

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.

INSTALLATION NOTE:

WHEN NECESSARY, INSTALLATION METHODS MAY BE MIXED WITH ANY ONE WINDOW SUCH THAT INDIVIDUAL SIDES OF THE WINDOW MAY USE ONE OR THE OTHER ANCHOR METHOD (EXAMPLE: LEFT SIDE MAY USE CLIP METHOD WHILE OTHER SIDES USE FRAME SCREWS)

ANCHOR/SUBSTRATE EVALUATION NOTE:

ALL ANCHORS IN THEIR SPECIFIED SUBSTRATES HAVE BEEN ANALYZED IN ACCORDANCE WITH THEIR APPLICABLE STANDARD(S) AND ARE FOUND TO BE CAPABLE OF SUPPORTING ALL LOADS IMPOSED ON THEM UNDER THE GUIDELINES OF THIS DOCUMENT. ANY SUBSTRATES OR CONDITIONS OUTSIDE OF WHAT IS SHOWN HERE-IN SHALL BE SUBJECT TO JOB SPECIFIC ENGINEER'S REVIEW & CERTIFICATION.

FRAME ANCHOR REQUIREMENTS TABLE

(3) OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
(3) MIN. 2X4 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	1 1/4"	3/4"
MIN. 16 GA. 50 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	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2"

INSTALLATION CLIP SCREWS

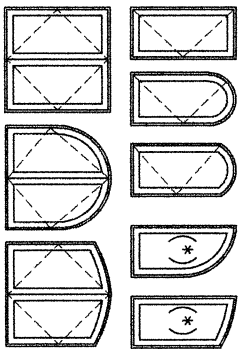
(2) MIN. 2x6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS SCREW	1 3/8"	3/4"
MIN. 16 GA. 50 KSI METAL STUD	NO. 14 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4-20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).
- (2) 2x6 BUCKS MAY BE RIPPED DOWN TO AS LITTLE AS 4" PROVIDING THE REQUIRED SCREW EDGE DISTANCE IS HELD & THE BUCK EXTENDS TO WITHIN 3/16" OF THE EXTERIOR EDGE OF THE WINDOW FRAME.
- (3) SUBSTRATE BENEATH DOOR THRESHOLDS SHALL BE OF A DEPTH EQUAL TO OR GREATER THAN THE THRESHOLD DEPTH (MIN. 4 3/4").

HINGE REQUIREMENTS

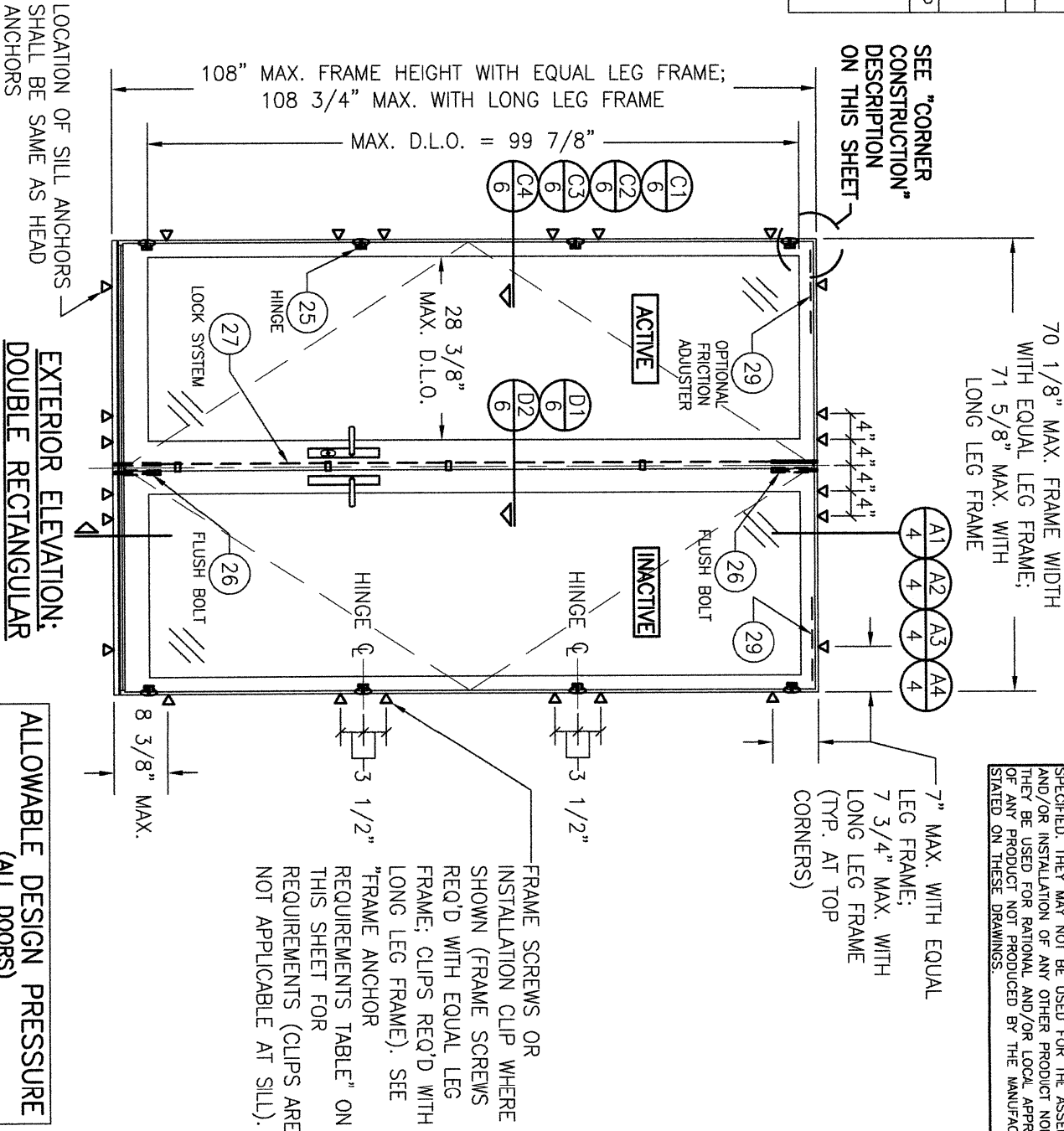
- HALF-ROUND TOP DOORS
- 4" FROM TOP SPRINGLINE, 5 3/8" FROM SILL BASE & MAXIMUM 32 7/8" O.C.
- ALL DOORS OTHER THAN HALF-ROUND TOP 4" TO 4 3/4" FROM TOP FRAME CORNER, 5 3/8" FROM SILL BASE & MAXIMUM 32 7/8" O.C. (4" IS FOR EQUAL LEG FRAME; 4 3/4" IS FOR LONG LEG FRAME)

APPROVED SHAPES



NOTES:

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & 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.
3. THE SHAPES LABELED (*) ARE ONLY APPLICABLE TO FIXED PANEL DOORS (NOT APPLICABLE TO OPERABLE DOORS).



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.

ALLOWABLE DESIGN PRESSURE (ALL DOORS)	
(1)	+55/-55 PSF

Digitally signed
by Warren W
Schaefer

Date:

2024.09.05

08:05:36 -04'00'



DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLT:	1=24	DATE:	09/13/10
NO.	REVISION DESCRIPTION	BY	DATE
A1	UPDATE TO CURRENT STANDARDS	W.R.M.	08/17/11
B1	ADD INST. CLIP DIMENSIONS	W.R.M.	09/25/13
C1	UPDATE TO CURRENT STANDARDS	W.W.S.	12/10/14
D1	INCREASE SHIM SPACE	W.W.S.	09/04/24

