

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

SERIES-150 (L.M.I.)
ALUMINUM SINGLE HUNG WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER CHARTS SHOWN ON SHEET 3.

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF S.H./S.H. OR SINGLE HUNG 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.

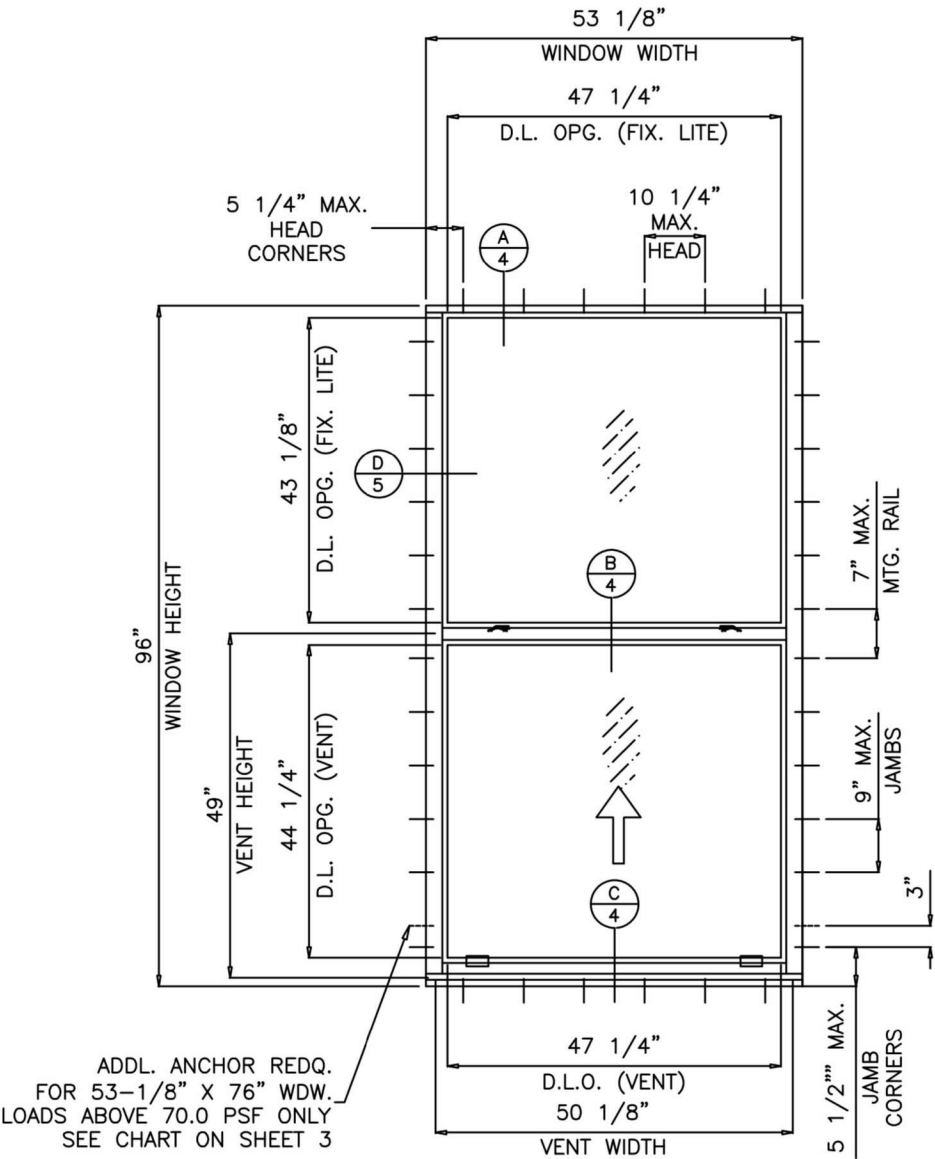
A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

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)'.



TYPICAL ELEVATION
(TESTED UNIT)



JAVAD AHMAD PE, inc
7875 NW 12th St., Suite 102 Doral,
FL 33126
Ph: (305) 424-8001
support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

MA	drawn by:	BS
JA-1844-24	check by:	
12/31/2024	date:	
REVISION		
No.	DATE	DESCRIPTION

SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
LARGE MISSILE IMPACT RATED

