

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.

EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS 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 THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.

CORNER CONSTRUCTION:

FRAME: CORNERS ARE COPED, BUTTED, SEALED WITH A GASKET, FASTENED WITH 4 NO. 8 X 1" SCREWS THROUGH THE JAMB INTO THE HEAD AND 8 NO. 8 X 1" SCREWS THROUGH THE JAMB INTO THE SILL AND SEALED WITH SILICONE.

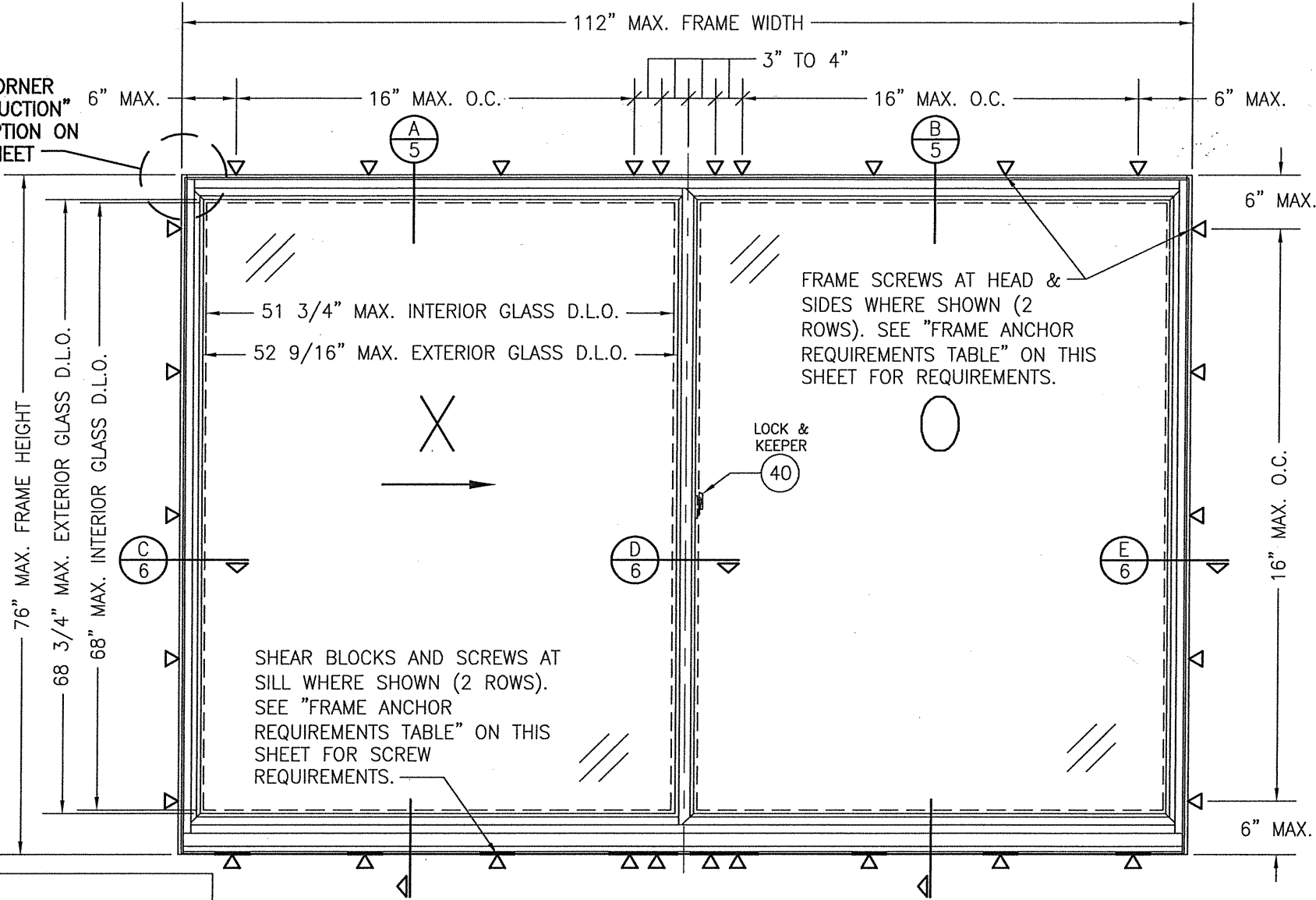
SASH: EACH MITERED, SEALED & SECURED WITH 2 NO. 6 X 1 3/8" SCREWS.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME & SILL SHEAR BLOCK SCREWS			
(2) MIN. 2X6 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 AT SILL; 3/16" CONCRETE SCREW AT SIDES & HEAD	1 1/4"	2"
I-BAR MULLION END CLIP SCREWS			
(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 18 GA. 33 KSI METAL STUD	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4-20 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"

- (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) 2X6 BUCKS MAY BE RIPPED DOWN TO MINIMUM 4 1/2" ACTUAL DEPTH.

