

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).
5. THIS PRODUCT IS NON-IMPACT RATED & MUST BE SHUTTERED WITH A FLORIDA CODE APPROVED SHUTTER WHERE REQUIRED BY CODE.
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 ENTRY & 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 WITHOUT 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.

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.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/HINGE/STRIKE/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	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2"
HINGE & STRIKE 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	(1) 3/16" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 3/16" CONCRETE SCREW	1 1/2"	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"

ALLOWABLE PRESSURE TABLE

(SINGLE "0" & "X" DOORS)

MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM FRAME WIDTH DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)		MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM FRAME WIDTH DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)	
		* POS.	NEG.			* POS.	NEG.
79.375	26.125	70.0	90.8	79.375	60.125	70.0	90.8
	30.750	70.0	89.7		60.875	70.0	89.7
	32.125	70.0	86.8		62.875	70.0	86.8
	34.125	70.0	81.6		66.875	70.0	81.6
	36.750	70.0	75.7		72.125	70.0	75.7
82.625	38.125	70.0	72.9	82.625	74.875	70.0	72.9
	26.125	70.0	87.2		60.125	70.0	87.2
	30.750	70.0	86.1		60.875	70.0	86.1
	32.125	70.0	83.4		62.875	70.0	83.4
	34.125	70.0	78.4		66.875	70.0	78.4
86.625	36.750	70.0	72.7	86.625	72.125	70.0	72.7
	38.125	70.0	70.0		74.875	70.0	70.0
	26.125	65.0	85.9		60.125	65.0	85.9
	30.750	65.0	84.9		60.875	65.0	84.9
	32.125	65.0	82.2		62.875	65.0	82.2
95.500	34.125	65.0	77.3	95.500	66.875	65.0	77.3
	36.750	65.0	71.6		72.125	65.0	71.6
	38.125	65.0	69.0		74.875	65.0	69.0
	26.125	65.0	82.6		60.125	65.0	82.6
	30.750	65.0	81.5		60.875	65.0	81.5
98.625	32.125	65.0	79.0	98.625	62.875	65.0	79.0
	34.125	65.0	74.2		66.875	65.0	74.2
	36.750	65.0	68.8		72.125	65.0	68.8
	38.125	65.0	66.3		74.875	65.0	66.3
	26.125	65.0	80.9		60.125	65.0	80.9

* POSITIVE PRESSURE MAY BE INCREASED TO EQUAL THE LISTED NEGATIVE PRESSURE WHEN WATER INFILTRATION RESISTANCE IS NOT REQUIRED BY THE DOOR PROVIDING THE DOOR IS INSTALLED IN A NON-HABITABLE AREA WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION OR THE UNIT IS INSTALLED AT A LOCATION PROTECTED BY A CANOPY OR OVERHANG WHERE-BY THE OVERHANG(OH) RATIO IS EQUAL TO OR MORE THAN 1.0 PER FBC.

ALLOWABLE PRESSURE TABLE

(TRANSOM UNITS)

SINGLE DOOR WITH TRANSOM MAXIMUM MULLION SPAN (IN.)	(1) ALLOWABLE PRESSURE (PSF)	
	* POS.	NEG.
26.125	65.0	94.9
30.750	65.0	80.6
32.125	65.0	77.1
34.125	65.0	72.6
36.750	65.0	67.4
38.125	65.0	65.0

DOUBLE DOOR WITH TRANSOM MAXIMUM MULLION SPAN (IN.)	(1) ALLOWABLE PRESSURE (PSF)	
	* POS.	NEG.
60.125	65.0	80.9
60.875	65.0	79.9
62.875	65.0	77.4
66.875	65.0	72.8
72.125	65.0	67.5
74.875	65.0	65.0

1. ALLOWABLE UNIT PRESSURE SHALL BE THE LESSER OF THE PRESSURE SHOWN IN THIS TABLE & THAT SPECIFIED FOR THE INDIVIDUAL DOOR & WINDOW UNITS.

ALLOWABLE PRESSURE TABLE

(SIDE-BY-SIDE MULLED UNITS)

1. ALLOWABLE MULLED UNIT PRESSURE SHALL BE THE LESSER OF THE ALLOWABLE PRESSURE SPECIFIED FOR EACH INDIVIDUAL UNIT WITHIN THE MULLED UNIT. SEE OTHER TABLES ON THIS SHEET FOR ALLOWABLE PRESSURE ON INDIVIDUAL DOOR UNITS.

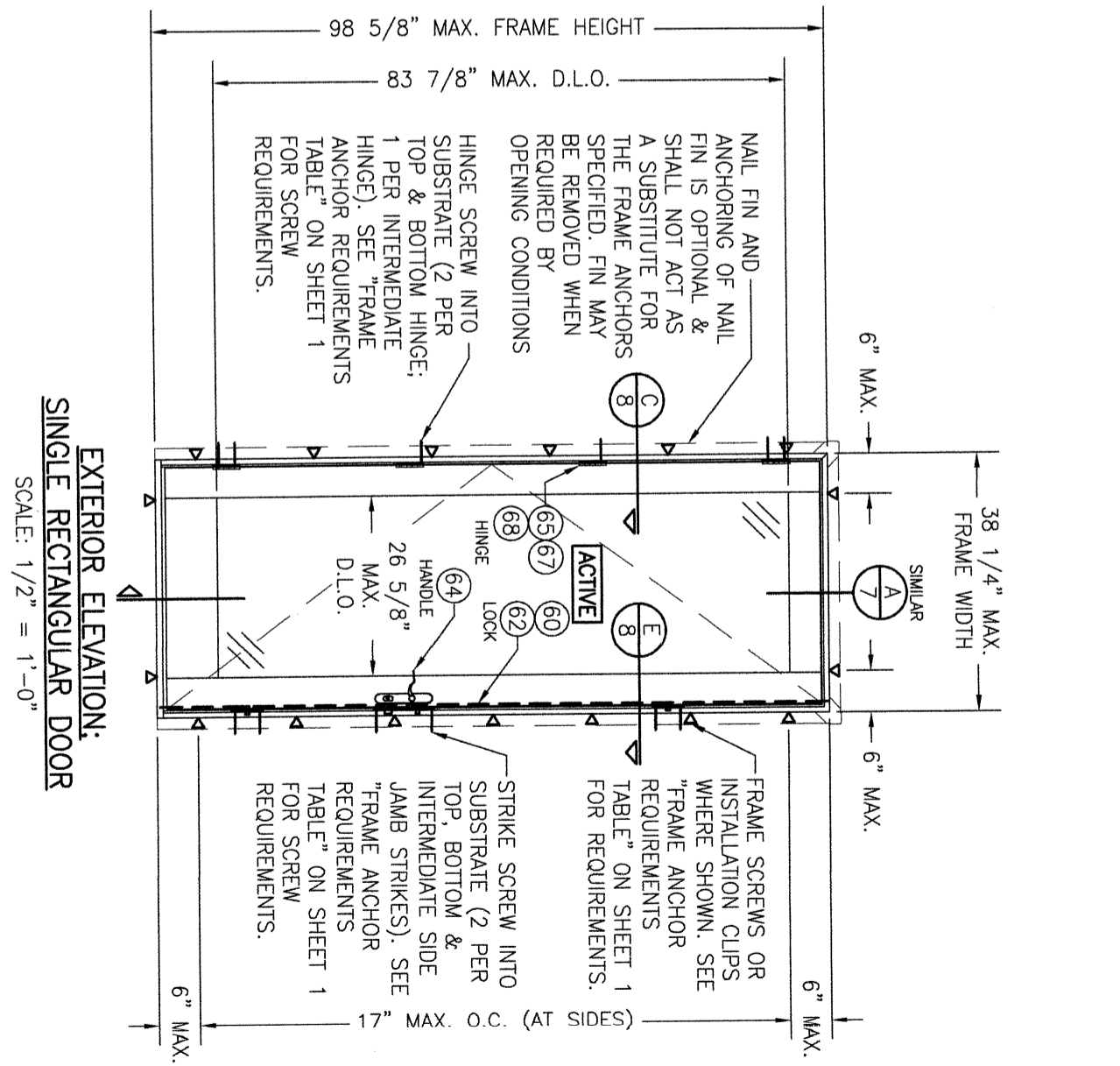
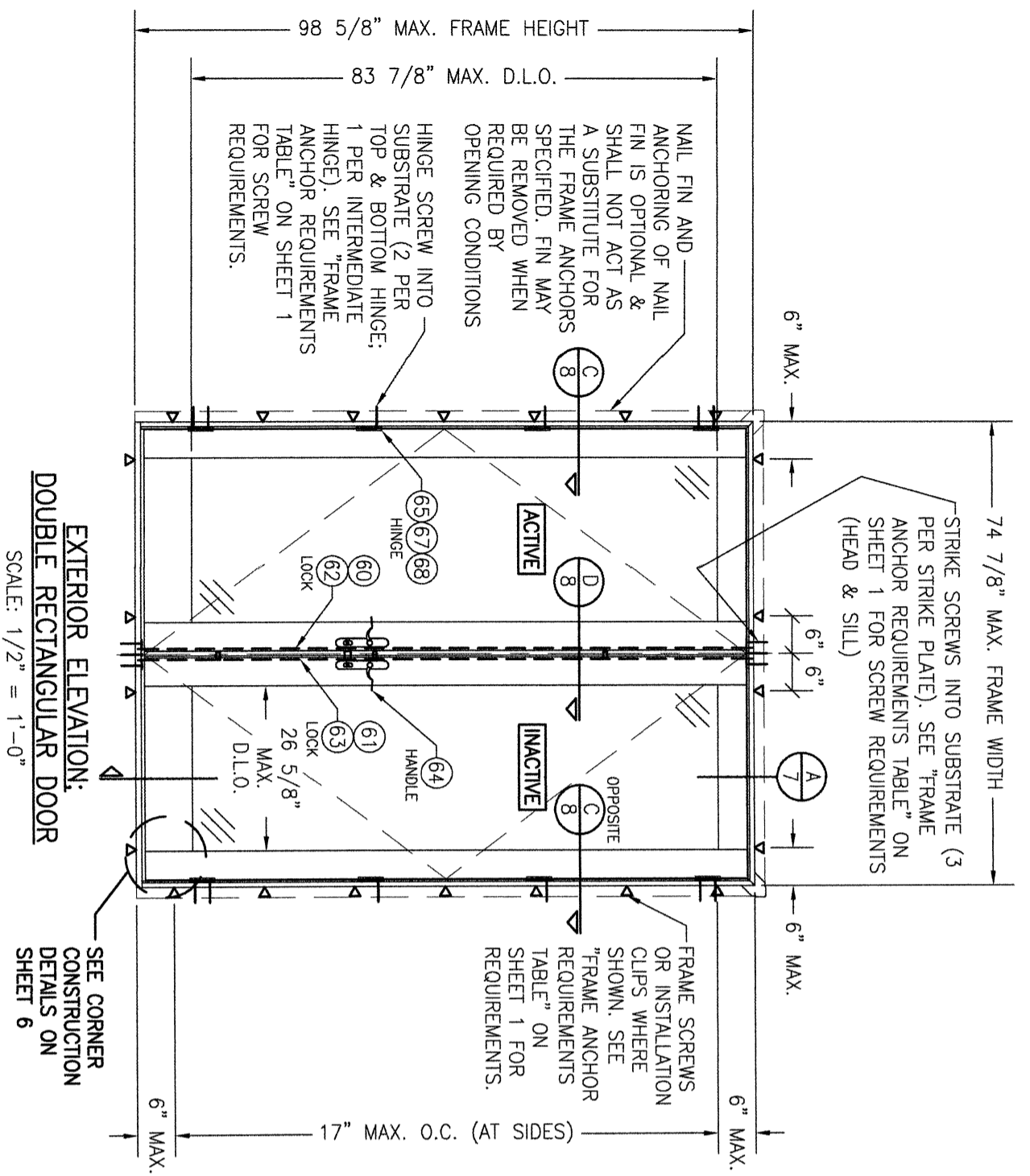
HINGE REQUIREMENTS (ALL DOOR CONDITIONS)

4 PER PANEL (ALL DOOR SIZES)

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.

