

SERIES 4000A NON-IMPACT SINGLE HUNG WINDOW

- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- 2) SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.
- 3) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 3. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.
- 4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH. OVERALL SEALING & FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- 5) SHIMS ARE REQUIRED AT EACH FLANGE ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- 6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

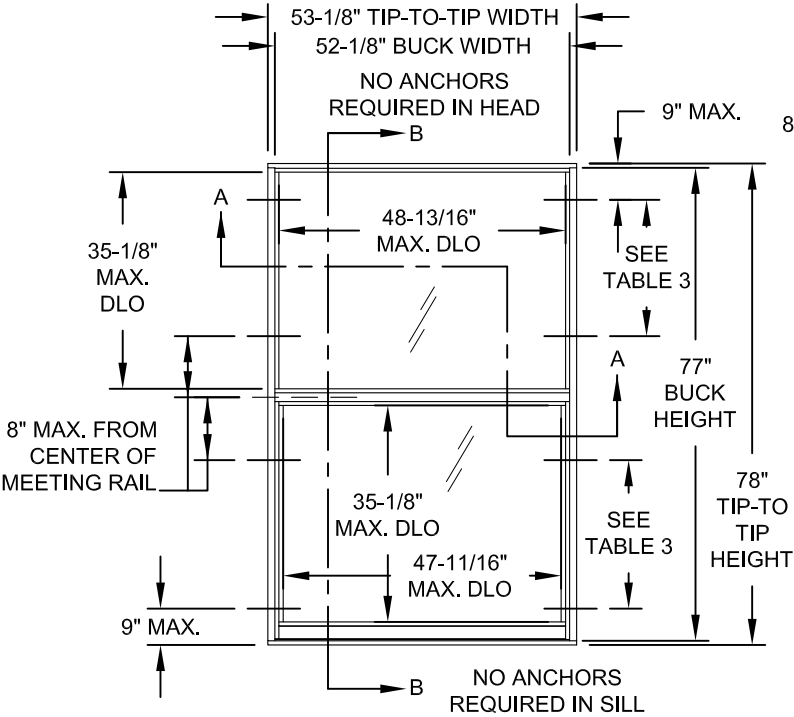
TABLE 1:

Glass Types	
1	1/8" Annealed
2	1/8" Tempered
3	3/16" Annealed
4	3/16" Tempered
5	1/4" Annealed
6	1/4" Tempered
7	1/8" Annealed, 1/4" Airspace, 1/8" Annealed
8	3/16" Annealed, 1/4" Airspace, 1/8" Annealed
9	1/8" Tempered, 1/4" Airspace, 1/8" Tempered
10	3/16" Tempered, 1/4" Airspace, 1/8" Tempered

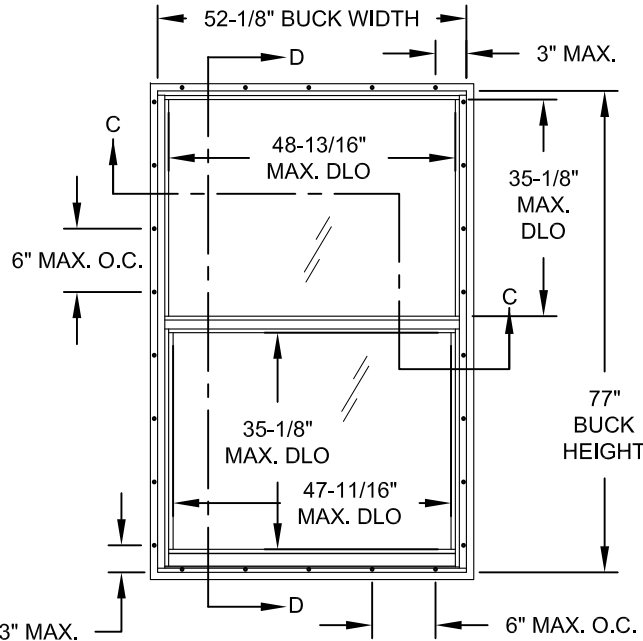
TABLE 2:

Design Pressure (lbs/ft ²) for Glass Type 1									
		Window Buck Width							
		18-1/8"	25-1/2"	32"	36"	40"	44"	48"	52-1/8"
Window Buck Height	22"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0
	36"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0
	37-3/8"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0
	44"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 46.0	+/- 41.4
	48"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 45.0	+/- 40.1
	49-5/8"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 44.9	+/- 39.9
	60"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 48.7	+/- 43.9	+/- 39.9
	62"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 47.9	+/- 43.3	+/- 39.7
	72"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 50.0	+/- 47.0	+/- 42.7	+/- 39.6	+/- 37.0
	77"	+/- 50.0	+/- 50.0	+/- 50.0	+/- 48.6	+/- 44.2	+/- 40.3	+/- 37.7	+/- 34.9

