

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 ANCHORS 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 REFERENCE 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 1.0 SHALL BE APPLIED PER THE ASCE-7 STANDARD.

8. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL SCREWS, SHALL 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 INSTALLATION OF THIS PRODUCT.

11. ALL WOOD MEMBERS IN 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.

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.

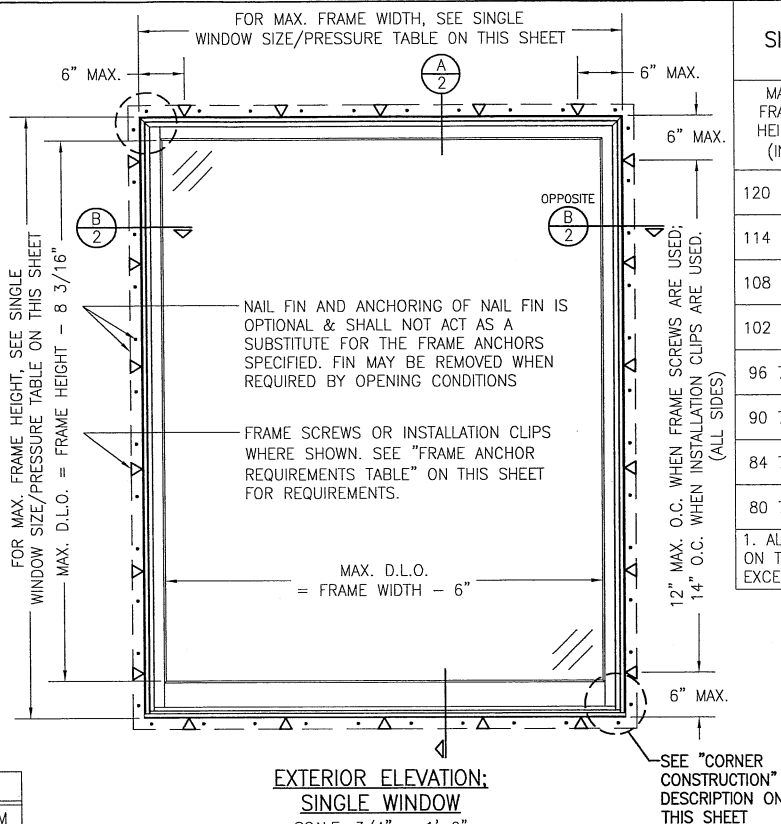
INSTALLATION EVALUATION IS BASED ON APPLICABLE ANCHOR STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THE EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT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

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED IN THIS DRAWING.
2. ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.

(2)	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.).

(2) FRAME SCREWS MAY ONLY BE ANGLED IF INTO A WOOD SUBSTRATE. WHEN INTO OTHER SUBSTRATES THE SCREWS SHALL BE IN THEIR STRAIGHT POSITIONS AS SPECIFIED IN THE SECTIONS.



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

RECTANGULAR WINDOWS SHOWN. ANCHORING OF SHAPED WINDOWS IS THE SAME WITH REQUIRED ANCHOR SPACING ALONG THE FRAME CIRCUMFERENCE BEING THE SAME AS SPECIFIED FOR A STRAIGHT FRAME.

RECTANGULAR FRAME: 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.

EYEBROW TOP FRAME: FRAME MEMBERS WERE MITERED & SECURED WITH 1 NO. 8 X 2 1/4" PFH AND 2 NO. 8 X 1 3/4" SCREWS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT.

HALF ROUND TOP FRAME: FRAME MEMBERS WERE RABBETED, BUTTED, & SECURED WITH 2 NO. 8 X 2 1/4" PFH SCREWS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT.

RECTANGULAR SASH: SASH CORNERS UTILIZED OPEN MORTISE AND TENON CONSTRUCTION AND WERE SECURED WITH 2 NO. 8 X 1" PFH SMS SCREWS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT.