DRAWING NO. 1831	DATE: 06/13/13
SHEET NO. 1 OF 12	CHECKED BY: W.W.S.
DRAWING TITLE: ULTRA SERIES MANOR NON-IMPACT DOOR	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	MANUFACTURER: KOLBE & KOLBE MILLWORK CO., INC.
25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666

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



EXTERIOR ELEVATION:
DOUBLE RECTANGULAR DOOR
SCALE: 1/2" = 1'-0"
SEE CORNER
CONSTRUCTION
DETAILS ON
SHEET 6

EXTERIOR ELEVATION:
SINGLE RECTANGULAR DOOR
SCALE: 1/2" = 1'-0"

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
ULTRA SERIES MANOR NON-IMPACT DOOR

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

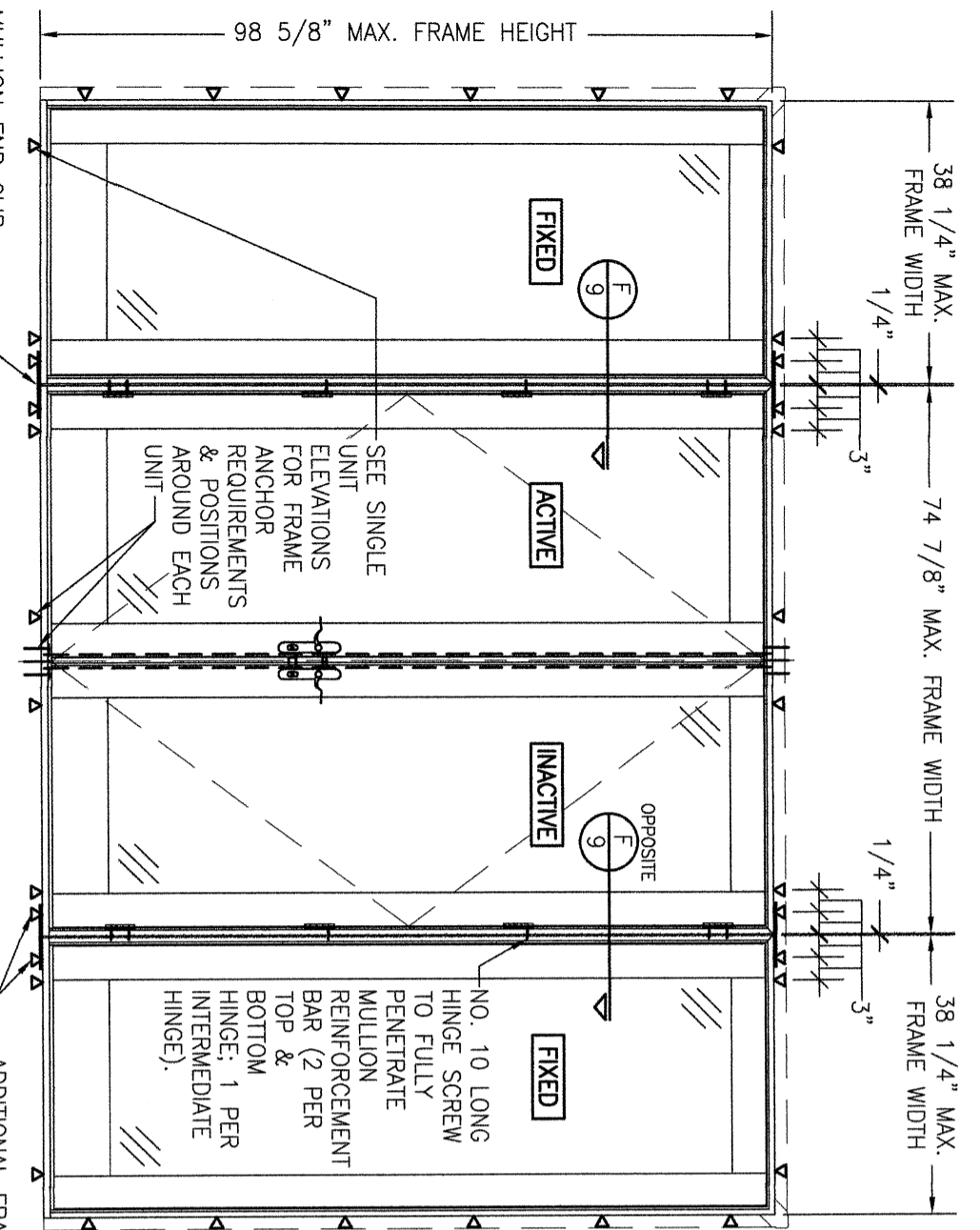
MANUFACTURER
KOLBE & KOLBE MILLWORK CO., INC.
1323 SOUTH 11TH AVE.
WAUSAU, WI 54401
715-842-5666

CERTIFICATION

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

DRAWING NO. 1831
REV. C
SHEET NO. 2 OF 12

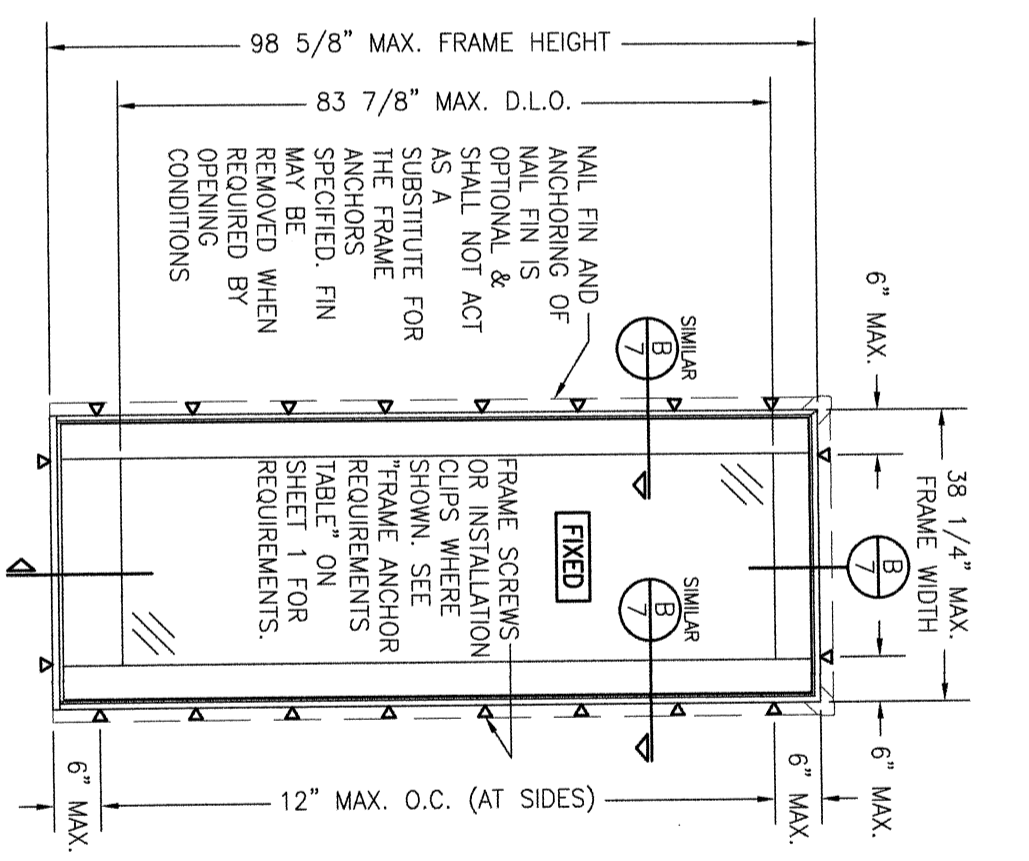
DRAWN BY: W.R.M.
CHECKED BY: W.M.S.
DATE: 06/13/13



**EXTERIOR ELEVATION:
DOUBLE DOORS WITH FIXED PANELS**

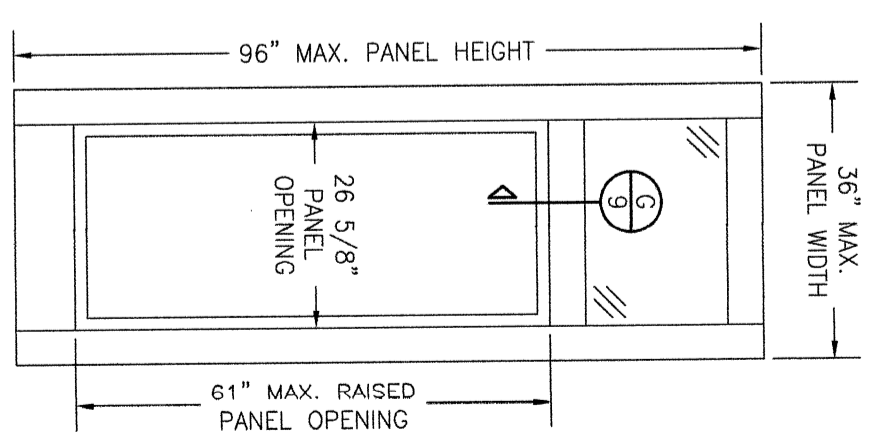
SCALE: 1/2" = 1'-0"
(RECTANGULAR DOORS SHOWN, SHAPED DOORS ALSO APPLY. SEE "APPROVED SHAPES" TABLE ON SHEET 2)
"FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

- MULTIPLE UNIT NOTES:**
- FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATIONS.
 - THERE IS NO LIMIT ON THE NUMBER OF DOORS THAT MAY BE COMBINED IN ONE DIRECTION INTO ONE OPENING PROVIDING THE OPENING IS DESIGNED TO SUPPORT ALL LOADS TRANSFERRED FROM THE DOORS & THEIR MULLIONS.
 - OXO UNIT IS SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.



**EXTERIOR ELEVATION:
SINGLE FIXED PANEL DOOR**

SCALE: 1/2" = 1'-0"
RECTANGULAR FIXED PANEL SHOWN, SHAPED FIXED PANEL UNITS ALSO APPLY PROVIDING THE HEADS OF THOSE UNITS ARE INSTALLED WITH THE SAME ANCHOR SPACING AS SPECIFIED FOR THE SIDES (12" MAX. O.C.)



**EXTERIOR ELEVATION:
RAISED PANEL**

SCALE: 1/2" = 1'-0"

- RAISED PANEL NOTES:**
- SINGLE RAISED PANEL CONDITION SHOWN, MORE THAN ONE RAISED PANEL MAY EXIST IN A SINGLE DOOR PANEL WHEN MULTIPLE MID-RAILS ARE USED.
 - PANEL ONLY IS SHOWN. FOR INSTALLATION INTO FRAME, SEE OTHER ELEVATIONS.
 - THESE PANEL CONDITIONS APPLY WITH BOTH OPERABLE & FIXED PANEL DOORS
 - RECTANGULAR CONDITION SHOWN, SHAPED CONDITIONS ALSO APPLY.
 - VERTICAL MID-RAILS MAY BE USED BETWEEN HORIZONTAL MID-RAILS AT RAISED PANEL PROVIDING RAIL SPAN DOES NOT EXCEED 26 5/8".