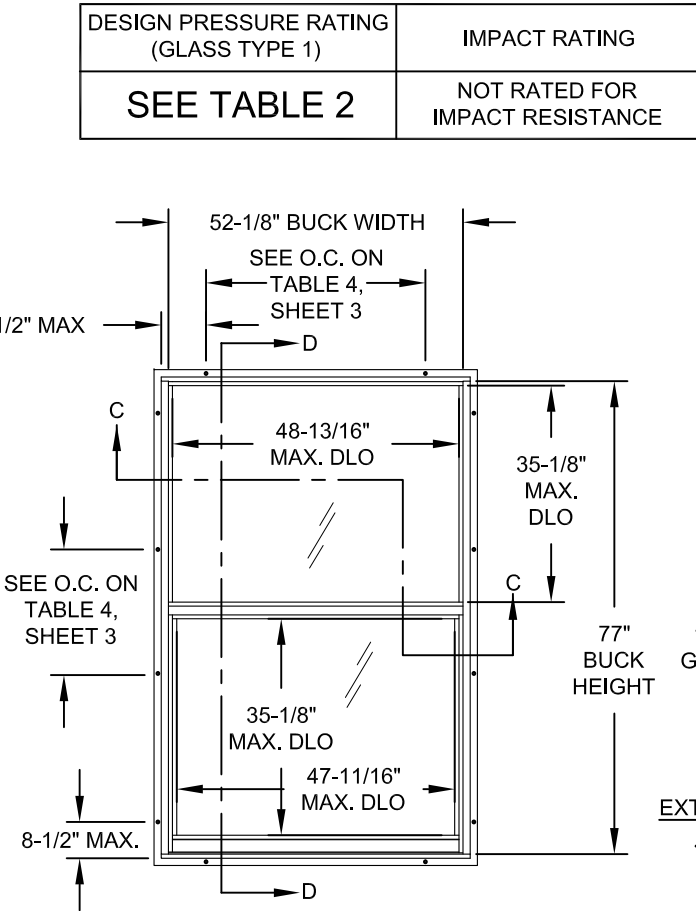
FLORIDA PRODUCT APPROVAL #23358



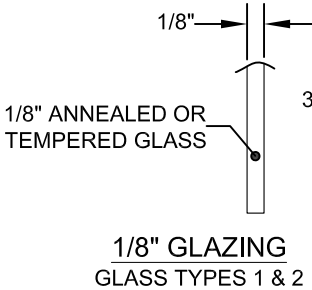
TYP. FLANGE FRAME
ANCHOR LOCATIONS @ MAX. SIZE



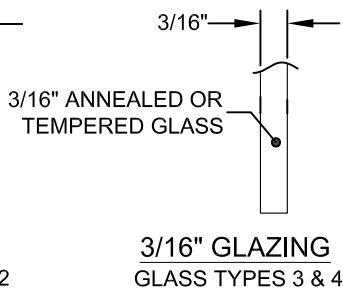
TYP. INTEGRAL FIN FRAME
ANCHOR LOCATIONS @ MAX. SIZE
(INSTALLED WITH NAILS)



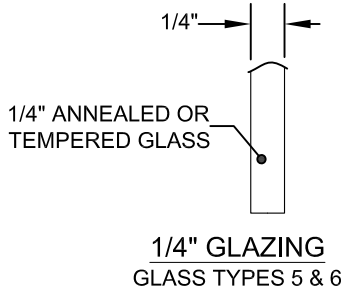
TYP. INTEGRAL FIN FRAME
ANCHOR LOCATIONS @ MAX. SIZE
(INSTALLED WITH SCREWS)



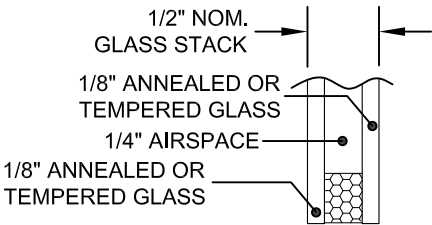
1/8" GLAZING
GLASS TYPES 1 & 2



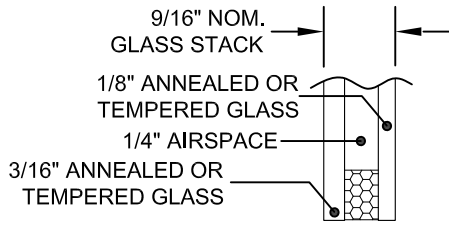
3/16" GLAZING
GLASS TYPES 3 & 4



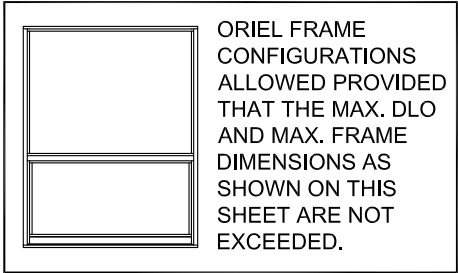
1/4" GLAZING
GLASS TYPES 5 & 6



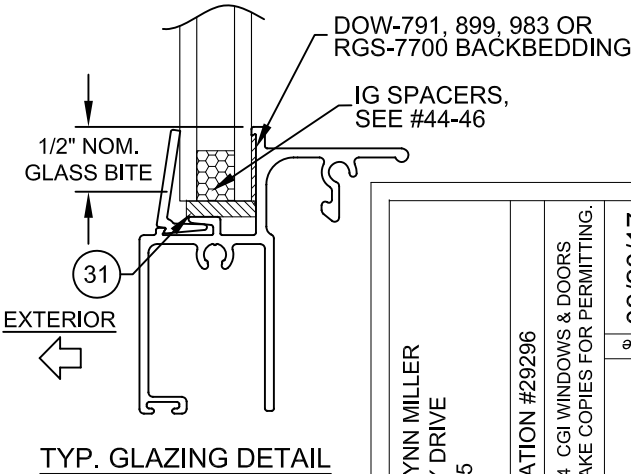
1/2" I.G. GLAZING
GLASS TYPES 7 & 9



9/16" I.G. GLAZING
GLASS TYPES 8 & 10



ORIEL FRAME
CONFIGURATIONS
ALLOWED PROVIDED
THAT THE MAX. DLO
AND MAX. FRAME
DIMENSIONS AS
SHOWN ON THIS
SHEET ARE NOT
EXCEEDED.