EYEBROW TOP SASH: HEAD CORNERS WERE BUTTED & SECURED WITH 1 NO. 8 X 3" PFH WS THROUGH EACH SILE INTO THE RAIL. SILL CORNERS UTILIZED OPEN MORTISE AND TENON CONSTRUCTION AND WERE SECURED WITH 2 NO. 8 X 1" PFH SMS SCREWS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT.

HALF ROUND TOP SASH: SASH SILL CORNERS WERE BUTTED & SECURED WITH 1 NO. 8 X 3" PFH WS THROUGH THE SILE INTO THE BOTTOM RAIL. SILL CORNERS UTILIZED OPEN MORTISE AND TENON CONSTRUCTION AND WERE SECURED WITH 2 NO. 8 X 1" PFH SMS SCREWS PER CORNER. CORNERS ARE SEALED WITH SILICONE SEALANT.

FRAME CLAD CORNERS: CLADDING MEMBERS WERE MITERED AND JOINED WITH A CORNER KEY (PART #24) AND 2 NO. 7 X 5/8" PH 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.

MAX. FRAME HEIGHT (IN.)	MAX. FRAME WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)	
		POS.	NEG.
120 7/16	43	65	70
	40	70	75
114 7/16	45	65	70
	42	70	75
108 7/16	48	65	70
	44	70	75
102 7/16	51	65	70
	47	70	75
96 7/16	54	65	70
	50	70	75
90 7/16	57	65	70
	53	70	75
84 7/16	61	65	70
	57	70	75
80 7/16	65	65	70
	60	70	75

1. ALL SIZES IN TABLE ARE BASED ON TESTED SIZES & DO NOT EXCEED THE WINDOW AREA TESTED.

[illegible]

TITLE	STERILIZATION	ROUBLE	FLU	FLU	STERILIZATION	WINDROW
1. TITLE						
2. STERILIZATION						
3. ROUBLE						
4. FLU						
5. FLU						
6. STERILIZATION						
7. WINDROW						

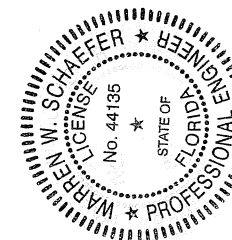
& KOLBE MILLWORK CO., INC.
1323 SOUTH 11TH AVE.
WAUSAU, WI 54401
715-842-5666

ULIKA STERLING IMPACT

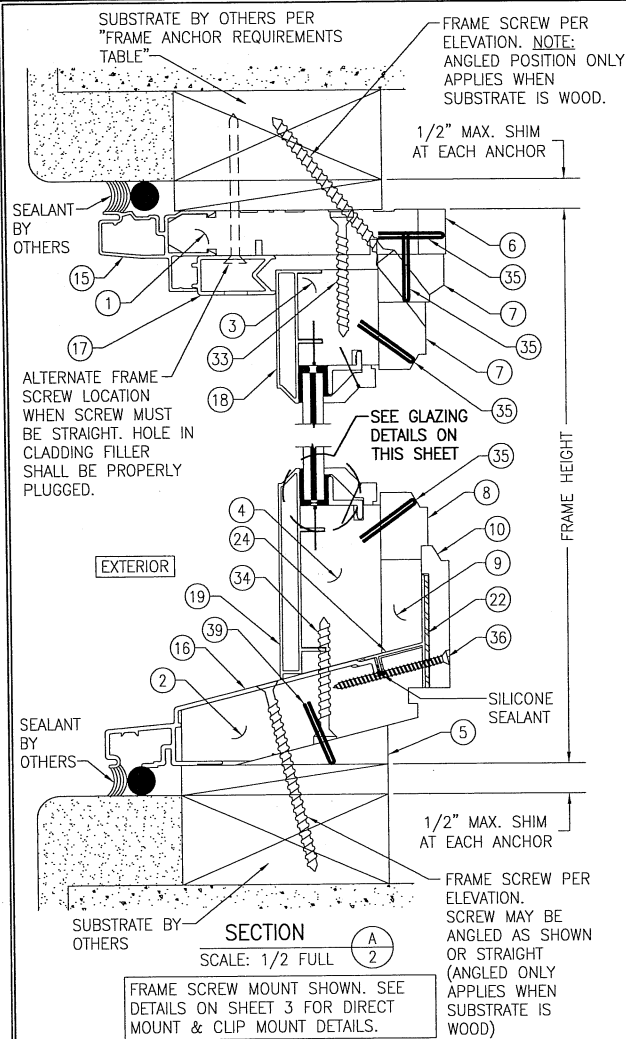
CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418

CERTIFICATION
AUG 16 2017
N. W. SCHAEFER, P.E.