NO.	REVISION	DESCRIPTION	BY	DATE

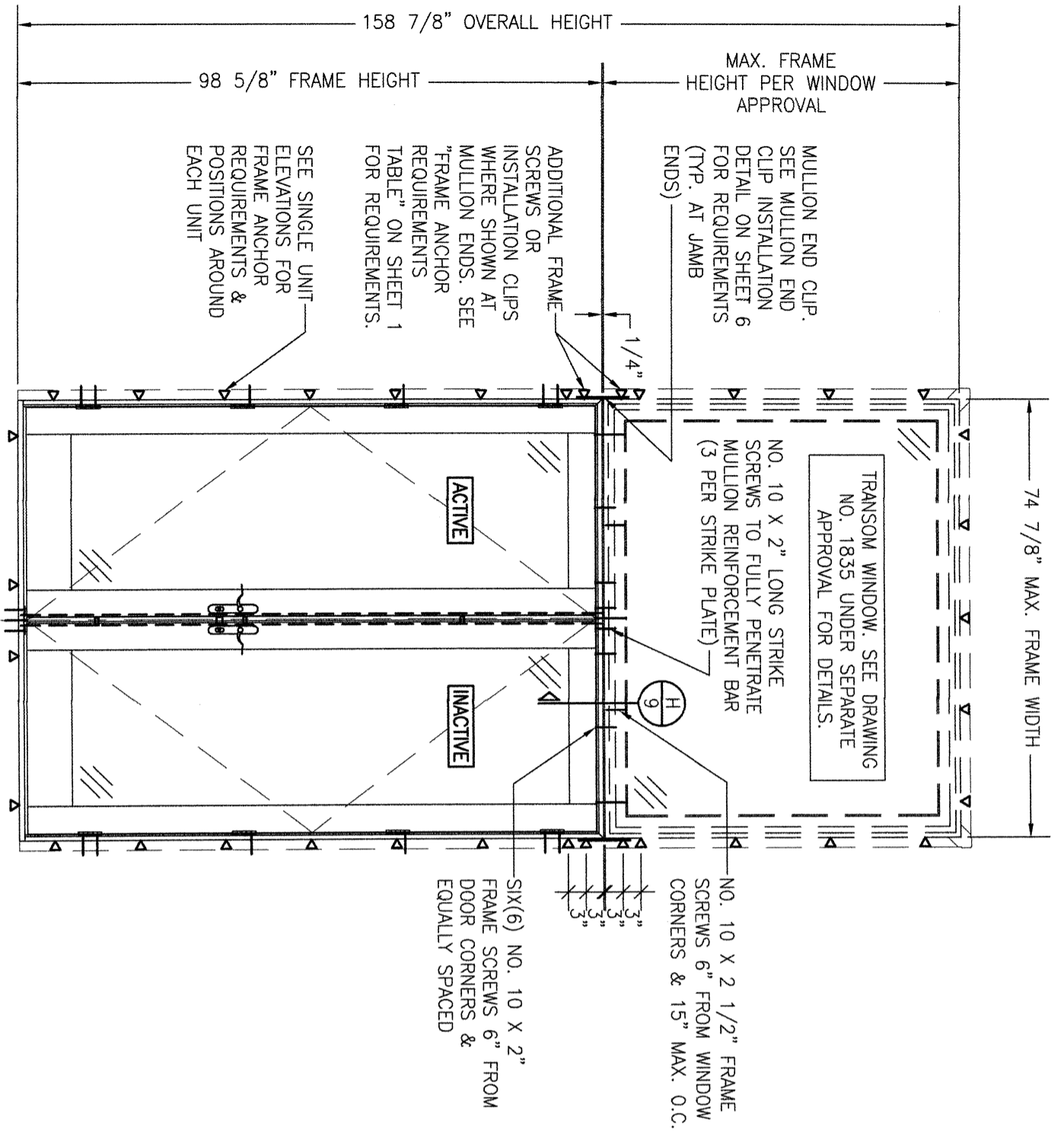
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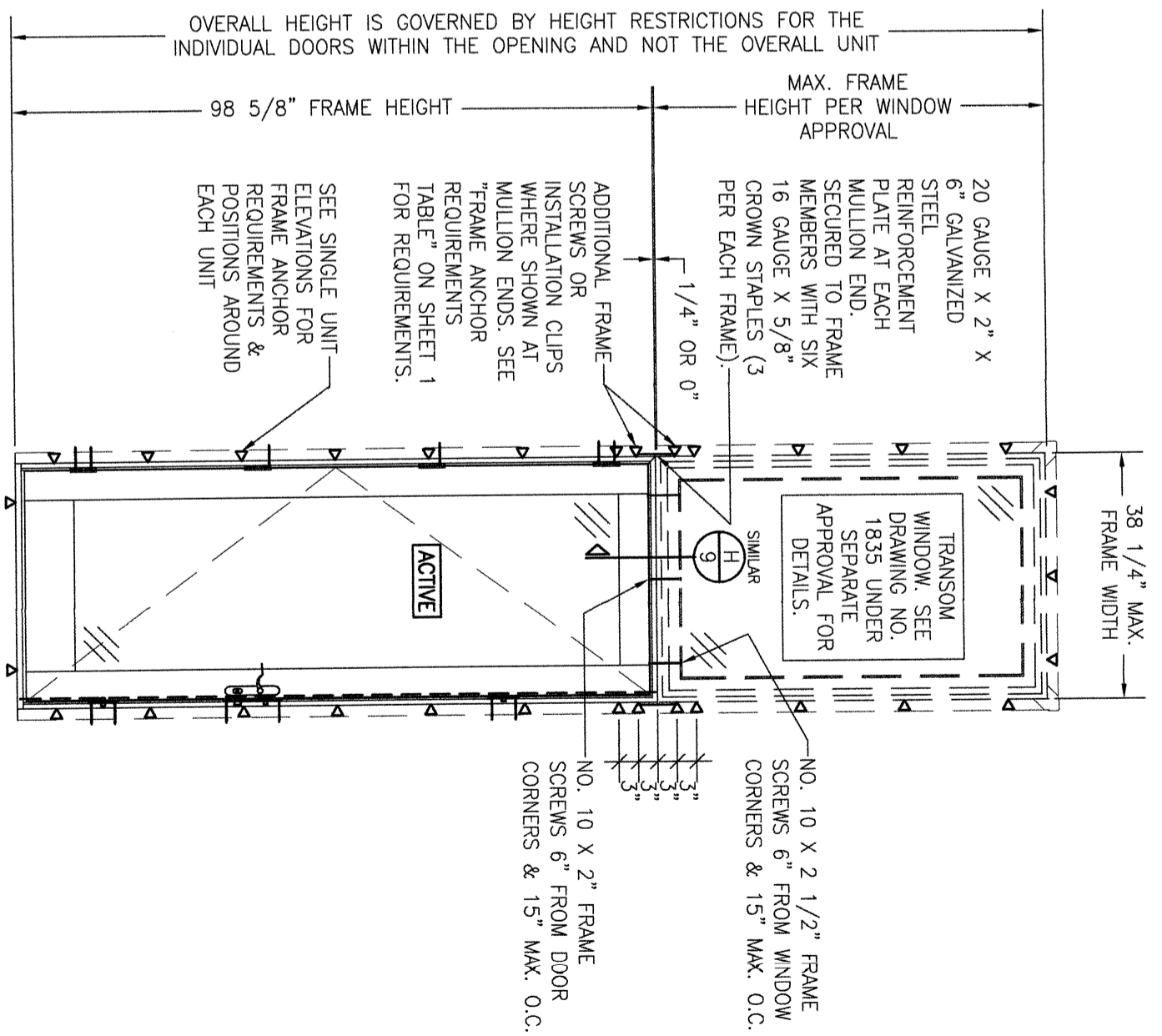
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WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. REV.
1831 C
SHEET NO.
4 OF 12

DRAWN BY: W.R.M.
CHECKED BY: M.M.S.
DATE: 06/13/13



**EXTERIOR ELEVATION:
DOUBLE DOOR WITH TRANSOM**
SCALE: 1/2" = 1'-0"
(FOR ALL DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATION)



**EXTERIOR ELEVATION:
SINGLE DOOR WITH TRANSOM**
SCALE: 1/2" = 1'-0"
(FOR DETAIL NOT SHOWN, SEE INDIVIDUAL UNIT ELEVATION)
(OPERABLE DOOR SHOWN. FIXED PANEL DOOR ALSO APPLIES)

NO.	REVISION	DESCRIPTION	BY	DATE
1	24			06/13/13

DRAWING TITLE
ULTRA SERIES MANOR NON-IMPACT DOOR

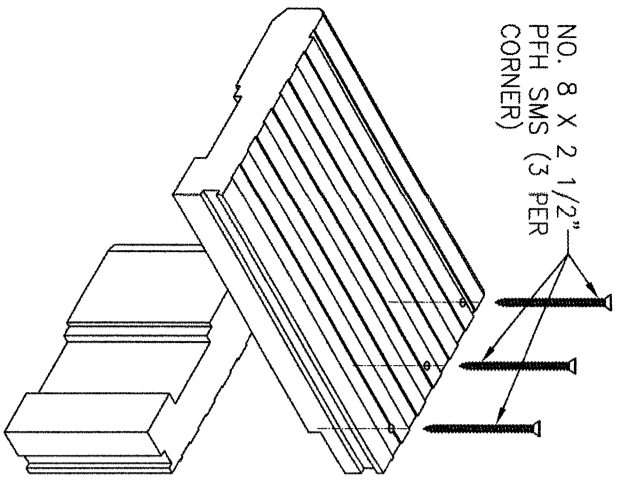
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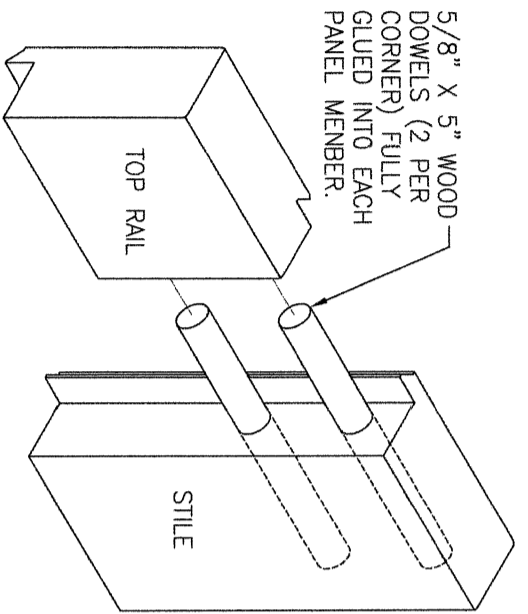
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WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

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1831 / C

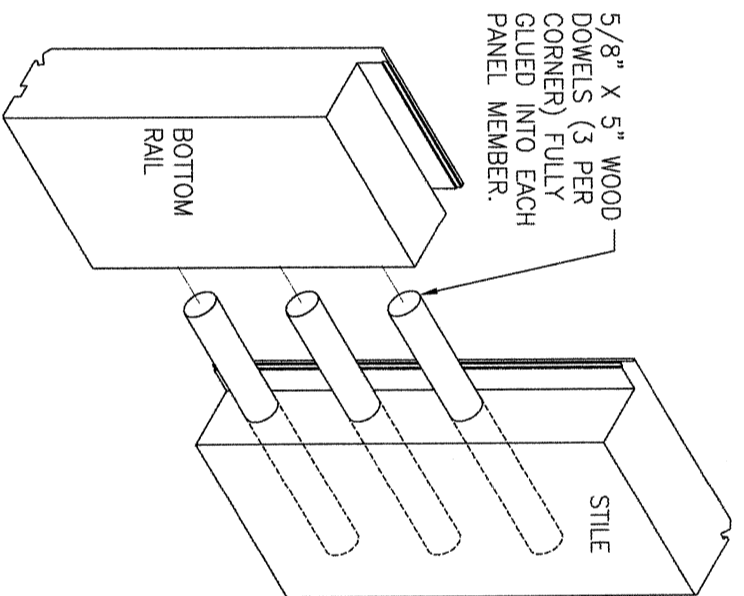
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5 / 12



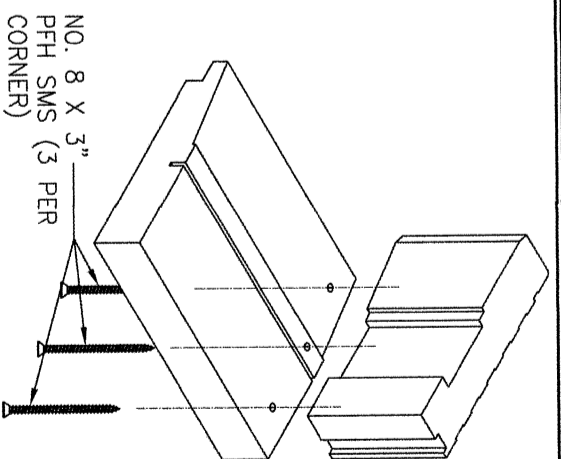
FRAME CORNER DETAIL
NOTE: FRAME MEETING SURFACES ARE SEALED WITH SILICONE.



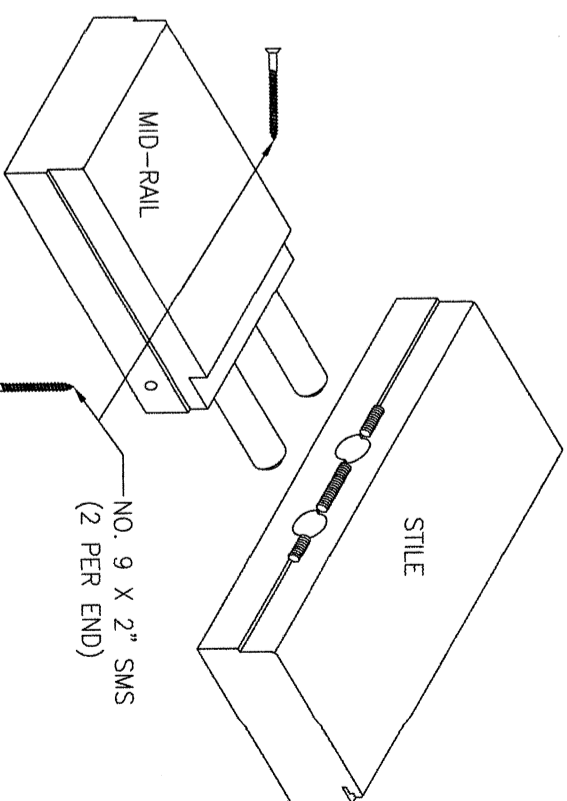
PANEL TOP CORNER DETAIL
NOTE: STILE & RAIL MEETING SURFACES ARE SEALED WITH SILICONE. CLAD JOINT IS ALSO SEALED WITH SILICONE.



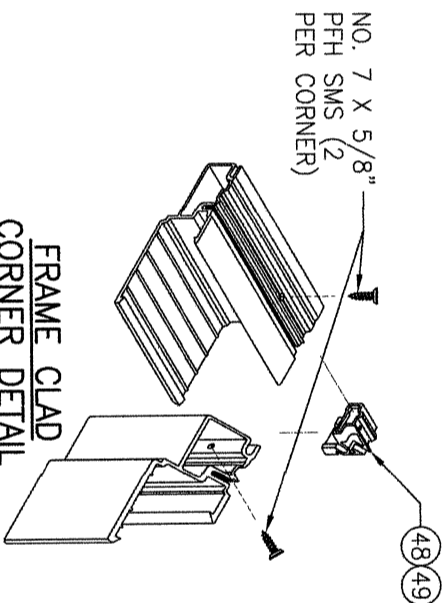
PANEL BOTTOM CORNER DETAIL
NOTE: STILE & RAIL MEETING SURFACES ARE SEALED WITH SILICONE. CLAD JOINT IS ALSO SEALED WITH SILICONE.