TYP. GLAZING DETAIL

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

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Impact Resistant
Windows & Doors

CGI WINDOWS AND DOORS
3780 W. 104TH STREET
HIALEAH, FL 33018

SH WINDOW INSTALLATION (NI)

ELEVATION & GENERAL NOTES

SH4000A

09/20/17

A MORLESIN

1 OF 4

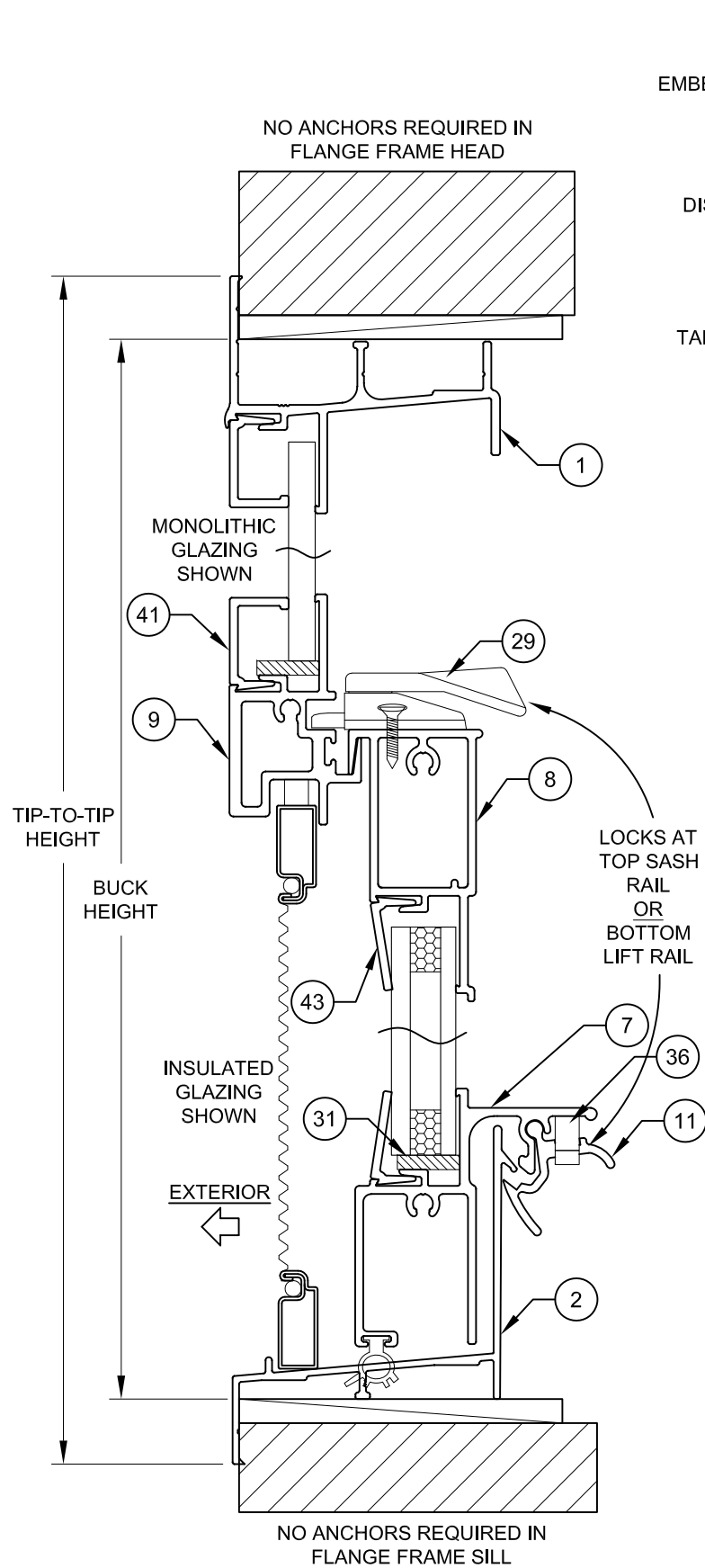
SH4000FLPA

ANTHONY LYNN MILLER
LICENSE
No. 58705
01/03/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