SEE "CORNER
CONSTRUCTION"
DESCRIPTION ON
THIS SHEET

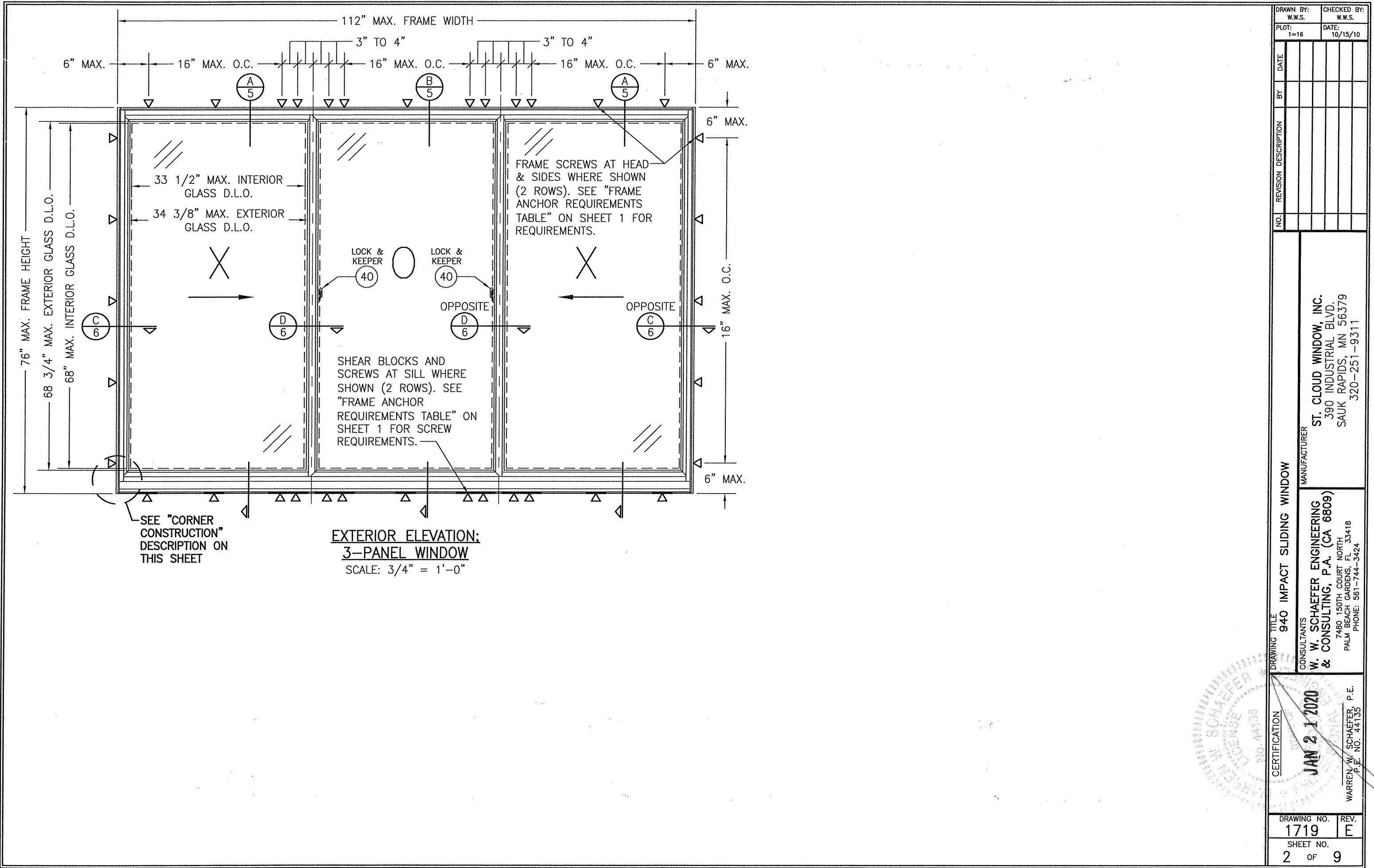


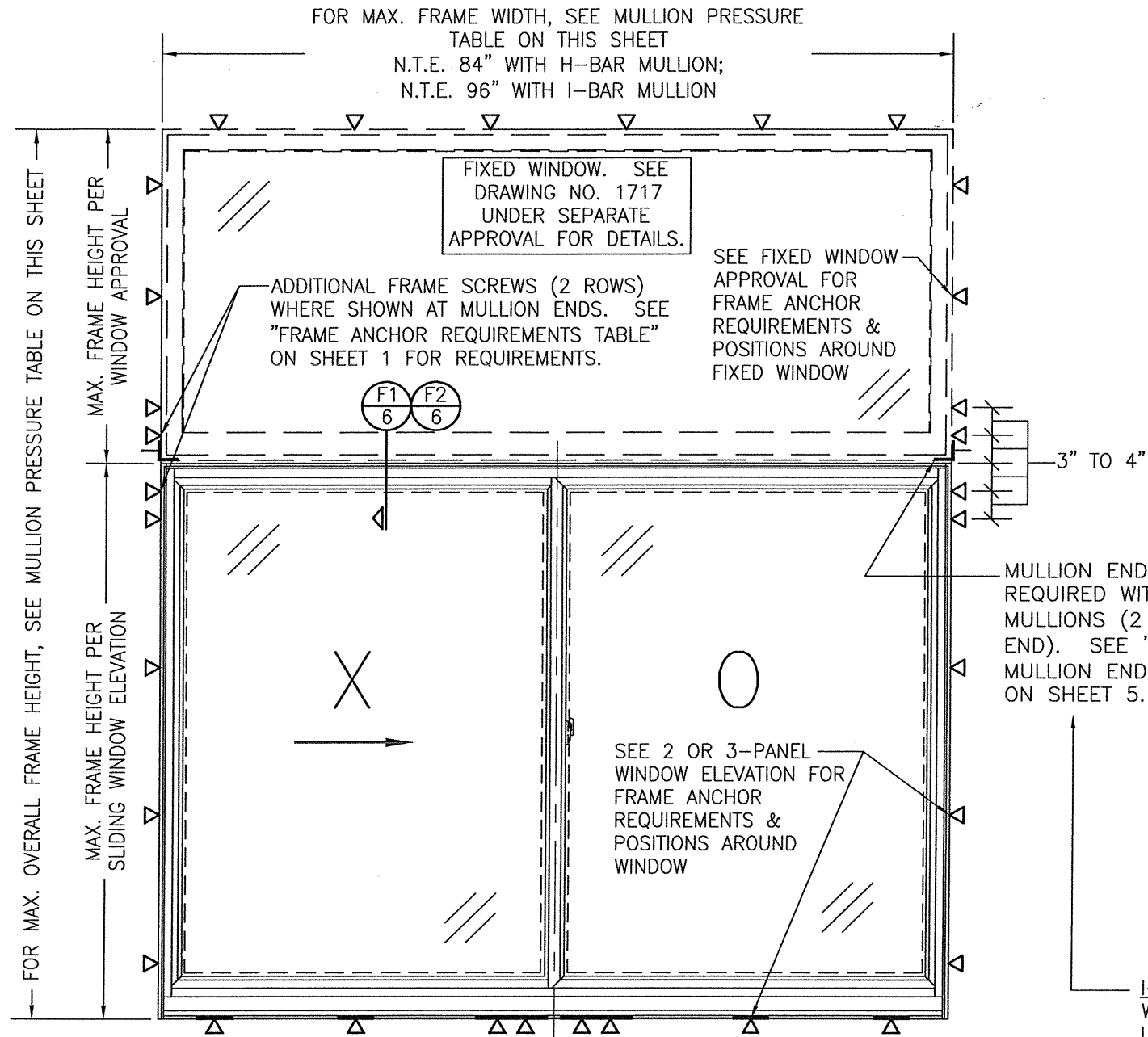
EXTERIOR ELEVATION:
2-PANEL WINDOW

SCALE: 3/4" = 1'-0"
(XO IS SHOWN. OX & XX ALSO APPLY.)