MANUFACTURER
HOPE'S WINDOWS, INC.
84 HOPKINS AVENUE
JAMESTOWN, NY 14702
(716) 665-5124

DRAWING TITLE
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS

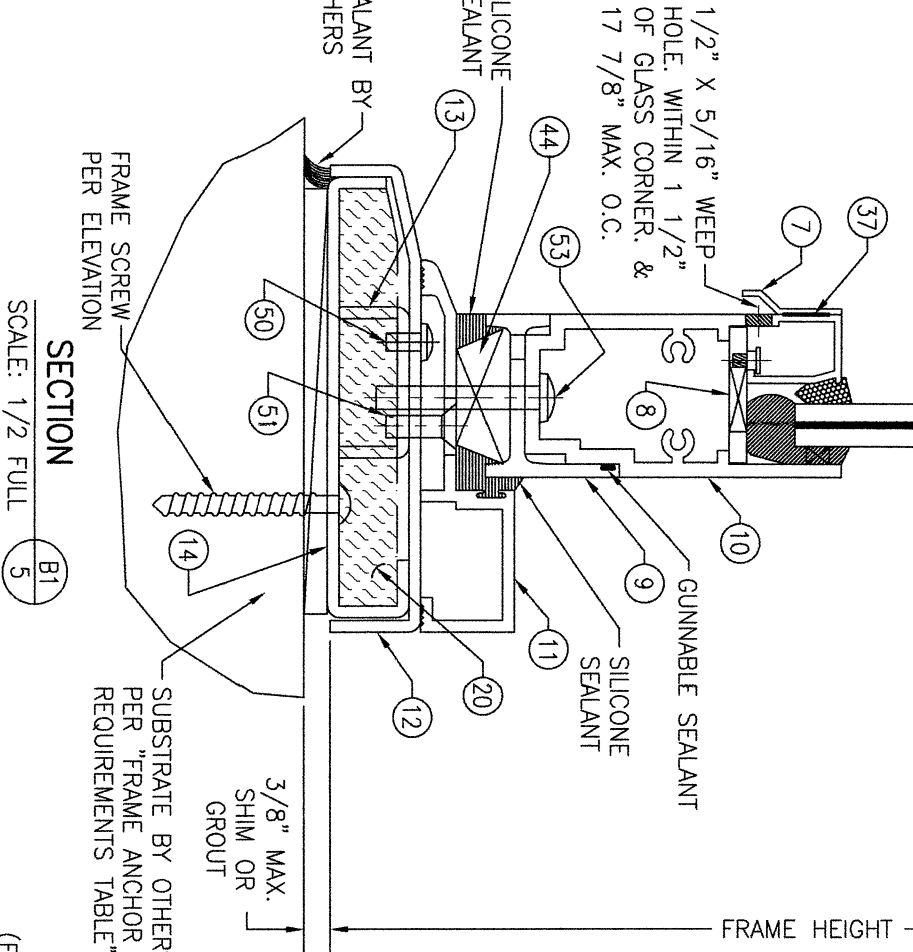
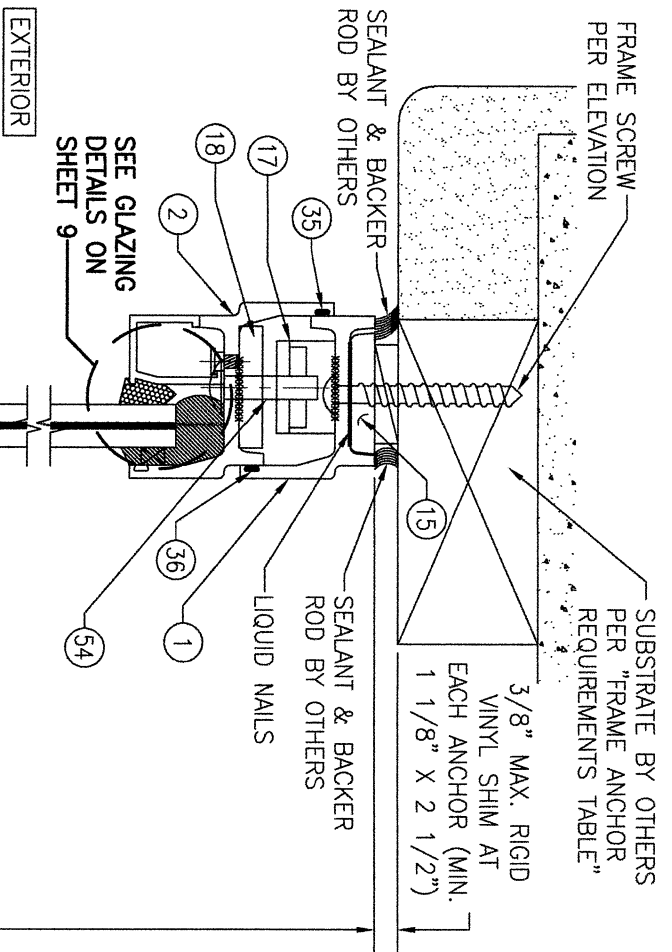
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

CERTIFICATION

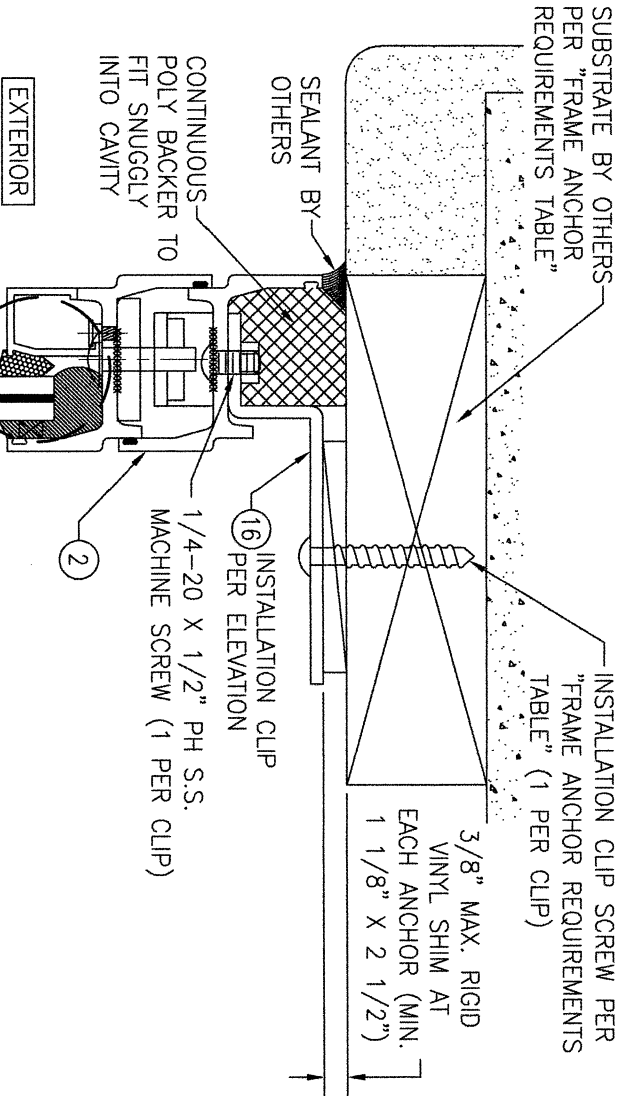
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO.	REV.
1713	D

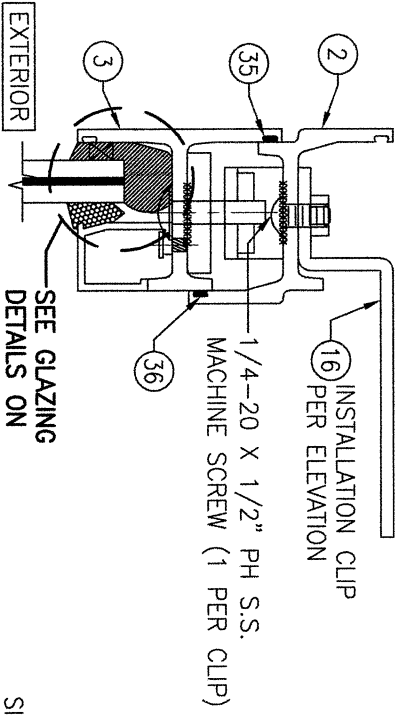
SHEET NO.
1 OF 10



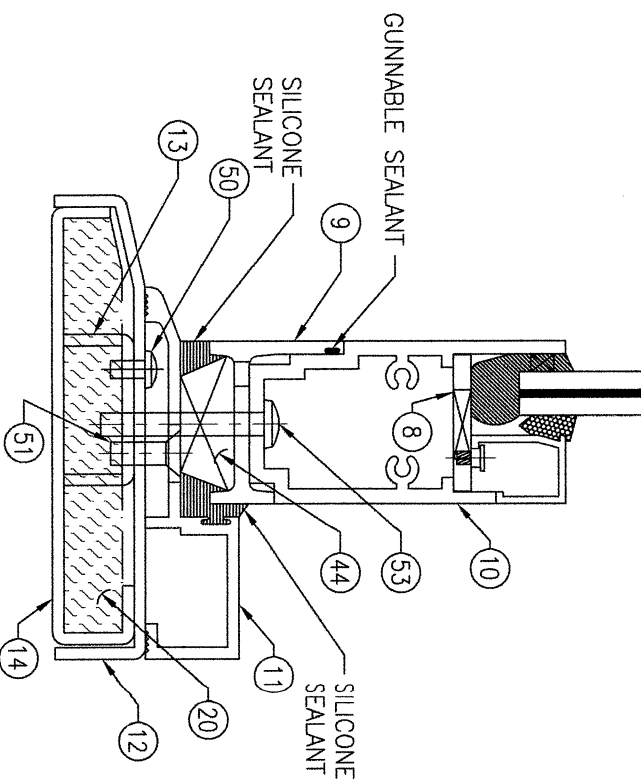
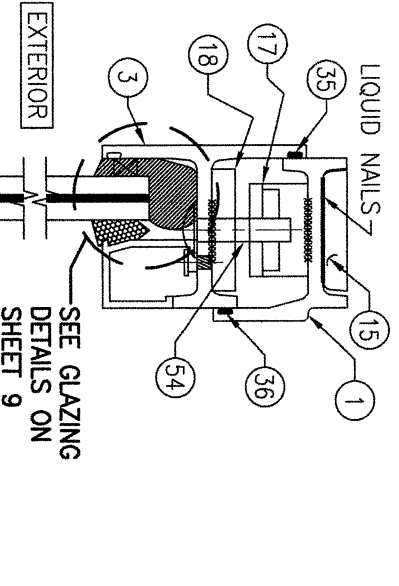
SECTION B1
SCALE: 1/2 FULL
EQUAL LEG FRAME; EXTERIOR
GLAZED CONDITION



