING, DUROMETER 65	SANTOPRENE	ULTRAFAB
9	E203	AS REQD.	GLAZING BEAD BULB, DUROMETER 65	SANTOPRENE	ULTRAFAB
10	35.12.00.400	2/ VENT	4 BAR HINGE, AT TOP AND BOTTOM	ST. STEEL	TRUTH, INSTALLED WITH (4) #10 X 5/8" SDS
11	13096.92	1	MULTI POINT LOCK SYSTEM	ZAMAK	TRUTH
12	-	6/ VENT	KEEPER	STEEL	-
13	-	1/ VENT	ROTO OPERATOR	ZAMAK/STEEL	TRUTH
14	PSJ40-SS	2/ CORNER	FRAME/VENT CORNER KEY	ST. STEEL	-
15	FY120	AS REQD.	FLUSH FRAME ADAPTER	6063 - T6	OPTIONAL
16	-	3	ANTI SAG SKATE	NYLON	M&M PLASTICS
17	#10 X 1-1/4"	2/ SKATE	FH SDS SKATE SCREWS	-	-
18	#8 X 3/4"	AS REQD.	FH SMS SNUBBER SCREWS	-	IN PAIRS 2" APART, PAIRS SPACED AT 7-3/4" O.C.
19	-	2/ LITE	SETTING BLOCK, 3/16" X 3/4" X 4" LONG	EPDM	DUROMETER 80±5 SHORE A
20	FLB-50	-	GLASS SPACER - 1/8" HIGH	SILICONE	FRANK LOWE
21	-	-	INSUL. GLASS SPACER	VARIOUS	VARIOUS

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH SCHNEE-MOREHEAD SM5504 SEAM SEALER. PERIMETER CAULKING SICAFLEX 15LM ON EXTERIOR ONLY.

LOCKS:

MULTIPOINT LOCK SYSTEM # 13096.92 BY 'TRUTH' AT FRAME JAMB.
LOCK OPERATOR #24.33.XX.004 AT 8-1/2" FROM SILL FASTENED TO JAMBS WITH (2) #10 X 5/8" SMS.
LOCK BAR SECURED TO JAMB WITH LOCK GUIDES #33489.00.0001 SPACED AT 12-3/4" O.C. MAX.
EACH GUIDE FASTENED WITH (2) #10 X 1" PH SMS.

STAINLESS STEEL KEEPERS #31964.92 AT VENT EACH FASTENED WITH (2) #10 X 5/8" FH SMS
SEE CHART ON SHEET 1 FOR QUANTITIES.

HINGES:

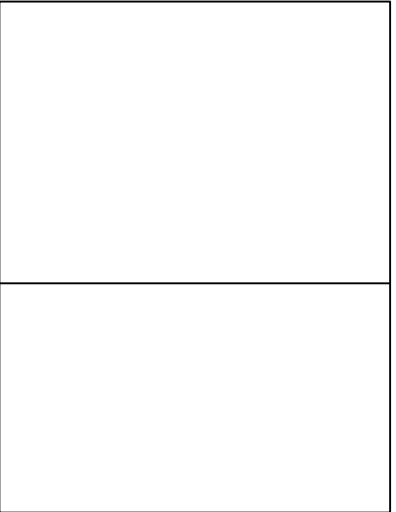
4 BAR ST/ST HINGES #35.12.00.400 BY 'TRUTH' LOCATED AT TOP AND BOTTOM CORNERS FASTENED TO FRAME WITH (2) #10 X 5/8" PH SDS
VENT WITH (2) #10 X 5/8" PH SDS

OPERATOR:

SINGLE ARM ROTO OPERATOR #52.13.012 BY 'TRUTH' LOCATED AT SILL END.
FASTENED WITH (6) # 10 X 1" PH SMS.
OPERATOR TRACK #30175 AT BOTTOM RAIL FASTENED WITH (2) #10 X 1" PH SMS.

