

SERIES 4000
NON-IMPACT RESISTANT
SINGLE HUNG WINDOW

FLORIDA PRODUCT APPROVAL #1435

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) 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 AND SECURED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER, (EOR) OR ARCHITECT OF RECORD, (AOR).

4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH TO ACHIEVE EMBEDMENT. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

5) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. FOR INTEGRAL FIN FRAMES INSTALL SHIMS AT MAX. 18" O.C.

6) DESIGN PRESSURES:

A. NEGATIVE DESIGN LOADS BASED ON STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.

B. POSITIVE DESIGN LOADS BASED ON WATER TEST PRESSURE, STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.

C. DESIGN LOADS ARE BASED ON ALLOWABLE STRESS DESIGN, ASD.

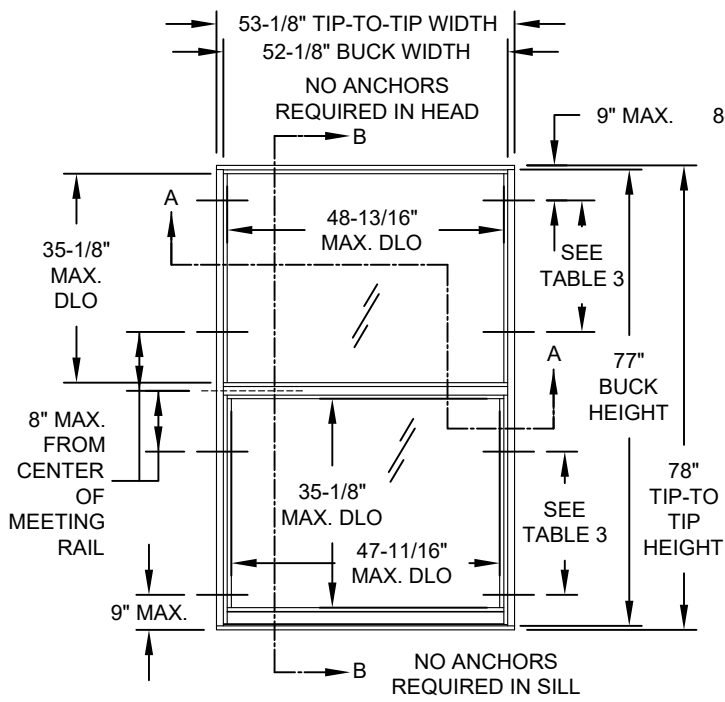
7) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

8) REFER TO CURRENT FLORIDA BUILDING CODE FOR EGRESS REQUIREMENTS.

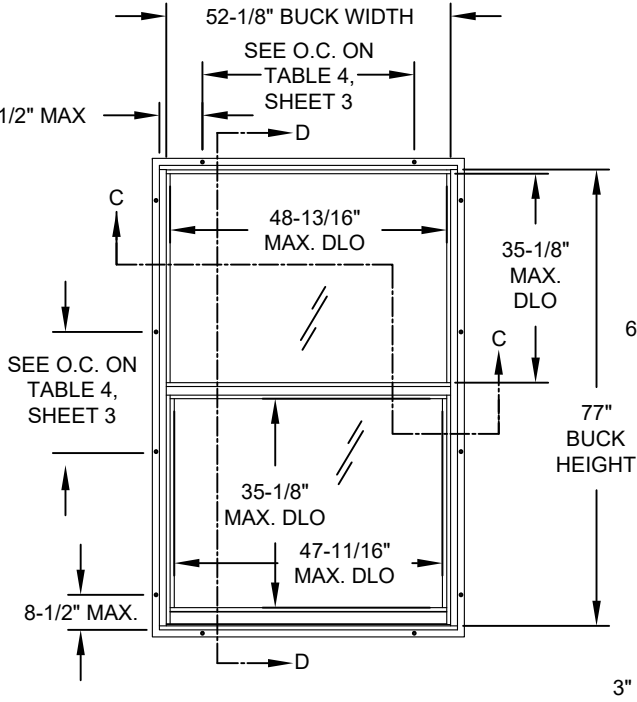
TABLE 1:

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

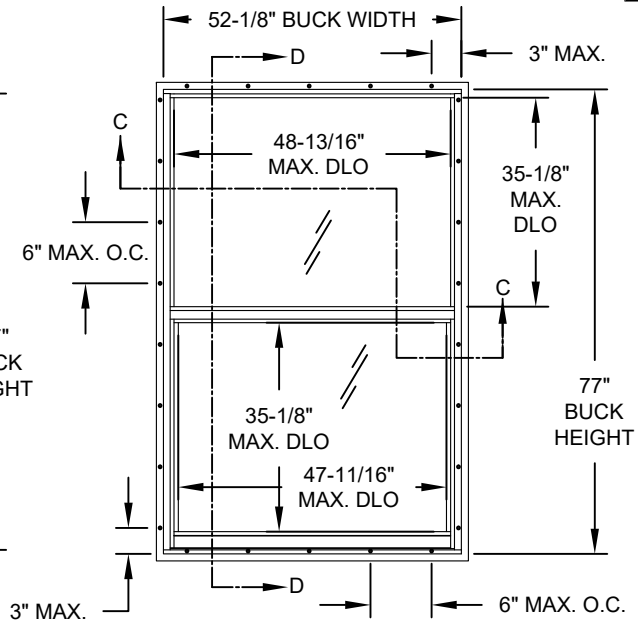
SEE DETAILS SHEET 4



TYP. FLANGE FRAME
ANCHOR LOCATIONS @ MAX. SIZE



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



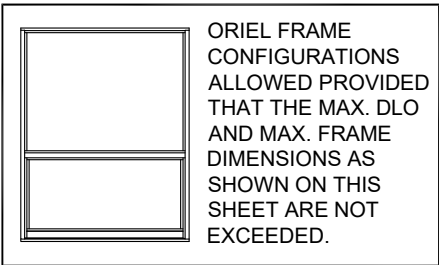
TYP. INTEGRAL FIN FRAME
ANCHOR LOCATIONS @ MAX. SIZE
(INSTALLED WITH NAILS)

TABLE 2A:

Design Pressure (lbs/ft ²) for Glass Type 1									
		Buck Width							
		18-1/8"	25-1/2"	32"	36"	40"	44"	48"	52-1/8"
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

TABLE 2B:

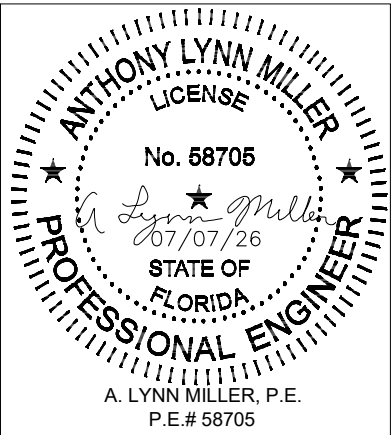
Design Pressure (lbs/ft ²) for Glass Types 2-10		
		Buck Width
		up to 52-1/8"
Buck Height	22"	+/- 50.0
	36"	+/- 50.0
	37-3/8"	+/- 50.0
	44"	+/- 50.0
	48"	+/- 50.0
	49-5/8"	+/- 50.0
	60"	+/- 50.0
	62"	+/- 50.0
	72"	+/- 50.0
	77"	+/- 50.0