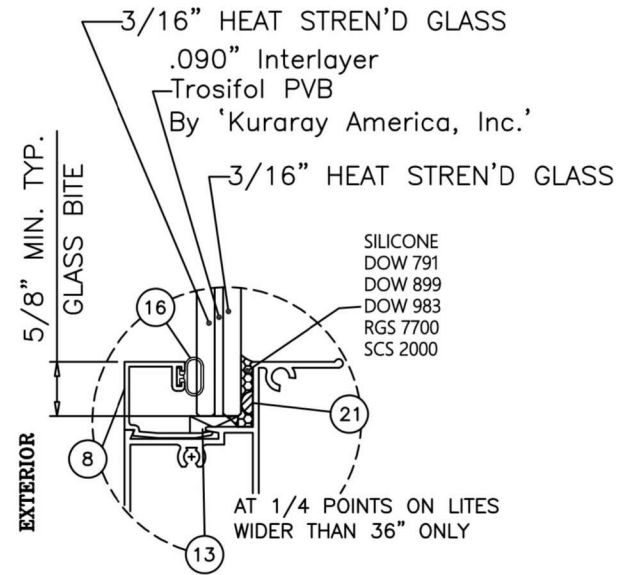


ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



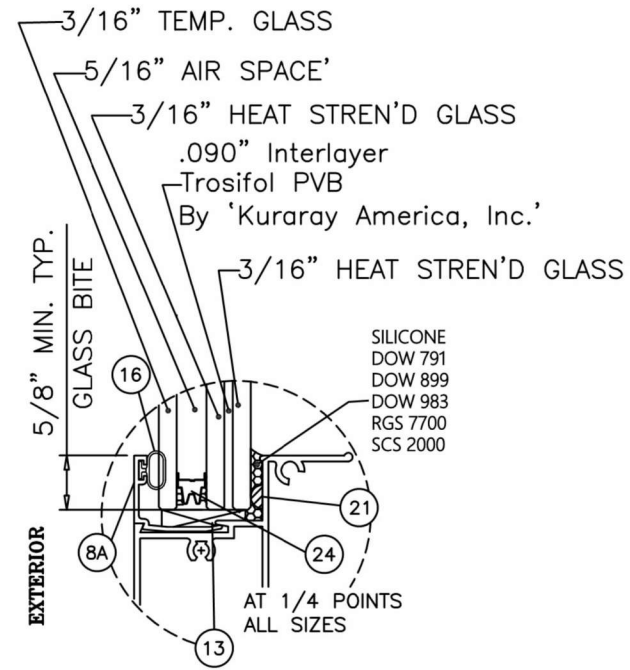
SEALED: 12/31/2024

FL#40096.5



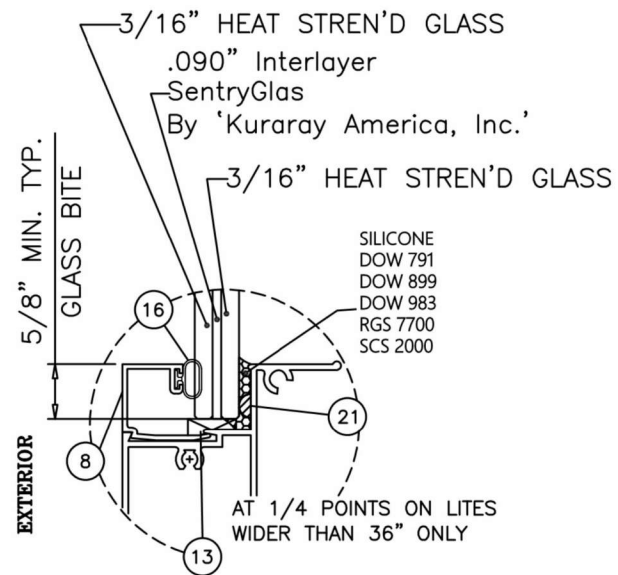
GLASS TYPE 'G1'

7/16" OVERALL LAM. GLASS



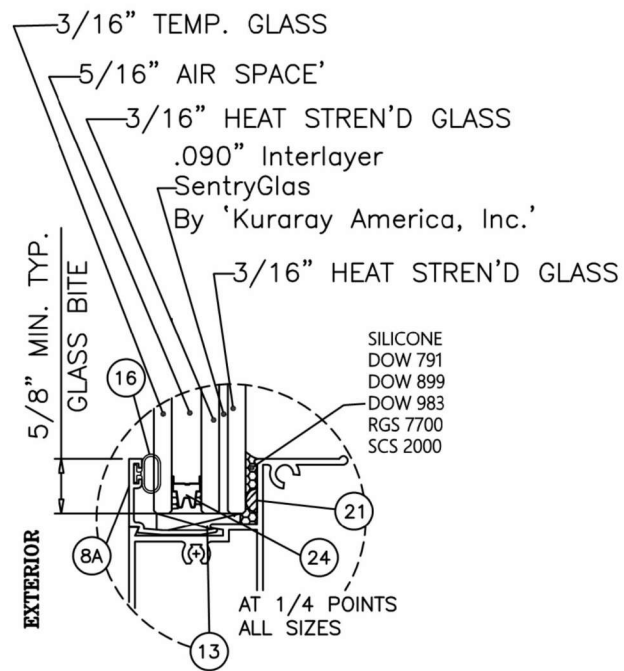
GLASS TYPE 'G2'

15/16" OVERALL INSUL. LAM. GLASS



GLASS TYPE 'G3'

7/16" OVERALL LAM. GLASS



GLASS TYPE 'G4'

15/16" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS



JAVAD AHMAD PE, inc

7875 NW 12th St., Suite 102 Doral,
FL 33126

Ph: (305) 424-8001

support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

drawing no.	date:	JA-1844-24	drawn by:	MA
		12/31/2024	check by:	BS
REVISION				
No.	DATE	BY	DESCRIPTION	

SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
LARGE MISSILE IMPACT RATED

ECO window systems
ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024

FL#40096.5

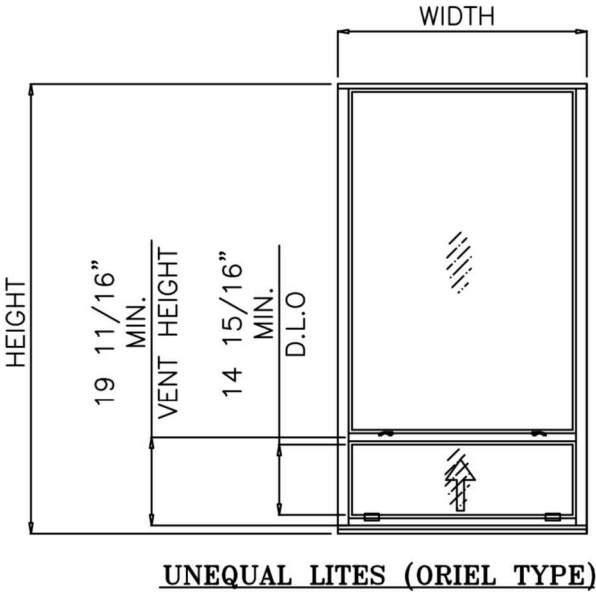
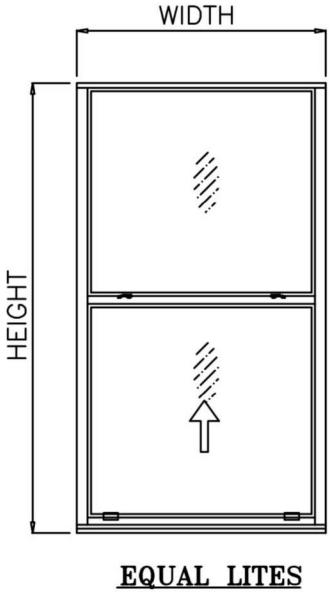
Equal Lites Windows													
Design Load Capacity - PSF													
Window Width (in.)	Glass Type	Window Height (in.)											
		38-3/8" (4)		50-5/8" (6)		63" (6)		76" (8)		84" (10)		96" (12)	
19-1/8"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0
26-1/2"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0
30"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0
42"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0
48"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	-	-
53-1/8"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0 *	-	-	-	-

* ADDL. ANCHORS REQD. AT SILL ENDS
FOR THIS SIZE AND LOAD ONLY.

Unequal Lites Windows													
Design Load Capacity - PSF													
Window Width (in.)	Glass Type	Window Height (in.)											
		38-3/8" (4)		50-5/8" (6)		63" (6)		76" (8)		84" (10)		96" (12)	
19-1/8"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0
26-1/2"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	-	-
30"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	-	-
42"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	-	-	-	-
	G3 & G4	+80.0	-120.0	+80.0	-120.0	+80.0	-120.0	-	-	-	-	-	-
48"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	-	-	-	-	-	-
	G3 & G4	+80.0	-120.0	+80.0	-120.0	-	-	-	-	-	-	-	-
53-1/8"	G1 & G2	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	-	-	-	-	-	-
	G3 & G4	+80.0	-120.0	+80.0	-120.0	-	-	-	-	-	-	-	-

NO. IN PARENTHESIS INDICATE NO. OF ANCHORS PER JAMB.
FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE
WIDTH OR HEIGHT DIMENSION SHOWN ON THE TABLE.