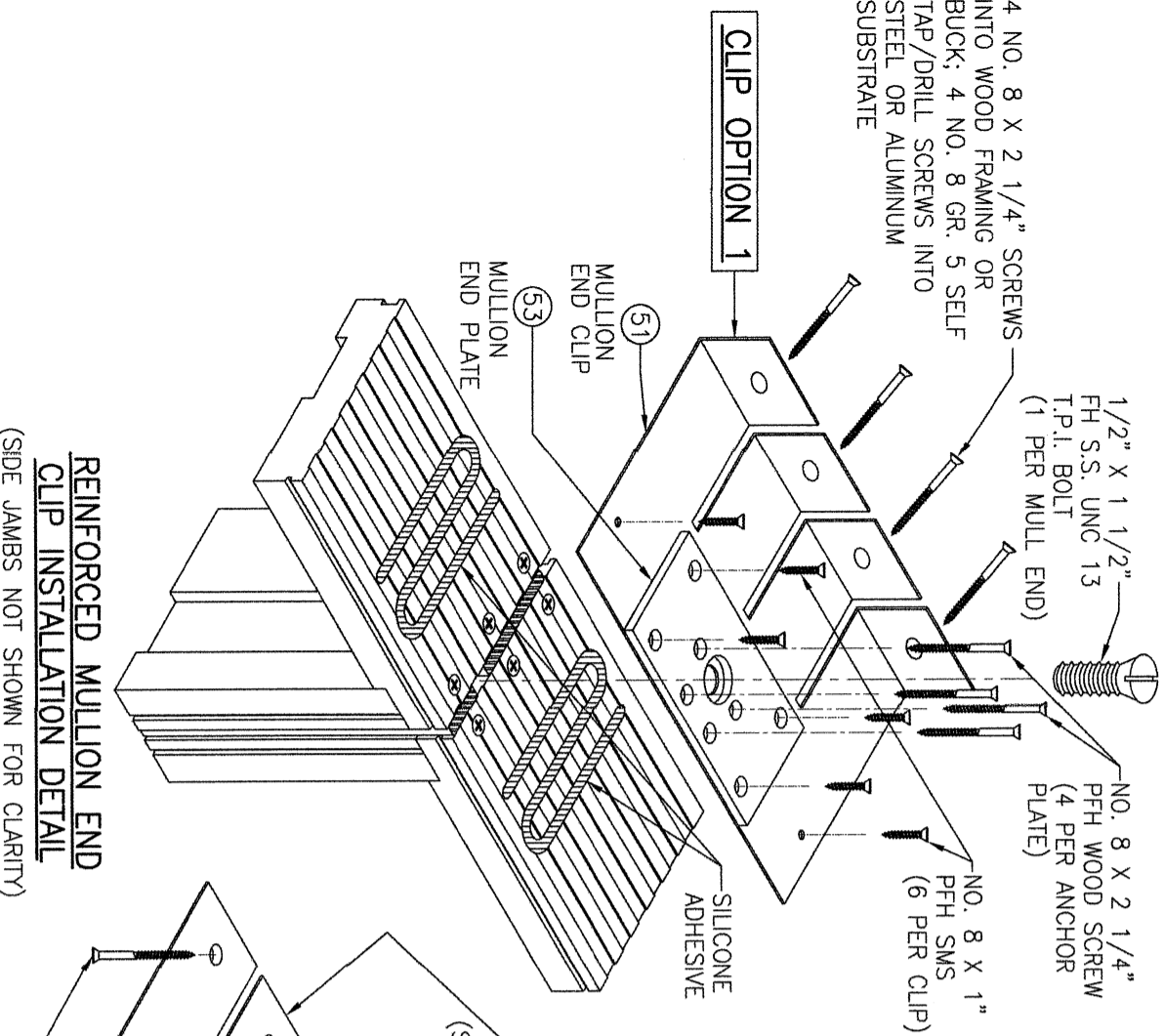
SILL CORNER DETAIL
NOTE: FRAME MEETING SURFACES ARE SEALED WITH SILICONE.



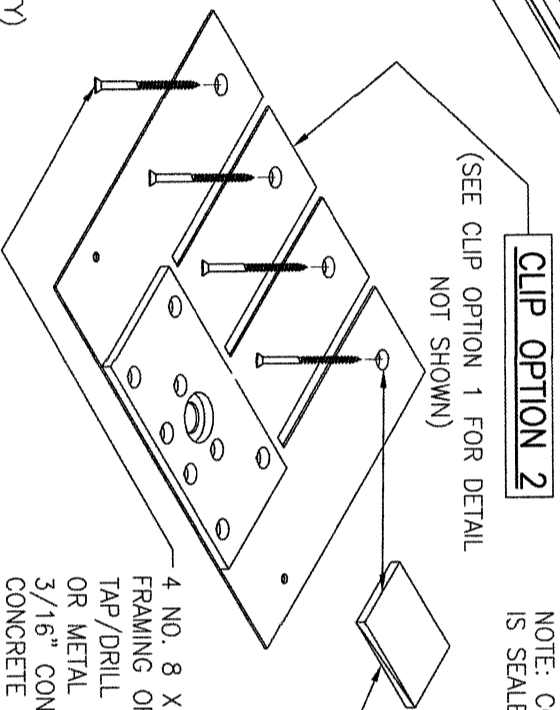
MID-RAIL END DETAIL
NOTE: STILE & RAIL MEETING SURFACES ARE SEALED WITH SILICONE. CLAD JOINT IS ALSO SEALED WITH SILICONE.



FRAME CLAD CORNER DETAIL
NOTE: CORNER OF CLAD IS SEALED WITH SILICONE.



CLIP OPTION 1



CLIP OPTION 2
(SEE CLIP OPTION 1 FOR DETAIL NOT SHOWN)

4 NO. 8 X 2 1/4" SCREWS INTO WOOD FRAMING OR BUCK; 4 NO. 8 GR. 5 SELF TAP/DRILL SCREWS INTO STEEL, ALUMINUM OR METAL STUD SUBSTRATE; FOUR(4) 3/16" CONCRETE SCREWS INTO CMU OR CONCRETE

NOTE: SHIM AS REQUIRED WITH PLASTIC OR COMPOSITE SHIMS TO FILL ANY VOID THAT MAY OCCUR BETWEEN THE CLIP AND THE SUPPORTING SUBSTRATE.

REINFORCED MULLION END CLIP INSTALLATION DETAIL

(SIDE JAMBS NOT SHOWN FOR CLARITY)

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: W.R.M.
CHECKED BY: W.M.S.
DATE: 08/13/13
PLOT: 1-24

ULTRA SERIES MANOR NON-IMPACT DOOR

DRAWING TITLE

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

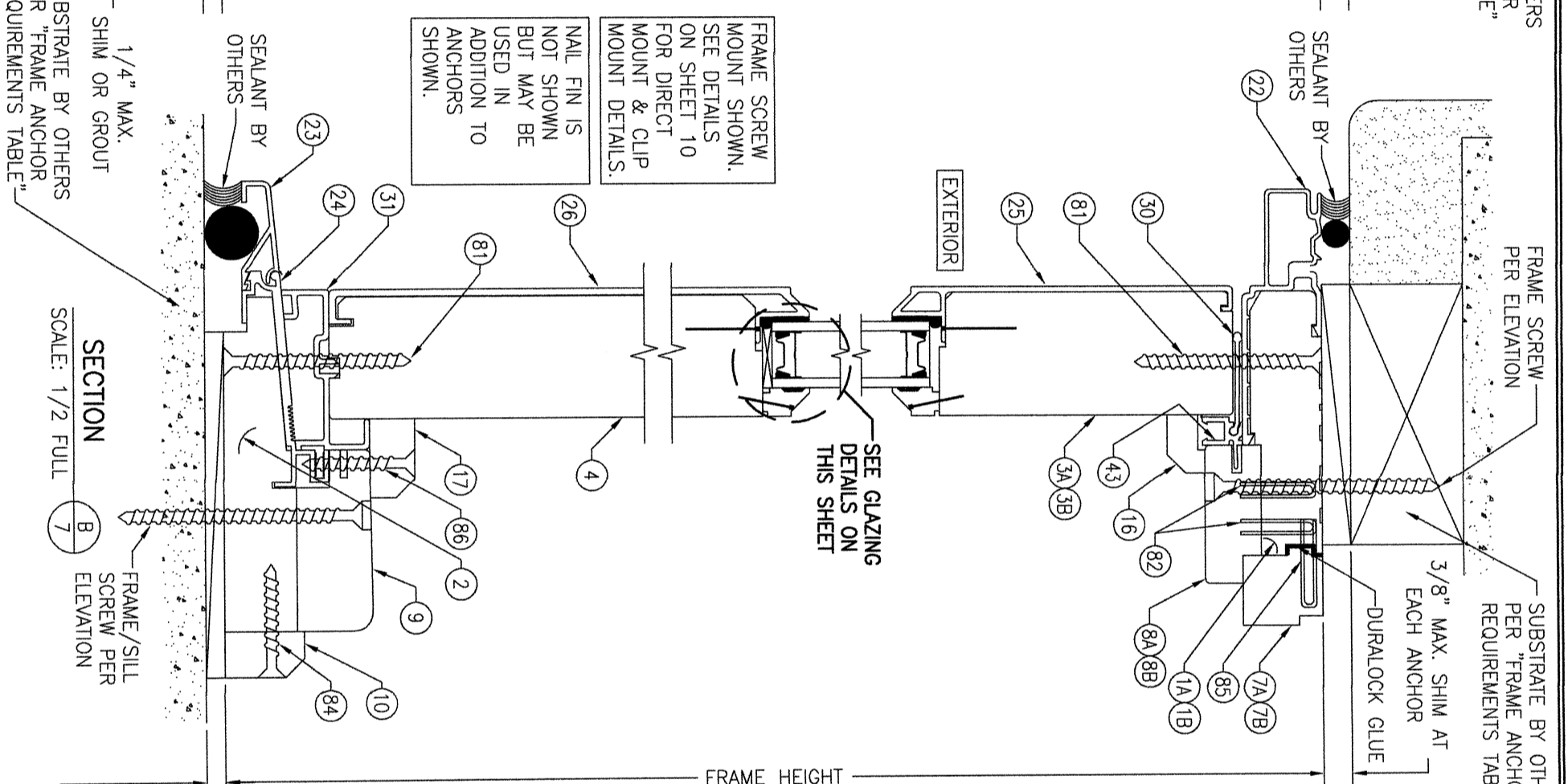
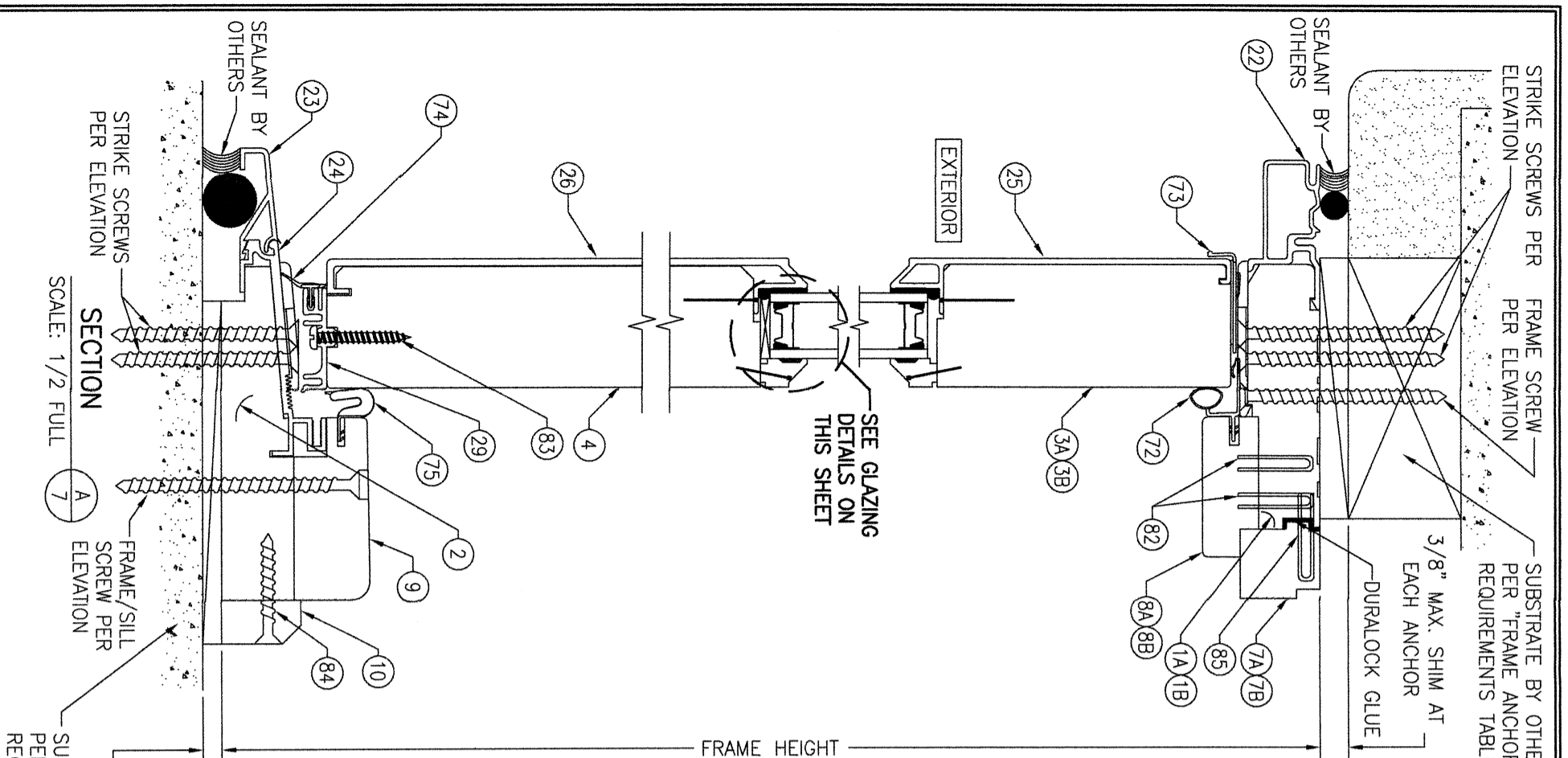
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CERTIFICATION