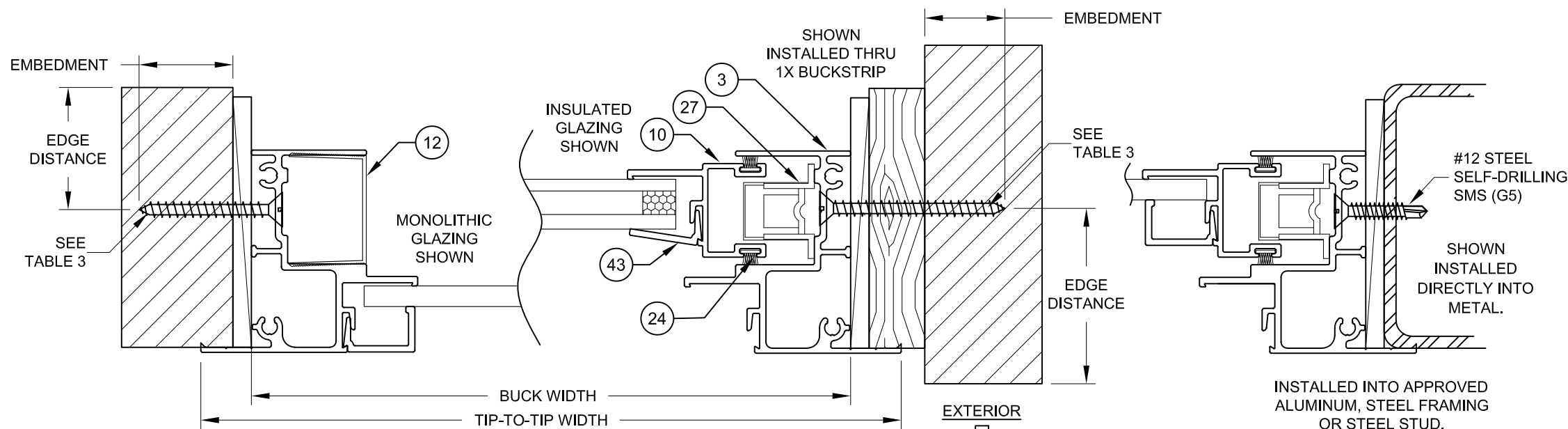
A. LYNN MILLER, P.E.
P.E.# 58705

Rev.	Date	Scale
G	01/03/24	JR

Rev.	Date	Scale
G	01/03/24	JR



VERTICAL SECTION B-B



HORIZONTAL SECTION A-A

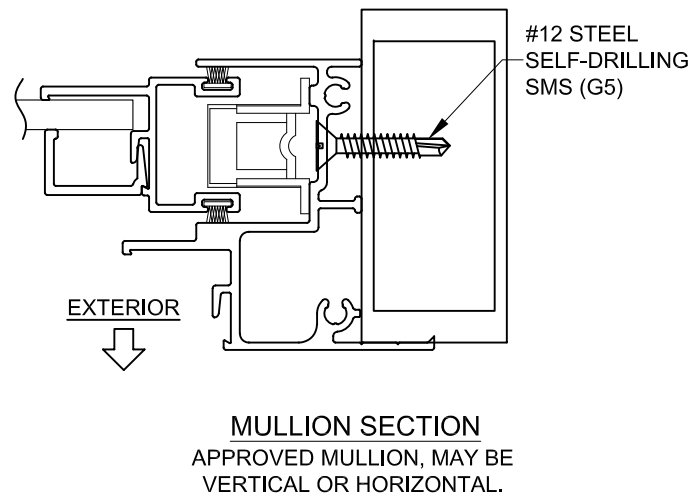
TABLE 3: THROUGH-FRAME ANCHORS

Anchor	Substrate	Minimum Edge Distance	Minimum Embedment	Max. O.C. (Above / Below Meeting Rail)
#12 Steel SMS Screw (G5)	P.T. Southern Pine (SG = .55)	9/16"	1-3/8"	21" / 23"
	Aluminum, 6063-T5 min.	3/8"	0.078"	21" / 23"
	Steel Stud, Gr. 33 min.	3/8"	0.045" (20 Ga)	21" / 23"
	A36 Steel	3/8"	0.050"	21" / 23"
1/4" Steel Ultracon+	P.T. Southern Pine (SG = .55)	1"	1-3/8"	21" / 23"
	Concrete (min. 3.0 ksi)	1-7/8"	1-3/8"	21" / 23"
	Grouted CMU, (ASTM C-90)	2-1/2"	1-3/4"	21" / 23"
	UngROUTED CMU, (ASTM C-90)	1"	1-1/4"	12-1/4" / 12-1/4"
1/4" 410 SS CreteFlex	P.T. Southern Pine (SG = .55)	1"	1-3/8"	21" / 23"
	Concrete (min. 3.35 ksi)	1"	1-3/4"	21" / 23"
	Concrete (min. 3.35 ksi)	2-1/2"	1"	21" / 23"
	UngROUTED CMU, (ASTM C-90)	1-3/4"	1-1/4"	21" / 23"

- 1) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.
2) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
3) ALL ANCHOR HEAD TYPES ARE ALLOWED.

NOTES

- 1) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED IN TABLE 3. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.
- 2) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLE 2. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.
- 3) SEE SHEET 1 & TABLE 3 FOR SPACING REQUIREMENTS.
- 4) MAX. SHIM THICKNESS TO BE 1/4".
- 5) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.