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-16 (3 SEC. GUSTS)



JAVAD AHMAD PE, inc
7875 NW 12th St., Suite 102 Doral,
FL 33126
Ph: (305) 424-8001
support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

drawing no.	date:	JA-1844-24	drawn by:	MA	check by:	BS	REVISION			
							No.	DATE	BY	DESCRIPTION
SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.) LARGE MISSILE IMPACT RATED										

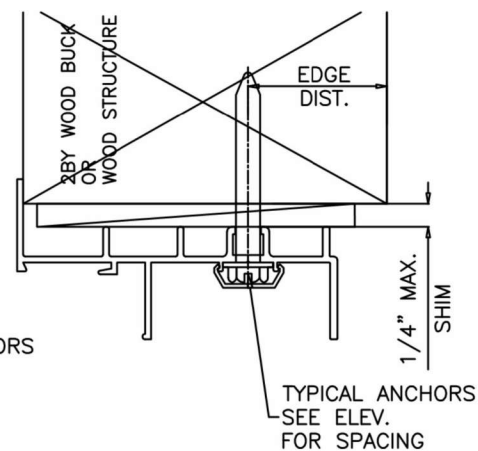
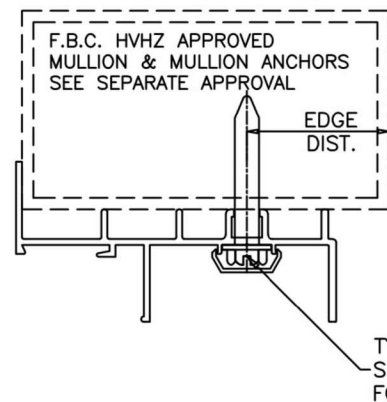
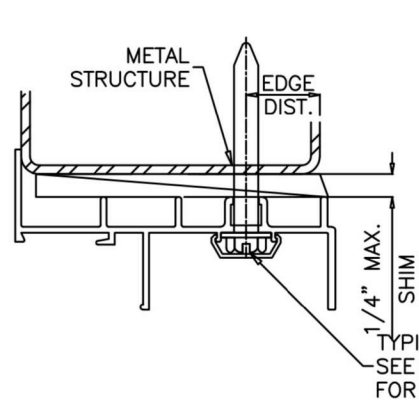
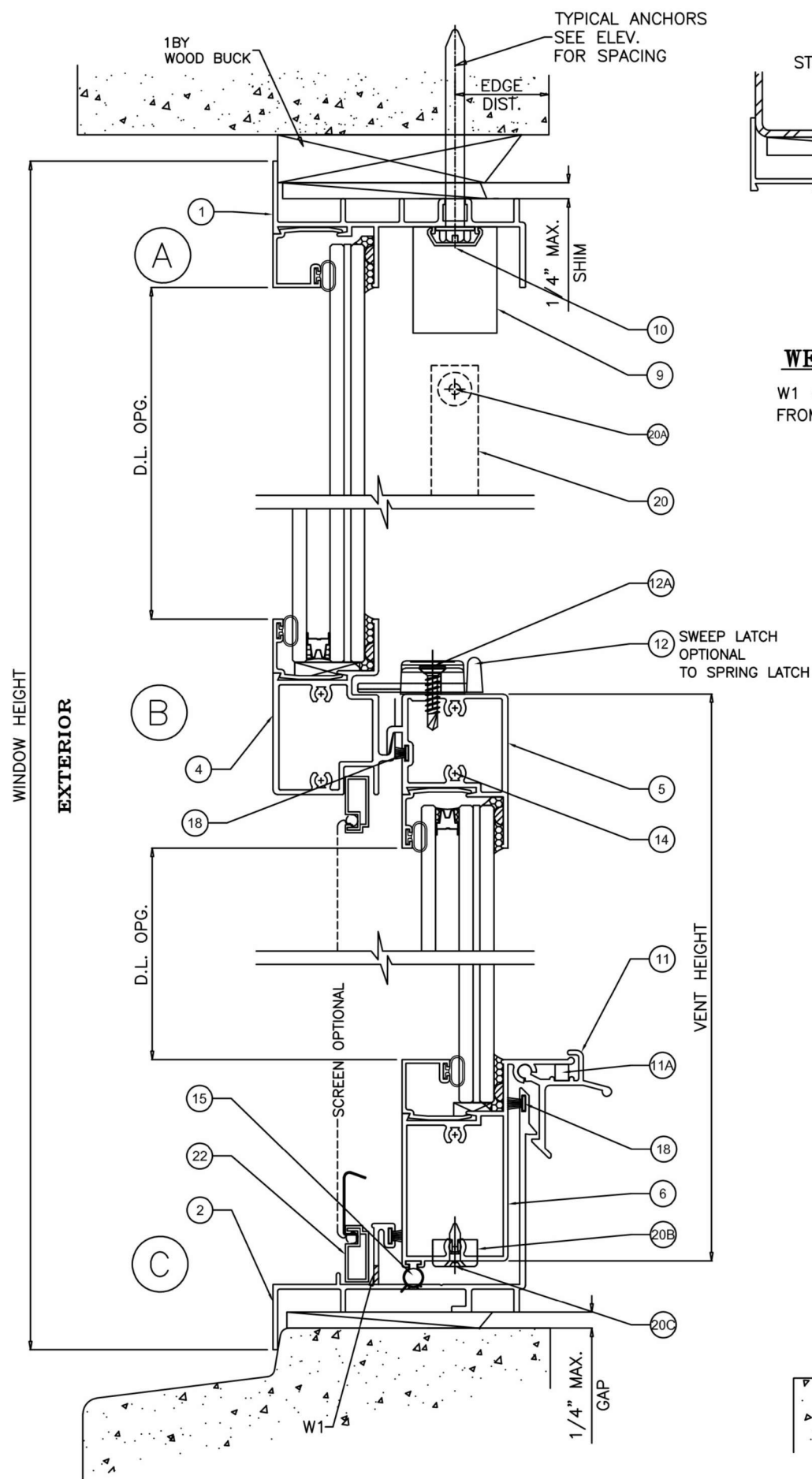


ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024

FL#40096.5



WEEPHOLES:

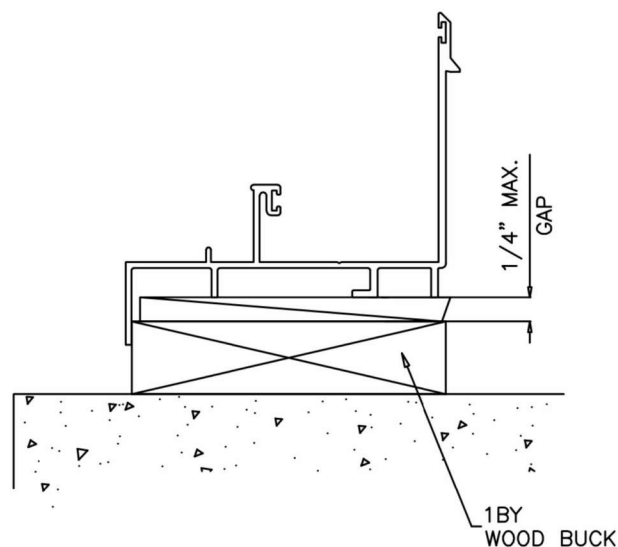
W1 = 1/4" X 3/4" WEEPHOLES AT 12-1/2" FROM EACH END.