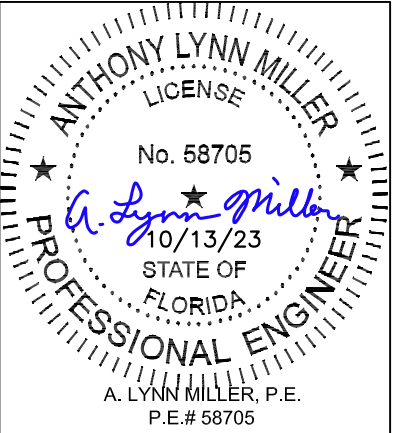
ANTI-SAG SKATES:

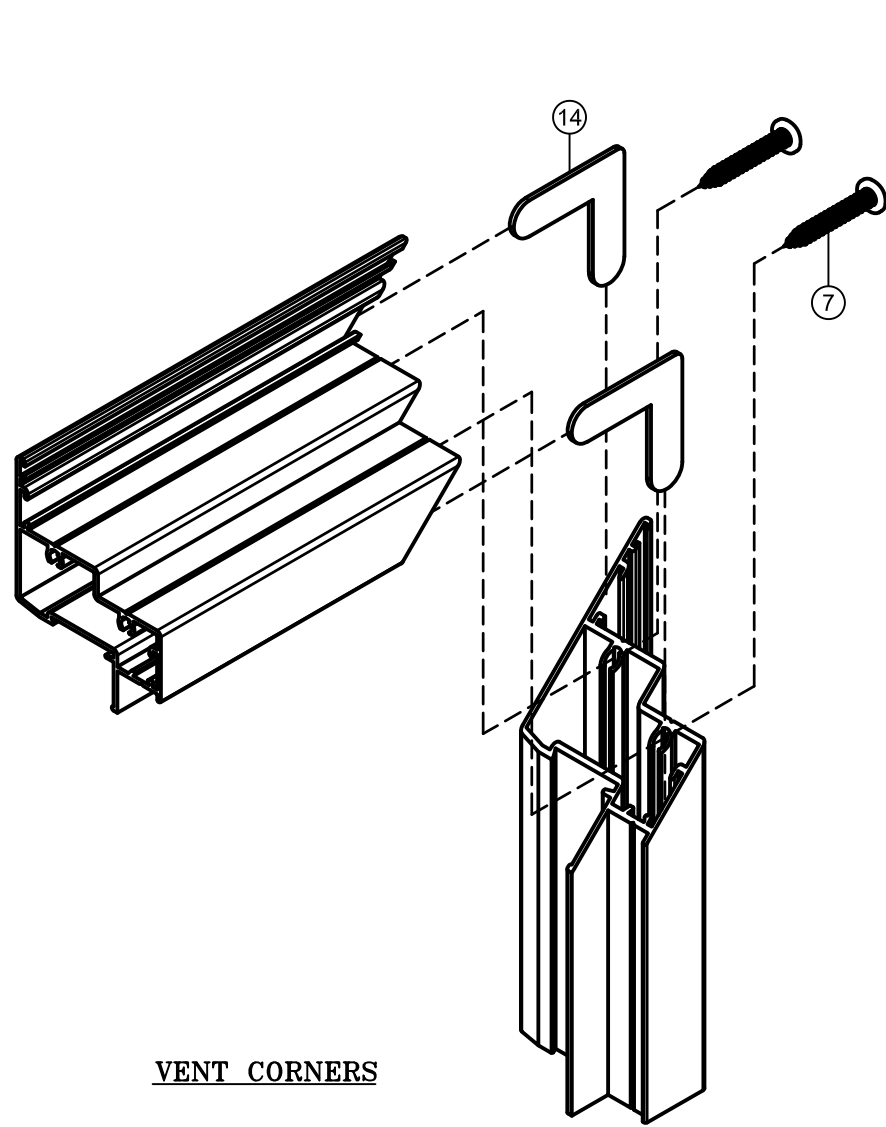
VINYL ANTI-SAG SKATES BY 'M&M PLASTICS'
(2) AT LOCK STILE AT 6-3/4" FROM TOP/BOTTOM RAILS
(1) AT BOTTOM RAIL AT 4" FROM LOCK STILE
EACH FASTENED WITH (2) #10 X 1-1/4" FH SDS.