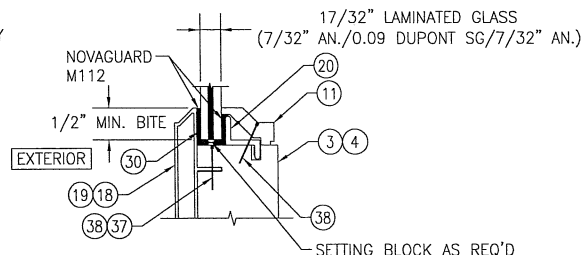
DRAWING NO.	REV
1750	C
SHEET NO.	
1	OF 4



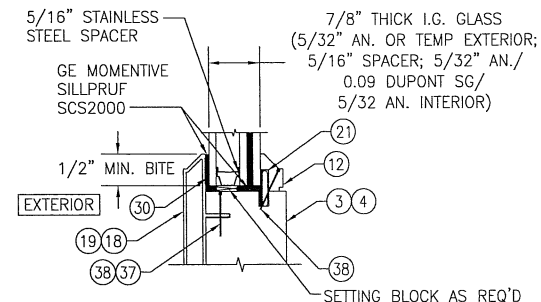
THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.



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

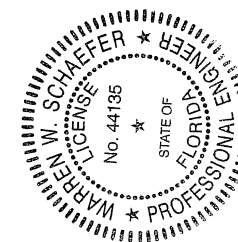
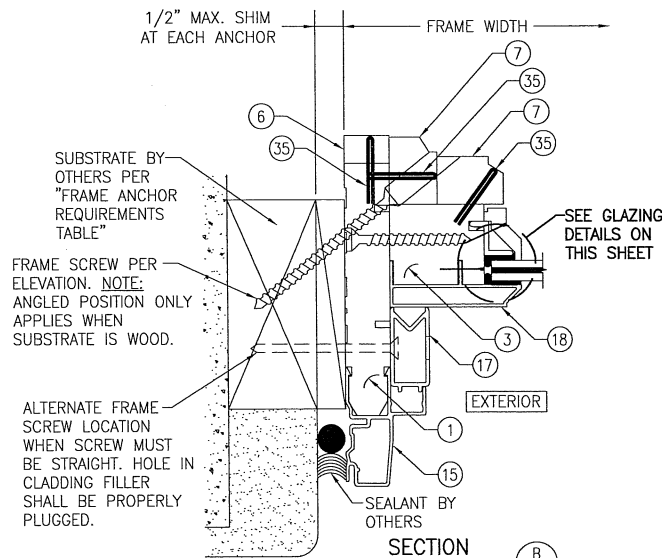


TYPICAL GLAZING DETAIL (NON-I.G. CONDITION)

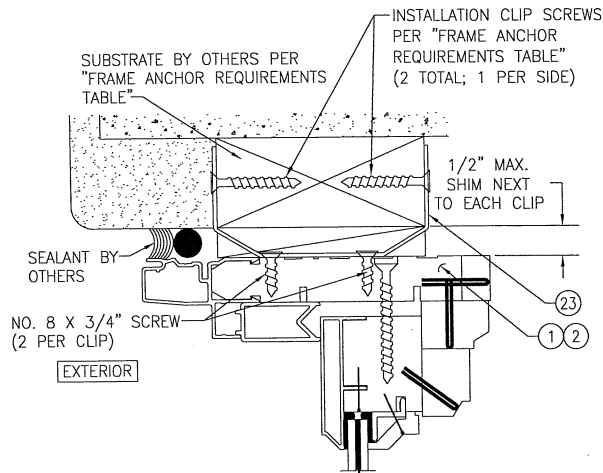


TYPICAL GLAZING DETAIL (I.G. CONDITION)

