

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 Kd = 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.

NOTE: THESE DOOR UNITS ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG WHERE-BY THE OVERHANG(OH) RATIO IS EQUAL TO OR MORE THAN 1.0 PER FBC.

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: JAMB MEMBERS RUN THROUGH, HEAD IS COPED, BUTTED AND FULLY WELDED TO JAMB MEMBERS. THRESHOLD ENDS: JAMB MEMBERS RUN THROUGH AND ARE BUTTED TO THRESHOLD. ENDS ARE SEALED WITH SILICONE SEALANT.

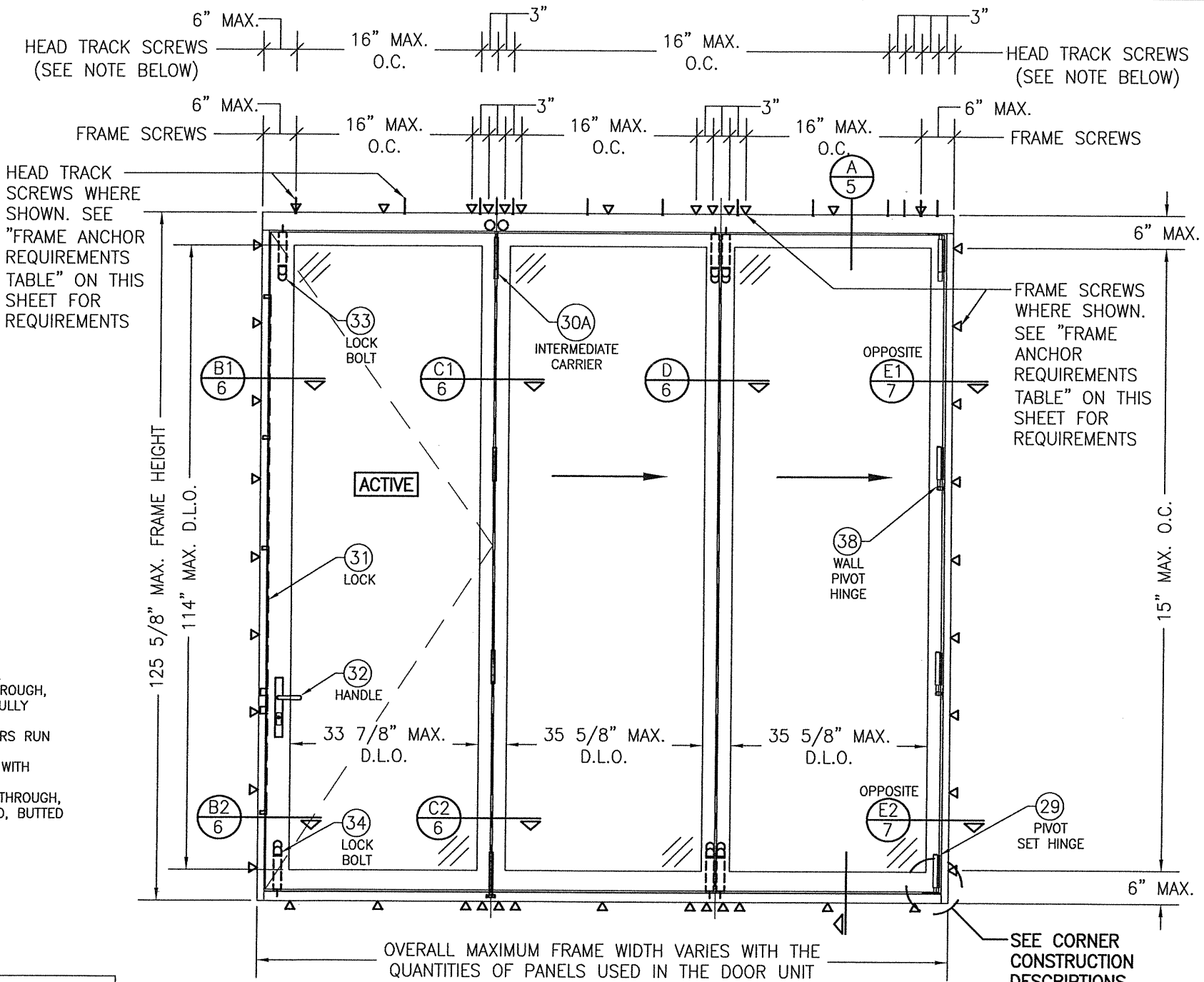
PANELS: STILE MEMBERS RUNS THROUGH, TOP & BOTTOM RAIL ARE COPED, BUTTED AND FULLY WELDED TO STILES.