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Impact Resistant Windows & Doors		CGI WINDOWS AND DOORS 3780 W. 104TH STREET HIALEAH, FL 33018		Drawn By	A MORLESIN
SH WINDOW INSTALLATION (NI)		ANCHOR INFORMATION, CROSS SECTION		No.	2 OF 4
SH4000A		SH4000FLPA		Sheet	
Title		Desc.		Series	

ANTHONY LYNN MILLER
LICENSE
No. 58705
01/03/24
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

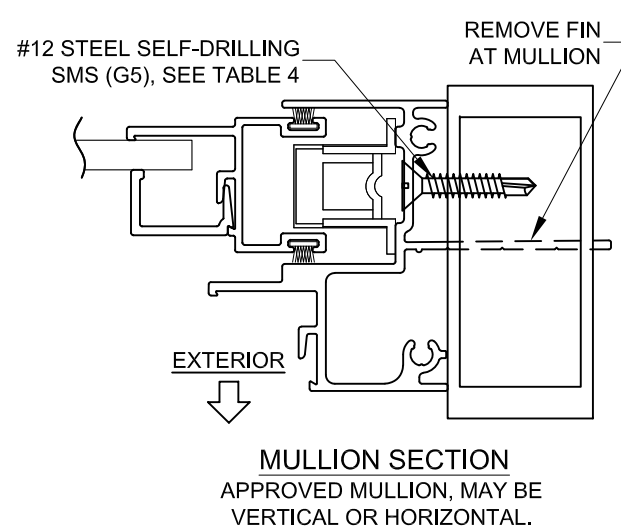
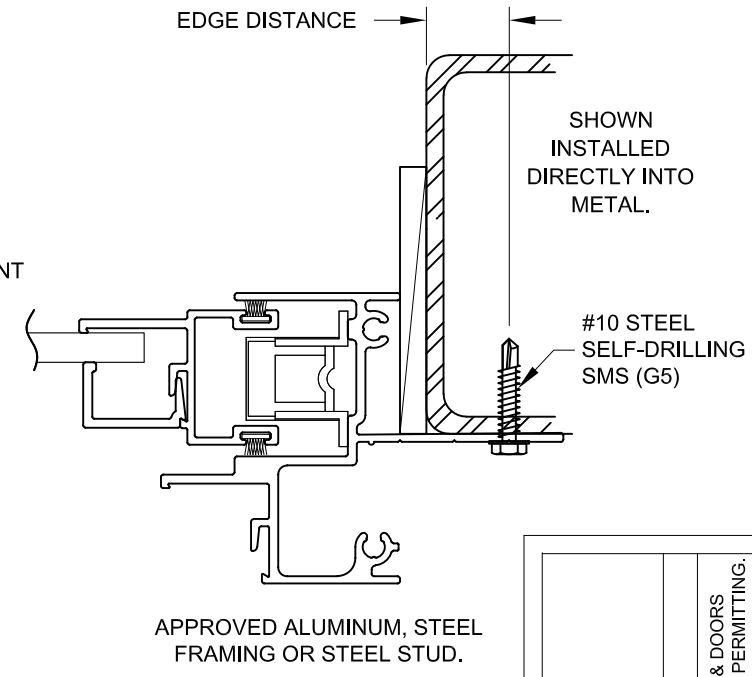
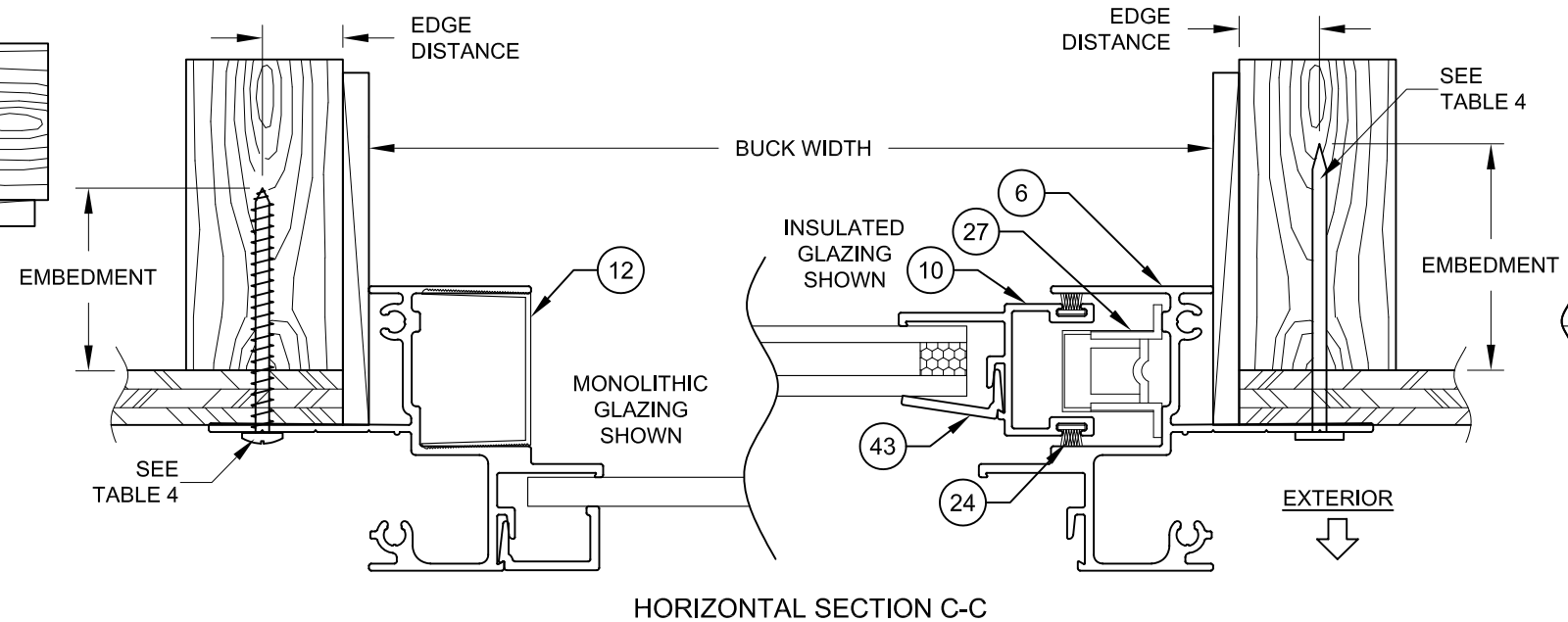
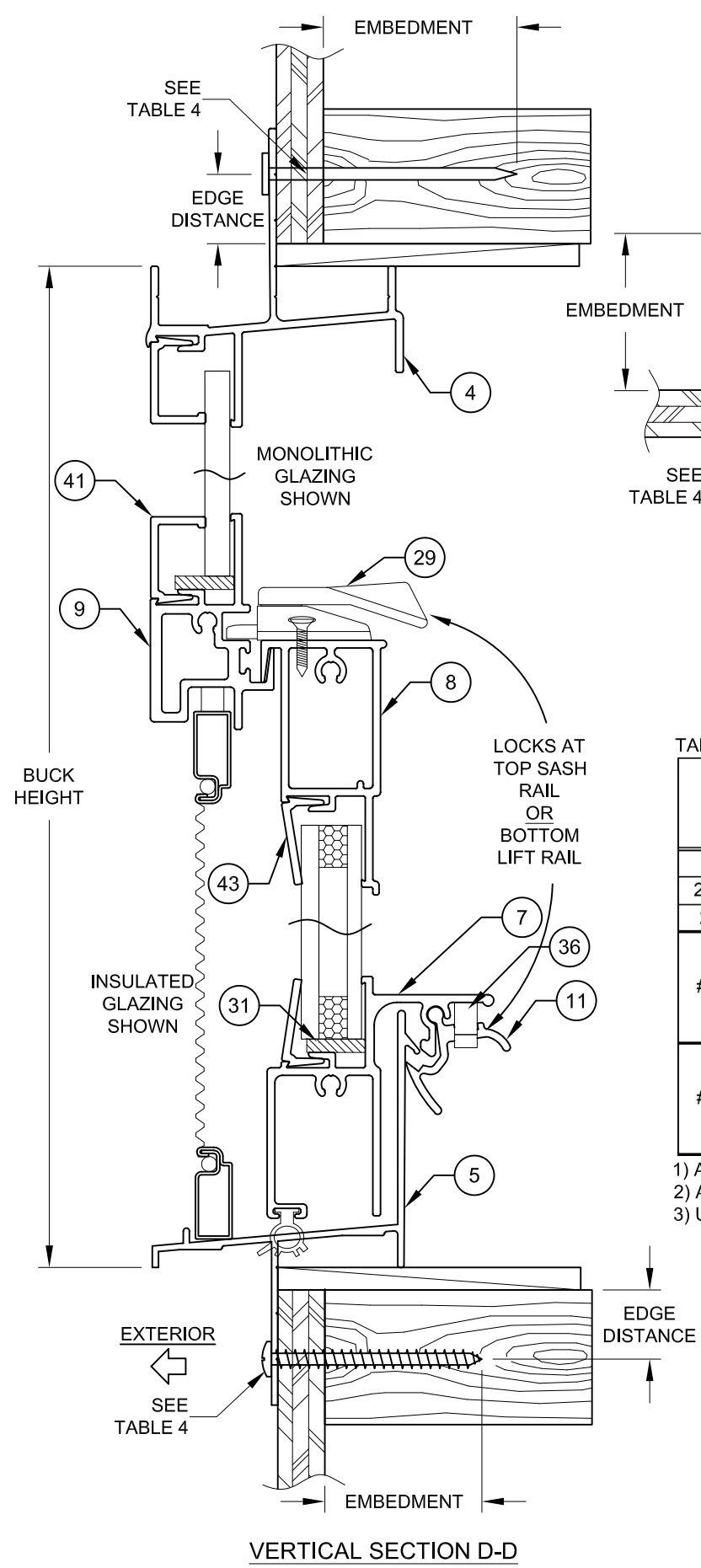