WOOD BUCKS AND METAL STRUCTURE NOT BY 'ECO WDW'. MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

Anchor Type	Frame Member	Substrate	Min. Edge Distance	Min. Embedment or Metal Thickness
1/4" DeWalt UltraCon +	All	Southern Pine (SG = 0.55)	1"	1-1/2"
	All	Thru 1BY Buck into Concrete (min. 3 ksi)	2-1/2"	1-1/4"
	Jambs	Thru 1BY Buck into Hollow or Filled Block (ASTM C90, min. 2 ksi)	2-1/2"	1-1/4"
	All	Concrete (min. 3ksi)	2-1/2"	1-1/4"
	Jambs	Hollow or Filled Block (ASTM C90, min. 2 ksi)	2-1/2"	1-1/4"
#14 SMS or Self Drilling Screws (Gr. 2)	All	F.B.C. Approved Mullions	3/4"	(3) Threads min. beyond metal thickness
	Head/Jambs	Aluminum 1/8" Thk. Min. (6063-T5)	3/4"	(3) Threads min. beyond metal thickness
	Head/Jambs	Steel 1/8" Thk. Min. (min. 36 ksi)	3/4"	(3) Threads min. beyond metal thickness

1. STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED
2. ALL ANCHOR HEAD TYPES ARE ACCEPTABLE



FL#40096.5



JAVAD AHMAD PE, inc

7875 NW 12th St., Suite 102 Doral,
FL 33126

Ph: (305) 424-8001

support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

MA	BS
drawn by:	check by:
JA-1844-24	12/31/2024
drawing no.	date:
REVISION	
No.	DATE
DESCRIPTION	