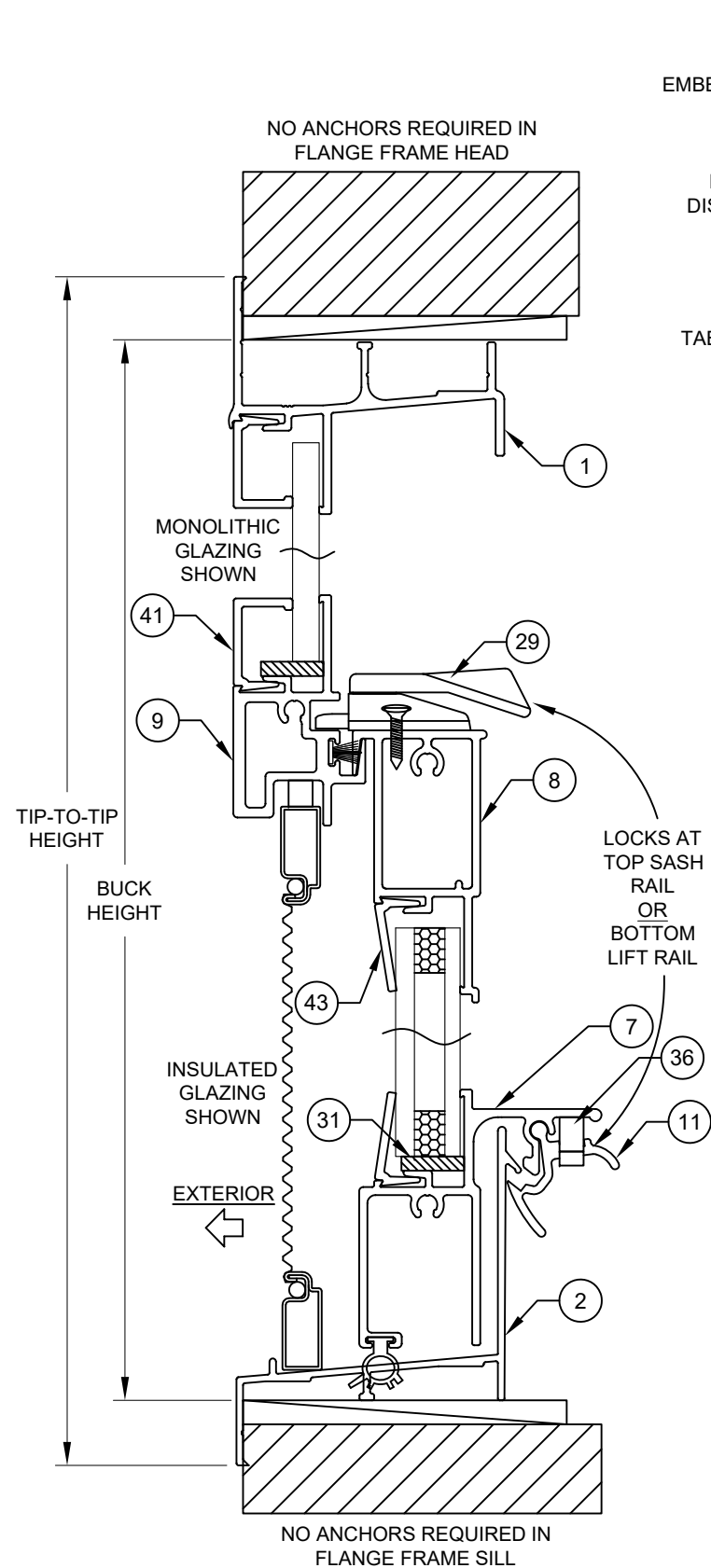


WHERE THE PRODUCT WILL BE INSTALLED WITHIN 3,000 FEET OF A SALTWATER COASTLINE, IT MUST COMPLY WITH SECTION 1711 OF THE FBC, BUILDING OR R332 OF THE FBC, RESIDENTIAL.

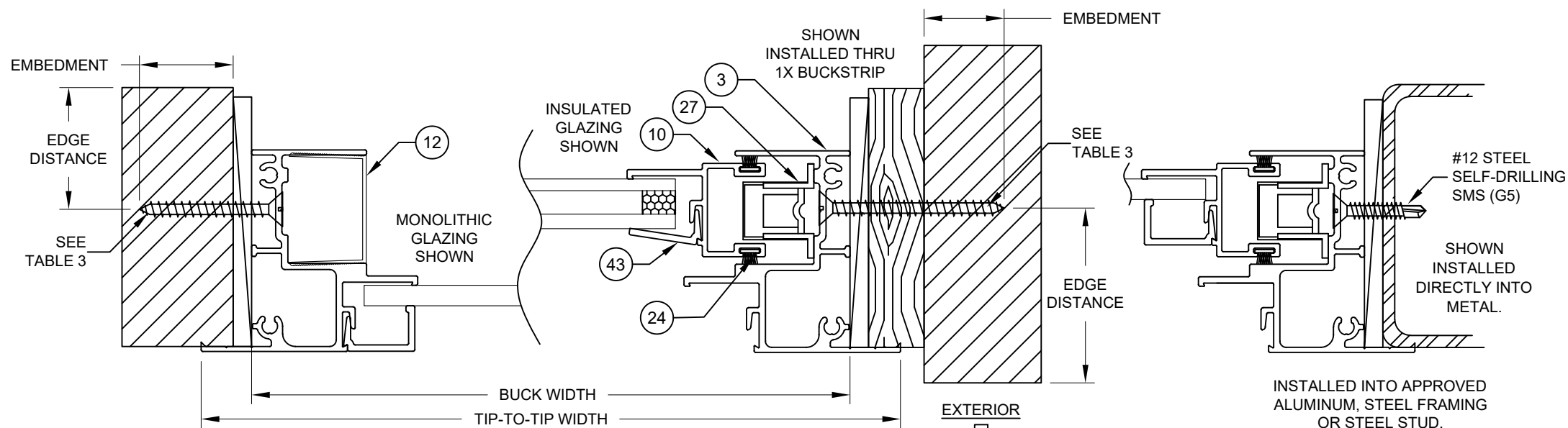
DESIGN PRESSURE RATING SEE TABLES 2A & 2B
WATER TEST PRESSURE 15% OF (+) DP
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE

PGT[®] WINDOWS and DOORS 3400 PRECISION DRIVE N. VENICE, FL 34275 (941) 480-1600				PREPARED BY A. LYNN MILLER 3400 PRECISION DRIVE N. VENICE, FL 34275 (941) 480-1600 COPYRIGHT © 2026 PGT INDUSTRIES, LLC LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.			
REGISTRATION #29296				ALUMINUM SINGLE HUNG WINDOW		Date	07/07/26
Title		ELEVATION & GENERAL NOTES		Drawn By	JENS ROSOWSKI		
Series	SH4000	Sheet	1 OF 4	DWG No.	SH4000-NI-HVHZ		





VERTICAL SECTION B-B



HORIZONTAL SECTION A-A

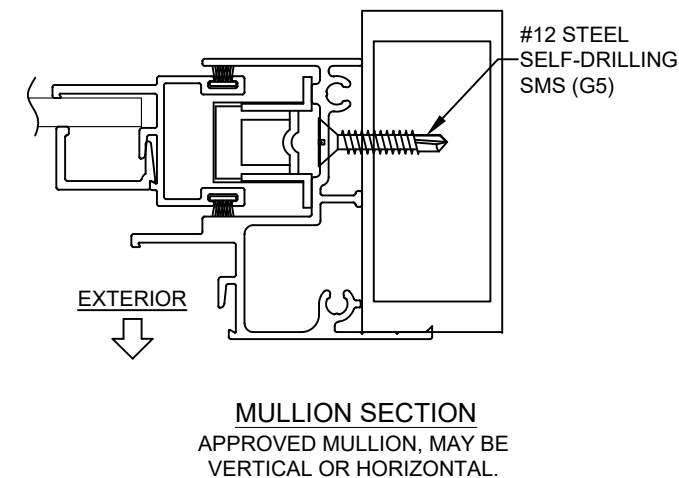
TABLE 3: THROUGH-FRAME ANCHORS

Anchor	Substrate	Minimum Edge Distance	Minimum Embedment	Max. O.C. (Above / Below Meeting Rail)
#12 SMS Carbon Steel or 18-8, 316, 410 SS	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+	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"
1/4" 410 SS CreteFlex	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"	12-1/4" / 12-1/4"
	Southern Pine (SG = .55)	1"	1-3/8"	21" / 23"
	Concrete (min. 3.35 ksi)	1"	1-3/4"	21" / 23"
1/4" 304 SS Aggre-Gator	Concrete (min. 3.35 ksi)	2-1/2"	1"	21" / 23"
	Ungrouted CMU, (ASTM C-90)	1-3/4"	1-1/4"	21" / 23"
	Southern Pine (SG = .55)	1"	1"	11-3/4" / 11-3/4"
	Concrete (min. 3.35 ksi)	1-1/2"	1"	11-3/4" / 11-3/4"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"	11-3/4" / 11-3/4"

- 1) MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.
2) ALL SCREWHEAD TYPES ARE APPLICABLE.
3) 18-8 FASTENERS SHALL BE MANUFACTURED FROM TYPE 304 OR 305 STAINLESS STEEL PER ASTM A240.
4) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.

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.