TABLE 4: TROUGH-FIN ANCHORS

Anchor	Substrate	Min. Embedment or Metal Thickness	Min. Edge Distance	Max. On-center Distance, O.C.	Max. Corner Distance
2-1/2" x .113" Box Nail	P.T. Southern Pine (SG = .55)	-	3/8"	6" @ Head/Sill 6" @ Jambs	2-7/8"
2-1/2" x .131" Common Nail	P.T. Southern Pine (SG = .55)	-	3/8"		
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG = .55)	-	3/8"		
#10 Steel SMS Screw (G5)	P.T. Southern Pine (SG = .55)	1-3/8"	1/2"	17-9/16" @ Head/Sill 15" @ Jambs	8-1/2"
	Aluminum, 6063-T5 min	0.100"	3/8"		
	Steel Stud, Gr. 33 min.	0.057"	3/8"		
#12 Steel SMS Screw (G5)	A36 Steel	0.050"	3/8"	17-9/16" @ Head/Sill 20" @ Jambs	8-1/2"
	P.T. Southern Pine (SG = .55)	1-3/8"	9/16"		
	Aluminum, 6063-T5 min.	0.125"	7/16"		
	Steel Stud, Gr. 33 min.	0.071"	7/16"		
#12 Steel SMS Screw (G5)	A36 Steel	0.050"	7/16"		