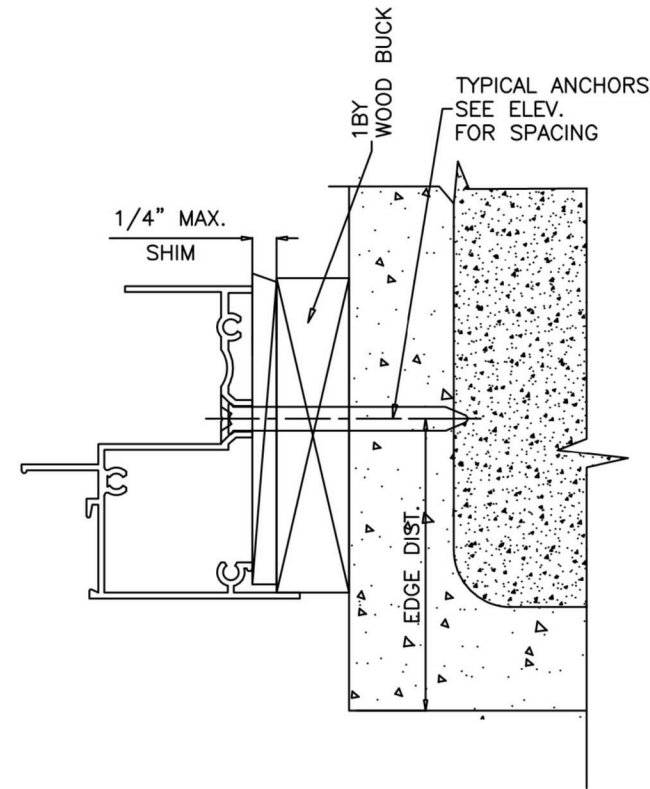
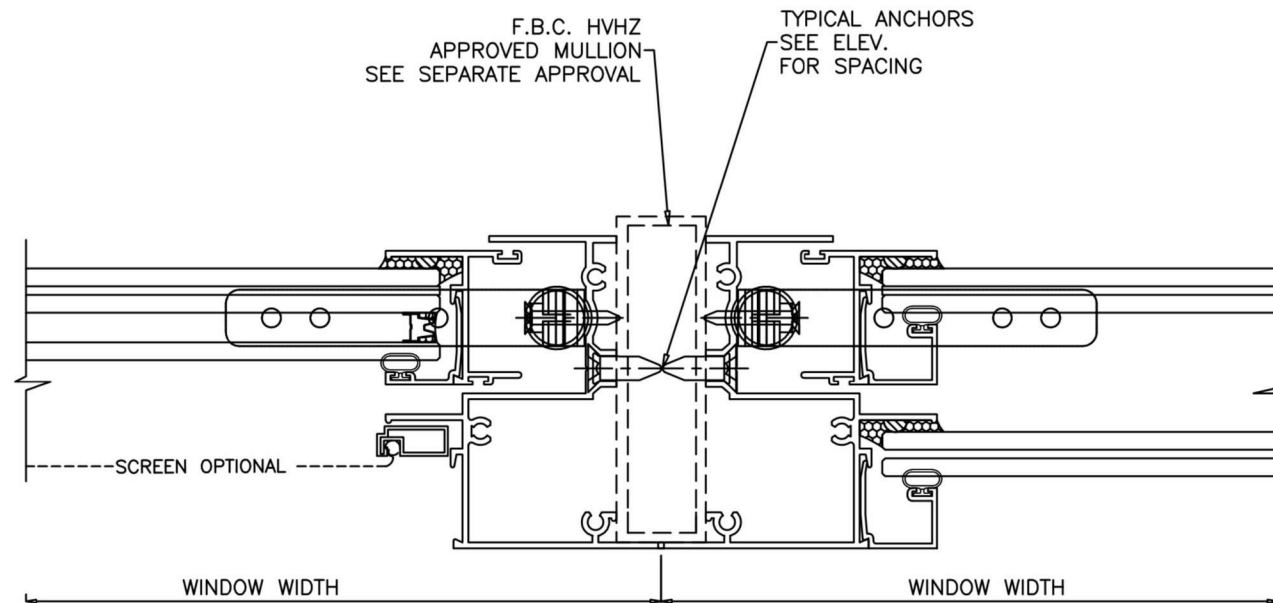
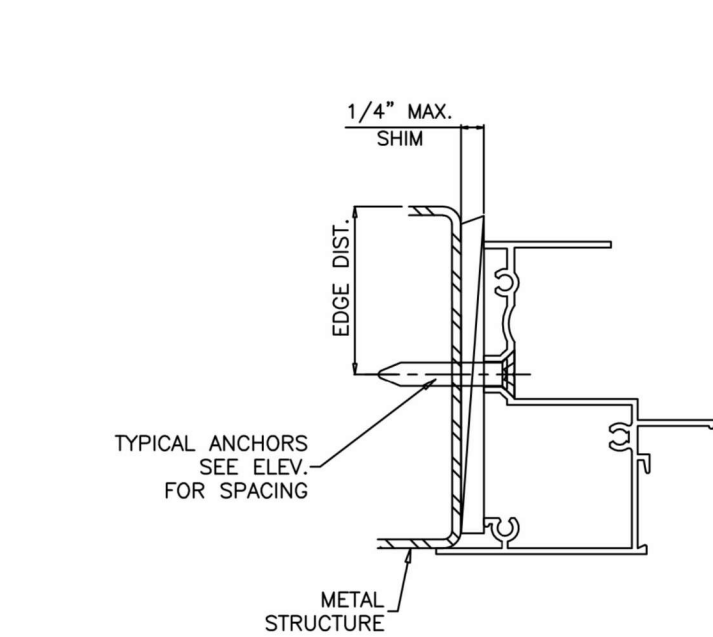
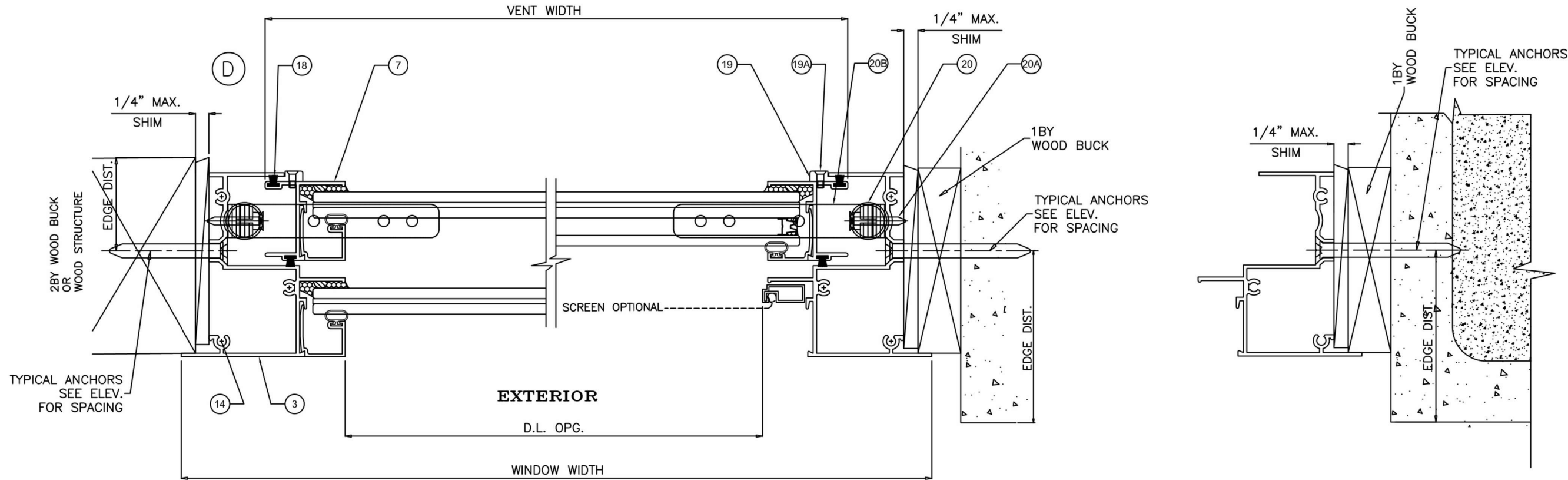
SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
LARGE MISSILE IMPACT RATED



ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024



FL#40096.5



JAVAD AHMAD PE, inc

7875 NW 12th St., Suite 102 Doral,
FL 33126

Ph: (305) 424-8001

support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

drawing no.	date:	JA-1844-24	12/31/2024	MA	BS
drawn by:		check by:			
REVISION		DATE	BY	DESCRIPTION	
No.					

SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
LARGE MISSILE IMPACT RATED