ALLOWABLE DESIGN PRESSURE
(SLIDING WINDOWS ONLY)
+/-70 PSF

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=16		DATE: 10/15/10	
DATE	BY	REVISION	DESCRIPTION
08/23/11		A1	UPDATE TO CURRENT STANDARDS
01/12/15		B1	UPDATE TO CURRENT STANDARDS
11/09/17		C1	CHANGE SHIM SPACE TO 3/8"
12/04/18		D1	ADD SIDE MILLED CONDITION
01/21/20		E1	EDIT SHEAR BLOCK INFO
MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
DRAWING TITLE 940 IMPACT SLIDING WINDOW			
CERTIFICATION JAN 21 2020 WARREN W. SCHAEFER, P.E. NO. 44135			
DRAWING NO. 1719		REV. F	
SHEET NO. 1 OF 9			





**EXTERIOR ELEVATION:
SLIDING WINDOW WITH TRANSOM**

TRANSOM UNIT NOTES: SCALE: 3/4" = 1'-0"

1. SLIDING WINDOW MAY BE EITHER A 2-PANEL OR 3-PANEL WINDOW. FOR ALL DETAIL NOT SHOWN, SEE 2-PANEL OR 3-PANEL WINDOW ELEVATION.
2. FOR ALLOWABLE PRESSURE ON TRANSOM MULLED UNITS, SEE MULLION PRESSURE TABLE ON THIS SHEET.

**MULLION ALLOWABLE DESIGN PRESSURE
(TRANSOM MULLIONS)**

MAXIMUM FRAME WIDTH (IN.)	MAXIMUM O/ALL FRAME HEIGHT (IN.)		ALLOWABLE PRESSURE (+/- PSF)	
	H-BAR MULLION	I-BAR MULLION	WITH H-BAR MULLION	WITH I-BAR MULLION
96	120	120.75	N/A	54.5
	108	108.75	N/A	60.6
	96	96.75	N/A	68.2
	92	92.75	N/A	70.0
90	120	120.75	N/A	58.2
	108	108.75	N/A	64.6
	98	98.75	N/A	70.0
84	120	120.75	56.0	62.3
	108	108.75	62.2	69.3
	96	96.75	70.0	70.0
78	120	120.75	60.3	67.1
	108	108.75	67.0	70.0
	102	102.75	70.0	70.0
72	120	120.75	65.3	70.0
	112	112.75	70.0	70.0
66	120	120.75	70.0	70.0

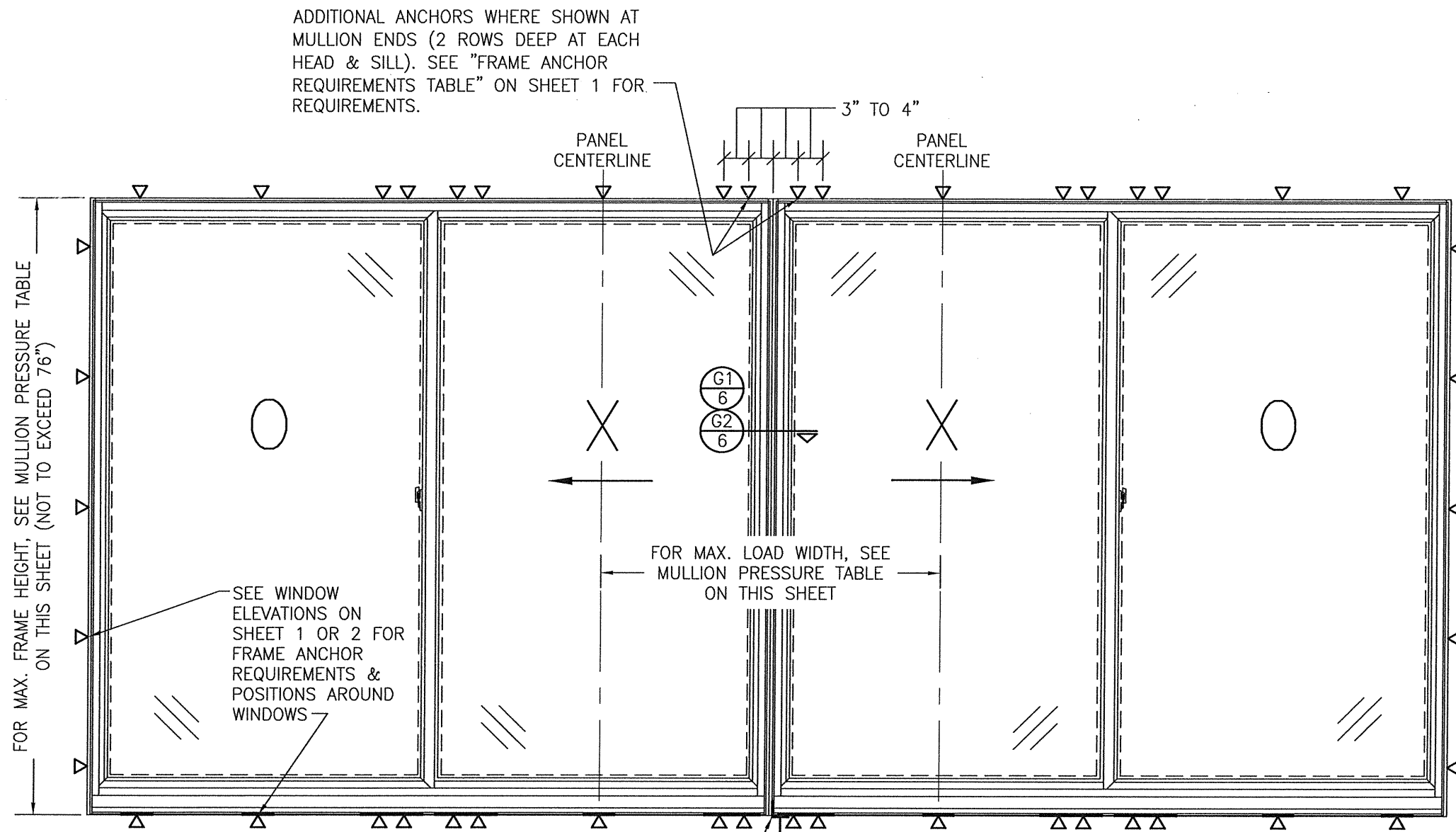
NOTES:

1. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL WINDOWS.
2. N/A DESIGNATES A SIZE NOT APPLICABLE TO THAT SIZE CONDITION.