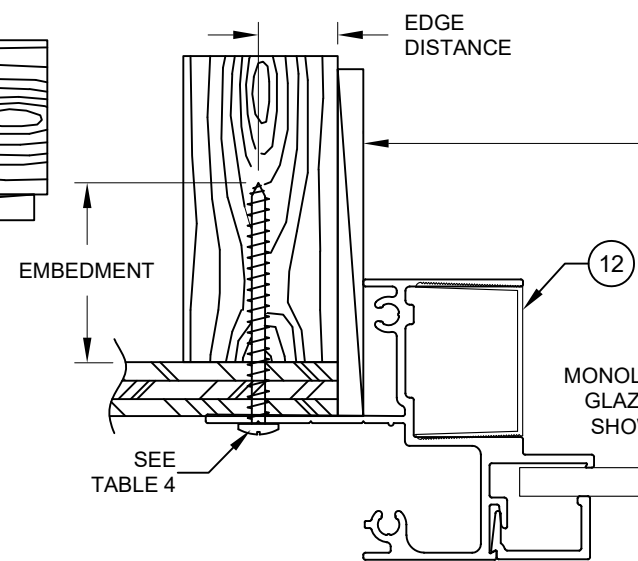
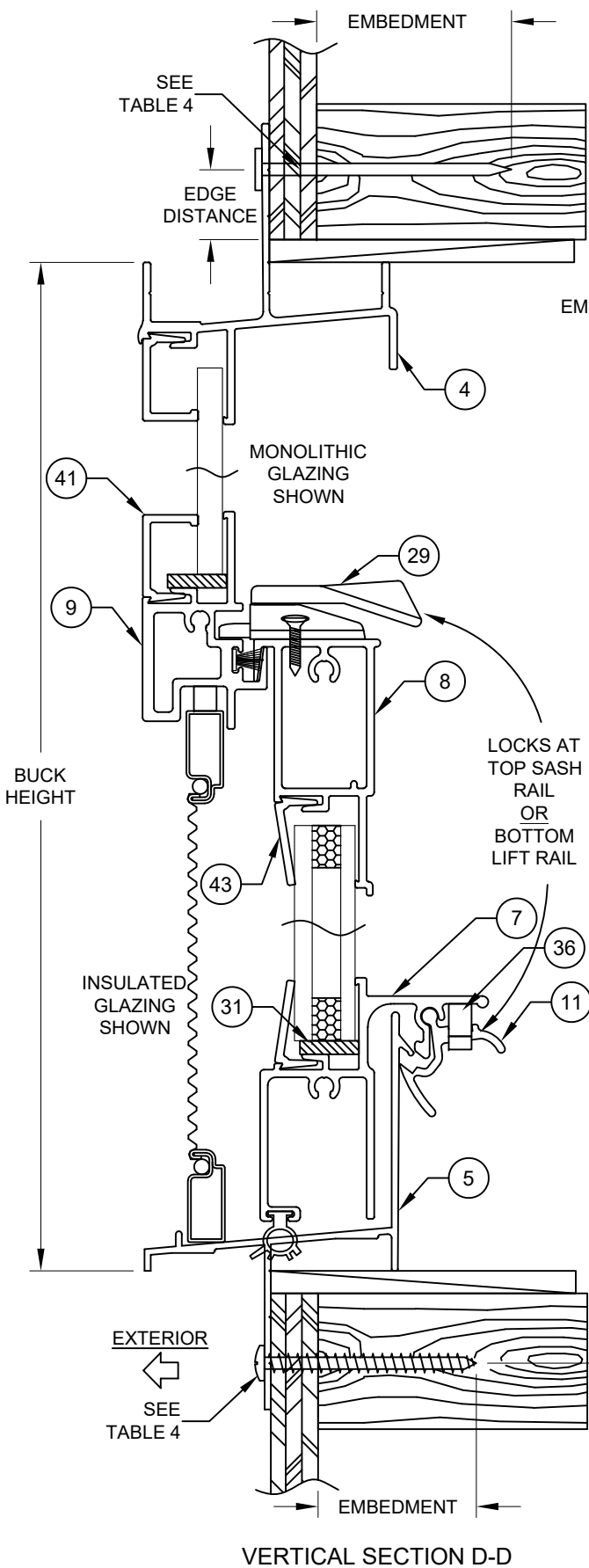


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REGISTRATION #29296

DATE 07/07/26
DRAWN BY JENS ROSOWSKI
ANCHOR INFORMATION, CROSS SECTION
ALUMINUM SINGLE HUNG WINDOW
2 OF 4
SH4000

ANTHONY LYNN MILLER
LICENSE
No. 58705
07/07/26
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705