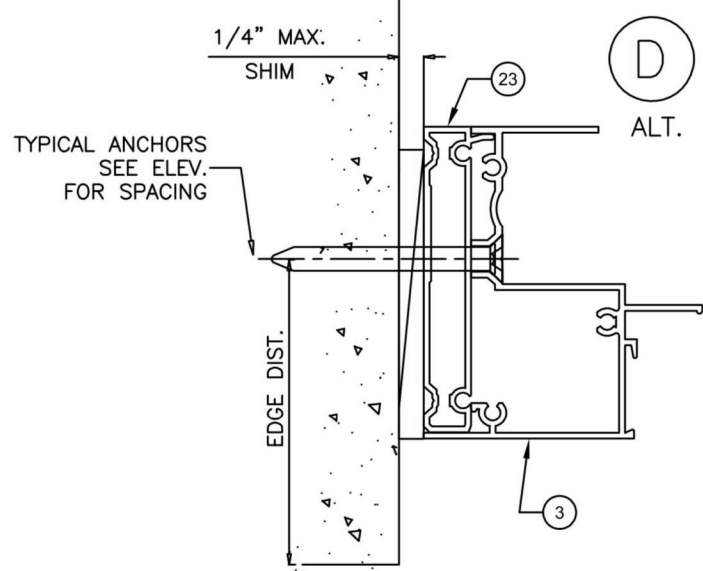
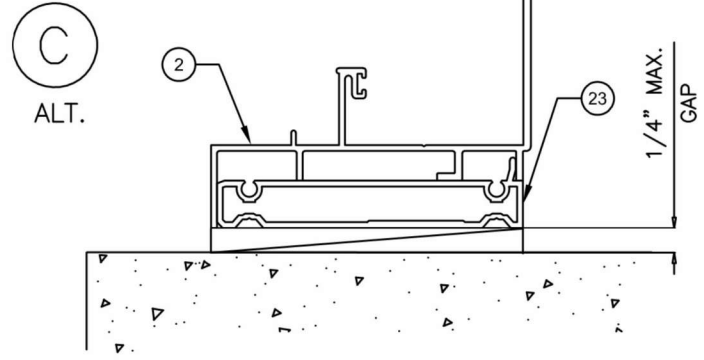
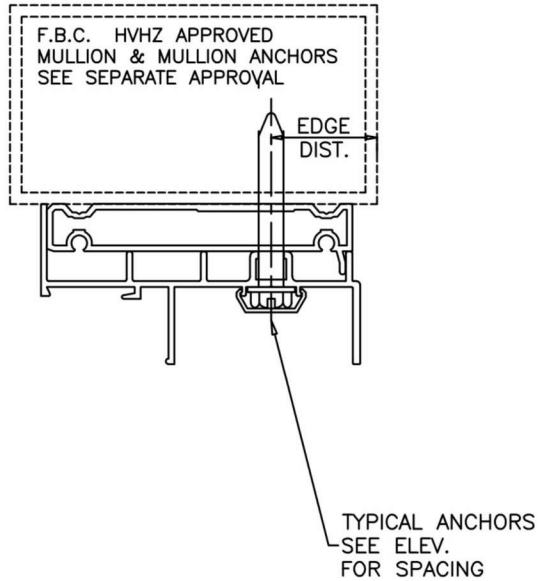
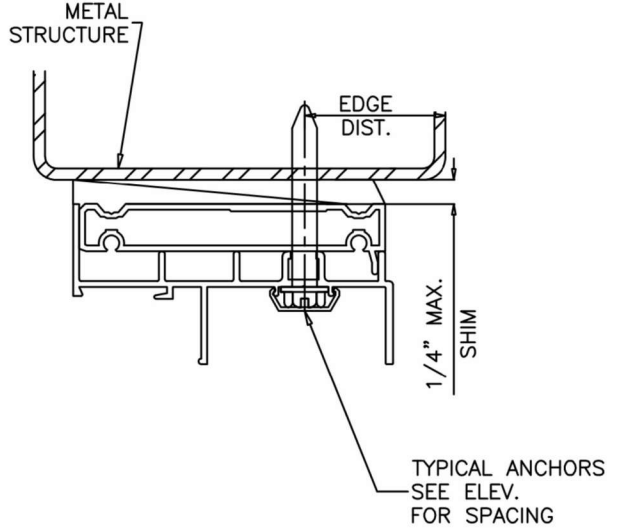
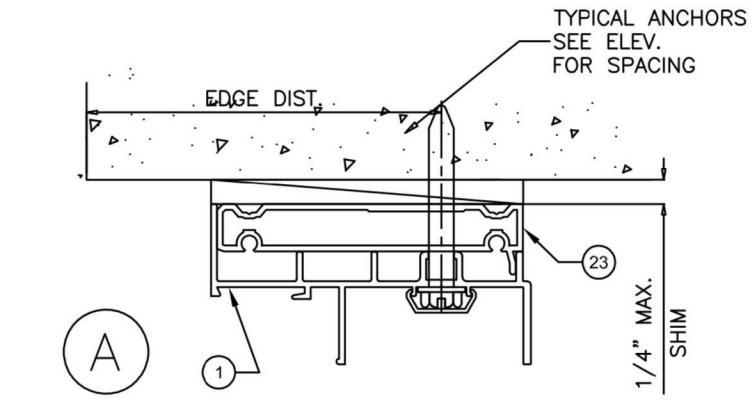
ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024

05

05 of 08



INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER
SEE SHEETS 4 & 5 FOR WINDOW DETAILS

FL#40096.5



JAVAD AHMAD PE, inc
7875 NW 12th St., Suite 102 Doral,
FL 33126
Ph: (305) 424-8001
support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

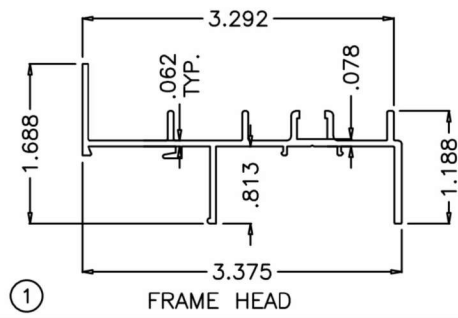
drawing no.	JA-1844-24	drawn by:	MA
date:	12/31/2024	check by:	BS
REVISION			
No.	DATE	BY	DESCRIPTION

SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
LARGE MISSILE IMPACT RATED

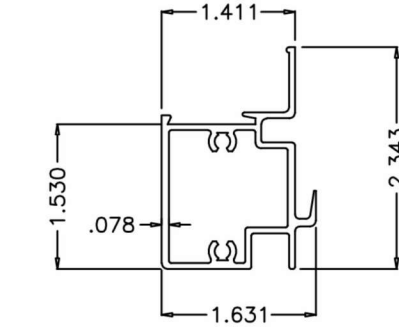
ECO window systems
ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST., MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