I-BAR MULLION END CLIP NOTE:

WHEN THE I-BAR MULLION IS USED UNDER THE SAME UNIT SIZE AND ALLOWABLE PRESSURE RESTRICTIONS AS THE H-BAR MULLION, NO MULLION END CLIPS ARE REQUIRED.

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PLOT: 1=16	DATE: 10/15/10
NO.	DATE
BY	REVISION DESCRIPTION
DRAWING TITLE 940 IMPACT SLIDING WINDOW	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311
CERTIFICATION JAN 21 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44133	DRAWING NO. 1719
SHEET NO. 3 OF 9	REV. F



**EXTERIOR ELEVATION:
SIDE-BY-SIDE MULLED WINDOWS**

SCALE: 3/4" = 1'-0"
OX MULLED TO XO IS SHOWN. ANY
CONFIGURATION OF 2 OR 3-PANEL WIDE
WINDOWS APPLY AS MULLED UNITS

MULTIPLE UNIT NOTES:

1. FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL WINDOW ELEVATIONS.
2. THERE IS NO LIMIT ON THE NUMBER OF WINDOWS THAT MAY BE COMBINED HORIZONTALLY IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE WINDOWS & THEIR MULLIONS.
3. OX MULLED TO XO IS SHOWN. ANY CONFIGURATION OF 2 OR 3-PANEL WIDE WINDOWS APPLY AS MULLED UNITS.
4. WHILE NOT SHOWN, ST. CLOUD'S 960 FIXED WINDOW MAY ALSO BE MULLED NEXT TO A SLIDING WINDOW THE SAME AS A SLIDER TO A SLIDER WITH THE LOAD WIDTH BEING THE DISTANCE BETWEEN THE SLIDING WINDOW PANEL CENTERLINE AND THE FIXED WINDOW CENTERLINE. THE PRESSURE TABLE HERE-IN ALSO APPLIES TO THIS CONDITION.
5. INDIVIDUAL WINDOW SIZES SHALL BE RESTRICTED AS SPECIFIED IN THE INDIVIDUAL WINDOW ELEVATIONS.

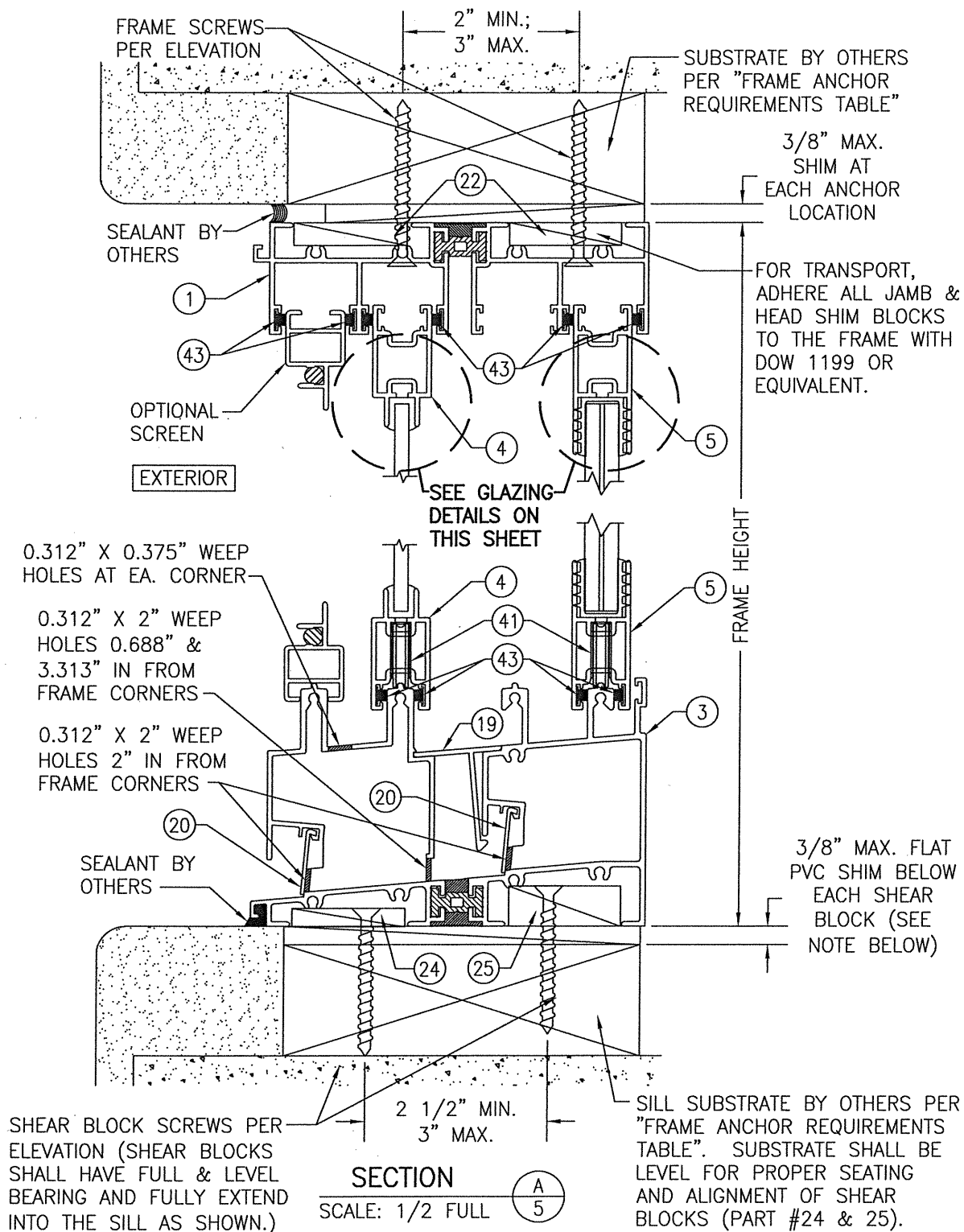
**MULLION ALLOWABLE DESIGN PRESSURE
(VERTICAL MULLIONS)**

MAX. FRAME HEIGHT (IN.)	MAX. LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	
		H-BAR MULLION	I-BAR MULLION
76	58	42.1	65.7
	54	45.3	70.0
	48	50.9	70.0
	42	58.2	70.0
	36	67.9	70.0
	34	70.0	70.0
72	58	47.0	70.0
	54	50.4	70.0
	48	56.7	70.0
	42	64.9	70.0
66	38	70.0	70.0
	58	55.9	70.0
	54	60.0	70.0
60	48	67.5	70.0
	46	70.0	70.0
	58	67.6	70.0
54	56	70.0	70.0
	58	70.0	70.0