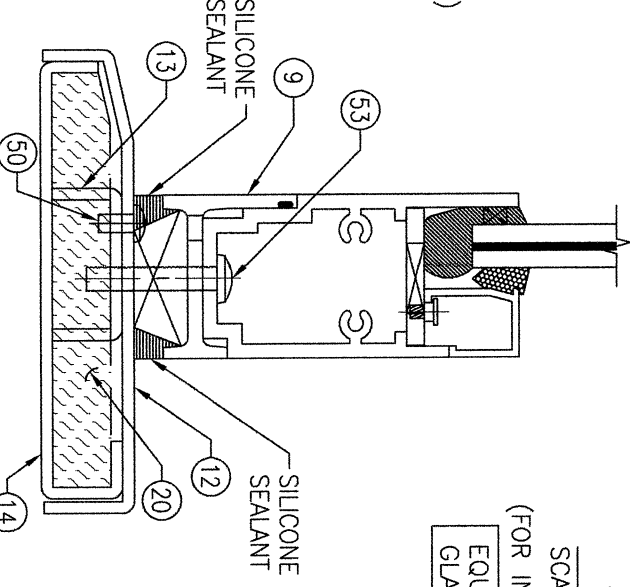
SECTION B2
SCALE: 1/2 FULL
(FOR SILL AND OTHER DETAIL NOT SHOWN, SEE SECTION B1/5)
LONG LEG FRAME; EXTERIOR
GLAZED CONDITION



SECTION B3
SCALE: 1/2 FULL
(FOR HEAD INSTALLATION, SEE SECTION B2/5)
(FOR SILL & OTHER DETAIL NOT SHOWN, SEE SECTION B3/5)
LONG LEG FRAME; INTERIOR
GLAZED CONDITION



SECTION B4
SCALE: 1/2 FULL
(FOR INSTALLATION, SEE SECTION B1/5)
EQUAL LEG FRAME; INTERIOR
GLAZED CONDITION



ALTERNATE FIXED PANEL SILL DETAIL
(WITHOUT THRESHOLD)
(FOR INSTALLATION, SEE SECTION B1/5)