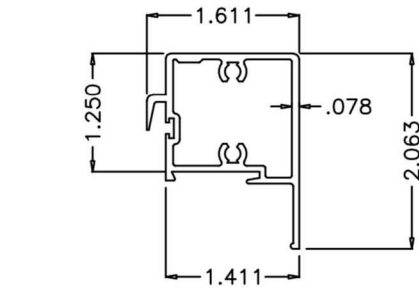
SEALED: 12/31/2024



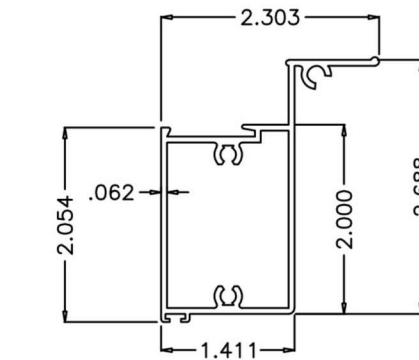
① FRAME HEAD



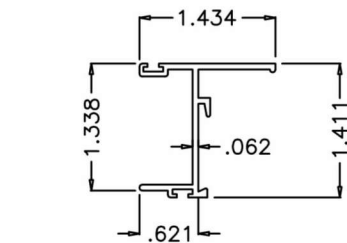
④ FIX. MEETING RAIL



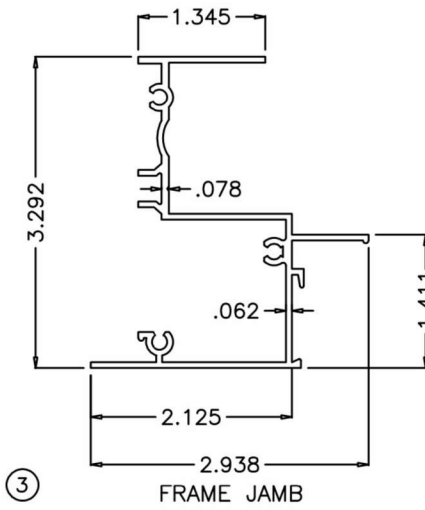
⑤ VENT TOP RAIL



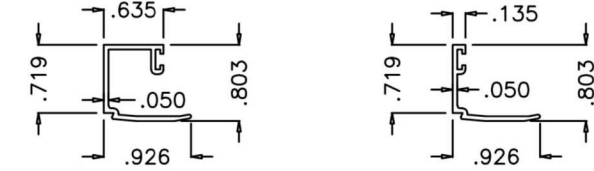
⑥ VENT BOTTOM RAIL



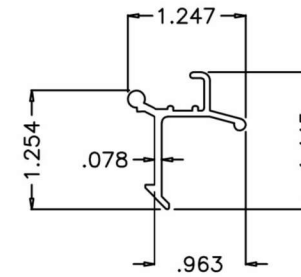
⑦ VENT SIDE RAIL



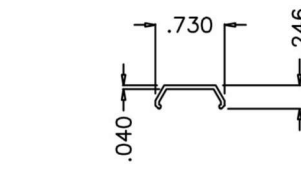
③ FRAME JAMB



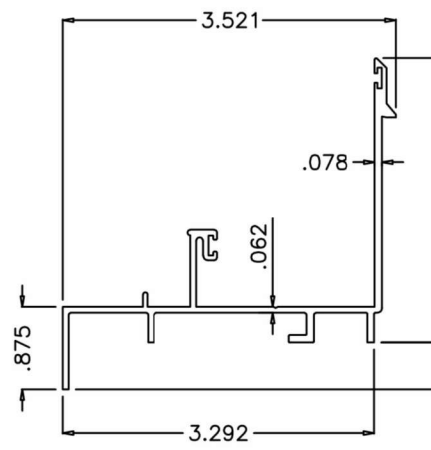
⑧ GLAZING BEADS



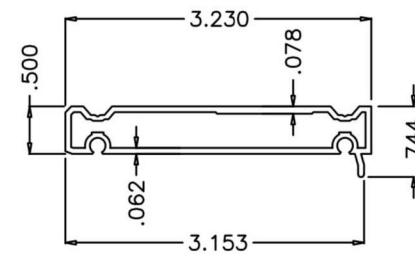
⑪ SPRING LOADED LATCH



⑩ SCREW COVER



② FRAME SILL



②③ FLUSH FRAME ADAPTER

ITEM #	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E151	1	FRAME HEAD	6063-T6	-
2	E152	1	FRAME SILL	6063-T6	-
3	E153	2	FRAME JAMB	6063-T6	-
4	E154	1	FIXED MTG. RAIL	6063-T6	-
5	E155	1	VENT TOP RAIL	6063-T6	-
6	E156	1	VENT BOTTOM RAIL	6063-T6	-
7	E157	2	VENT SIDE RAIL	6063-T6	-
8	E159	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T6	-
8A	E158	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
9	FY116	2/VENT	SASH STOP	6063-T5	-
10	E162	AS REQD.	SCREW COVER	6063-T6	-
11	FY113	2/VENT	SPRING LOADED LATCH, AT 6" FROM ENDS	6063-T6	-
11A	-	1/LATCH	LATCH SPRING	ST STEEL	-
12	SL203P	2/VENT	SWEEP LATCH, AT 12" FROM ENDS	ZAMAK	SULLIVAN & ASSOC.
12A	#8 X 5/8"	2/LATCH	LATCH INST. SCREWS	ST STEEL	FH SMS
13	-	AS REQD.	SETTING BLOCK	EPDM	DUROMETER 80±5 SHORE A
14	#10 X 1"	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	CRS	PH SMS
14A	#10 X 1-1/4"	2/CORNER	FLUSH FRAME ADAPTER FASTENERS	CRS	FH SMS
15	E207	AS REQD.	BOTTOM RAIL SEAL - SERIES 101	NEOPRENE	ULTRAFAB
16	TR.3020	AS REQD.	GLAZING BEAD BULB	SANTOPRENE	TECHNO RUBBER
17	E163	2/VENT	SASH TOP GUIDE	DERLIN	M&M PLATICS
18	W23181	AS REQD.	FIN SEAL W'STRIPPING	-	ULTRAFAB
19	E164	4/VENT	SASH SIDE GUIDE	DERLIN	M&M PLATICS
19A	#6 X 3/8"	1/GUIDE	SASH GUIDE INST. SCREW	CRS	OH SMS TYPE B
20	F210	2/VENT	SASH BALANCE	-	SUPERBOOST BY BSI
20A	#8 X 1"	1/BALANCE	BALANCE INST. SCREW	ST STEEL	FH SMS
20B	21B02 UEK	1/BALANCE	BALANCE BRACKET	STEEL	CALDWELL
20C	#8 X 1/2"	2/BRACKET	BRACKET FASTENER	ST. STEEL	PH SMS
21	-	AS REQD.	GLASS SPACER	SILICONE	FRANK LOWE
22	-	1	5/16" BOX SCREEN	-	OPTIONAL
23	E161	-	FLUSH FRAME ADAPTER	6063-T6	OPTIONAL
24	-	-	INSUL. GLASS SPACER	VARIOUS	VARIOUS

FL#40096.5



JAVAD AHMAD PE, inc

7875 NW 12th St., Suite 102 Doral,
FL 33126

Ph: (305) 424-8001

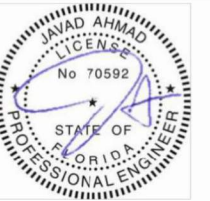
support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