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

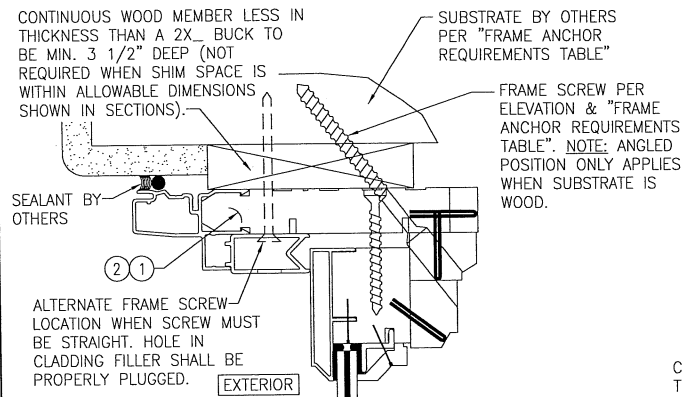


DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 04/04/11
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE	ULTRA STERLING IMPACT DOUBLE HUNG FIXED STUDIO WINDOW
MANUFACTURER	KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH, 33418 PALM BEACH GARDENS, FL 33418 PHONE: 561-744-5424
CERTIFICATION	AUG 16 2017 WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO.	1750
REV.	C
SHEET NO.	2 OF 4



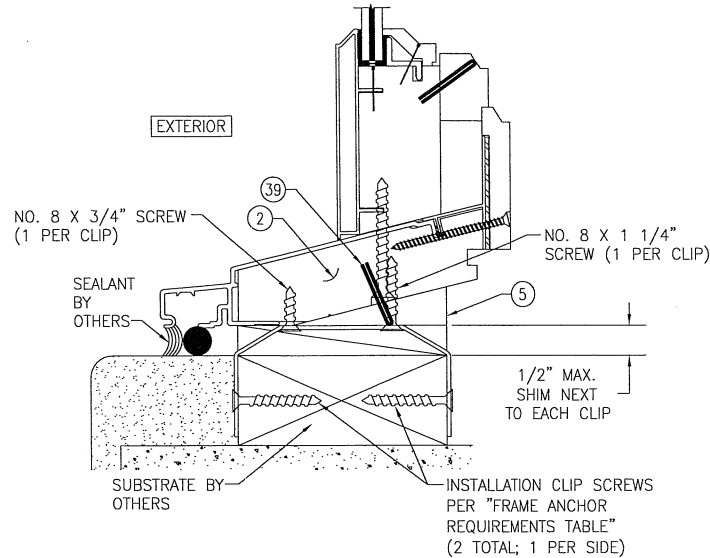
OPTIONAL INSTALLATION CLIP DETAIL AT SIDES & HEAD

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



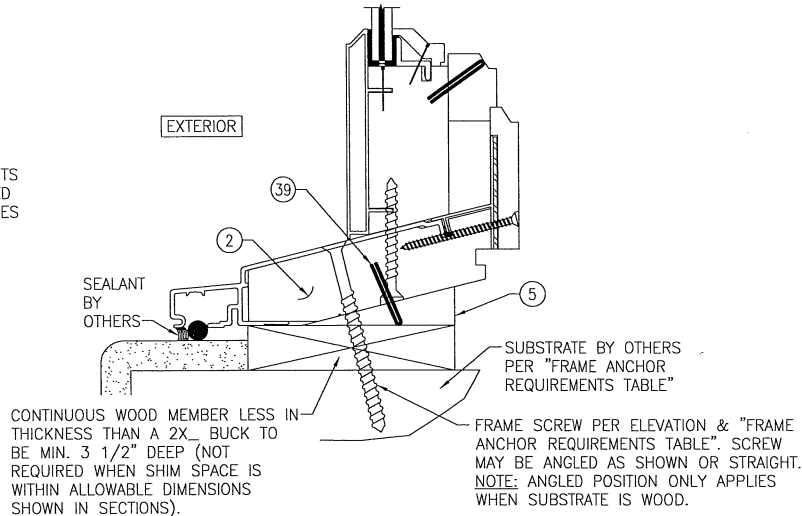
OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER AT SIDES & HEAD

