

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS LARGE MISSILE IMPACT RATED.
5. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
6. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
9. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
10. CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.
11. ALL WOOD MEMBERS OF THIS PRODUCT THAT MAY POSSIBLY COME INTO CONTACT WITH MASONRY OR CONCRETE SUBSTRATES, ARE SUBJECT TO MOISTURE &/OR ARE SUBJECT TO THE OUTSIDE ENVIRONMENT SHALL BE OF AN APPROVED DURABLE SPECIES OR BE TREATED IN AN APPROVED METHOD WITH AN APPROVED PRESERVATIVE PER FBC REQUIREMENTS.

ALTERNATE ANCHOR/SUBSTRATE EVALUATION NOTE:

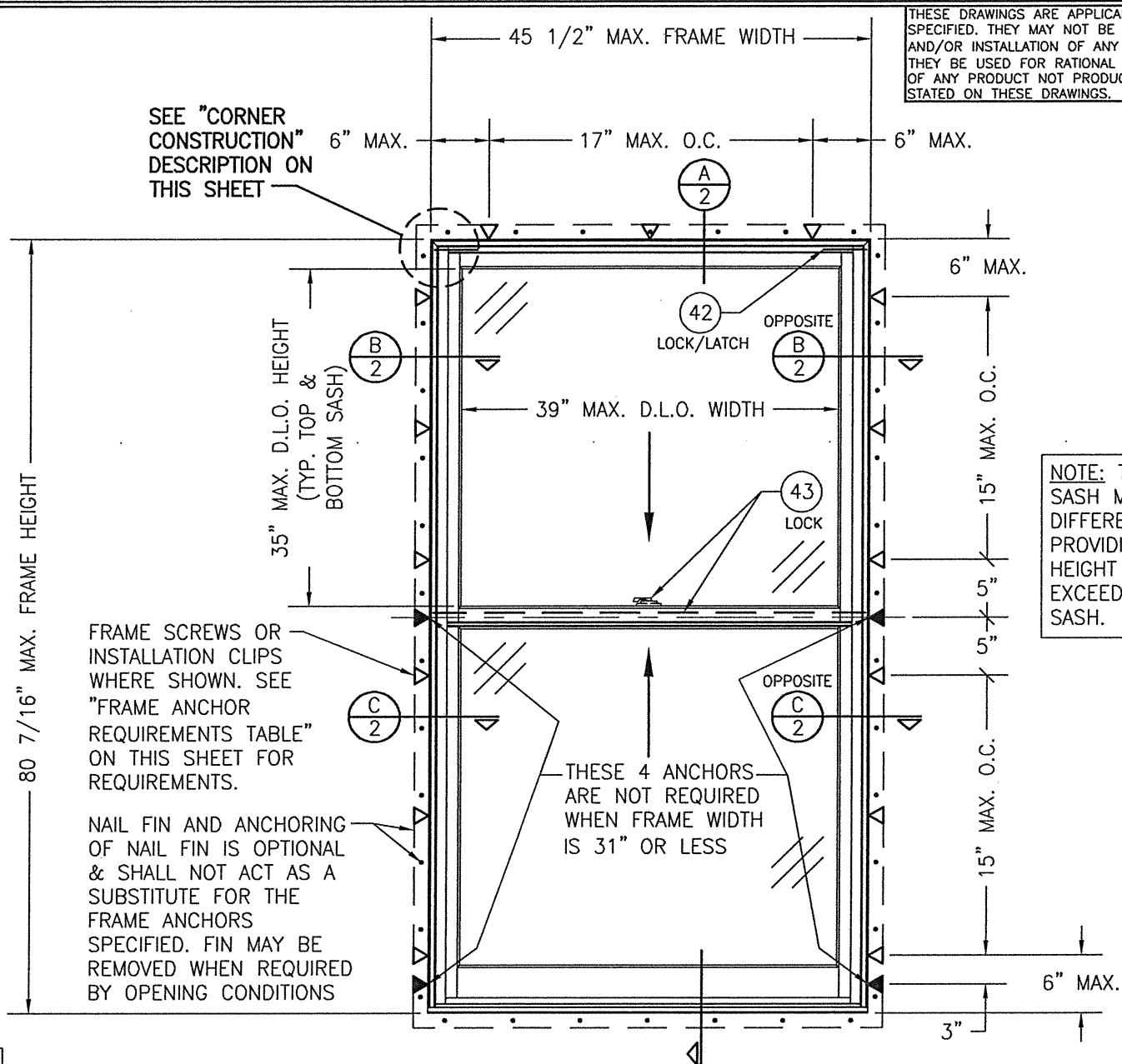
ALL ALTERNATE ANCHORS IN THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARD(S) AND ARE FOUND TO BE EQUIVALENT TO OR STRONGER THAN THE ANCHOR(S) USED IN TESTING WITH THIS PRODUCT.

INSTALLATION EVALUATION IS BASED ON APPLICABLE ANCHOR STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THE EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THE REFERENCED PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE INSTALLATION EVALUATION ENGINEER OF RECORD THAT THE INSTALLATIONS SPECIFIED HERE-IN ARE CURRENT WITH THE THEN CURRENT TESTING, CODE AND APPLICABLE STANDARDS.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & $G=0.55$)	NO. 10 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 10 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU OR 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
INSTALLATION CLIP SCREWS			
MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & $G=0.55$)	NO. 8 SMS SCREW	1 3/8"	1/2"
MIN. 18 GA. 33 KSI METAL STUD	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	NO. 8 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).



THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER, STATED ON THESE DRAWINGS.

NOTE: TOP & BOTTOM SASH MAY BE OF DIFFERENT HEIGHTS PROVIDING THE D.L.O. HEIGHT SPECIFIED IS NOT EXCEEDED IN EITHER SASH.

EXTERIOR ELEVATION:
SINGLE WINDOW

SCALE: 3/4" = 1'-0"

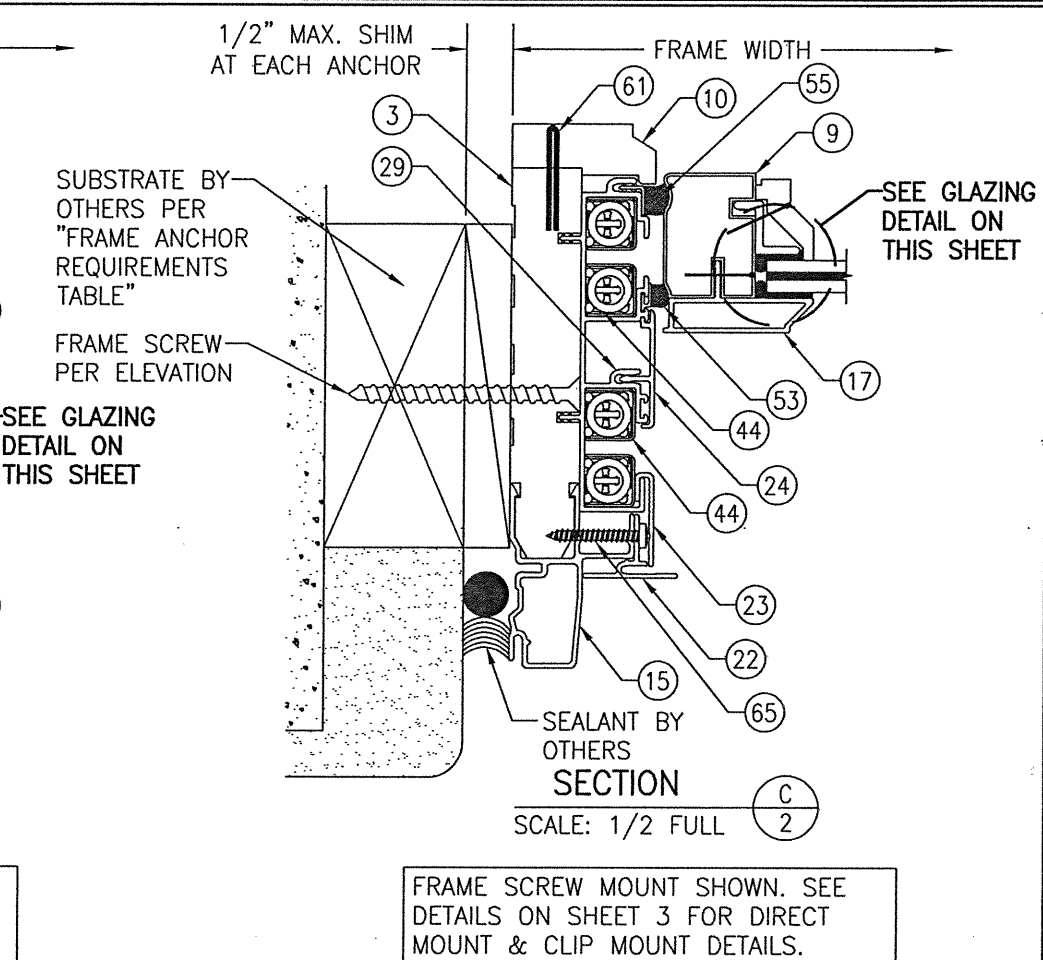
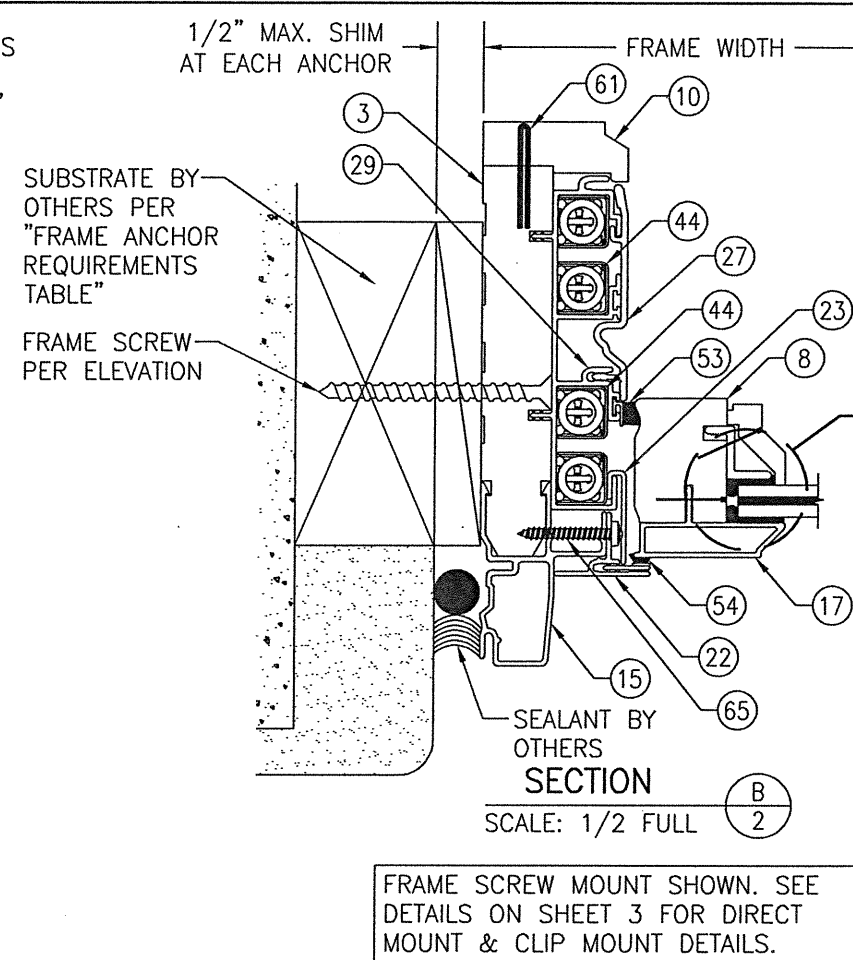
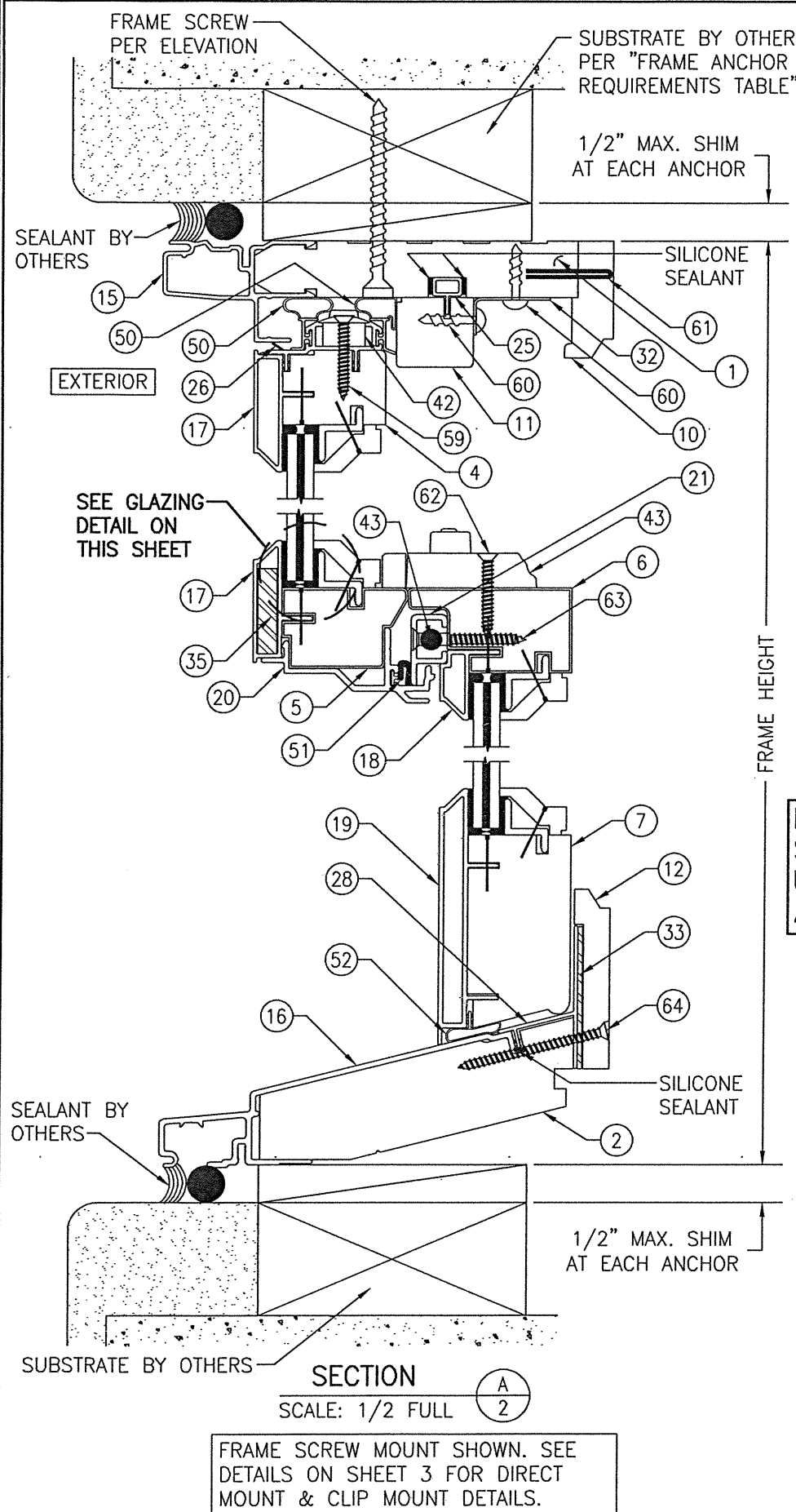
ALLOWABLE DESIGN PRESSURE