NO.	REVISION	DESCRIPTION	BY	DATE
1-2				09/13/10

DRAWING TITLE
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS

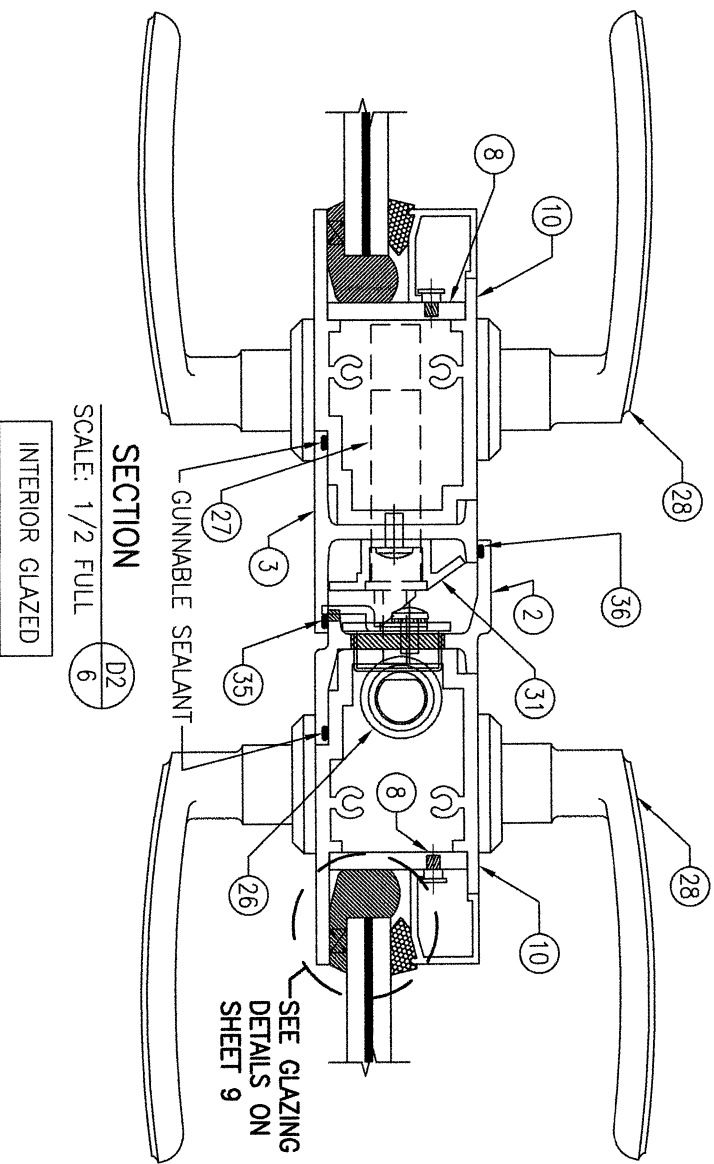
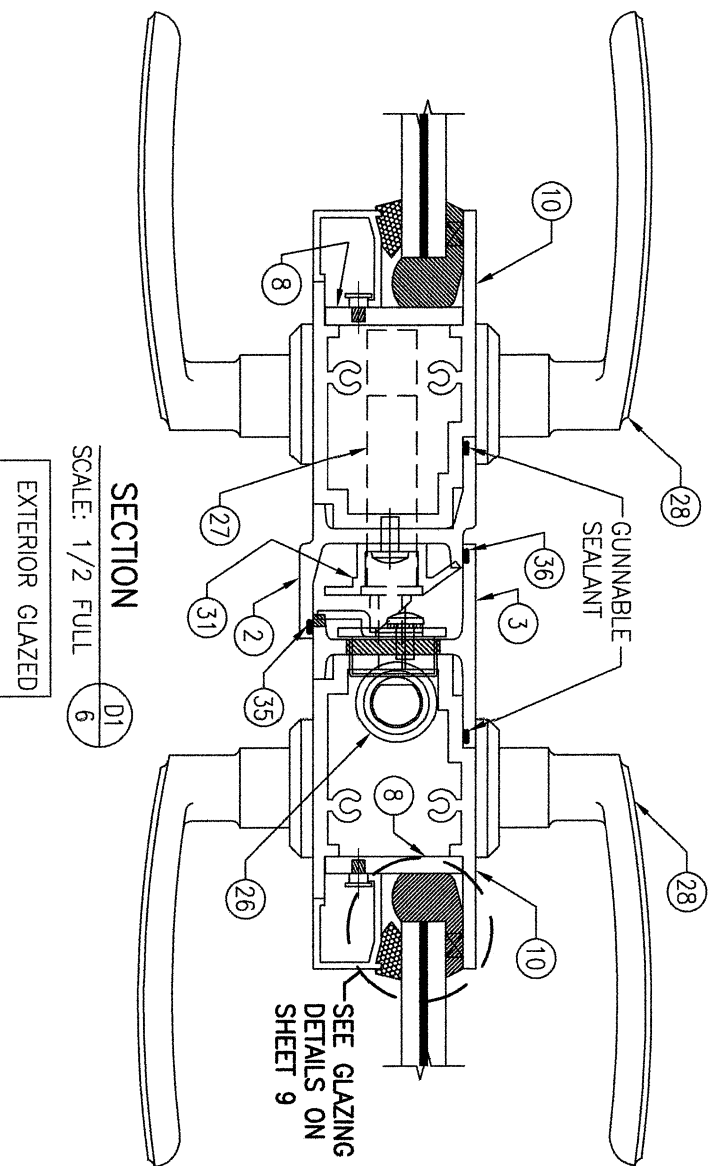
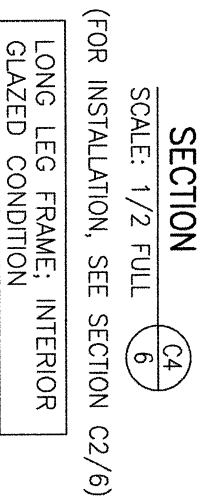
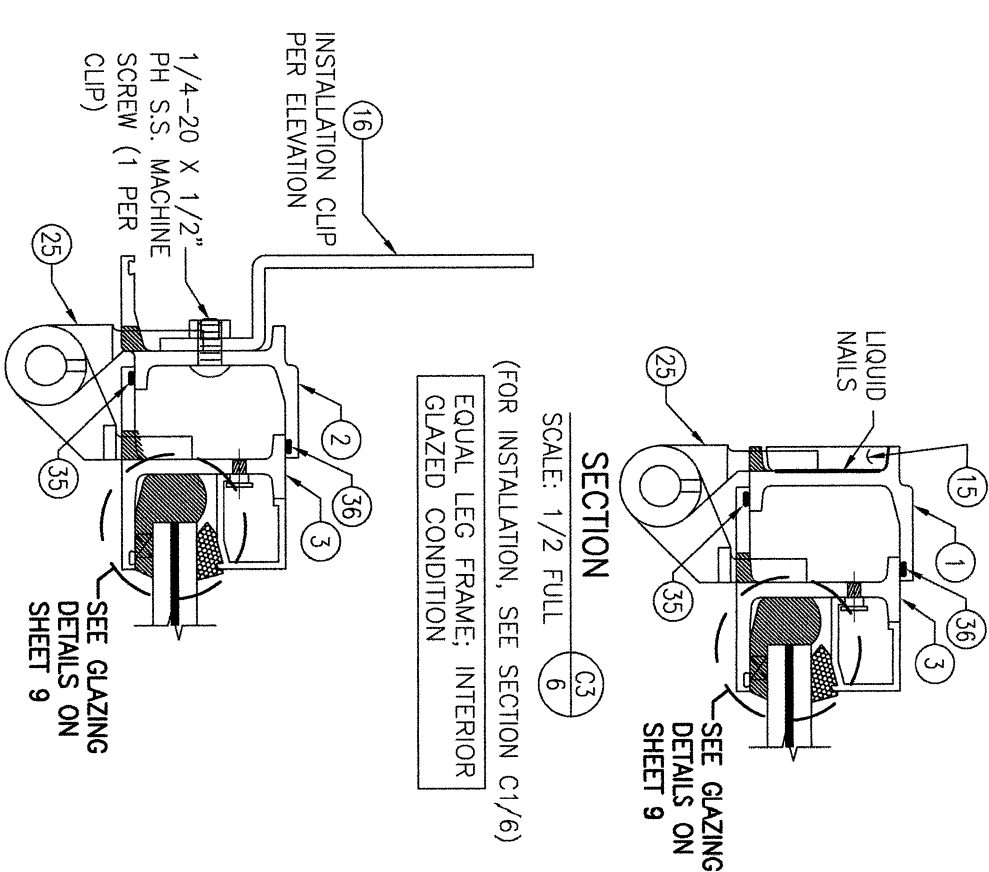
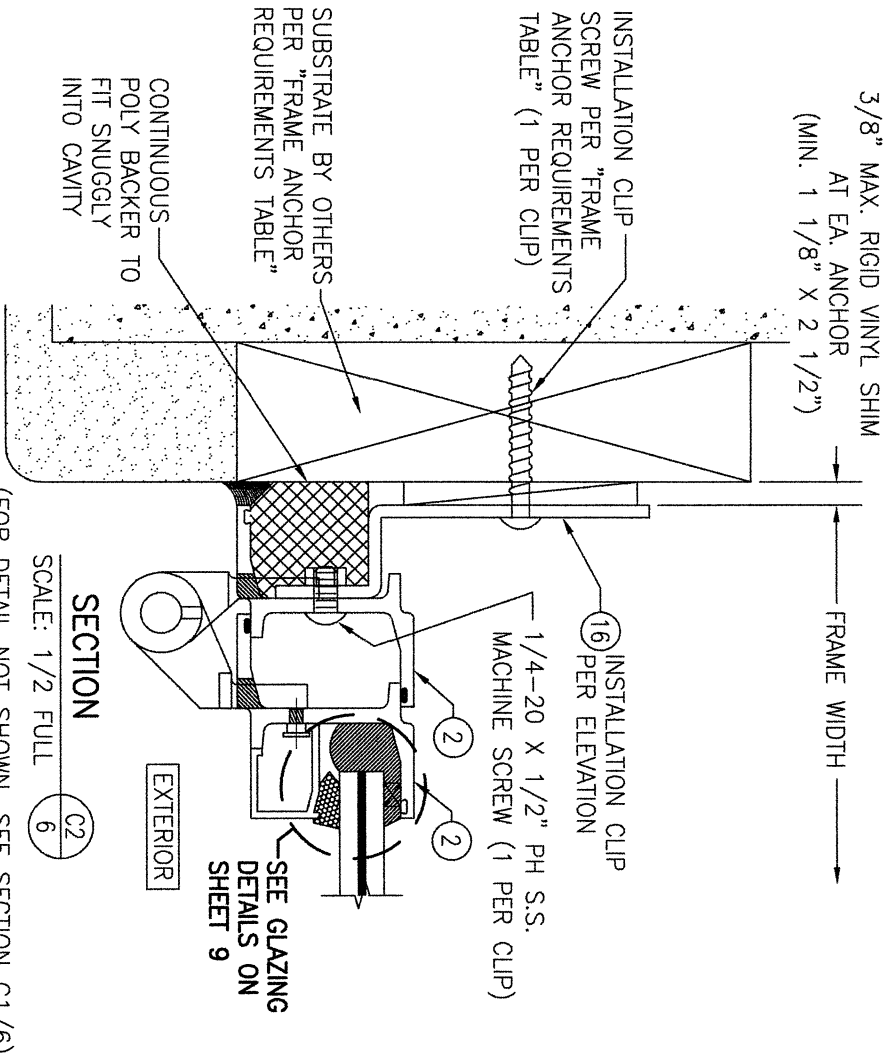
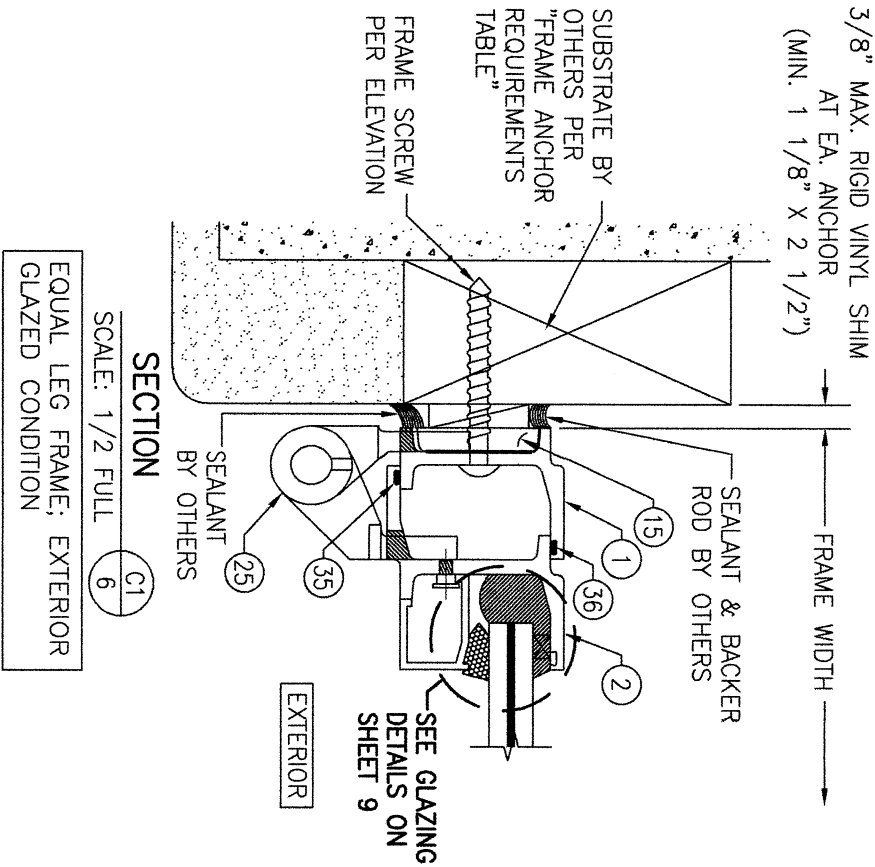
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
25601 AYSEN DRIVE
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MANUFACTURER
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CERTIFICATION
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. **1713**
REV. **D**

SHEET NO. **5** OF **10**



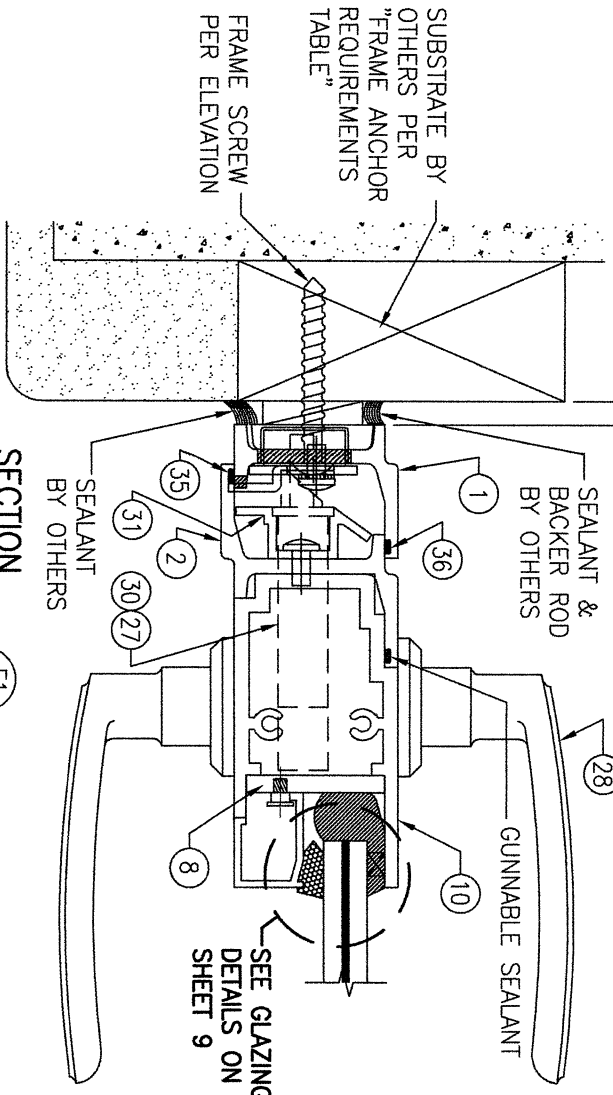
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W.W.S.		W.W.S.		
PLOT: 1-2		DATE: 09/13/10		
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS	
CONSULTANTS	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	
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CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	
1713	
REV.	
D	
SHEET NO.	
6 OF 10	