HORIZONTAL SECTION C-C

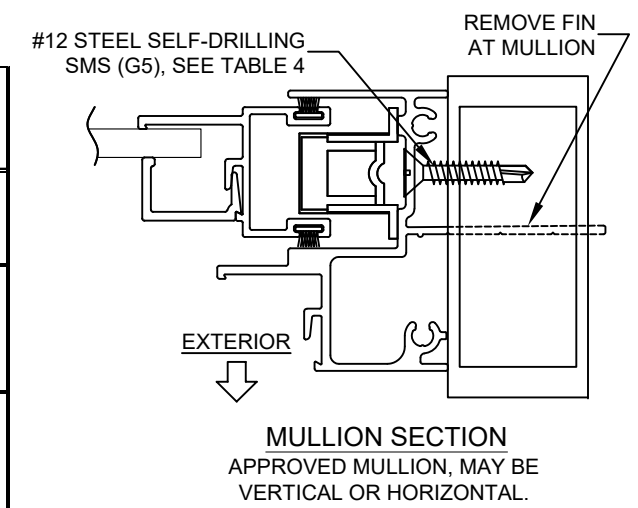
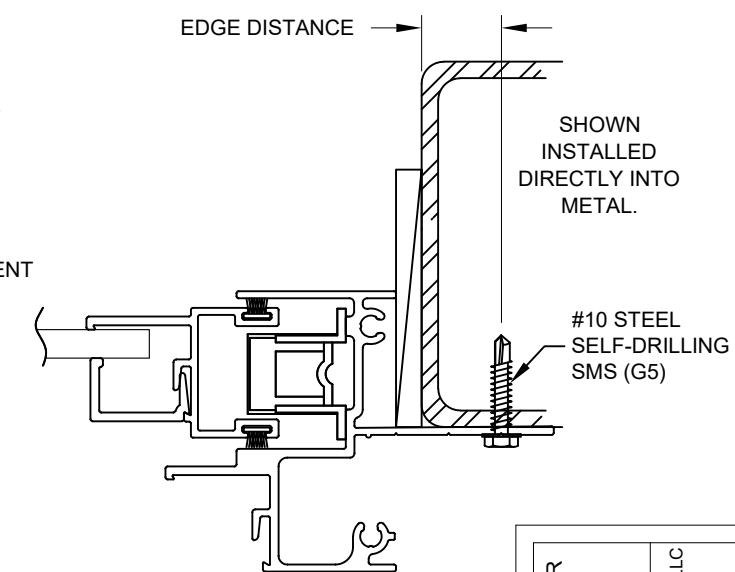


TABLE 4: TROUGH-FIN ANCHORS

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	Southern Pine (SG = .55)	-	3/8"	6" @ Head/Sill 6" @ Jams	2-7/8"
2-1/2" x .131" Common Nail	Southern Pine (SG = .55)	-	3/8"		
2-1/2" x .145" Roofing Nail	Southern Pine (SG = .55)	-	3/8"		
#10 SMS Carbon Steel or 18-8, 316 or 410 SS	Southern Pine (SG = .55)	1-3/8"	1/2"	17-9/16" @ Head/Sill 15" @ Jams	8-1/2"
	Aluminum, 6063-T5 min	0.100"	3/8"		
	Steel Stud, Gr. 33 min.	0.057"	3/8"		
	A36 Steel	0.050"	3/8"		
#12 SMS Carbon Steel or 18-8, 316 or 410 SS	Southern Pine (SG = .55)	1-3/8"	9/16"	17-9/16" @ Head/Sill 20" @ Jams	8-1/2"
	Aluminum, 6063-T5 min.	0.125"	7/16"		
	Steel Stud, Gr. 33 min.	0.071"	7/16"		
	A36 Steel	0.050"	7/16"		

- 1) MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE.
2) ALL SCREWHEAD TYPES ARE APPLICABLE.
3) 18-8 FASTENERS SHALL BE MANUFACTURED FROM TYPE 304 OR 305 STAINLESS STEEL PER ASTM A240.

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". MAX. SHIM O.C. TO BE 18".
5) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.