NOTES:

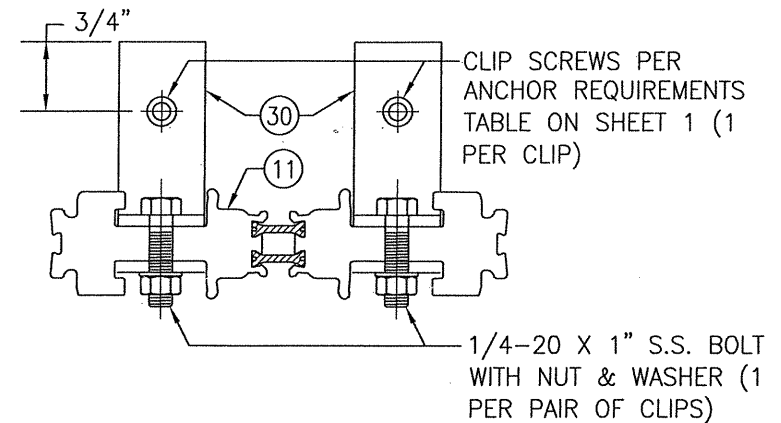
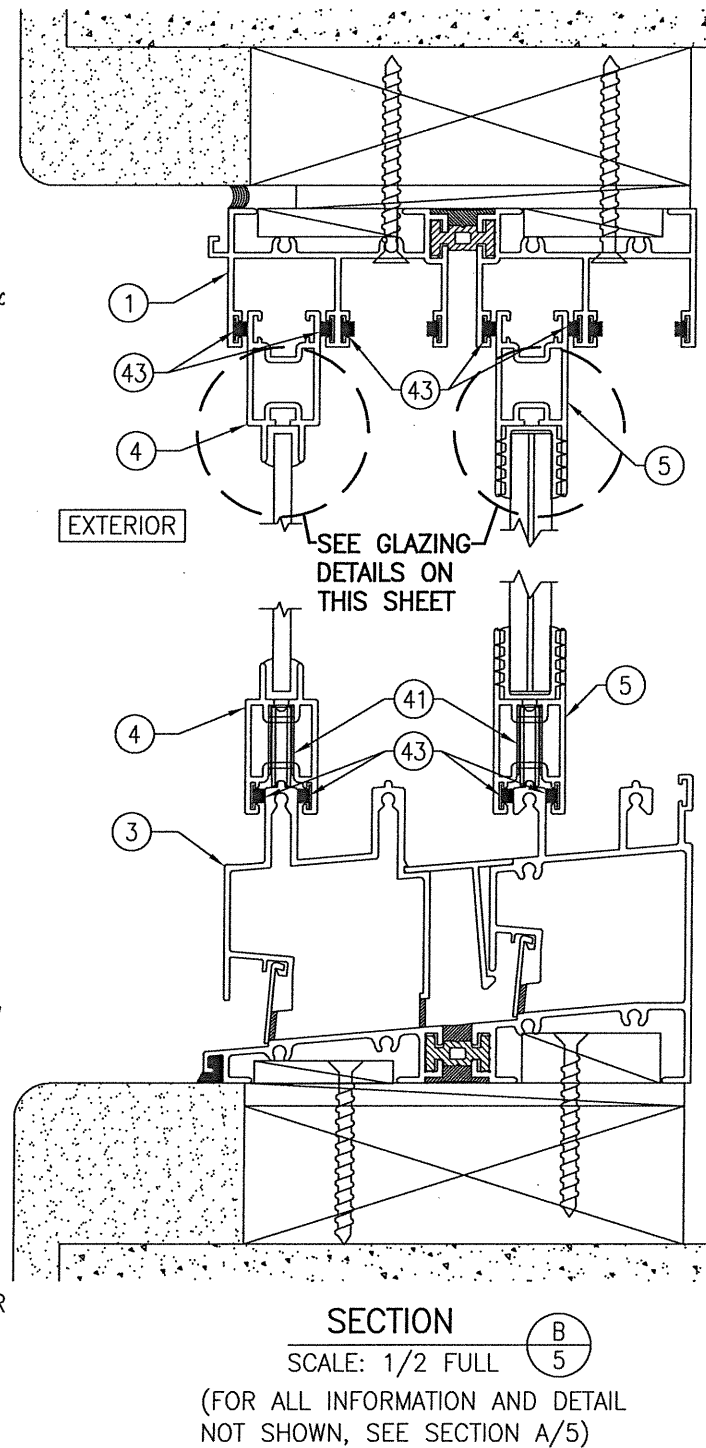
1. SEE ELEVATION FOR DIMENSIONING OF LOAD WIDTH.
2. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL WINDOW.

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PLOT: 1=16	DATE: 10/15/10
NO.	REVISION DESCRIPTION
DATE	BY
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MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
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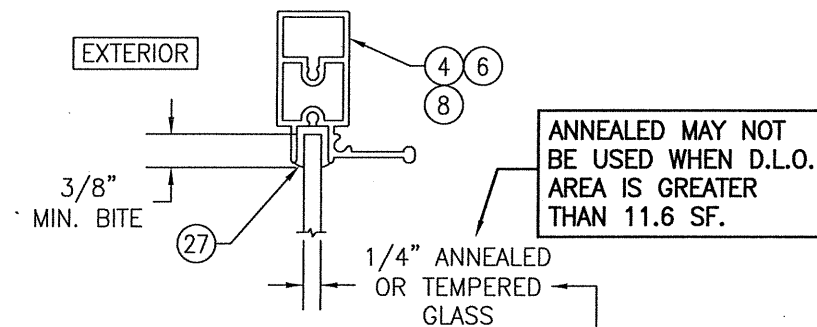


SILL SHIMMING REQUIREMENTS:

FLAT SHIMS AT SILL SHALL BE MINIMUM 3 3/4" WIDE X 4 1/2" DEEP AND BE PLACED DIRECTLY BELOW THE SHEAR BLOCKS SUCH THAT THE SHEAR BLOCKS SECURELY SIT FLUSH AND LEVEL ON THE SHIMS. INDIVIDUAL SHIM THICKNESS SHALL BE AS REQUIRED (NTE 3/8") TO INSURE ALL SHEAR BLOCKS FULLY EXTEND INTO THE SILL AS SHOWN.