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



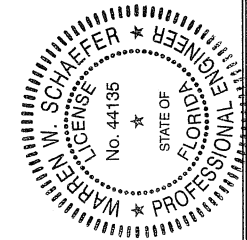
OPTIONAL INSTALLATION CLIP DETAIL AT SILL

(FOR DETAIL NOT SHOWN, SEE SECTION A/2)



OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER AT SILL

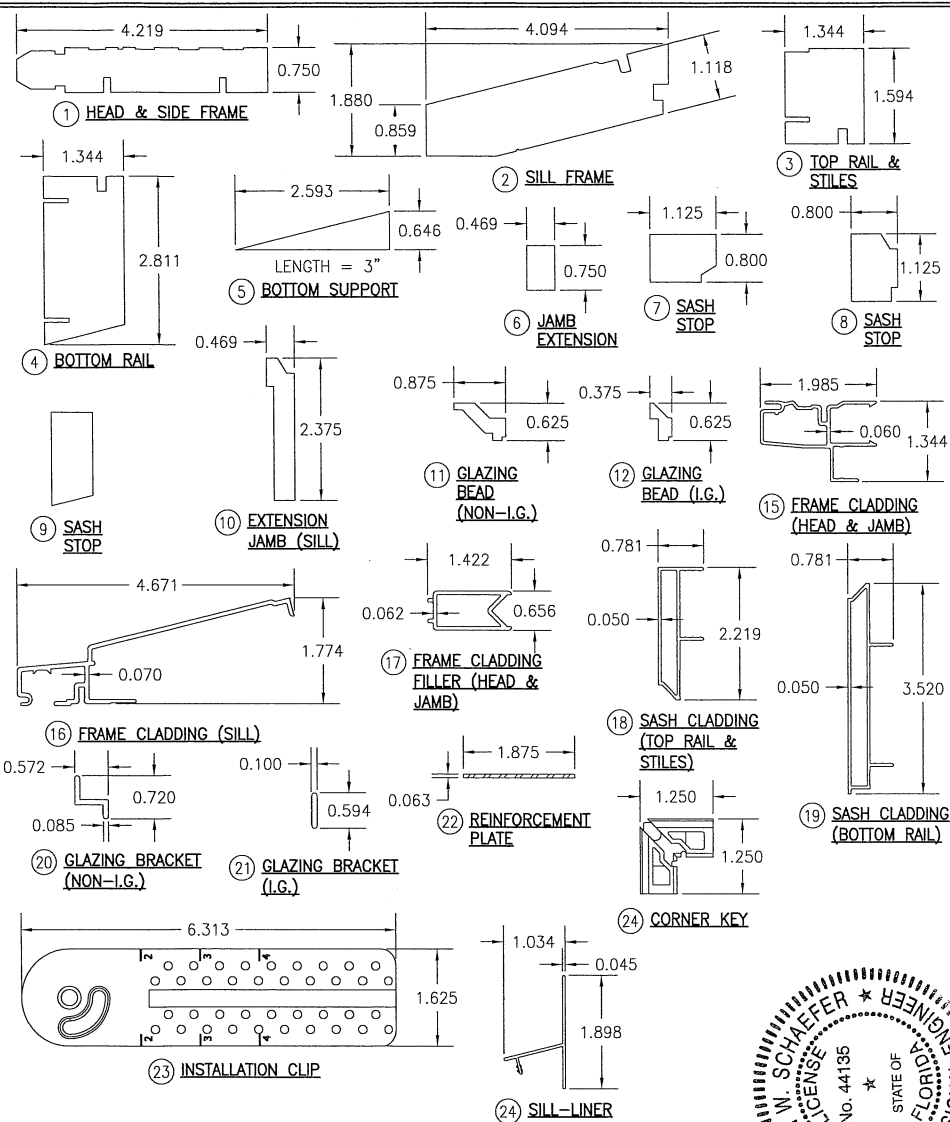
(FOR DETAIL NOT SHOWN, SEE OTHER SECTION A/2)