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REGISTRATION #29296

ALUMINUM SINGLE HUNG WINDOW

ANCHOR INFORMATION,
CROSS SECTION

ANCHOR INFORMATION,
CROSS SECTION

07/07/26

JENS ROSOWSKI

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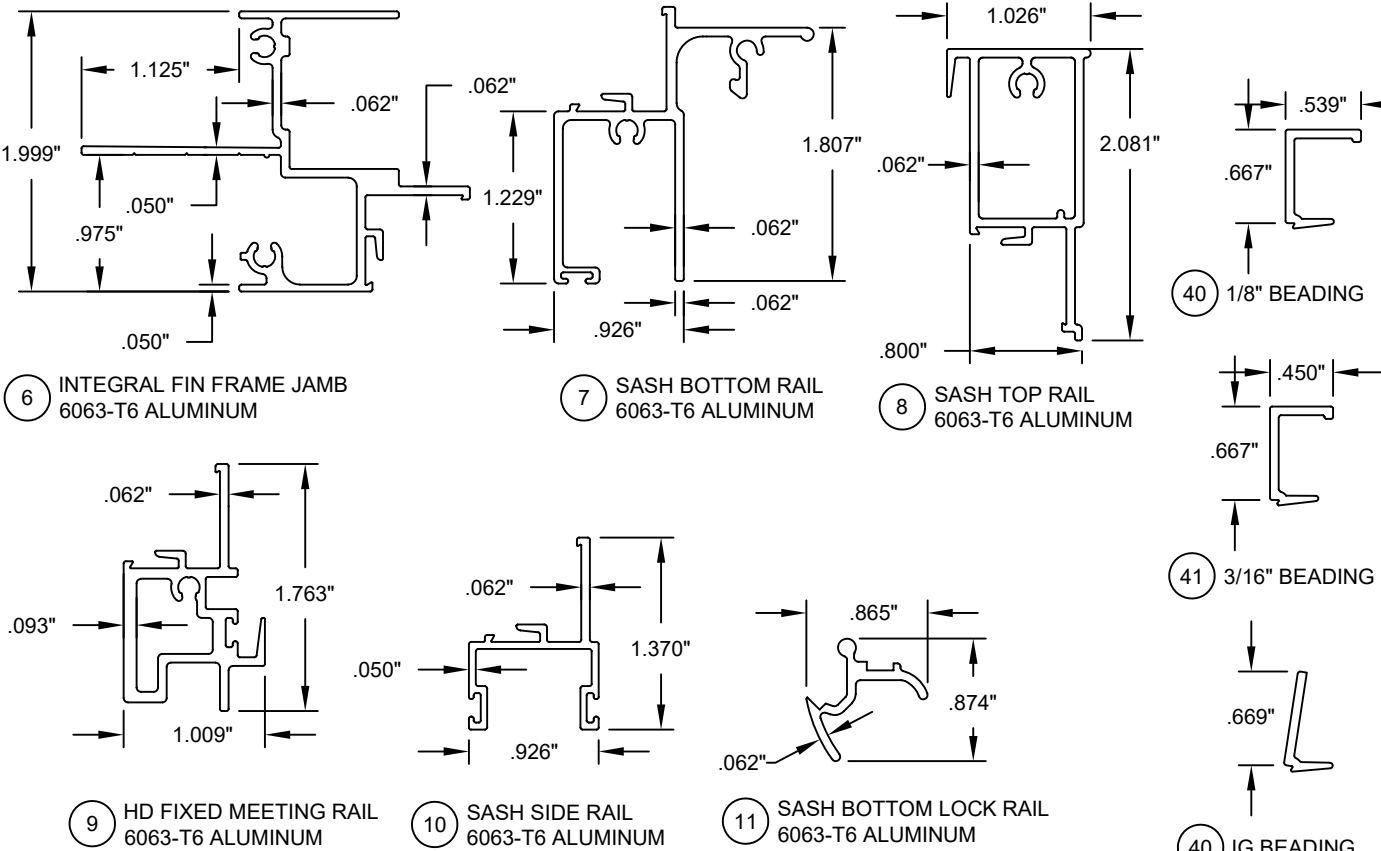
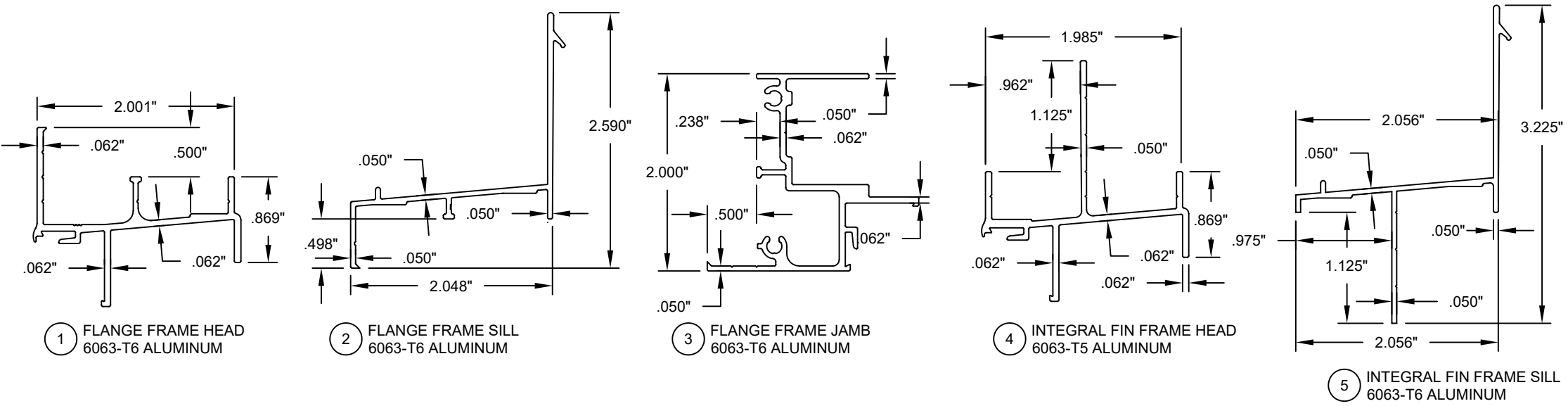
SH4000