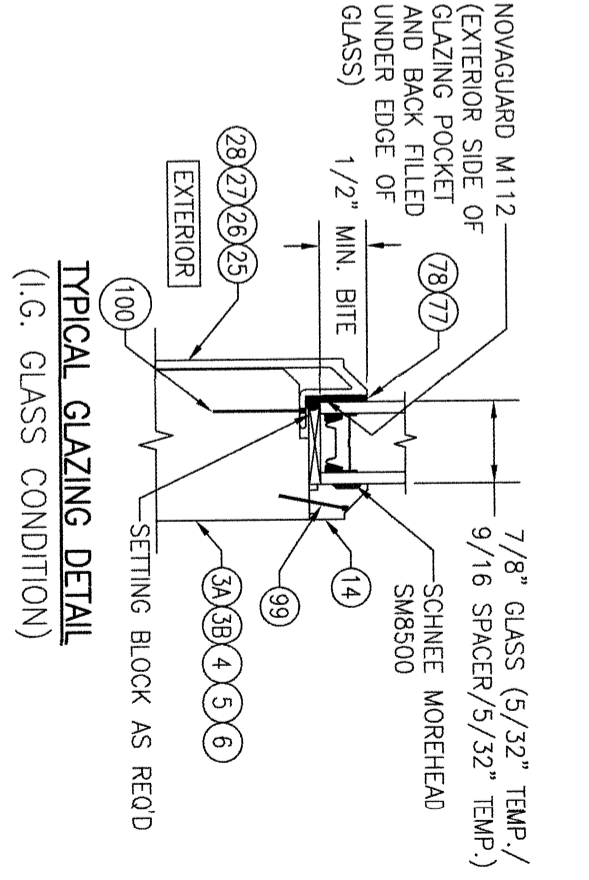
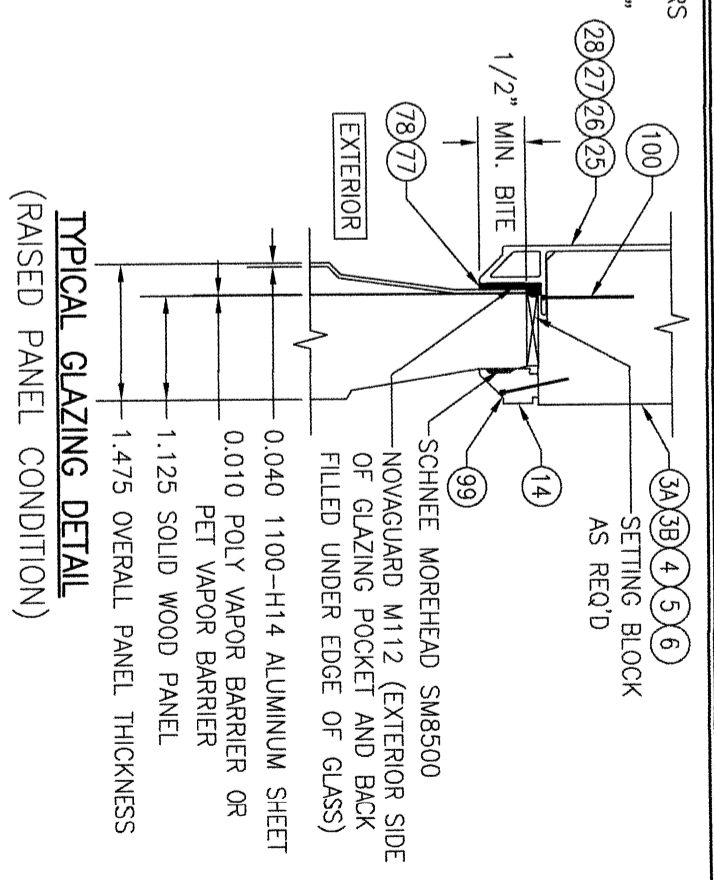
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1831
REV. C
SHEET NO. 6 OF 12



FRAME SCREW MOUNT SHOWN. SEE DETAILS ON SHEET 10 FOR DIRECT MOUNT & CLIP MOUNT DETAILS.

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



NO.	REVISION DESCRIPTION	BY	DATE
1=2			

DRAWING TITLE
ULTRA SERIES MANOR NON-IMPACT DOOR

CONSULTANTS
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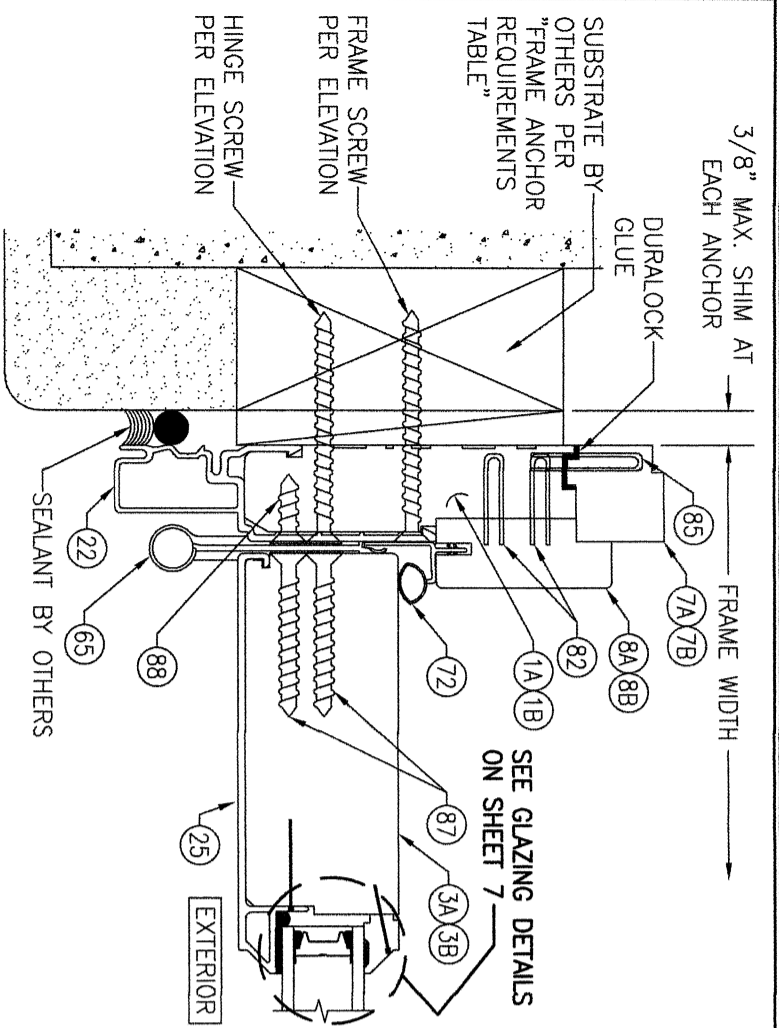
MANUFACTURER
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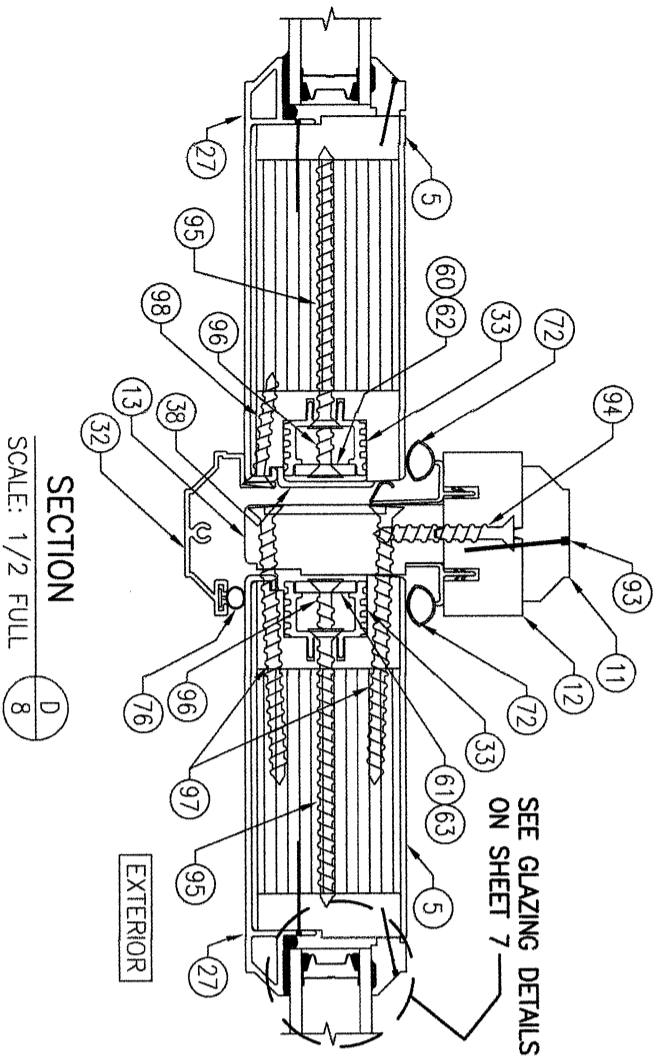
DRAWING NO.
 1831