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PLOT: 1-2		DATE: 04/04/11	
DATE	BY	REVISION	DESCRIPTION
DRAWING TITLE: ULTRA STERLING IMPACT DOUBLE HUNG FIXED STUDIO WINDOW			
CONSULTANTS:		MANUFACTURER:	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 130TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 361-744-3424		KOLBE & KOLBE MILLWORK CO., INC. 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666	
CERTIFICATION AUG 16 2017 WARREN W. SCHAEFER, P.E. P.E. NO. 44136		DRAWING NO. 1750 SHEET NO. 3 OF 4 REV. C	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD & SIDE FRAME	PINE
2	SILL FRAME	PINE
3	TOP RAIL & STILES	PINE
4	BOTTOM RAIL	PINE
5	BOTTOM SUPPORT	PINE
6	MEETING RAIL (BOTTOM SASH)	PINE
7	SASH STOP	PINE
8	SASH STOP	PINE
9	SASH STOP	PINE
10	EXTENSION JAMB (SILL)	PINE
11	GLAZING BEAD (NON-I.G.)	PINE
12	GLAZING BEAD (I.G.)	PINE
15	FRAME CLADDING (HEAD & JAMB)	6063-T5 ALUMINUM
16	FRAME CLADDING (SILL)	6063-T5 ALUMINUM
17	FRAME CLADDING FILLER (HEAD & JAMB)	6063-T5 ALUMINUM
18	SASH CLADDING (TOP RAIL & STILES)	6063-T5 ALUMINUM
19	SASH CLADDING (BOTTOM RAIL)	6063-T5 ALUMINUM
20	GLAZING BRACKET (NON-I.G.)	RIGID PVC
21	GLAZING BRACKET (I.G.)	RIGID PVC
22	CONTINUOUS REINFORCEMENT PLATE	GALV. STEEL
23	INSTALLATION CLIP	20 GAGE GALVANIZED SHEET STEEL ASTM A653 CS TYPE B, W/G90 COATING
24	CORNER KEY	POLYCARBONATE
25	SILL-LINER	UV-R RIGID & FLEXIBLE PVC
SEALS & SEALANTS		
30	SHIM	80 DUROMETER EPDM
FASTENERS		
33	NO. 10 X 2" SMS SCREW	WITHIN 4" OF ENDS & 16" MAX. O.C.
34	NO. 9 X 2" WOOD SCREW	WITHIN 4" OF ENDS & 16" MAX. O.C.
35	1/8" X 1 1/8" 18 GAUGE STAPLE	5"-6" O.C.
36	NO. 6 X 2" WOOD SCREW	WITHIN 6" OF ENDS & 9" MAX. O.C.
37	NO. 6 X 3/4" SMS SCREW (USED WITH SHAPED SASHES)	WITHIN 1" OF CORNERS & 6" MAX. O.C.
38	18 GA. X 3/4" BRAD NAIL (USED WITH RECTANGULAR SASHES)	WITHIN 1" OF CORNERS & 6" MAX. O.C.
39	5/32" X 1" 18 GAUGE STAPLE	CENTERED AT EACH FRAME SCREW/INSTALLATION CLIP

NOTE: WOOD USED IN TESTING WAS PINE WITH A SPECIFIC GRAVITY OF G = 0.43 AND A MODULUS OF ELASTICITY OF 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.



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 04/04/11	
NO.	REVISION	DESCRIPTION	DATE
1	1	INITIALS	DATE
DRAWING TITLE: ULTRA STERLING IMPACT DOUBLE HUNG FIXED STUDIO WINDOW MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC. CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 1323 SOUTH 11TH AVE. WAUSAU, WI 54401 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 FAX: 561-744-3424 AUG 16 2017 WARREN W. SCHAEFER, P.E. LICENSE NO. 44135 STATE OF FLORIDA PROFESSIONAL ENGINEER			
DRAWING NO. 1750		REV. C	
SHEET NO. 4		OF 4	