+/-65 PSF

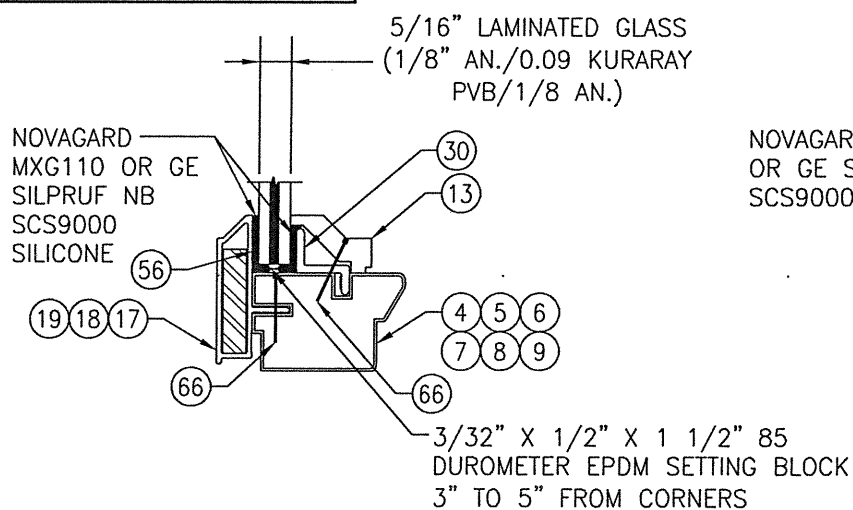
CORNER CONSTRUCTION:

FRAME CORNERS: FRAME MEMBERS WERE RABBETED, BUTTED, & SECURED WITH THREE(3) 16 GAUGE X 1/2" X 2" STAPLES PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT. TOP SASH TOP CORNER: CORNERS UTILIZED OPEN MORTISE AND TENON CONSTRUCTION AND WERE SECURED WITH TWO(2) 16 GAUGE X 1 1/8" BRAD NAILS PER CORNER. FRAME CLAD CORNERS: CLADDING MEMBERS WERE MITERED AND JOINED WITH A CORNER KEY (PART #36) AND TWO(2) NO. 7 X 5/8" FH SMS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT. SASH CLAD CORNERS: CLADDING MEMBERS WERE SQUARE CUT OR PROFILE CUT, BUTTED TOGETHER & SEALED WITH SILICONE SEALANT.

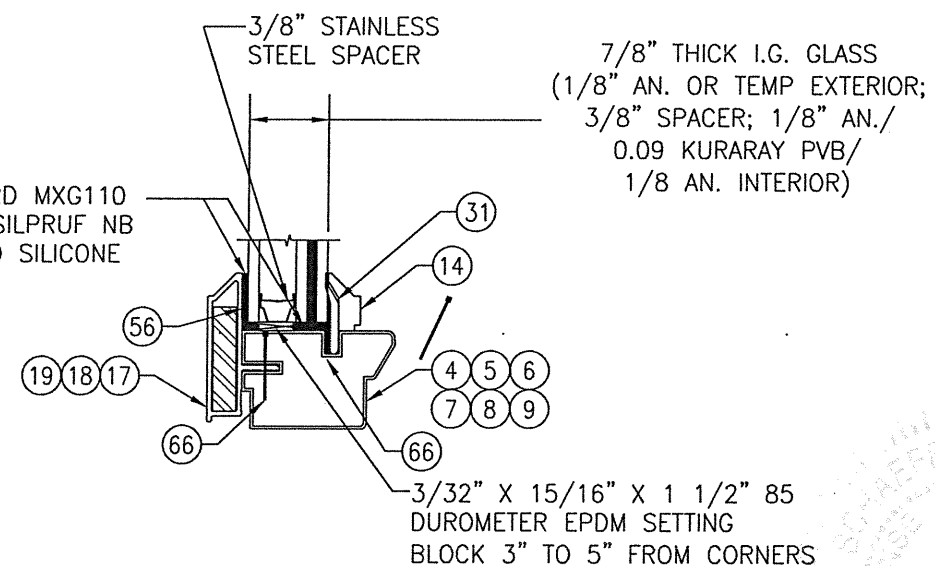
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PLOT: 1=16		DATE: 03/01/11	
NO.	REVISION	DESCRIPTION	DATE
A1	UPDATE TO	CURRENT STANDARDS	08/22/11
B1	UPDATE TO	CURRENT STANDARDS	01/06/15
C1	REMOVED	DOW 995	08/03/17
D1	UPDATE	CLASS REQUIREMENTS	11/02/20
E1	UPDATE	GLAZING DETAILS	11/15/21
DRAWING TITLE: ULTRA STERLING IMPACT DOUBLE HUNG WINDOW			
MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: NOV 15 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1745		REV. E	
SHEET NO. 1 OF 4			



NAIL FIN IS NOT SHOWN BUT MAY BE USED IN ADDITION TO ANCHORS SHOWN.



TYPICAL GLAZING DETAIL
(NON-I.G. CONDITION)



TYPICAL GLAZING DETAIL
(I.G. CONDITION)

NOTE: WHEN SILL HEIGHT OF WINDOW EXCEEDS 30 FT. ABOVE GRADE, THE EXTERIOR PANE OF I.G. GLASS MUST BE TEMPERED.