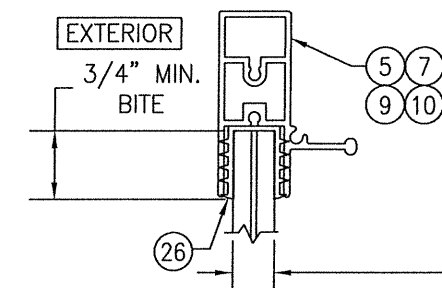


I-BAR MULLION END CLIP DETAIL



TEMPERED IS NECESSARY IN AREAS WHERE SAFETY GLASS IS REQUIRED BY CODE (EX: IN OR ABOVE AREAS OF A BUILDING WHERE SMALL MISSILE IMPACT GLASS MAY EXIST).

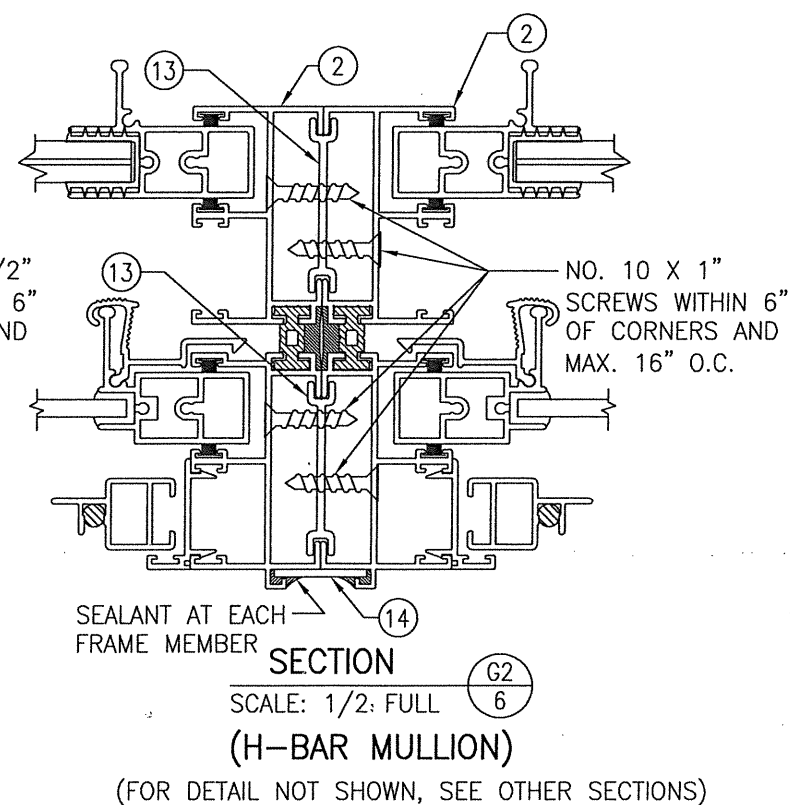
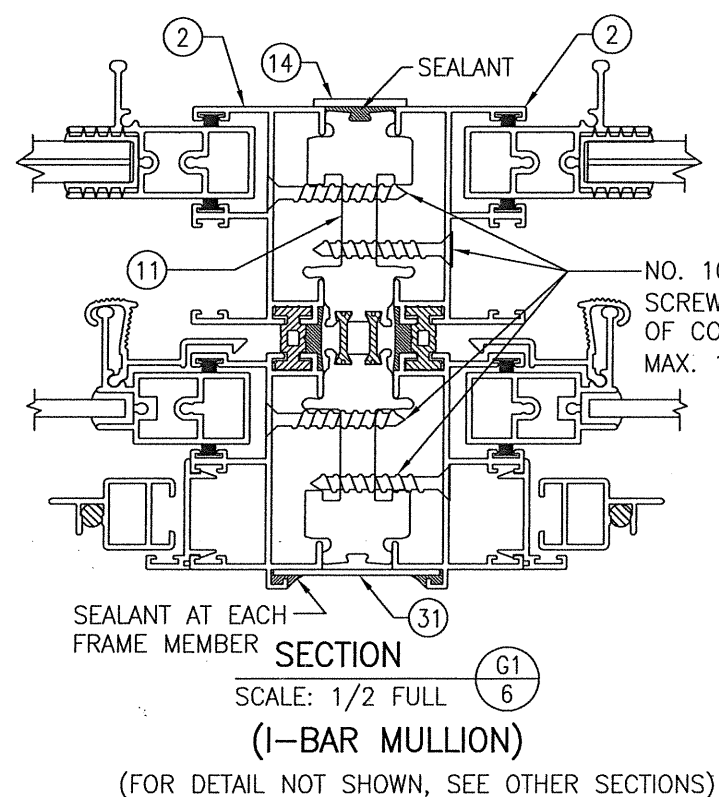
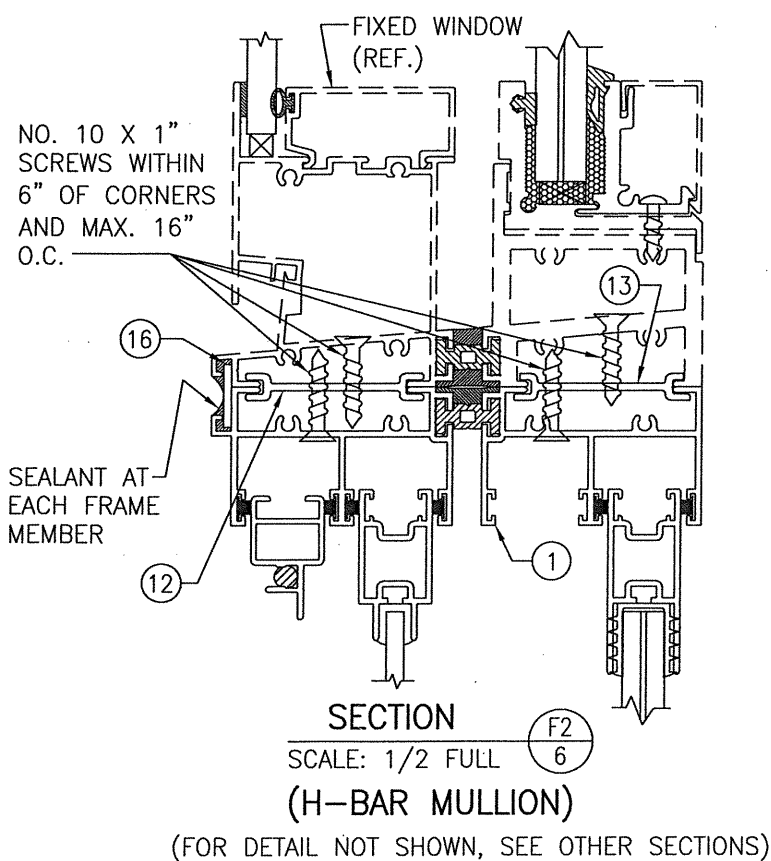
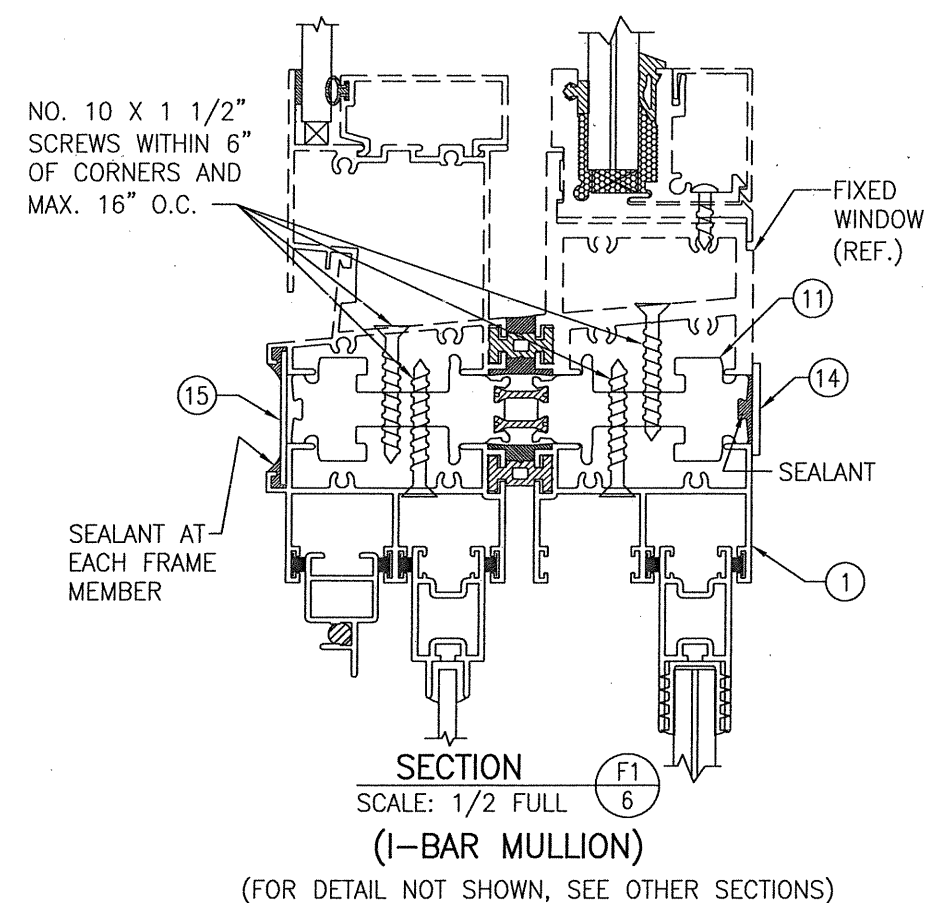
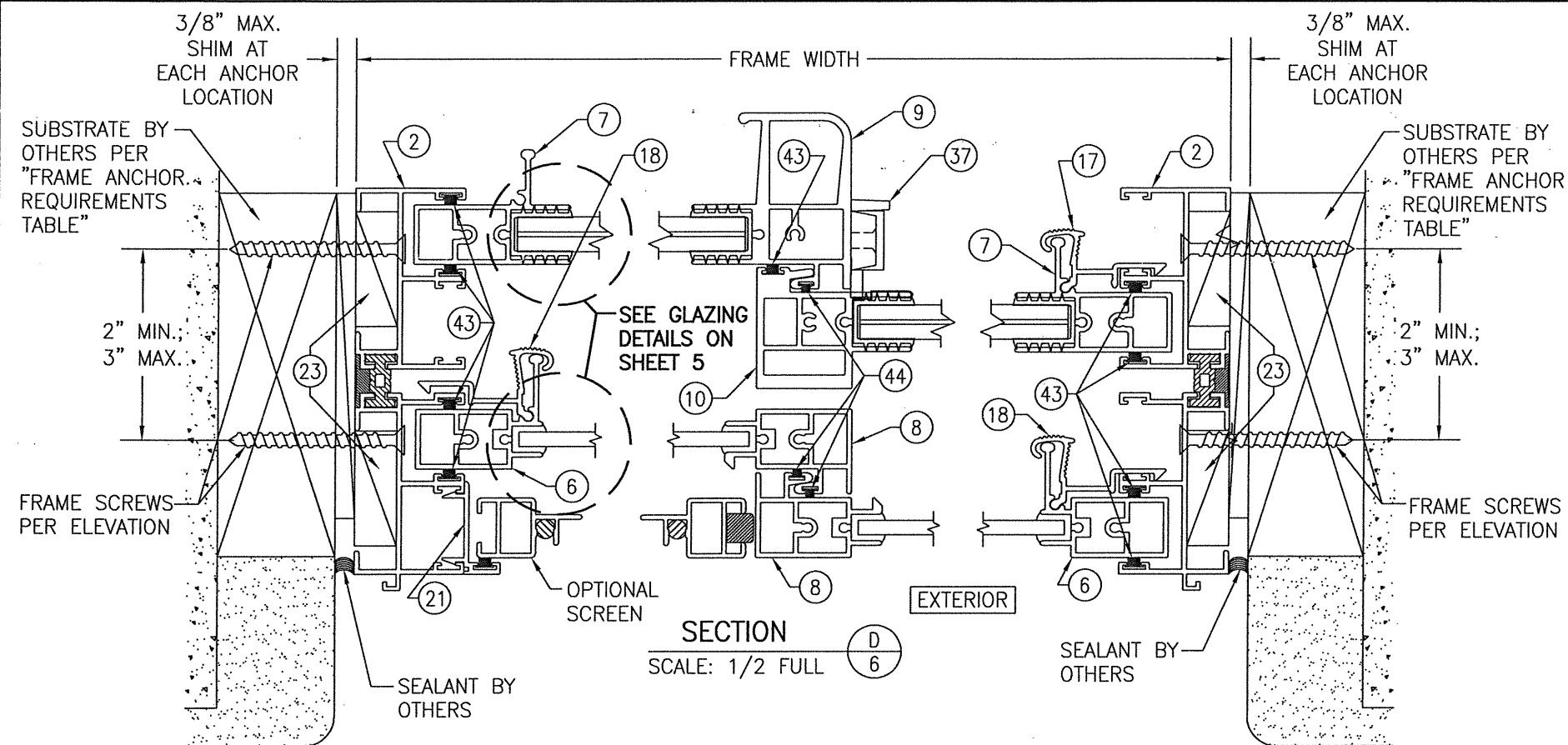
TYPICAL GLAZING DETAIL (EXTERIOR GLASS)