- 1) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.
2) ALL HEAD TYPES ARE ACCEPTABLE FOR #10 SCREWS.
3) USE ONLY PAN OR HEX HEAD TYPES FOR #12 SCREWS WHEN INSTALLING THROUGH THE FIN.

NOTES

- 1) USE ONLY SUBSTRATE APPROPRIATE ANCHORS LISTED IN TABLE 4. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.
2) 2X WOOD FRAMING OR BUCK, 1-1/2" THICK OR GREATER.
3) SEE SHEET 1 AND TABLE 4 FOR SPACING REQUIREMENTS.
4) MAX. SHIM THICKNESS TO BE 1/4".
5) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.

Impact Resistant Windows & Doors

CGI WINDOWS AND DOORS
3780 W. 104TH STREET
HIALEAH, FL 33018

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

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SH WINDOW INSTALLATION (NI)

ANCHOR INFORMATION, CROSS SECTION

SH4000A

Date

09/20/17

By

A MORLESIN

No.

3 OF 4

Sheet

SH4000FLPA

Rev.

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DATE

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Rev.

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Anthony Lynn Miller

PROFESSIONAL ENGINEER

FLORIDA

01/03/24

No. 58705

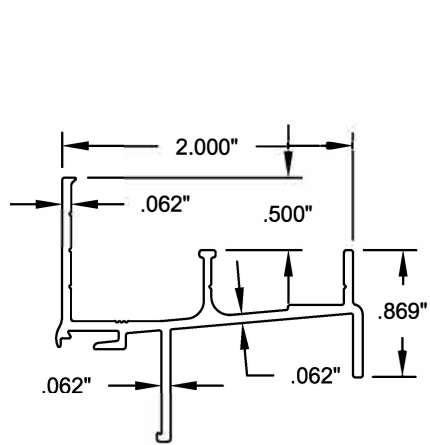
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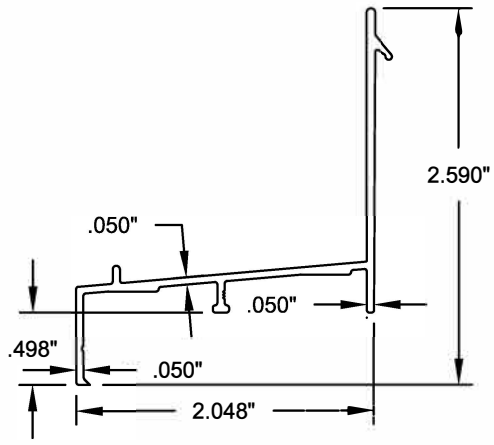
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TABLE 5:

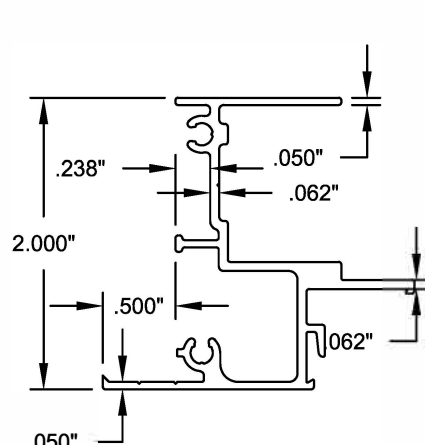
Item #	Description
1	Flange Frame Head
2	Flange Frame Sill
3	Flange Frame Jamb
4	Integral Fin Frame Head
5	Integral Fin Frame Sill
6	Integral Fin Frame Jamb
7	Sash Bottom Rail
8	Sash Top Rail
9	HD Fixed Meeting Rail
10	Sash Side Rail
11	Sash Bottom Lock
12	Vinyl Sash Stop
20	Vinyl Bulb, Flex PVC 70
21	Frame Corner Gasket, Polyethelyne, opt.
22	Sash Corner Gasket, Polyethelyne, opt
23	Fixed Meeting Rail Plug, Rigid PVC
24	Wstp., 187" X .230" Fin Seal
25	Frame/Sash Corner Sealant, opt.
26	Balance Take-out Clip
27	Balance
28	Sash Cam, Nylon
29	Sweep Latch, Zinc
30	#6 X 5/8" Ph. Fl. SMS Latch Screws
31	Setting Block 1/8" X 1/2" X 1", EPDM
36	Sash Bottom Lock Spring
38	Glazing Sealant
40	Vinyl Glass Bead (1/8" Glass)
41	Vinyl Glass Bead (3/16" Glass)
43	Vinyl Glass Bead (I.G.)
44	Kommerling Kodispace 4SG TPS
45	Quanex Super Spacer with Hot-melt Butyl
46	Metal IG Spacer