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-2		DATE: 03/01/11	
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DRAWING TITLE: ULTRA STERLING IMPACT DOUBLE HUNG WINDOW

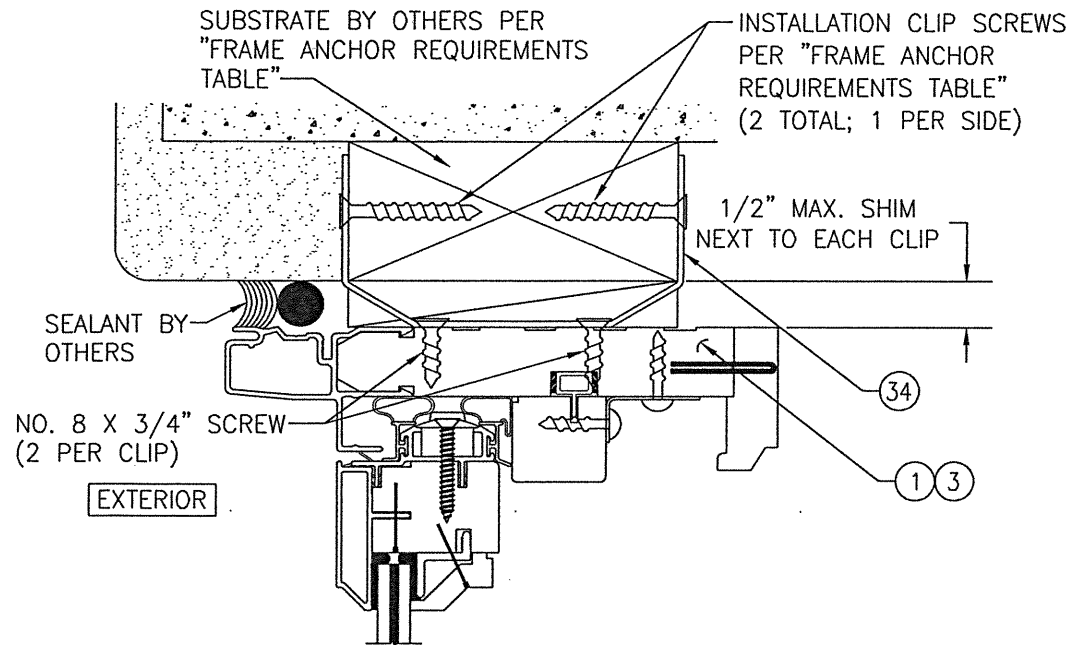
MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC.
1323 SOUTH 11TH AVE.
WAUSAU, WI 54401
715-842-5666

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
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PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION: NOV 15 2021

WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

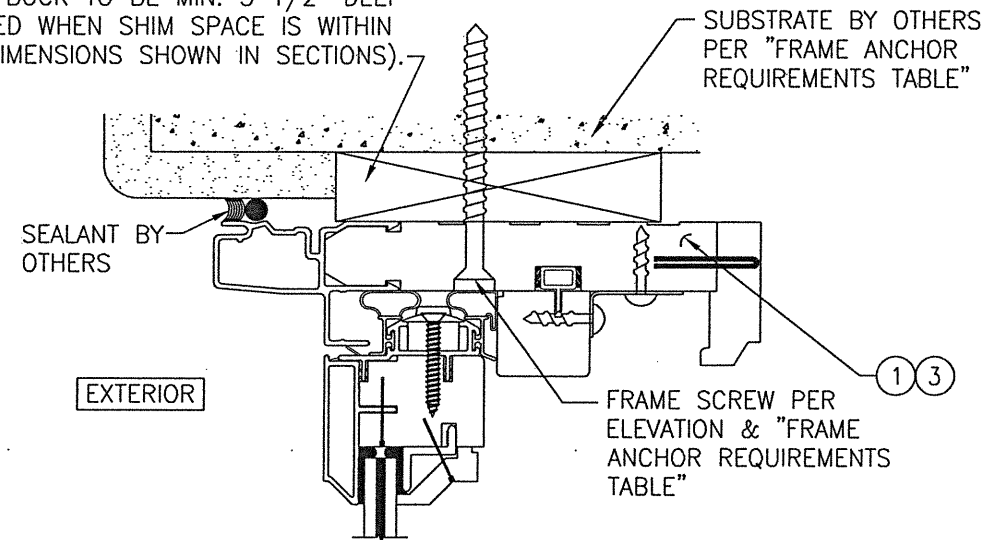
DRAWING NO. 1745
SHEET NO. 2 OF 4



OPTIONAL INSTALLATION CLIP DETAIL

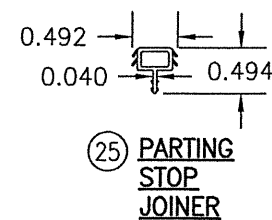
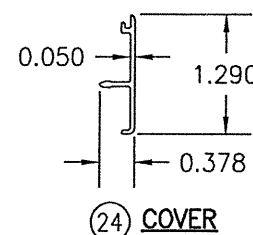
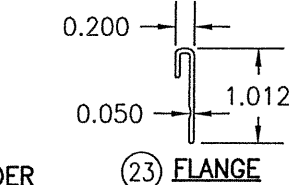
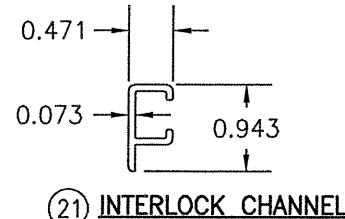
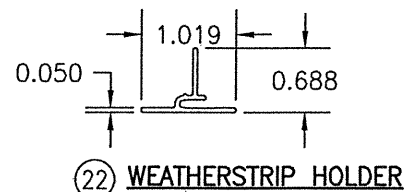
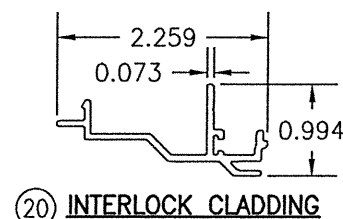
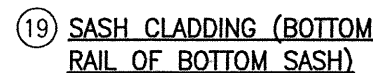
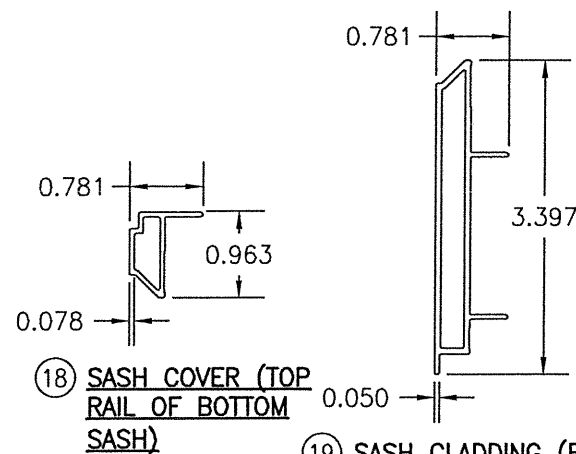
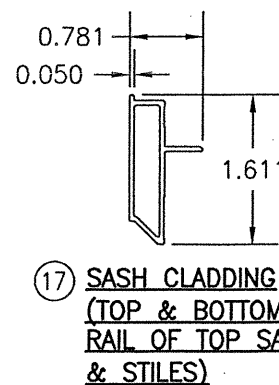
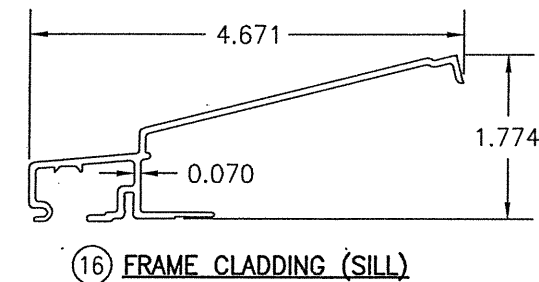
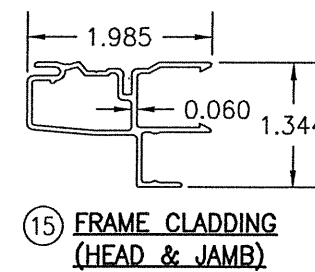
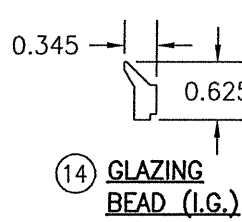
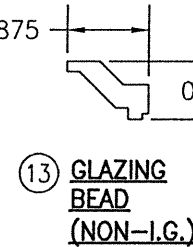
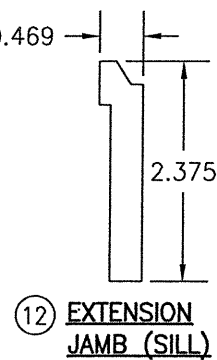
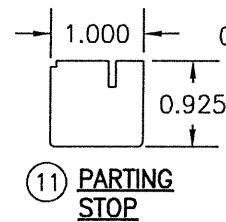
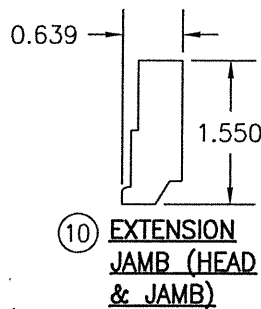
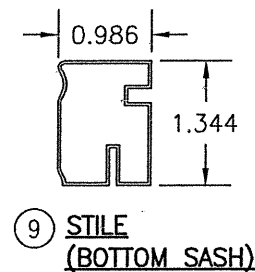
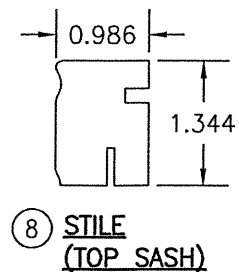
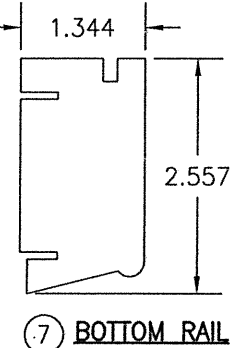
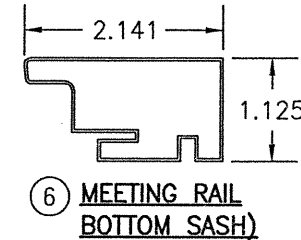
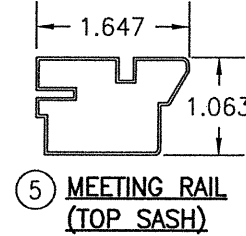
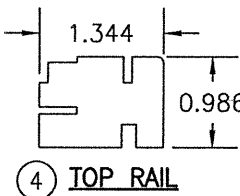
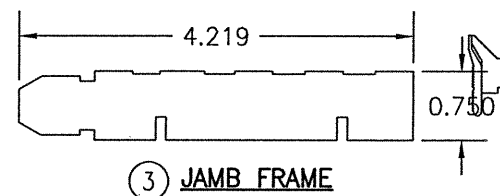
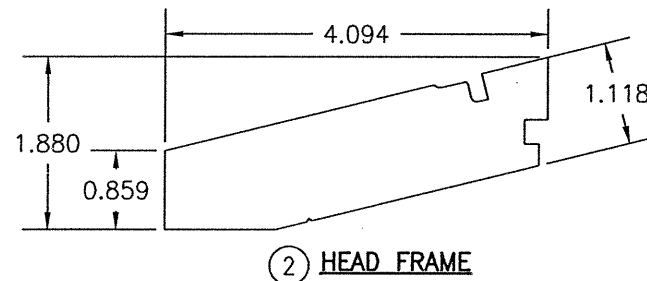
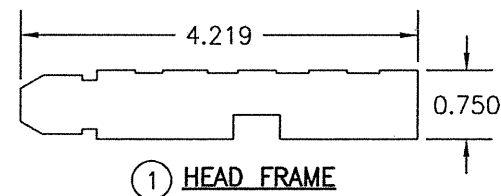
(HEAD SECTION SHOWN; SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