REV.
 C

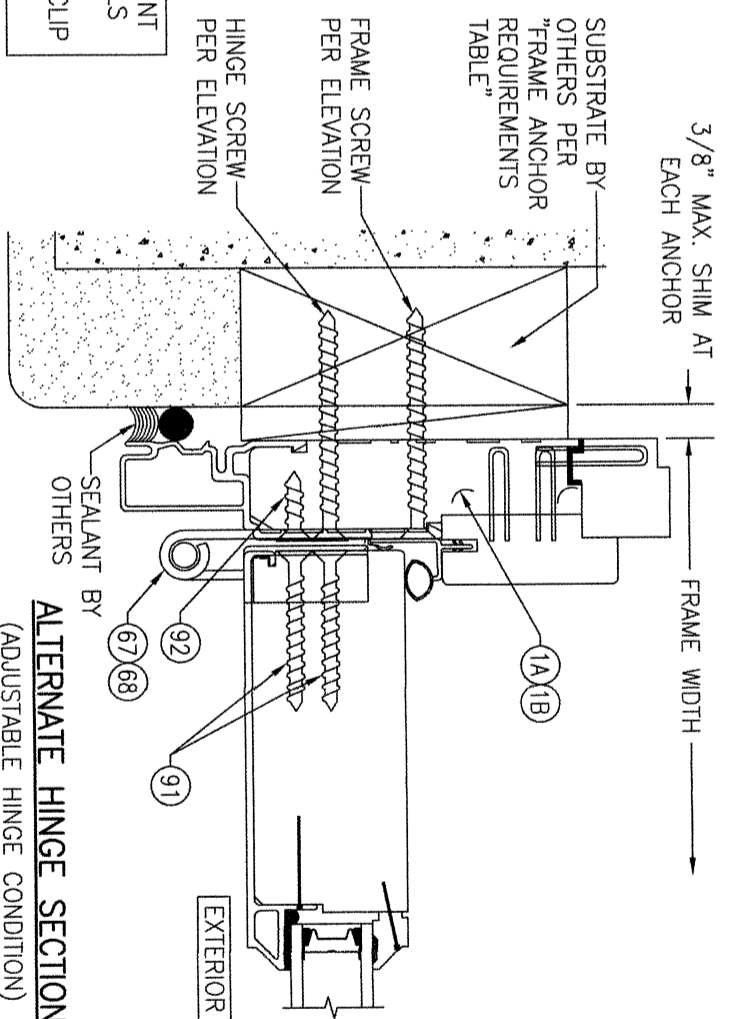
SHEET NO.
 7 OF 12



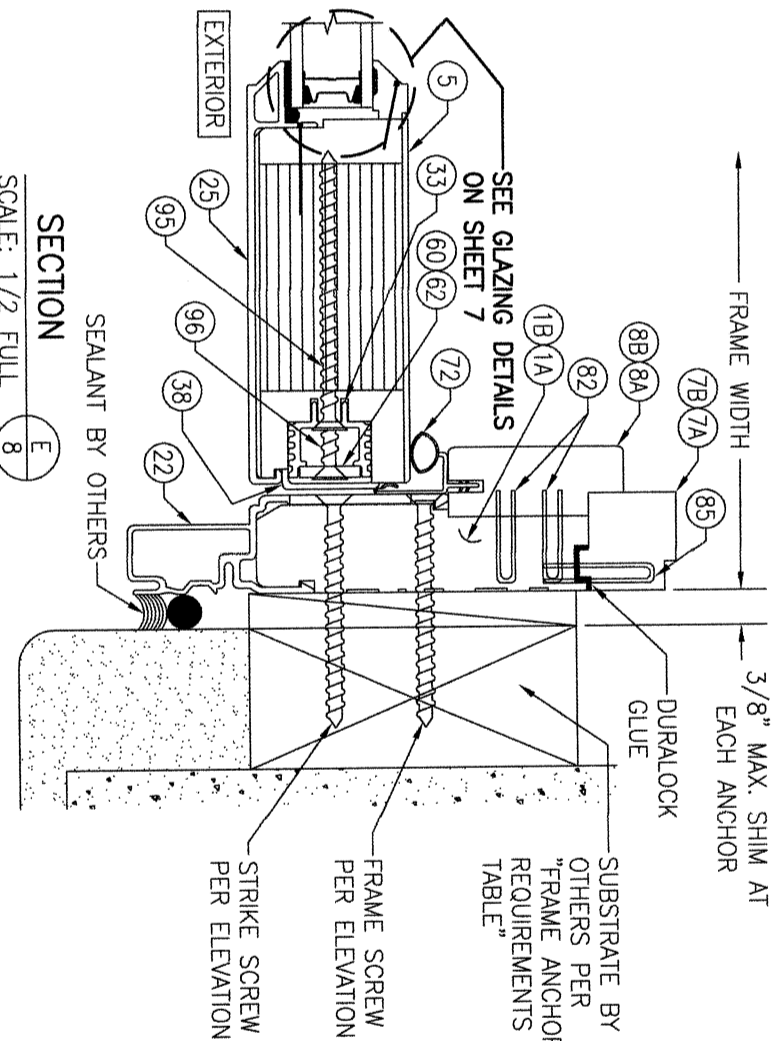
SCALE: 1/2 FULL
SECTION C
(BUTT HINGE CONDITION SHOWN. FOR ADJUSTABLE HINGE CONDITION SEE THE ALTERNATE HINGE SECTION ON THIS SHEET)



SCALE: 1/2 FULL
SECTION D
SEE GLAZING DETAILS ON SHEET 7
EXTERIOR



SCALE: 1/2 FULL
SECTION E
SEALANT BY OTHERS
EXTERIOR
ALTERNATE HINGE SECTION
(ADJUSTABLE HINGE CONDITION)
(FOR DETAIL NOT SHOWN, SEE SECTION C/8)



SCALE: 1/2 FULL
SECTION E
SEALANT BY OTHERS
EXTERIOR

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			

DRAWING TITLE: **ULTRA SERIES MANOR NON-IMPACT DOOR**

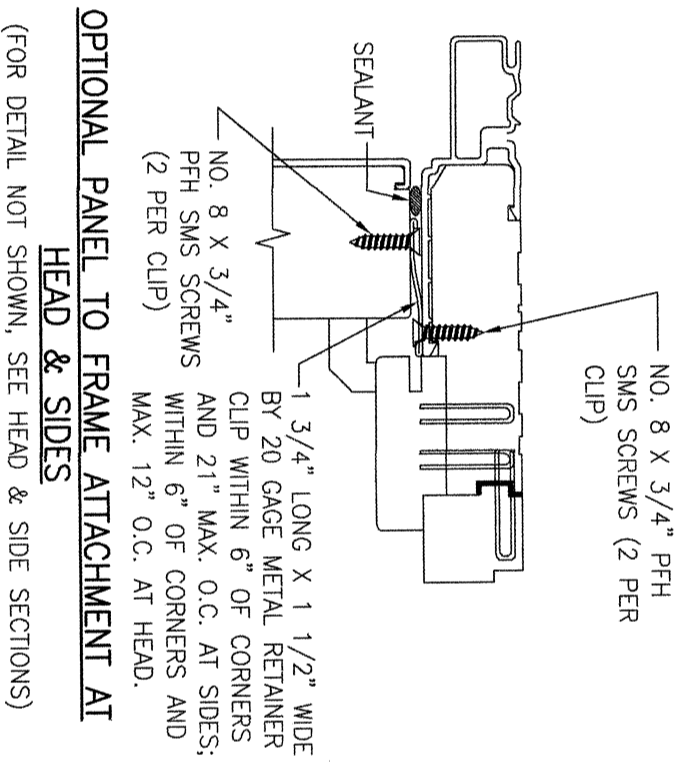
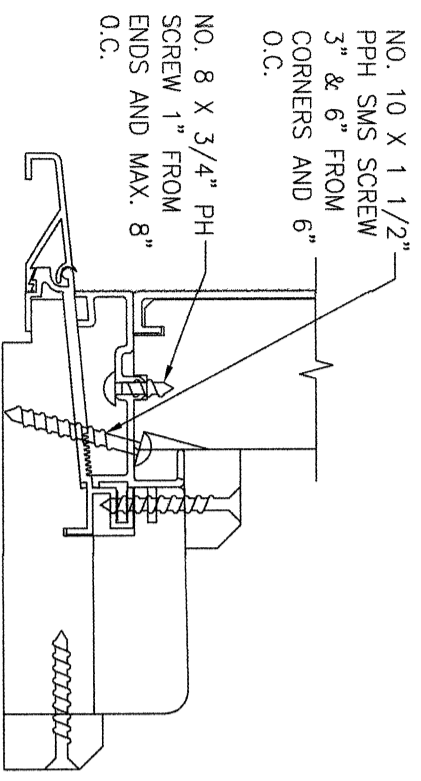
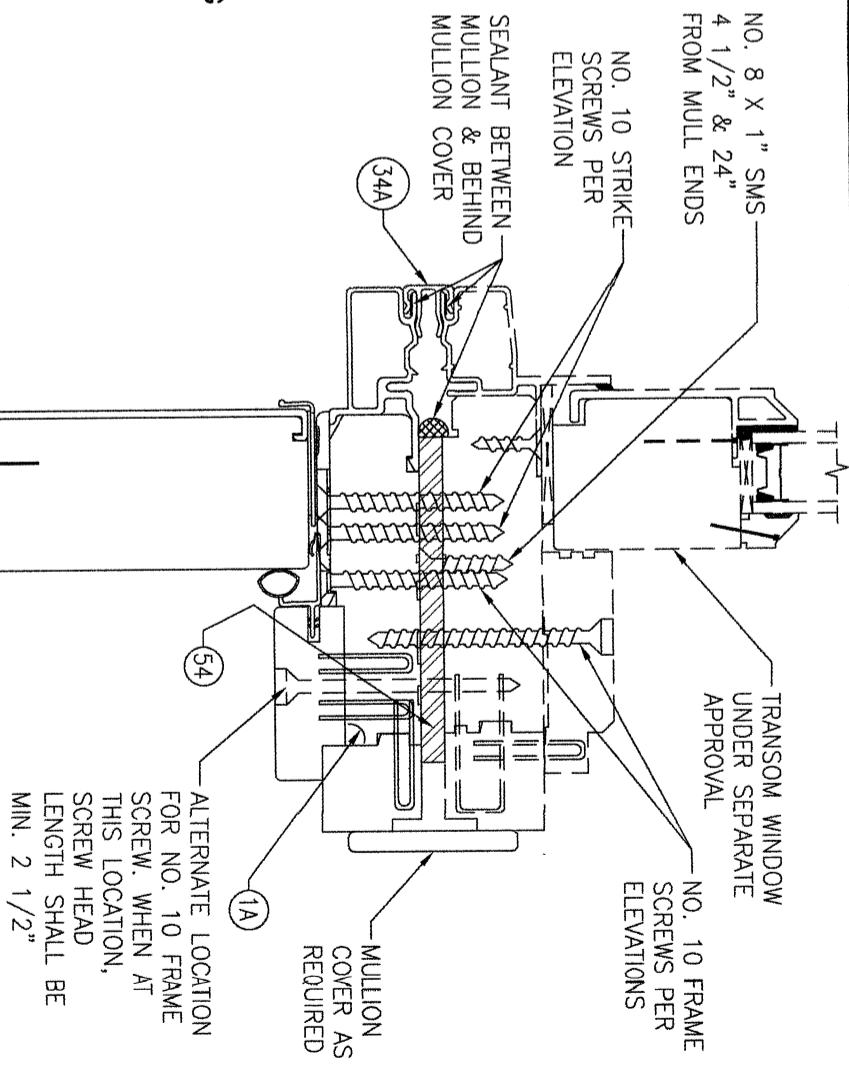
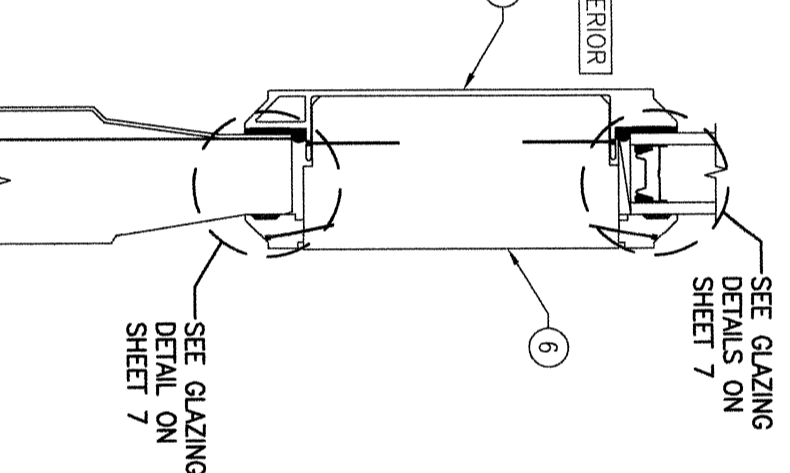
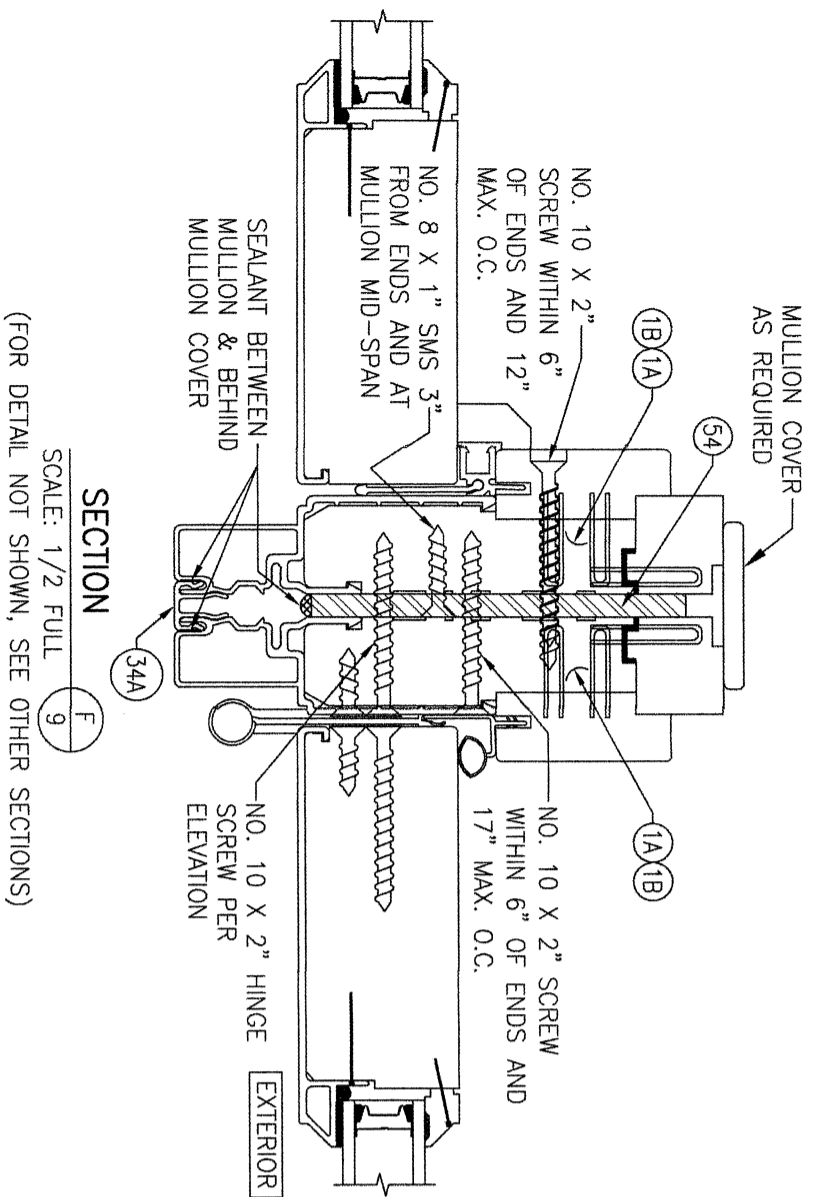
CONSULTANTS: **W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.**
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