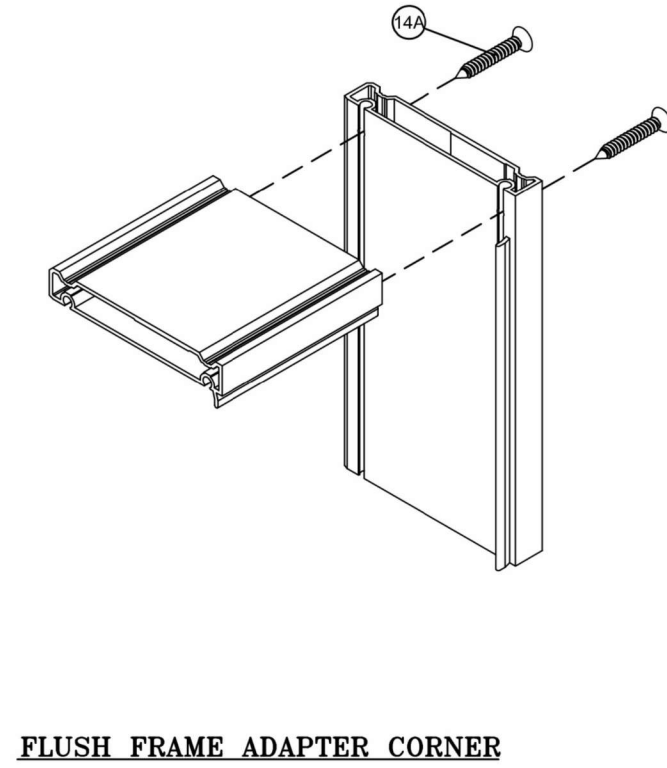
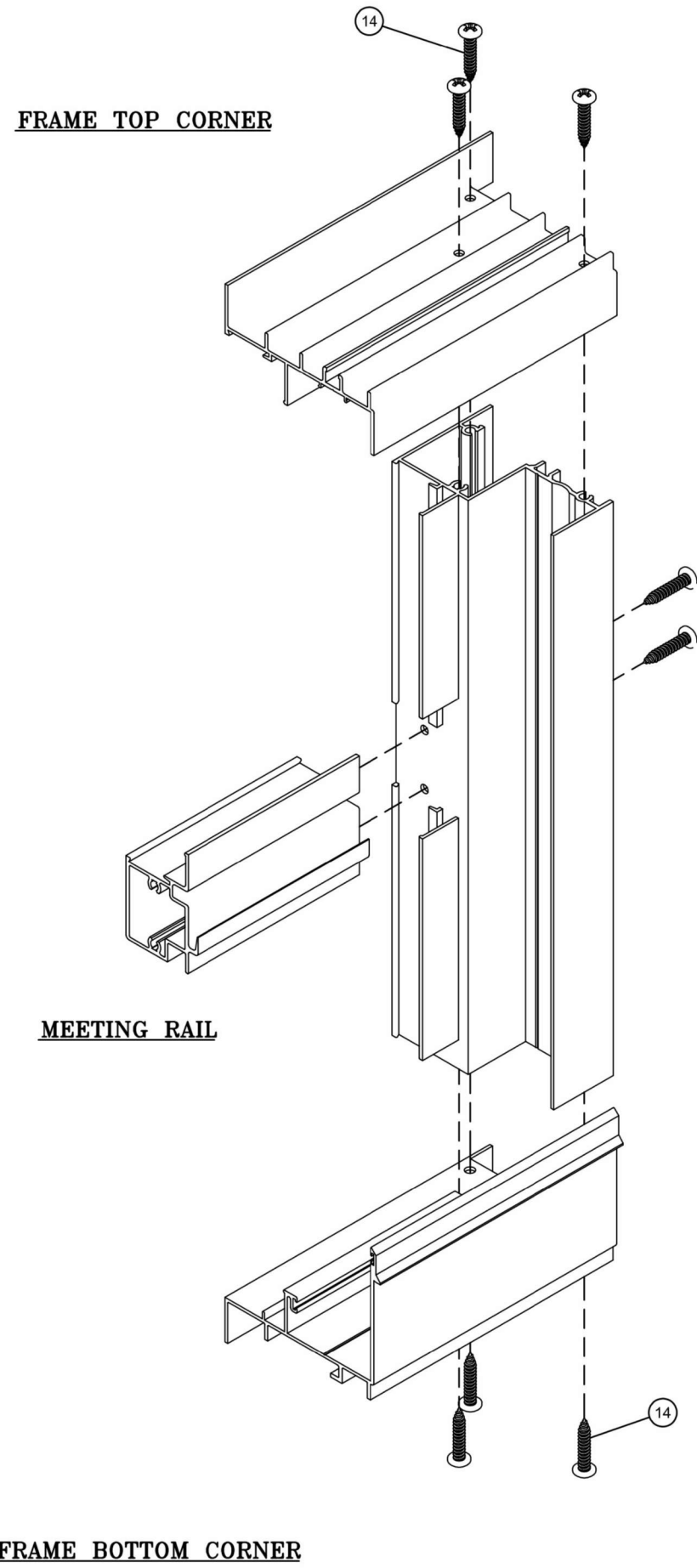
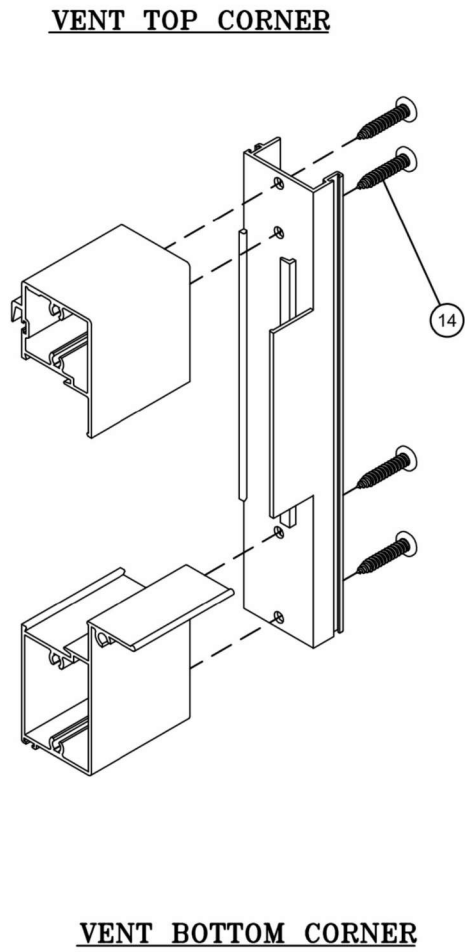
SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW
(L.M.I.)
LARGE MISSILE IMPACT RATED



ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th ST. MEDLEY, FL 33166
TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024



FL#40096.5



JAVAD AHMAD PE, inc
 7875 NW 12th St., Suite 102 Doral,
 FL 33126
 Ph: (305) 424-8001
 support@ja-pe.com

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

drawing no.	JA-1844-24	drawn by:	MA
date:	12/31/2024	check by:	BS
REVISION			
No.	DATE	BY	DESCRIPTION

SERIES 150: ECO-GUARD ALUMINUM SINGLE HUNG WINDOW (L.M.I.)
 LARGE MISSILE IMPACT RATED

ECO window systems
 ECO WINDOW SYSTEMS, LLC.
 8502 N.W. 80th ST. MEDLEY, FL 33166
 TEL. (305) 885-5299 FAX. (305) 885-5902



SEALED: 12/31/2024