3/8" MAX. RIGID VINYL SHIM
AT EA. ANCHOR
(MIN. 1 1/8" X 2 1/2")

FRAME WIDTH



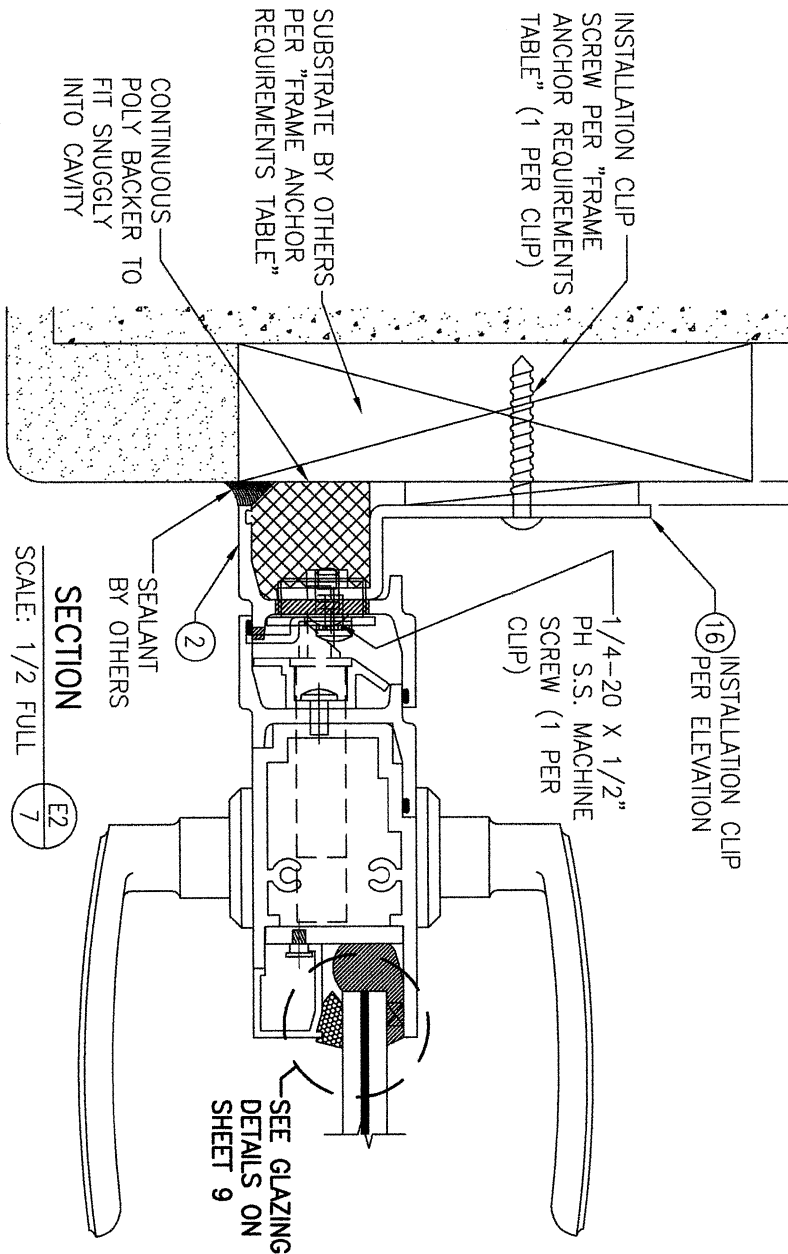
SECTION

SCALE: 1/2 FULL

E1
EQUAL LEG FRAME; EXTERIOR
GLAZED CONDITION

3/8" MAX. RIGID VINYL SHIM
AT EA. ANCHOR
(MIN. 1 1/8" X 2 1/2")

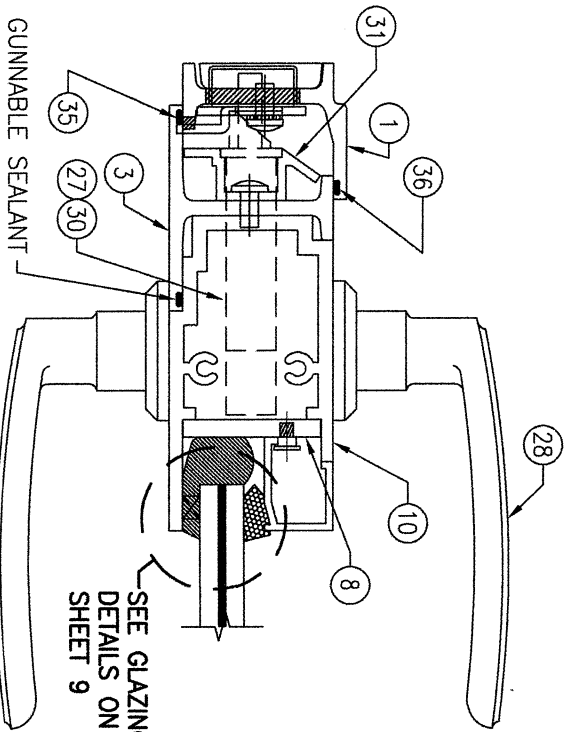
FRAME WIDTH



SECTION

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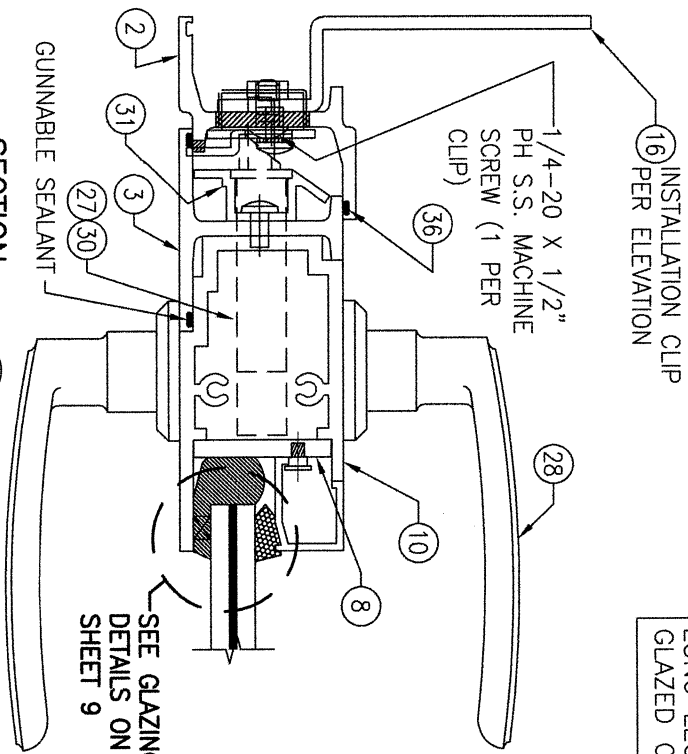
E2
LONG LEG FRAME; EXTERIOR
GLAZED CONDITION