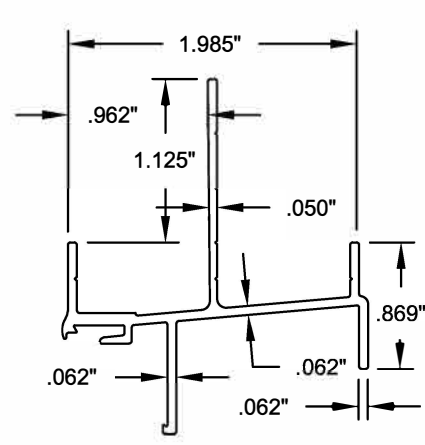
1 FLANGE FRAME HEAD
6063-T6 ALUMINUM



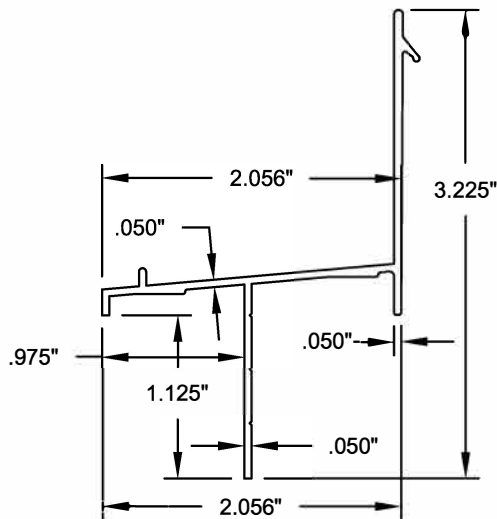
2 FLANGE FRAME SILL
6063-T6 ALUMINUM



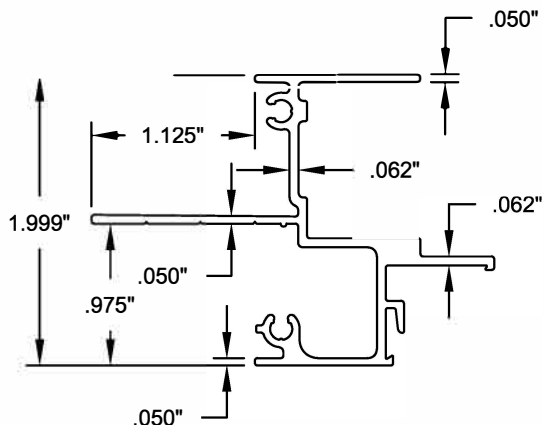
3 FLANGE FRAME JAMB
6063-T6 ALUMINUM



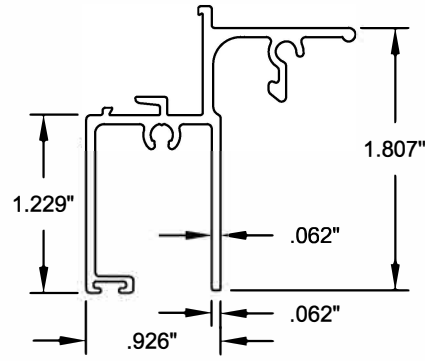
4 INTEGRAL FIN FRAME HEAD
6063-T5 ALUMINUM



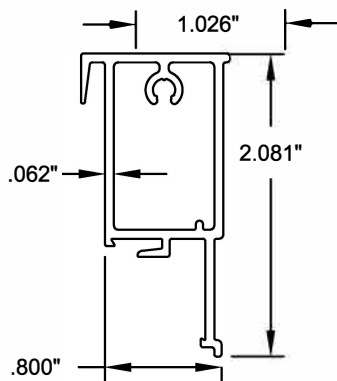
5 INTEGRAL FIN FRAME SILL
6063-T6 ALUMINUM



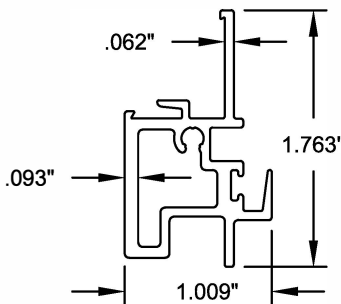
6 INTEGRAL FIN FRAME JAMB
6063-T6 ALUMINUM



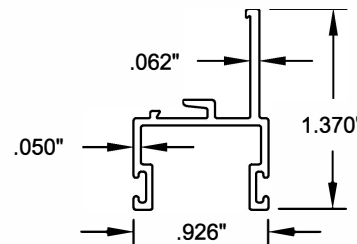
7 SASH BOTTOM RAIL
6063-T6 ALUMINUM



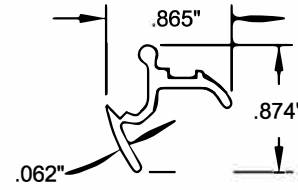
8 SASH TOP RAIL
6063-T6 ALUMINUM



9 HD FIXED MEETING RAIL
6063-T6 ALUMINUM



10 SASH SIDE RAIL
6063-T6 ALUMINUM



11 SASH BOTTOM LOCK RAIL
6063-T6 ALUMINUM

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	A MORLESIN		09/20/17		Date		By		Sheet		Title		Series		Desc.	