ALLOWABLE DESIGN PRESSURE
+/-60 PSF

FRAME ANCHOR REQUIREMENTS TABLE

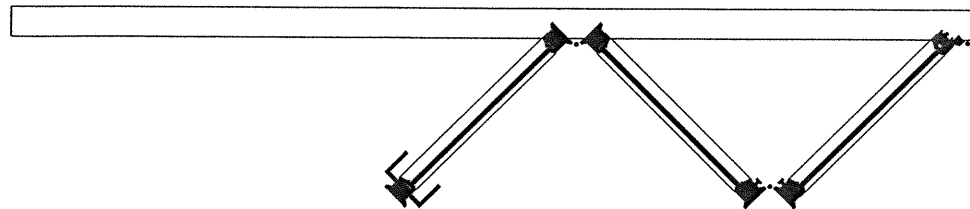
OPENING TYPE (SUBSTRATE)	FRAME/TRACK TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME & HEAD TRACK SCREWS			
MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	(3) 1 1/4"	3/4"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
(2) MIN. C-90 CMU	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 2500 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2"

- (1) 1/4" 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) CMU IS APPLICABLE AT SIDES ONLY (NOT APPLICABLE AT HEAD OR SILL).
- (3) EMBED OF HEAD TRACK SCREWS MAY HAVE TO EXCEED 1 1/4" IF RECOMMENDED BY MANUFACTURER TO CARRY HANGING WEIGHT OF DOORS.



EXTERIOR ELEVATION:
SINGLE SWING PANEL WITH RIGHT DIRECTION BI-FOLD DOORS

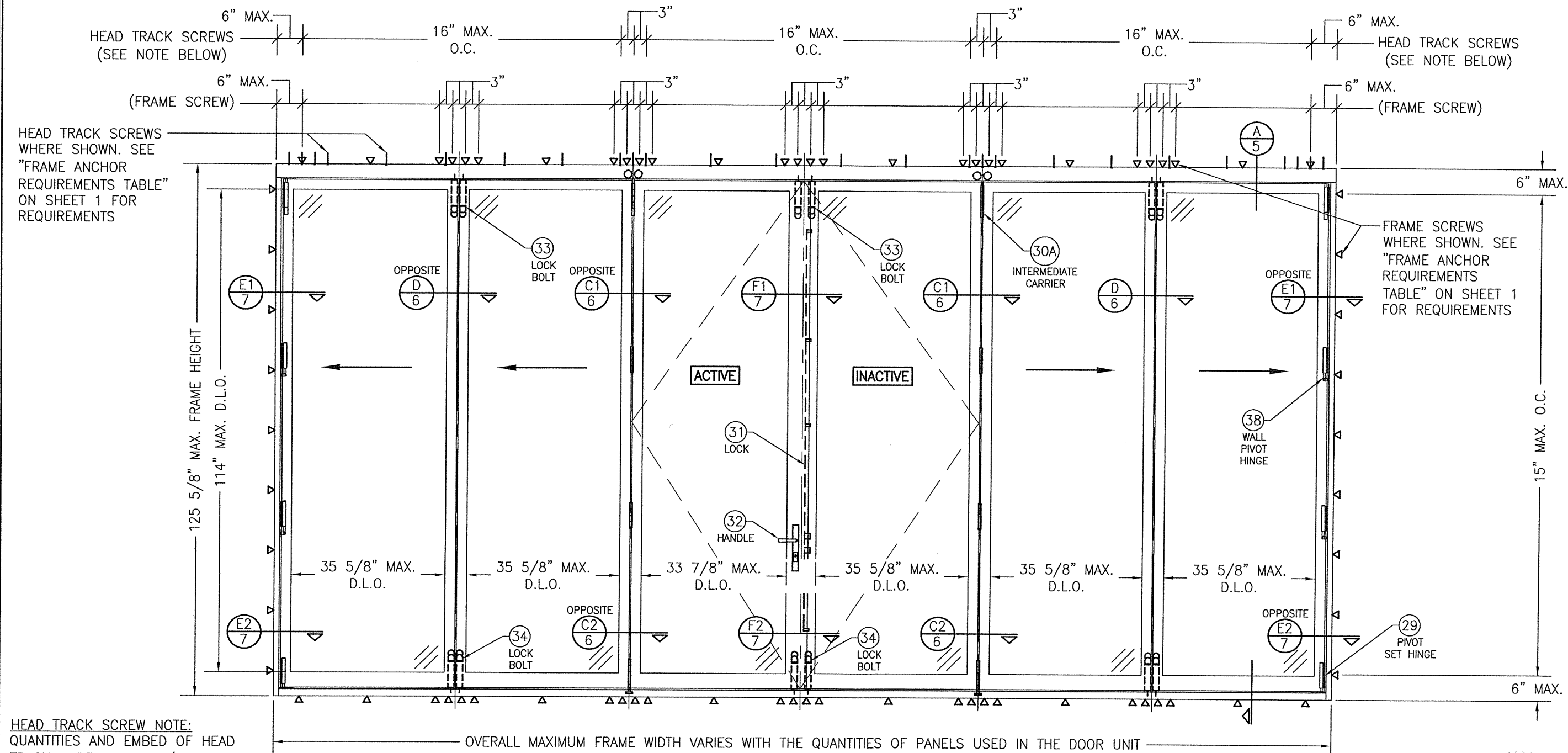
SCALE: 1/2" = 1'-0"