SECTION

SCALE: 1/2 FULL

E3
(FOR INSTALLATION, SEE SECTION E1/7)
EQUAL LEG FRAME; INTERIOR
GLAZED CONDITION



SECTION

SCALE: 1/2 FULL

E4
(FOR INSTALLATION, SEE SECTION E2/7)
LONG LEG FRAME; INTERIOR
GLAZED CONDITION

NO.	REVISION	DESCRIPTION	BY	DATE
1	2			

DRAWN BY:	CHECKED BY:
W.W.S.	W.W.S.
DATE:	DATE:
09/13/10	

DRAWING TITLE
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS

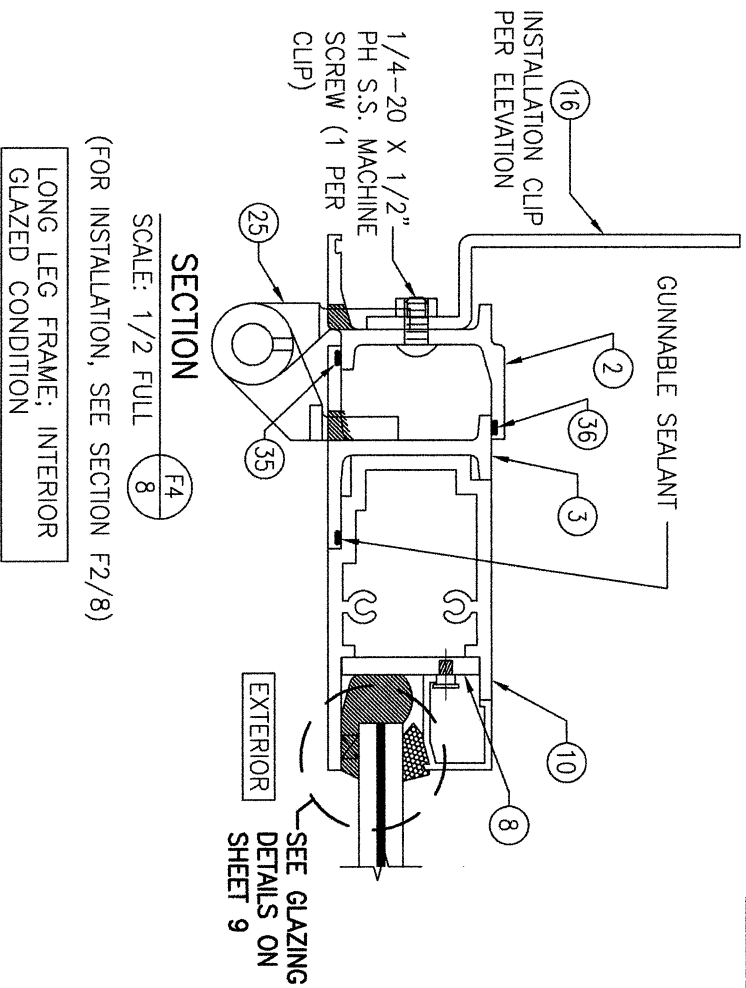
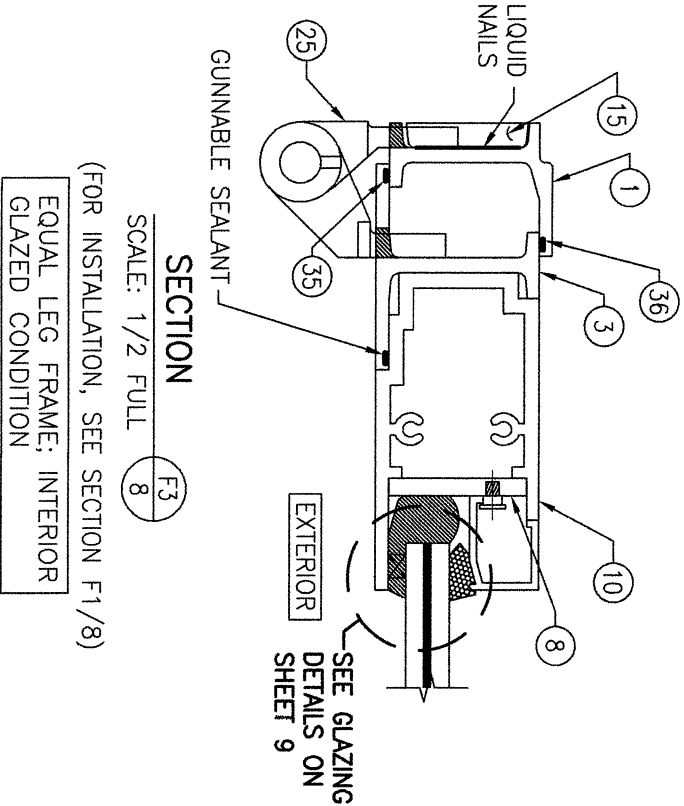
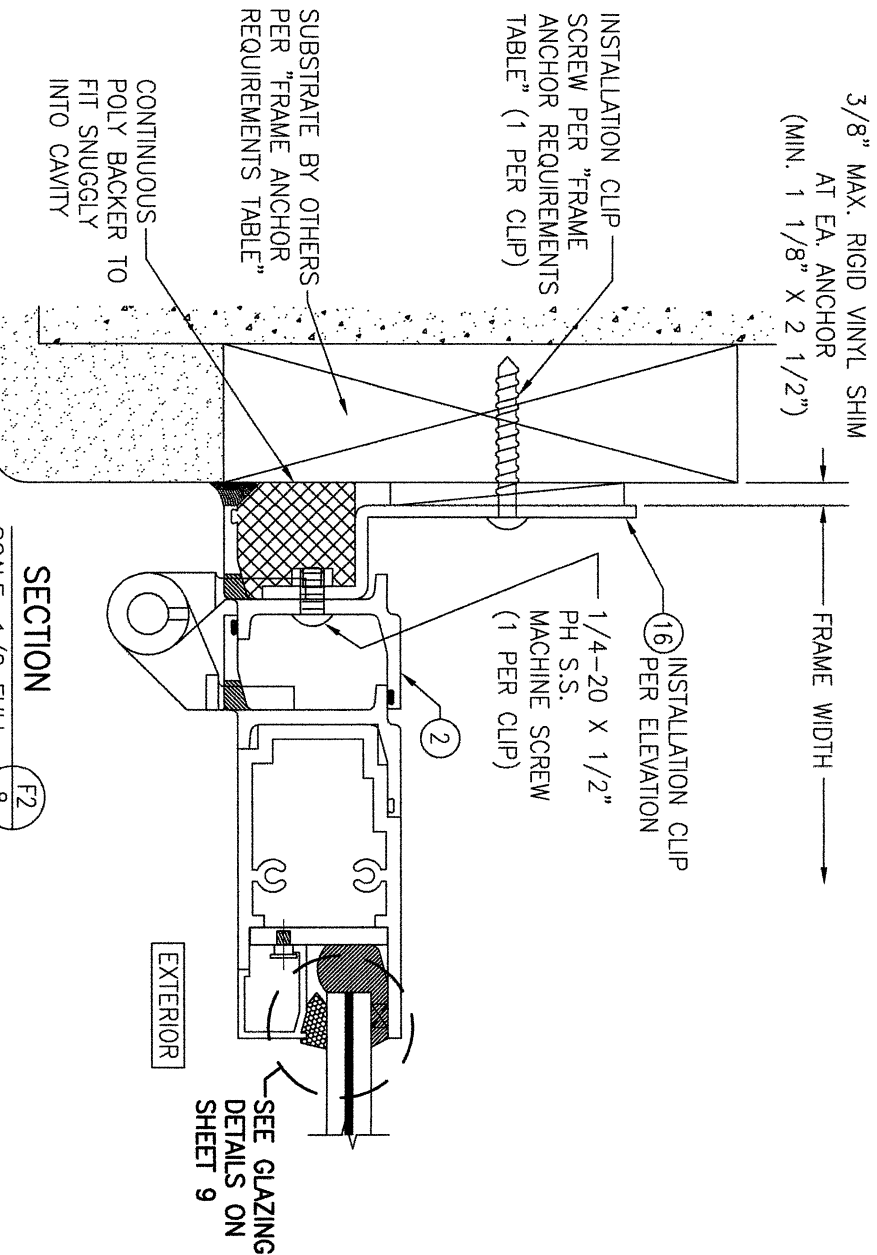
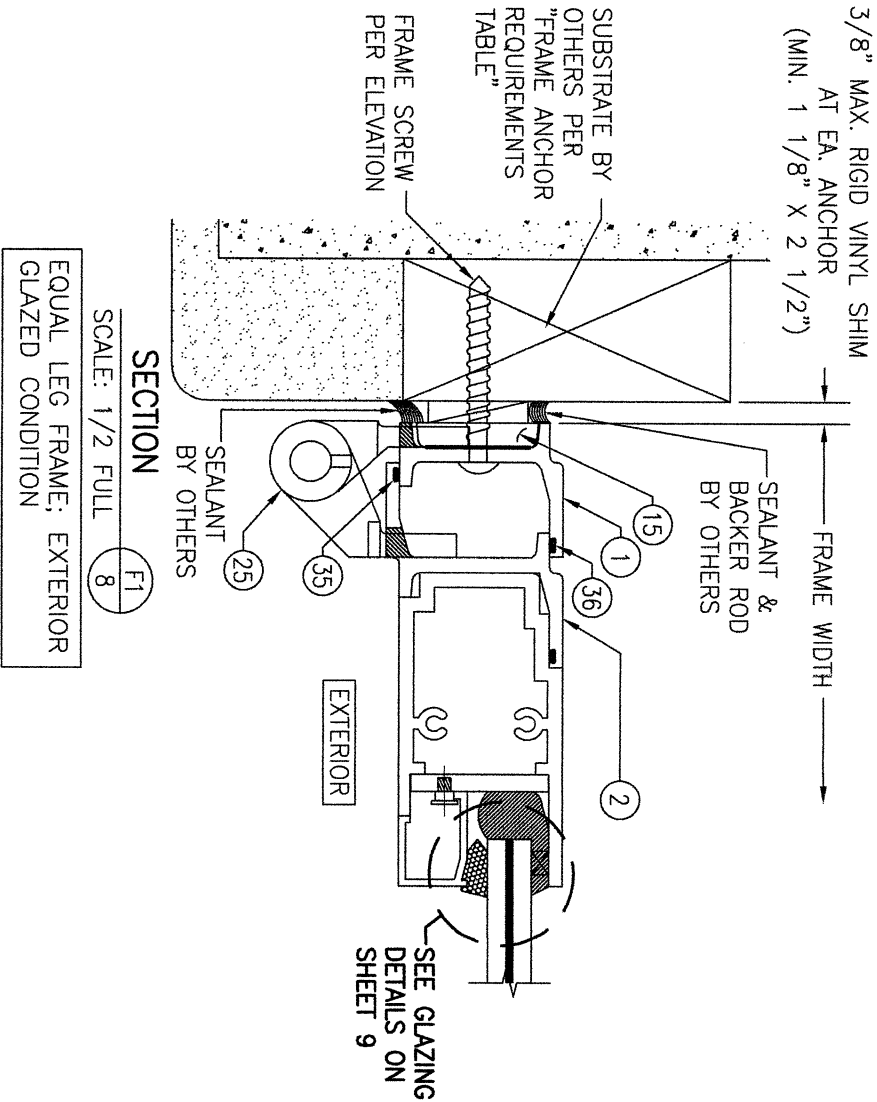
CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