CONTINUOUS WOOD MEMBER LESS IN THICKNESS THAN A 2X_ BUCK TO BE MIN. 3 1/2" DEEP (NOT REQUIRED WHEN SHIM SPACE IS WITHIN ALLOWABLE DIMENSIONS SHOWN IN SECTIONS).



OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER

(HEAD SECTION SHOWN; SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



DRAWING TITLE
ULTRA STERLING IMPACT DOUBLE HUNG WINDOW

MANUFACTURER
KOLBE & KOLBE MILLWORK CO., INC.
1323 SOUTH 11TH AVE.
WAUSAU, WI 54401
715-842-5666

CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
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CERTIFICATION

NOV 15 2021

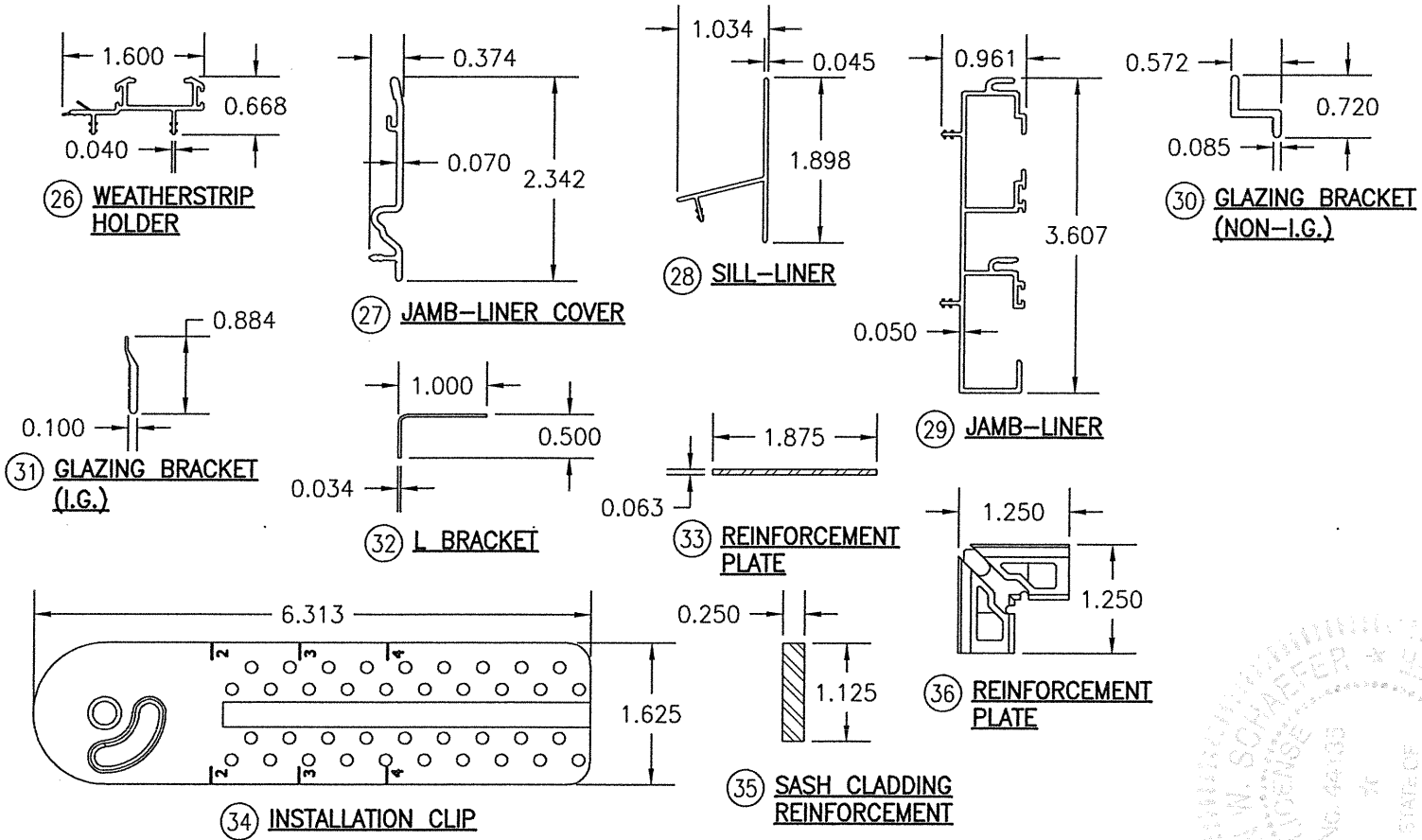
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1745
SHEET NO. 3 OF 4
REV. E