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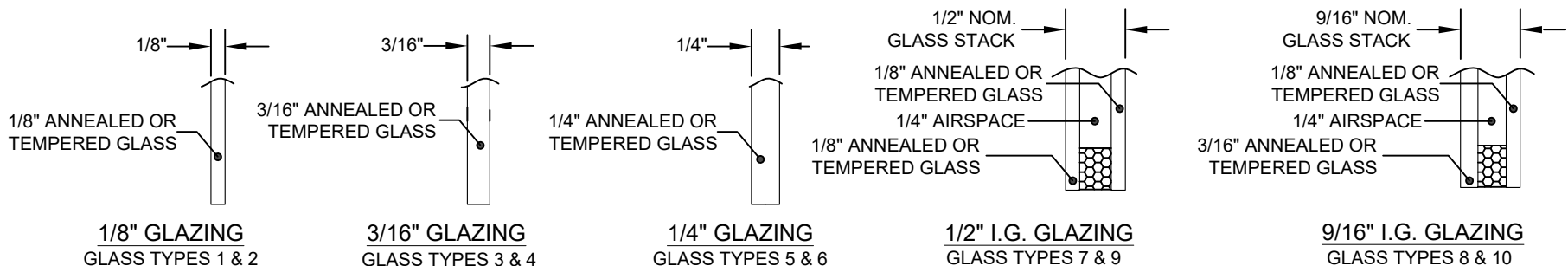
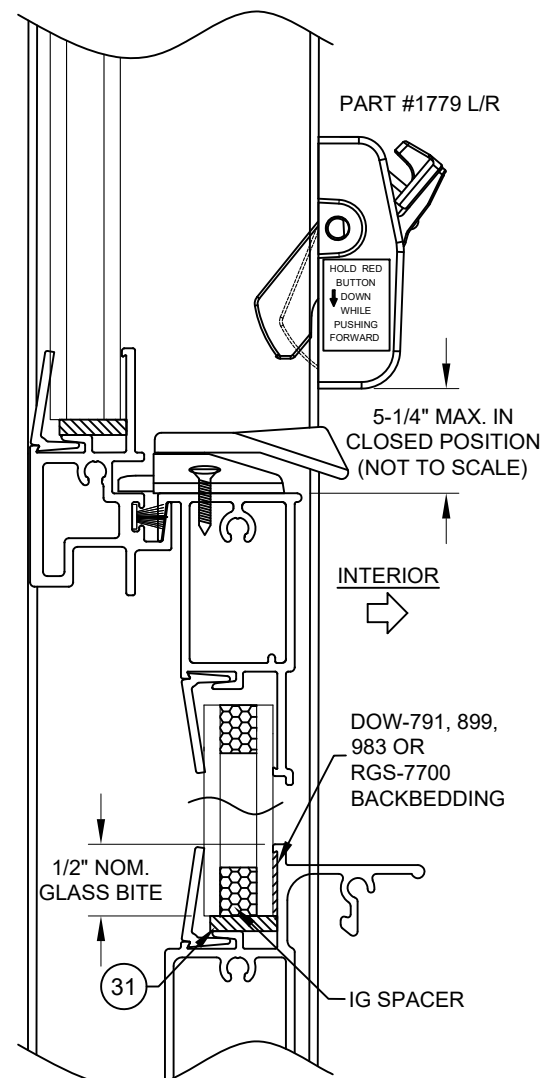
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PROFESSIONAL ENGINEER
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P.E.# 58705

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



OPTIONAL WOCD DEVICE
COMPLIES WITH ASTM F2090



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07/07/26

ALUMINUM SINGLE HUNG WINDOW

GLAZING INFORMATION & DESIGN PRESSURES

JENS ROSOWSKI

SH4000-NI-HVHZ

4 OF 4

SH4000

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