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

CERTIFICATION: **WARREN W. SCHAEFER, P.E.**
P.E. NO. 44135

DRAWING NO.: **1831**
REV.: **C**

SHEET NO.: **8** OF **12**



NO.	REVISION DESCRIPTION	BY	DATE
1=2			

DRAWING TITLE
ULTRA SERIES MANOR NON-IMPACT DOOR

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

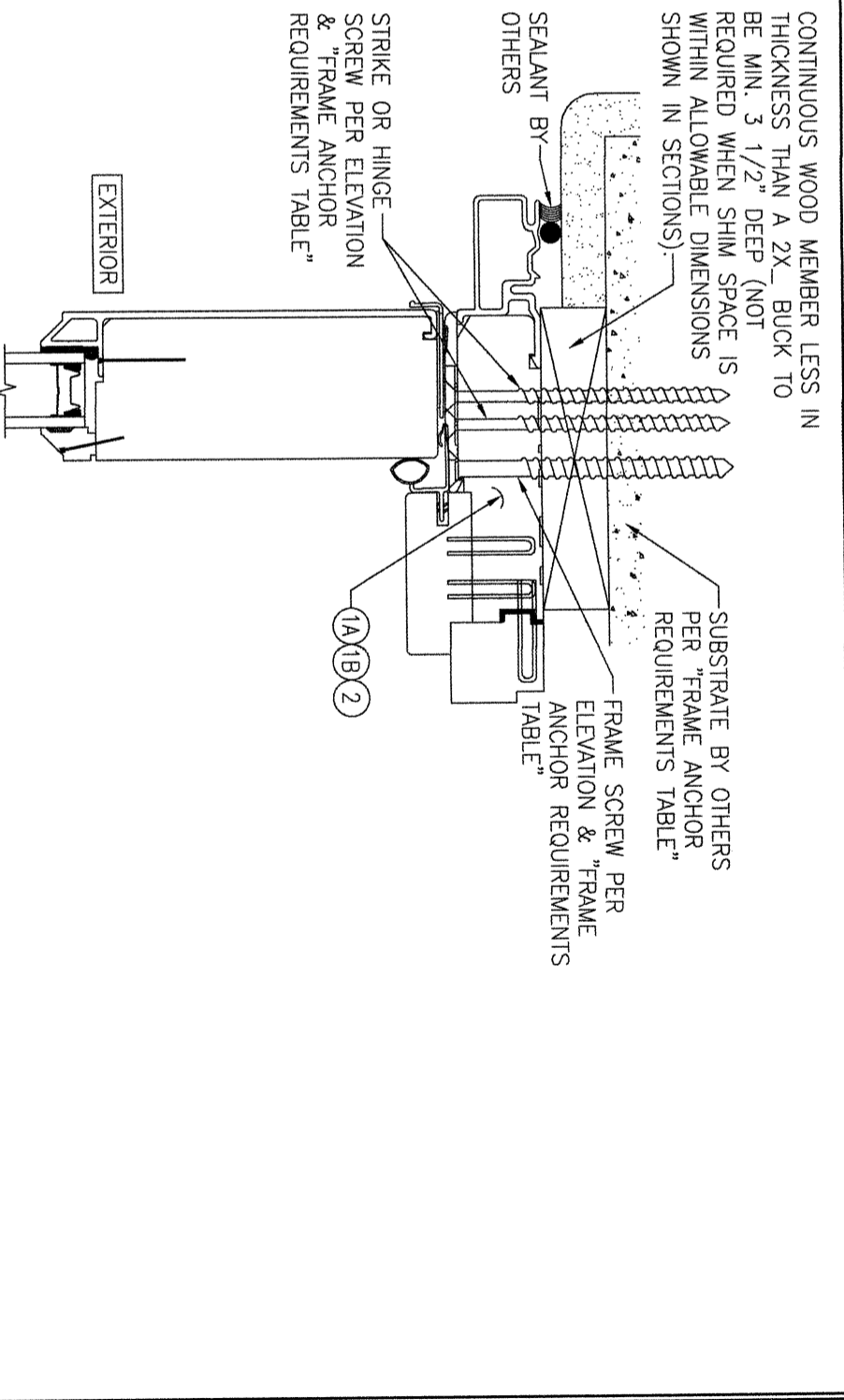
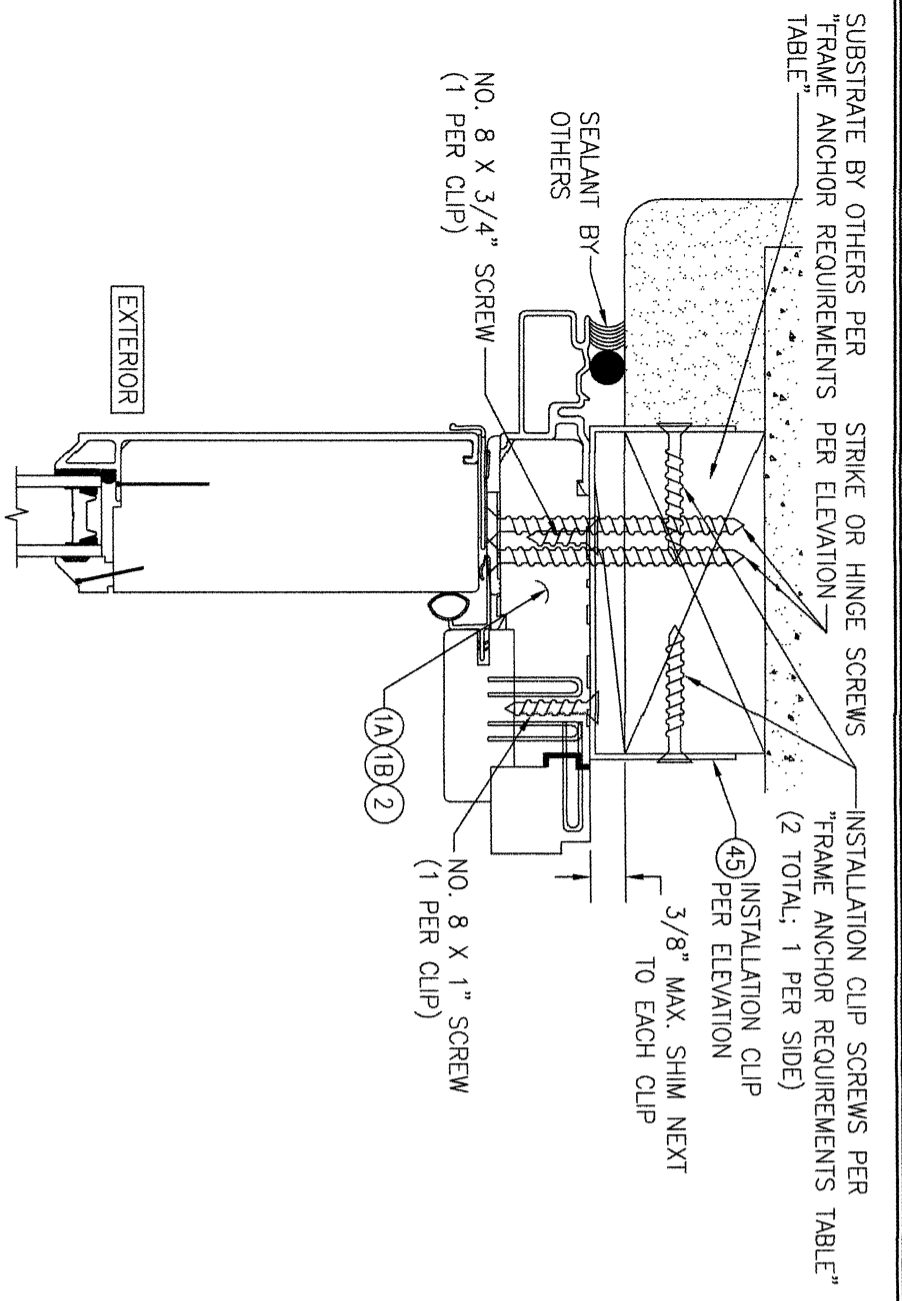
MANUFACTURER
KOLBE & KOLBE MILLWORK CO., INC.
1323 SOUTH 11TH AVE.
WAUSAU, WI 54401
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CERTIFICATION