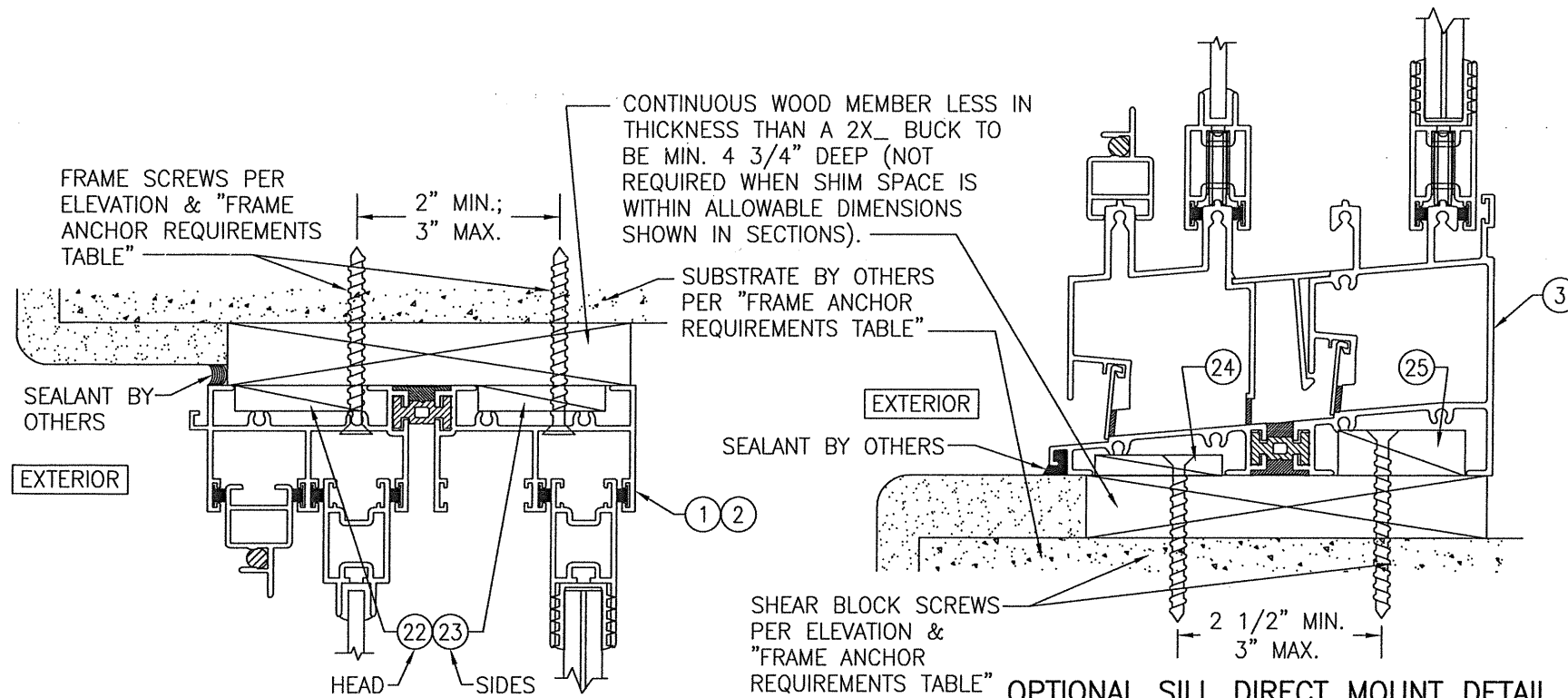


15/32" LAMINATED GLASS (0.196" AN/0.09 DUPONT SG/0.196 AN)

TYPICAL GLAZING DETAIL (INTERIOR GLASS)

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PLOT: 1=2	DATE: 10/15/10
REVISION DESCRIPTION	DATE
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MANUFACTURER ST. CLOUD WINDOW, INC. 390 INDUSTRIAL BLVD. SAUK RAPIDS, MN 56379 320-251-9311	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION JAN 21 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1719	REV. F
SHEET NO. 5	OF 9





**OPTIONAL JAMB/HEAD DIRECT MOUNT DETAIL
TO SUBSTRATE WITH SPACER**

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

**OPTIONAL SILL DIRECT MOUNT DETAIL
TO SUBSTRATE WITH SPACER**

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

NOTE: SILL CONTINUOUS WOOD MEMBER MUST BE LEVEL AND STABLE
AGAINST THE SUBSTRATE TO INSURE THE SHEAR BLOCKS HAVE FULL
AND LEVEL BEARING AND FULLY EXTEND INTO THE SILL AS SHOWN.

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PLOT: 1=2		DATE: 10/15/10	
NO.	REVISION	DESCRIPTION	DATE
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CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		P.E. NO. 44135	
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