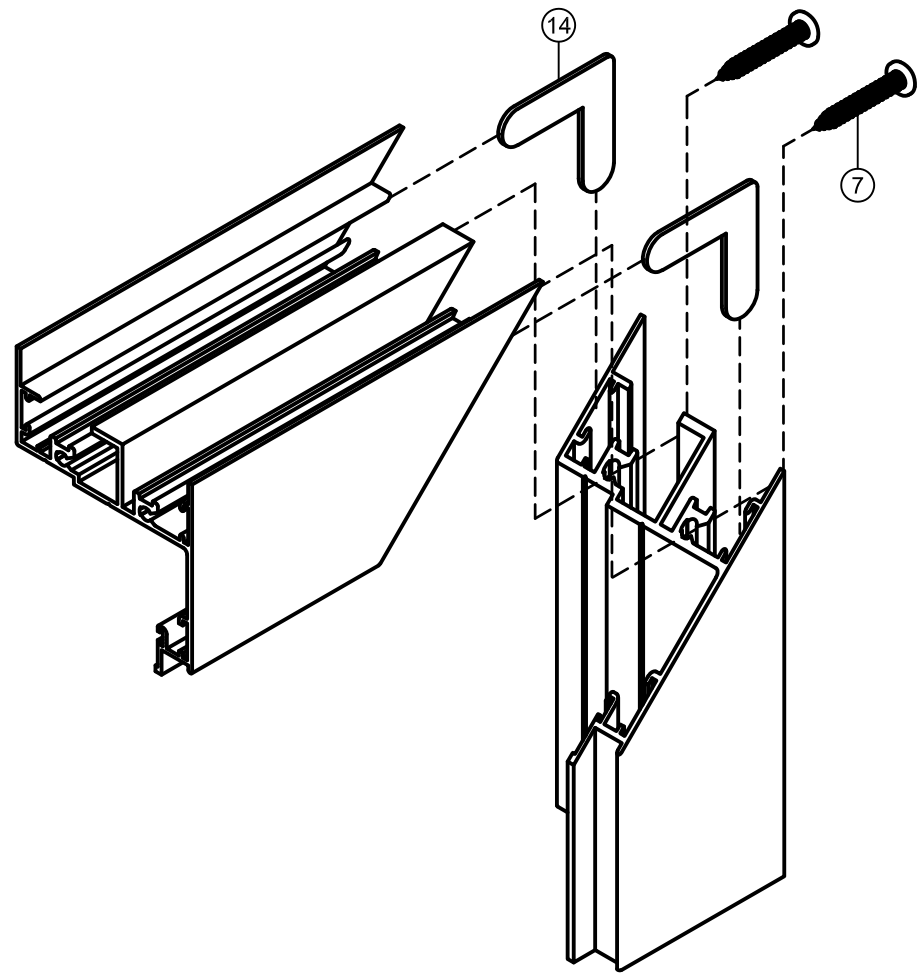
Revision:	PLACED
ANCHORS IN	TABLE
FORMAT,	ADDED
ANCHOR HEAD	TYPE NOTE,
REMOVED	SILICONE AND
BACKSTOP ON	INSTALL
DETAIL	

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	8/1/2022	Rev.	A
ECO WINDOW SYSTEMS, LLC. 8502 N.W. 80th ST., MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902	SERIES 500 ALUMINUM OUTSWING CASEMENT WDW. (L.M.I.)	By A. M.	DWG	CA500FPA - LMI
BOM & EXTRUSION PROFILES HARDWARE DETAILS	SERIES 500	5 OF 6	Sheet	
Series	Desc.	Title		

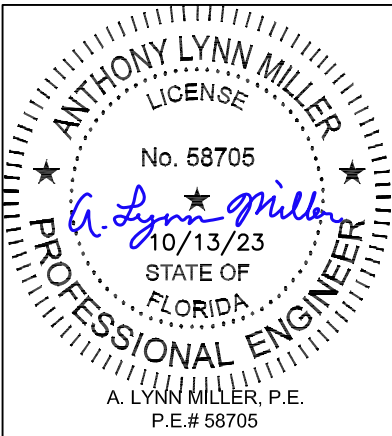




VENT CORNERS



FRAME CORNERS



Series	Desc.	Title
SERIES 500	CORNER ASSEMBLY DETAILS	
6 OF 6		
Sheet		
DWG		
No.		
CA500FPA - LMI		
Rev.		
A		

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296	
ECO WINDOW SYSTEMS, LLC. 8502 N.W. 80th ST., MEDLEY, FL 33166 TEL. (305) 885-5299 FAX. (305) 885-5902		SERIES 500 ALUMINUM OUTSWING CASEMENT WDW. (L.M.I.)	
Date		8/1/2022	
Drawn		A. M.	

Revision:
PLACED ANCHORS IN TABLE FORMAT, ADDED ANCHOR HEAD TYPE NOTE, REMOVED SILICONE AND BACKSTOP ON INSTALL DETAIL