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

DRAWING NO. 1831
REV. C

SHEET NO. 9 OF 12

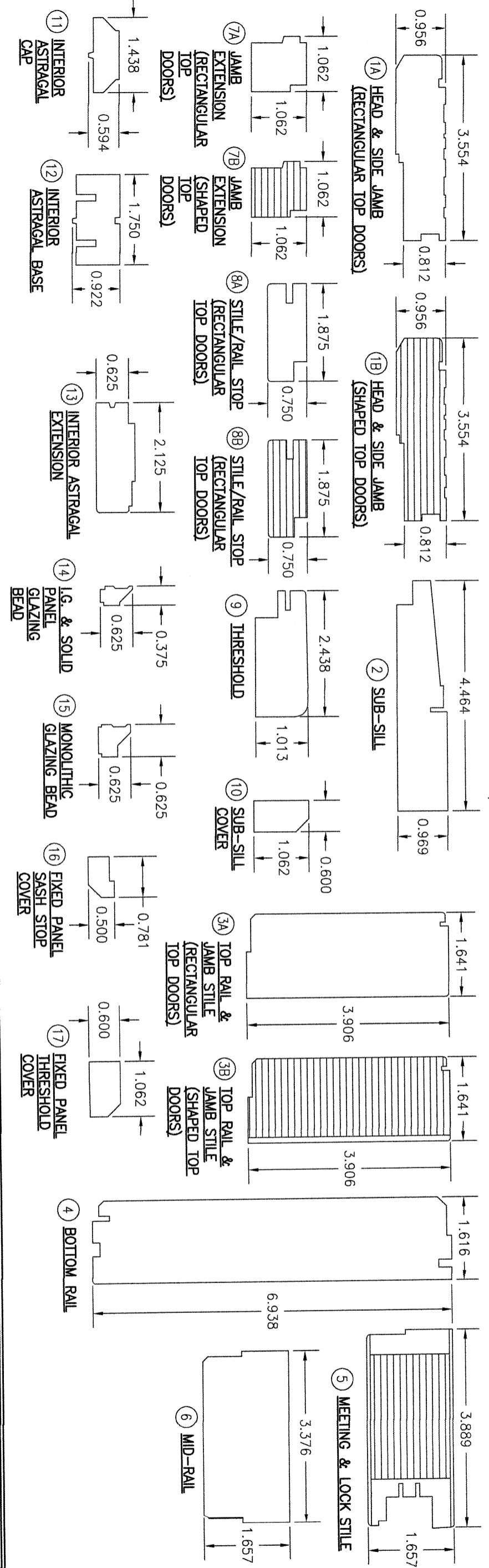


OPTIONAL INSTALLATION CLIP DETAIL

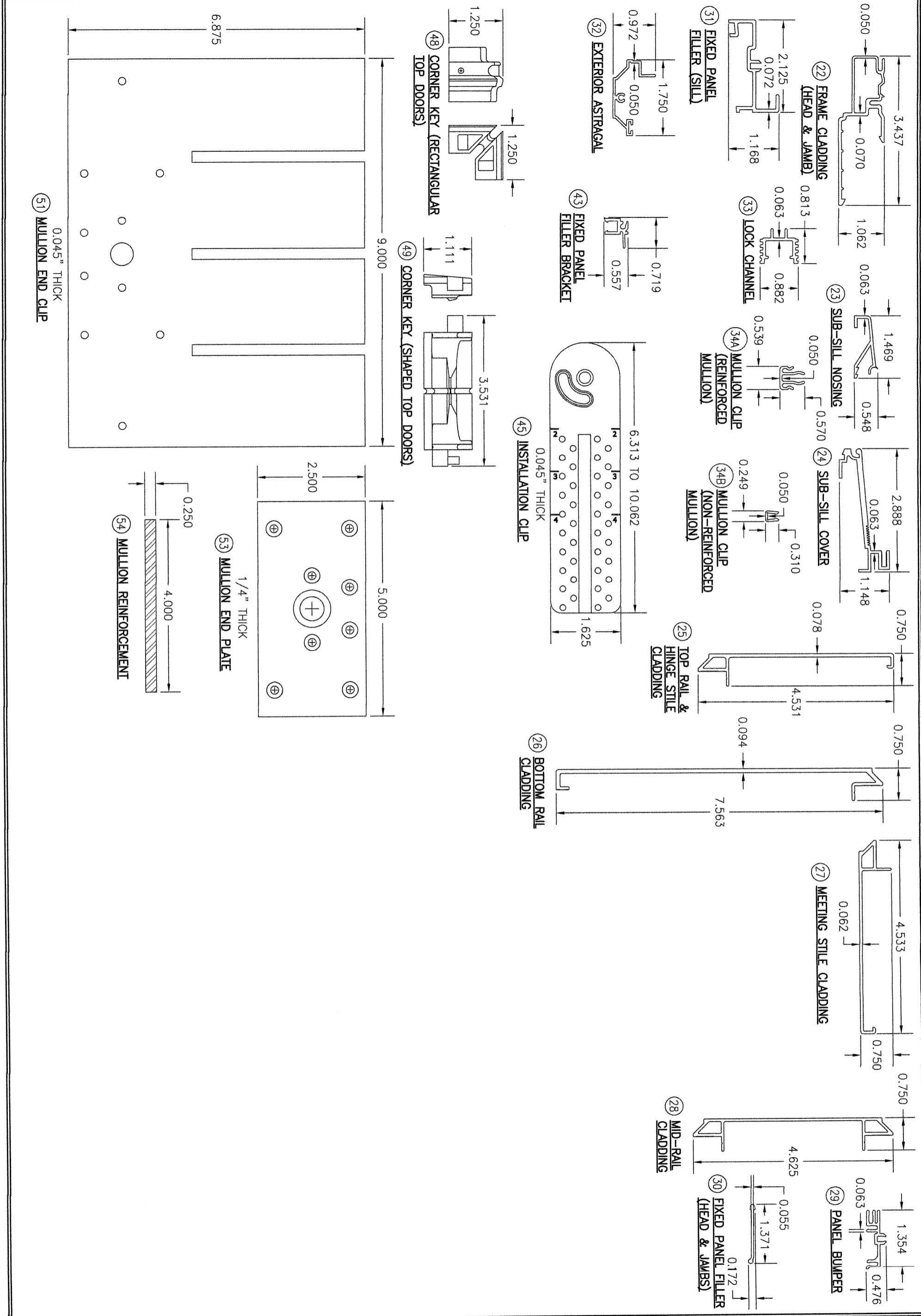
(HEAD SECTION SHOWN; SILL & SIDES ARE INSTALLED THE SAME)
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
 (OPERABLE DOOR SHOWN, FIXED PANEL DOOR ALSO APPLIES)

OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER

(HEAD SECTION SHOWN; SILL & SIDES ARE INSTALLED THE SAME)
 (FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)
 (OPERABLE DOOR SHOWN, FIXED PANEL DOOR ALSO APPLIES)



DRAWING TITLE		DRAWING NO.		SHEET NO.	
ULTRA SERIES MANOR NON-IMPACT DOOR		1831		10 OF 12	
CONSULTANTS		MANUFACTURER		DATE	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		KOLBE & KOLBE MILLWORK CO., INC.		06/13/13	
25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424		1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666			
CERTIFICATION		WARREN W. SCHAEFER, P.E. P.E. NO. 44135		CHECKED BY:	
				NO. REVISION DESCRIPTION BY DATE	



NO.	REVISION DESCRIPTION	BY	DATE
1			
2			

DRAWING TITLE
ULTRA SERIES MANOR NON-IMPACT DOOR

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 25601 AYSEN DRIVE
 PUNTA GORDA, FL 33983
 PHONE: 561-744-3424

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

CERTIFICATION

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

DRAWING NO.
 1831

REV.
 C

SHEET NO.
 11 OF 12

DRAWN BY:
 W.R.M.

CHECKED BY:
 W.M.S.

DATE:
 06/13/13

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
	PARTS	
1A	HEAD & SIDE JAMB (RECTANGULAR TOP DOORS)	WOOD
1B	HEAD & SIDE JAMB (SHAPED TOP DOORS)	LVL
2	SUB-SILL	WOOD
3A	TOP RAIL & JAMB STILE (RECTANGULAR TOP DOORS)	WOOD
3B	TOP RAIL & JAMB STILE (SHAPED TOP DOORS)	LVL
4	BOTTOM RAIL	WOOD
5	MEETING & LOCK STILE	LVL CORE WITH WOOD VENEER
6	MID-RAIL	WOOD
7A	JAMB EXTENSION (RECTANGULAR TOP DOORS)	WOOD
7B	JAMB EXTENSION (SHAPED TOP DOORS)	LVL
8A	STILE/RAIL STOP (RECTANGULAR TOP DOORS)	WOOD
8B	STILE/RAIL STOP (SHAPED TOP DOORS)	LVL WITH WOOD VENEER
9	THRESHOLD	WOOD
10	SUB-SILL COVER	WOOD
11	INTERIOR ASTRAGAL CAP	WOOD
12	INTERIOR ASTRAGAL BASE	WOOD
13	INTERIOR ASTRAGAL EXTENSION	WOOD
14	I.G. & SOLID PANEL GLAZING BEAD	WOOD
15	MONOLITHIC GLAZING BEAD	WOOD
16	FIXED PANEL SASH STOP COVER	WOOD
17	FIXED PANEL THRESHOLD COVER	WOOD
22	FRAME CLADDING	6063-T5 ALUMINUM
23	SUB-SILL NOSING	6063-T5 ALUMINUM
24	SUB-SILL COVER	6063-T5 ALUMINUM
25	TOP RAIL & HINGE STILE CLADDING	6063-T5 ALUMINUM
26	BOTTOM RAIL CLADDING	6063-T5 ALUMINUM
27	MEETING STILE CLADDING	6063-T5 ALUMINUM
28	MID-RAIL CLADDING	6063-T5 ALUMINUM
29	PANEL BUMPER	6063-T5 ALUMINUM
30	FIXED PANEL FILLER (HEAD & JAMBS)	6063-T5 ALUMINUM
32	FIXED PANEL FILLER (SILL)	6063-T5 ALUMINUM
32	EXTERIOR ASTRAGAL	6063-T5 ALUMINUM
33	LOCK CHANNEL	6063-T5 ALUMINUM
34A	MULLION CLIP (REINFORCED MULLION)	6063-T5 ALUMINUM
34B	MULLION CLIP (NON-REINFORCED MULLION)	6063-T5 ALUMINUM
38	7" LONG S.S. LOCK STILE U-CHANNEL	18-8 S.S. (TOP & BOTTOM OF LOCK STILE)
43	FIXED PANEL FILLER BRACKET	CLIM-A-TECH RIGID & FLEXIBLE PVC
45	INSTALLATION CLIP	ASTM A653 MIN. 33 KSI GALV. STEEL
48	CORNER KEY (RECTANGULAR TOP DOORS)	DARTER PLASTICS POLYCARBONATE
49	CORNER KEY (SHAPED TOP DOORS)	DARTER PLASTICS POLYCARBONATE
51	MULLION END CLIP	ASTM A653 GALV. STEEL (F _y = 50 ksi)
53	MULLION END PLATE	A-36 STEEL
54	MULLION REINFORCEMENT	A-36 STEEL

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. ALL WOOD IS MINIMUM GRADE 2 MILLED BY KOLBE & KOLBE TO SELECT.

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
	HARDWARE	
60	5-POINT LOCK HARDWARE (ACTIVE PANEL)	HTL HLS-8000 SERIES
61	2-POINT LOCK HARDWARE (INACTIVE PANEL)	HTL HLS-8000 SERIES
62	5-POINT LOCK HARDWARE (ACTIVE PANEL)	HTL HLS-9000 SERIES
63	2-POINT LOCK HARDWARE (INACTIVE PANEL)	HTL HLS-9000 SERIES
64	HANDLE	AS REQUIRED TO OPERATE LOCK SYSTEM
65	4X4 BUTT HINGE WITH STATIONARY PIN	HAGER 5060390 S.S. STEEL, BRASS OR BRONZE
67	4X4 ADJUSTABLE SET (INTERMEDIATE) HINGE	HTL 5143790 S.S. STEEL, BRASS OR BRONZE
68	4X4 ADJUSTABLE GUIDE (TOP & BOTTOM) HINGE	HTL 5143780 S.S. STEEL, BRASS OR BRONZE
	SEALS & SEALANTS	
72	BULB/FIN WEATHERSTRIP	INTEK 5074565 POLYPROPYLENE/SANTOPRENE
73	FIN WEATHERSTRIP	CLIM-A-TECH 5095675 RIGID & FLEXIBLE PVC
74	EXTERIOR PANEL WEATHERSTRIP	AMESBURY GROUP 5031500 RIGID & FLEXIBLE PVC
75	SILL WEATHERSTRIP	AMESBURY GROUP 5146560 POLYPROPYLENE/SANTOPRENE
76	BULB WEATHERSTRIP	AMESBURY GROUP 5066980 POLYPROPYLENE
77	SHIM 1/16" X 1/4" X 1/2"	80 DUROMETER EPDM WITHIN 1" OF ENDS & 8" MAX. O.C.
78	GLAZING TAPE 1/16" X 1/4"	CONTINUOUS
	FASTENERS	
81	NO. 10 X 2 1/2" WOOD SCREW	(4 AT EA. PANEL CORNER 2" APART & ONE(1) AT PANEL MIDSPAN)
82	1/8" X 1" 18 GAUGE STAPLE	WITHIN 2" FROM ENDS & MAX. 8" O.C.
83	NO. 8 X 1 1/4" PPH SMS	WITHIN 1" FROM ENDS & MAX. 8" O.C.
84	NO. 8 X 1 1/4" PPH SMS	WITHIN 2" FROM ENDS & MAX. 14" O.C.
85	1/8" X 1 1/4" 18 GAUGE STAPLE	WITHIN 2" FROM CORNERS & MAX. 8" O.C.
86	NO. 8 X 1 1/4" PFH SMS	WITHIN 4" FROM CORNERS & MAX. 13 1/2" O.C.
87	NO. 12 X 1 3/4" PFH	4 PER HINGE
	BRASS OR S.S. WOOD SCREW	2 PER TOP & BOTTOM HINGE;
88	NO. 12 X 3/4" PFH BRASS OR S.S. SMS	3 PER INTERMEDIATE HINGE
91	NO. 9 X 1 3/4" PFH	4 PER HINGE
	BRASS OR S.S. WOOD SCREW	2 PER TOP & BOTTOM HINGE;
92	NO. 9 X 3/4" PFH BRASS OR S.S. SMS	3 PER INTERMEDIATE HINGE
93	1/8" X 1" 18 GAUGE STAPLE	WITHIN 1/2" FROM ENDS & MAX. 8" O.C.
94	NO. 8 X 1 3/4" SMS	WITHIN 4" FROM ENDS & MAX. 12" O.C.
95	NO. 10 X 3" PFH SMS	6 PER CHANNEL SPACED ALONG STILE
96	NO. 10 X 3" PFH SMS	2 PER TOP & 1 PER BOTTOM U-CHANNEL
97	NO. 8 X 3" PFH SMS (2 ROWS)	WITHIN 2" FROM ENDS & MAX. 8" O.C.
98	NO. 6 X 1 1/4" SELF TAPPING SCREW	WITHIN 2" FROM ENDS & MAX. 15" O.C.
99	18 GAUGE X 3/4" BRAD NAIL	WITHIN 2" FROM CORNERS & MAX. 6" O.C.
100	15 GAUGE X 1" BRAD NAIL	WITHIN 2" FROM CORNERS & MAX. 8" O.C.

DRAWING NO. 1831	REV. C	SHEET NO. 12 OF 12	DRAWING TITLE ULTRA SERIES MANOR NON-IMPACT DOOR	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	MANUFACTURER KOLBE & KOLBE MILLWORK CO., INC.
				25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	1323 SOUTH 11TH AVE. WAUSAU, WI 54401 715-842-5666
CERTIFICATION			WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWN BY: W.R.M. / CHECKED BY: W.M.S. DATE: 06/13/13	