MANUFACTURER
HOPE'S WINDOWS, INC.
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(716) 665-5124

CERTIFICATION

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

DRAWING NO. 1713
SHEET NO. 7 OF 10



SAME AS HEAD PORTION OF SECTIONS B1/5, B2/5, B3/5 & B4/5 EXCEPT ROTATED 90 DEGREES

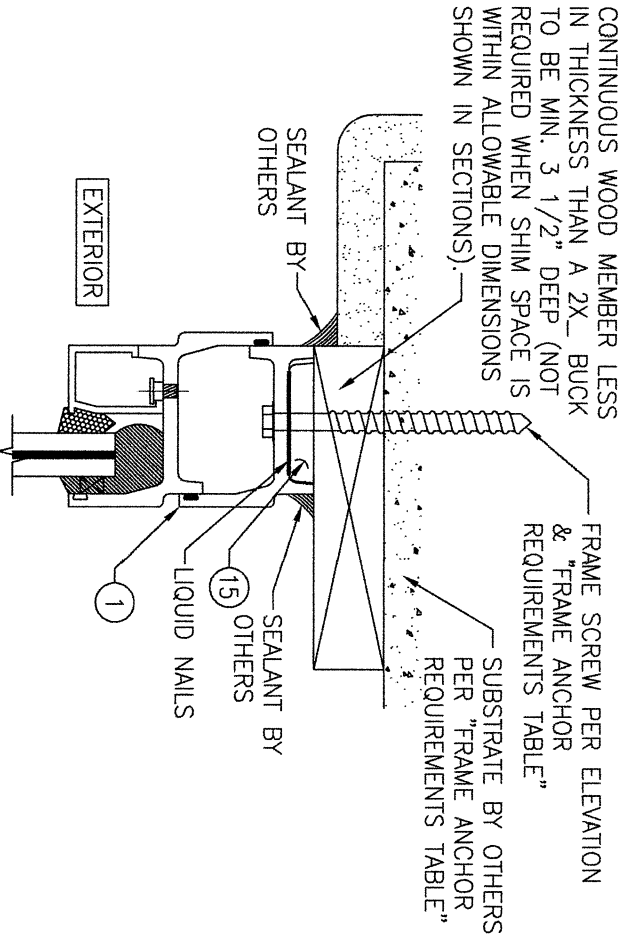
SECTION G1 G2 G3 G4

SCALE: 1/2 FULL

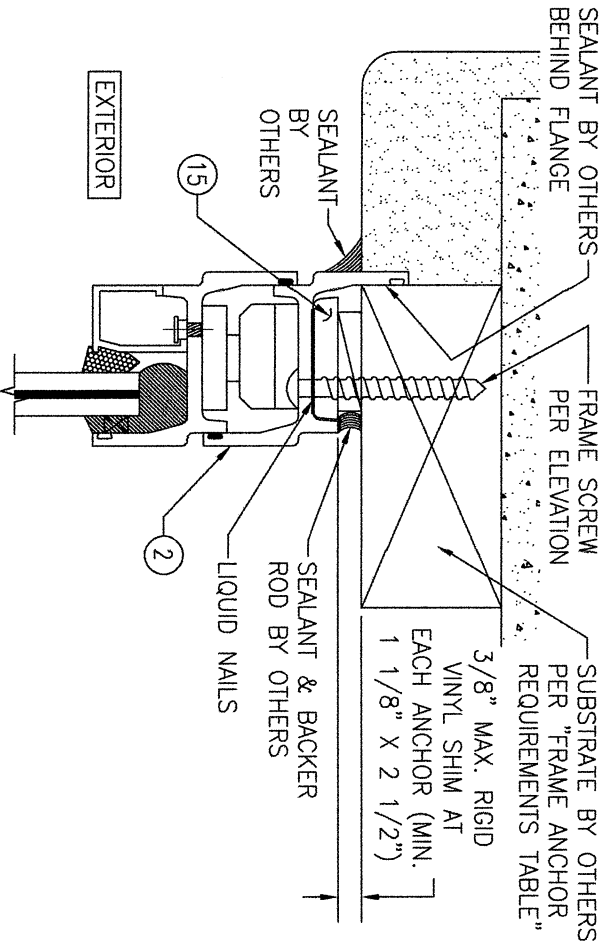
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W.W.S.		W.W.S.		
PLOT: 1-2	DATE: 09/13/10			
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE	
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

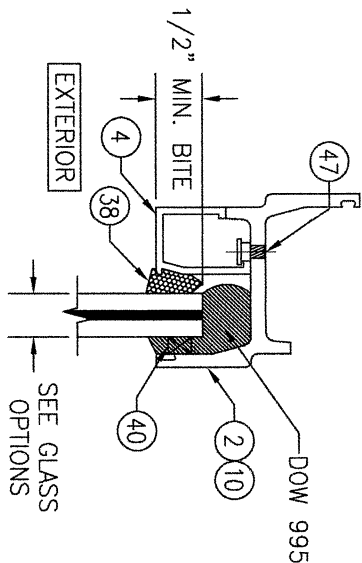
CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.
1713	D
SHEET NO.	
8 OF 10	



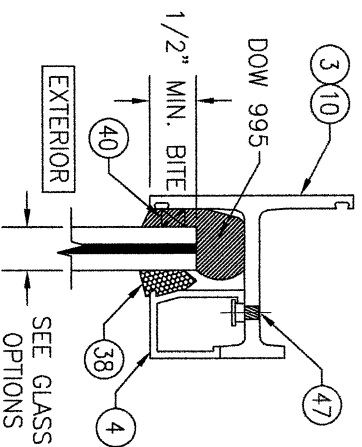
**OPTIONAL DIRECT MOUNT DETAIL
TO SUBSTRATE WITH SPACER**
(HEAD SECTION SHOWN; SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



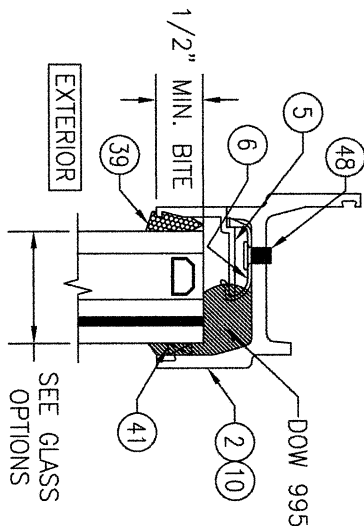
OPTIONAL FLANGE MOUNT DETAIL
(HEAD SECTION SHOWN; SILL & SIDES ARE INSTALLED THE SAME)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



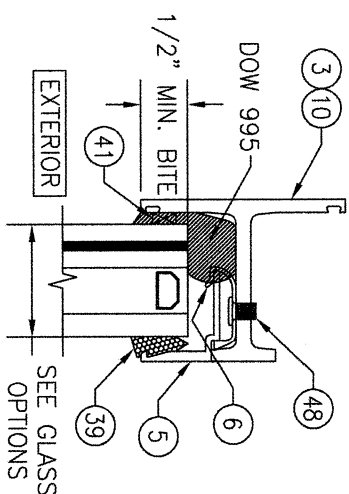
**GLAZING DETAIL 1
(EXTERIOR GLAZED WITH
NON-I.G. GLASS)**



**GLAZING DETAIL 2
(INTERIOR GLAZED WITH
NON-I.G. GLASS)**



**GLAZING DETAIL 3
(EXTERIOR GLAZED I.G. GLASS)**



**GLAZING DETAIL 4
(INTERIOR GLAZED I.G. GLASS)**

GLASS OPTIONS

- OPTION 1 (NON-I.G. GLASS INTERIOR OR EXTERIOR GLAZED):
7/16" LAMINATED GLASS (3/16" H.S./0.09" KURARAY SG/3/16" H.S.)
OPTION 2 (I.G. GLASS EXTERIOR GLAZED):
1 1/4" I.G. LAMINATED GLASS (1/4" TEMP. EXTERIOR, 1/2" ALUMINUM SPACER & 3/16" H.S./0.09" KURARAY SG/3/16" H.S. INTERIOR)
OPTION 3 (I.G. GLASS INTERIOR GLAZED):
1 1/4" I.G. LAMINATED GLASS (3/16" H.S./0.09" KURARAY SG/3/16" H.S. EXTERIOR, 1/2" ALUMINUM SPACER & 1/4" TEMP. INTERIOR)