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD FRAME	PINE
2	SILL FRAME	PINE
3	JAMB FRAME	PINE
4	TOP RAIL	PINE
5	MEETING RAIL (TOP SASH)	MAPLE WITH PINE VENEER
6	MEETING RAIL (BOTTOM SASH)	MAPLE WITH PINE VENEER
7	BOTTOM RAIL	PINE
8	STILE (TOP SASH)	PINE
9	STILE (BOTTOM SASH)	MAPLE WITH PINE VENEER
10	EXTENSION JAMB (HEAD & JAMB)	PINE
11	PARTING STOP	PINE
12	EXTENSION JAMB (SILL)	PINE
13	GLAZING BEAD (NON-I.G.)	PINE
14	GLAZING BEAD (I.G.)	PINE
15	FRAME CLADDING (HEAD & JAMB)	6063-T5 ALUMINUM
16	FRAME CLADDING (SILL)	6063-T5 ALUMINUM
17	SASH CLADDING (TOP & BOTTOM RAIL OF TOP SASH & ALL STILES)	6063-T5 ALUMINUM
18	SASH COVER (TOP RAIL OF BOTTOM SASH)	FIBERGLASS
19	SASH CLADDING (BOTTOM RAIL OF BOTTOM SASH)	6063-T5 ALUMINUM
20	INTERLOCK CLADDING	6063-T5 ALUMINUM
21	INTERLOCK CHANNEL	6063-T5 ALUMINUM
22	WEATHERSTRIP HOLDER	6063-T5 ALUMINUM
23	FLANGE	6063-T5 ALUMINUM
24	COVER	6063-T5 ALUMINUM
25	PARTING STOP JOINER	RIGID WEATHERABLE & FLEXIBLE PVC
26	WEATHERSTRIP HOLDER	RIGID WEATHERABLE & FLEXIBLE PVC
27	JAMB-LINER COVER	RIGID WEATHERABLE & FLEXIBLE PVC
28	SILL-LINER	UV-R RIGID & FLEXIBLE PVC
29	JAMB-LINER	UV-R RIGID & FLEXIBLE PVC
30	GLAZING BRACKET (NON-I.G.)	RIGID PVC
31	GLAZING BRACKET (I.G.)	RIGID PVC
32	L BRACKET (3 PER UNIT)	GALV. STEEL
33	CONTINUOUS REINFORCEMENT PLATE	GALV. STEEL
34	INSTALLATION CLIP	20 GAGE GALVANIZED SHEET STEEL ASTM A653 CS TYPE B, W/G90 COATING
35	SASH CLADDING REINFORCEMENT	A36 STEEL
36	CORNER KEY	POLYCARBONATE
HARDWARE		
42	TILT LATCH (2 PER TOP SASH)	TRUTH 5140000
43	3 POINT LOCK SYSTEM WITH OPERATOR	ASHLAND 5103190 & 5106510
44	BALANCE	BSI 5100385

NOTE: WOOD USED IN TESTING WAS MAPLE WITH A SPECIFIC GRAVITY OF G = 0.63 AND A MODULUS OF ELASTICITY OF E = 1,800,000 PSI. & PINE WITH G = 0.43 & E = 1,200,000 PSI. OTHER WOOD SPECIES APPLICABLE FOR USE WITH THIS PRODUCT ARE THOSE WITH A SPECIFIC GRAVITY AND MODULUS OF ELASTICITY EQUAL TO OR GREATER THAN THAT USED WITH TESTING. ALL WOOD IS MINIMUM GRADE 2 MILLED BY KOLBE & KOLBE TO SELECT.

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
SEALS & SEALANTS		
50	WEATHERSTRIP	PPI 5135290
51	COMPRESSION SEAL	SCHLEGEL 5145520
52	WEATHERSTRIP	RIGID PVC & URETHANE FOAM
53	BULB WEATHERSTRIP	CLIMATECH 5129960
54	PILE WEATHERSTRIP	RIGID POLYPROPYLENE & FLEX TPE
55	BULB WEATHERSTRIP	AMESBURY 5132590 RIGID PVC & FOAM
56	SHIM	SCHLEGEL 5107900 RIGID PVC & PILE
		AMESBURY 5133180 RIGID PVC & FOAM
		80 DUROMETER EPDM
FASTENERS		
59	NO. 7 X 1 1/8" WOOD SCREW	1 PER TILT LATCH
60	NO. 7 X 3/4" WOOD SCREW	1 PER CLIP
61	1/8" X 1 1/8" 18 GAUGE STAPLE	5"-6" O.C.
62	NO. 7 X 1 1/8" WOOD SCREW	2 PER SPRING LOCK
63	NO. 8 X 2" WOOD SCREW	1" & 2 1/2" FROM ENDS & 4 EACH SIDE OF CENTER MAX. 4" O.C.
64	NO. 8 X 2" WOOD SCREW	WITHIN 6" OF ENDS & 9" MAX. O.C.
65	NO. 6 X 1" WOOD SCREW	WITHIN 2" OF CORNERS & 6" MAX. O.C.
66	18 GA. X 1" BRAD NAIL	WITHIN 1" OF CORNERS & 6" MAX. O.C.



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 03/01/11	
DATE	BY	REVISION	DESCRIPTION
DRAWING TITLE: ULTRA STERLING IMPACT DOUBLE HUNG WINDOW MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666 CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 CERTIFICATION: NOV 15 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135 DRAWING NO. 1745 REV. E SHEET NO. 4 OF 4			