DRAWN BY:		CHECKED BY:		
M.W.S.		M.W.S.		
PLOT:	DATE:	09/13/10		
1=2				
NO.	REVISION	DESCRIPTION	BY	DATE

DRAWING TITLE

EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS

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

25601 AYSEN DRIVE
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

MANUFACTURER

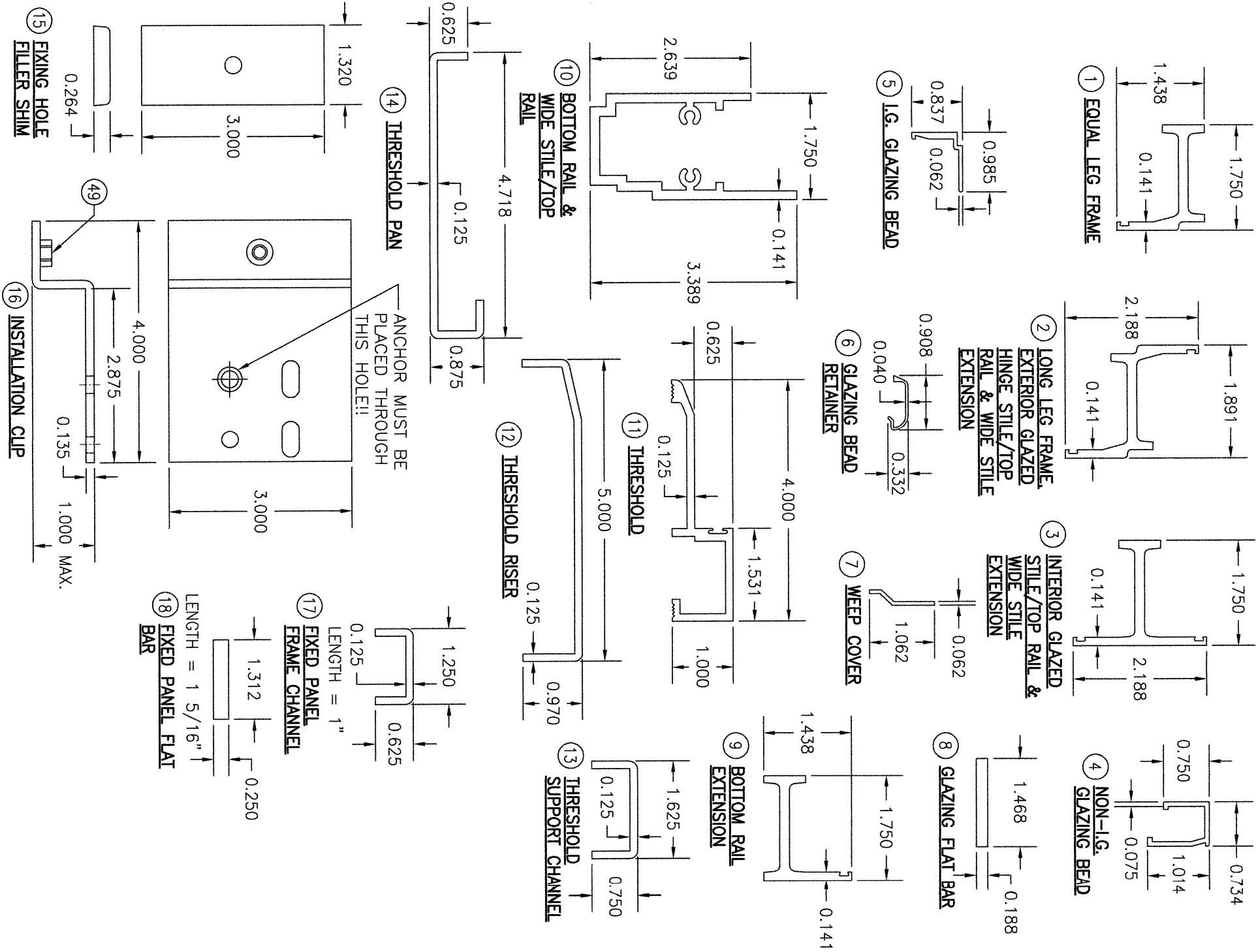
HOPE'S WINDOWS, INC.
84 HOPKINS AVENUE
JAMESTOWN, NY 14702
(716) 665-5124

CERTIFICATION

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

DRAWING NO. **1713** REV. **D**
SHEET NO. **9** OF **10**

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	EQUAL LEG FRAME	385 BRONZE
2	LONG LEG FRAME, EXTERIOR GLAZED HINGE STILE/TOP RAIL & WIDE STILE EXTENSION	385 BRONZE
3	INTERIOR GLAZED STILE/TOP RAIL & WIDE STILE EXTENSION	385 BRONZE
4	NON-I.G. GLAZING BEAD	385 BRONZE
5	I.G. GLAZING BEAD	304 S.S., 6063-T5 ALUM OR 385 BRONZE
6	GLAZING BEAD RETAINER	304 S.S., 6063-T5 ALUM OR 280 BRONZE
7	WEEP COVER	6063-T5 ALUMINUM OR 280 BRONZE
8	GLAZING FLAT BAR	385 BRONZE (WELDED IN PLACE)
9	BOTTOM RAIL EXTENSION	385 BRONZE
10	BOTTOM RAIL & WIDE STILE/TOP RAIL	385 BRONZE
11	THRESHOLD	385 BRONZE
12	THRESHOLD RISER	385 BRONZE
13	THRESHOLD SUPPORT CHANNEL	385 BRONZE (WELDED TO RISER)
14	THRESHOLD PAN	385 BRONZE
15	FIXING HOLE FILLER SHIM	RIGID VINYL
16	INSTALLATION CLIP	10 GA. GALVANIZED STEEL
17	FIXED PANEL FRAME CHANNEL	385 BRONZE (WELD TO FRAME @ 12" O.C.)
18	FIXED PANEL FLAT BAR	385 BRONZE (WELD TO VENT @ 12" O.C.)
19	WEEP HOOD	PVC BY PREFERRED ENGINEERING PRODUCTS
20	SILL END CLOSURE	1/8" THICK BRONZE WELDED & CAULKED
HARDWARE		
25	STANDARD WELDED ON PIVOT HINGE	HOPE'S PART NO. 237
26	FLUSH BOLT (INACTIVE PANEL)	IVES FB458
27	6-POINT MULTI-POINT LOCK	G-U RHINO W/55 mm BACKSET
28	HANDLE	AS REQUIRED TO OPERATE DOOR
29	OPTIONAL FRICTION ADJUSTER	HOPE'S PART NO. 846
30	5-POINT LOCK (SHAPE TOP DOORS ONLY)	G-U RHINO W/55 mm BACKSET
31	MULTI-POINT LOCK ADAPTER	EURO-1B
SEALS & SEALANTS		
36	EPDM SPONGE WEATHERSTRIP	TREMCO TR11688E EPDM
37	DOUBLE SIDED TAPE	3M VEH 4941 FOAM/ACRYLIC
38	GLAZING WEDGE (USED WITH NON-I.G. GLAZING)	TREMCO 496E EPDM
39	GLAZING WEDGE (USED WITH I.G. GLAZING)	TREMCO PS1125E EPDM
40	NON-I.G. GLAZING SHIM	TREMCO TR2178W EPDM
41	I.G. GLAZING SHIM	TREMCO TR1488W EPDM
42	SILL WEATHERSTRIP	REESE 797B
43	WEATHERSEAL/SWEEP	HOPE'S 127
44	POLYBLOCK BACKER FOR CAULK	STYRAFOAM
FASTENERS		
47	6-32 X 1/4" S.S. HIGH COLLAR CAP SCREW	2 1/2" FROM D.L.O. EDGE & 12" MAX. O.C.
48	10-24 X 1/4" S.S. SELF SEALING MACHINE SCREW	2 1/2" FROM D.L.O. EDGE & 16" MAX. O.C.
49	1/4-20 SELF CLINCHING NUT INSERT	1 PER CLIP
50	10-24 X 3/8" PBH SS MACHINE SCREW	WITHIN 1" OF ENDS & 12" MAX. O.C.
51	1/4-20 X 3/4" PFH SS MACHINE SCREW	WITHIN 2" OF ENDS & 12" MAX. O.C.
52	8-32 X 3/8" TRUSS HEAD S.S. MACHINE SCREW	WITHIN 1 1/2" OF ENDS & 12" MAX. O.C.
53	1/4-20 X 1 3/4" PBH SS MACHINE SCREW	2 1/2" FROM PANEL CORNERS & 12" MAX. O.C.
54	1/4-20 X 1" PTH SS MACHINE SCREW	2 1/2" FROM PANEL CORNERS & 12" MAX. O.C.



NO.	REVISION	DESCRIPTION	BY	DATE

DRAWN BY:	CHECKED BY:
W.W.S.	W.W.S.
PLT:	DATE:
1=2	09/13/10

DRAWING TITLE	
EMPIRE BRONZE SERIES IMPACT OUT-SWING DOORS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.	HOPE'S WINDOWS, INC.
25601 AYSEN DRIVE PUNTA GORDA, FL 33983 PHONE: 561-744-3424	84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124

CERTIFICATION	
WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.
1713	D
SHEET NO.	
10	OF 10