HEAD TRACK SCREW NOTE: QUANTITIES AND EMBED OF HEAD TRACK SCREWS STATED/SHOWN HERE-IN ARE MINIMUMS AS REQUIRED BY DOOR IMPACT & PRESSURE TESTING. ADDITIONAL SCREWS OR EMBED MAY BE REQUIRED AS SPECIFIED BY HOPES WINDOWS INSTALLATION REQUIREMENTS TO PROPERLY SUPPORT THE DOOR HANGING WEIGHT. INSTALLER SHALL CONFIRM WITH HOPES WINDOWS, INC. THE END TRACK SCREW REQUIREMENTS TO INSURE THE HANGING WEIGHT IS PROPERLY SUPPORTED.

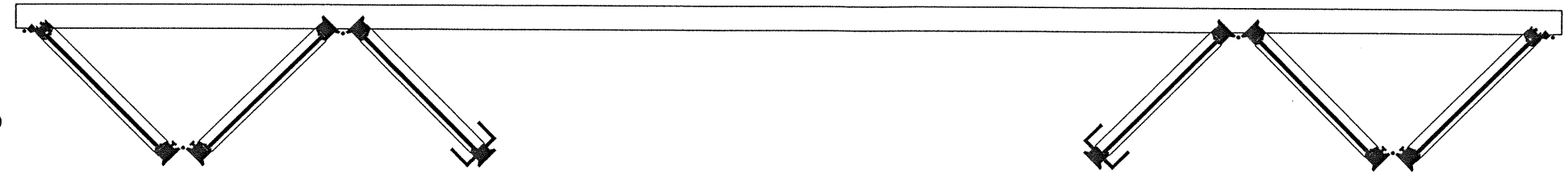
THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 11/19/12
DATE 12/10/14	DATE 06/10/20
BY W.W.S.	BY W.W.S.
REVISION DESCRIPTION	REVISION DESCRIPTION
NO.	NO.
A1 UPDATE TO CURRENT STANDARDS	B1 UPDATE GLASS INNER LAYER
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR	
JOB INFORMATION: HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1843	REV. A
SHEET NO. 1 OF 9	



HEAD TRACK SCREW NOTE:
QUANTITIES AND EMBED OF HEAD
TRACK SCREWS STATED/SHOWN
HERE-IN ARE MINIMUMS AS
REQUIRED BY DOOR IMPACT &
PRESSURE TESTING. ADDITIONAL
SCREWS OR EMBED MAY BE
REQUIRED AS SPECIFIED BY HOPES
WINDOWS INSTALLATION
REQUIREMENTS TO PROPERLY
SUPPORT THE DOOR HANGING
WEIGHT. INSTALLER SHALL CONFIRM
WITH HOPES WINDOWS, INC. THE END
TRACK SCREW REQUIREMENTS TO
INSURE THE HANGING WEIGHT IS
PROPERLY SUPPORTED.

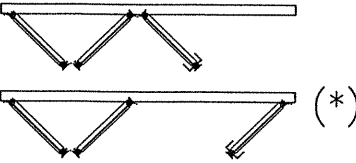
EXTERIOR ELEVATION:
DOUBLE SWING PANELS WITH RIGHT AND LEFT DIRECTION BI-FOLD DOORS
SCALE: 1/2" = 1'-0"



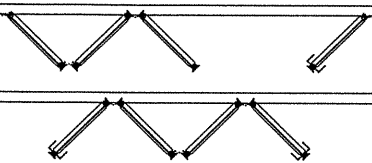
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 11/19/12	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR			
JOB INFORMATION: HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1843		REV. A	
SHEET NO. 3		OF 9	

APPROVED CONFIGURATIONS

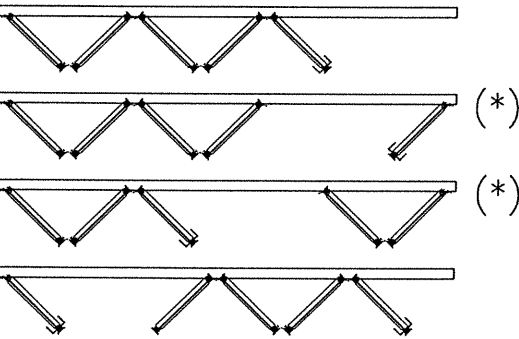
3-PANEL CONFIGURATIONS



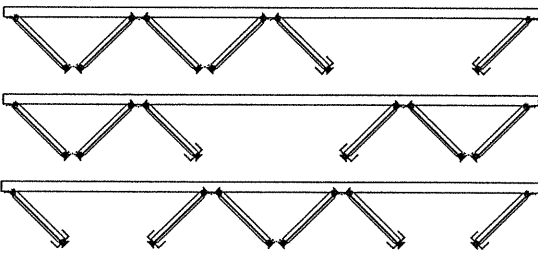
4-PANEL CONFIGURATIONS



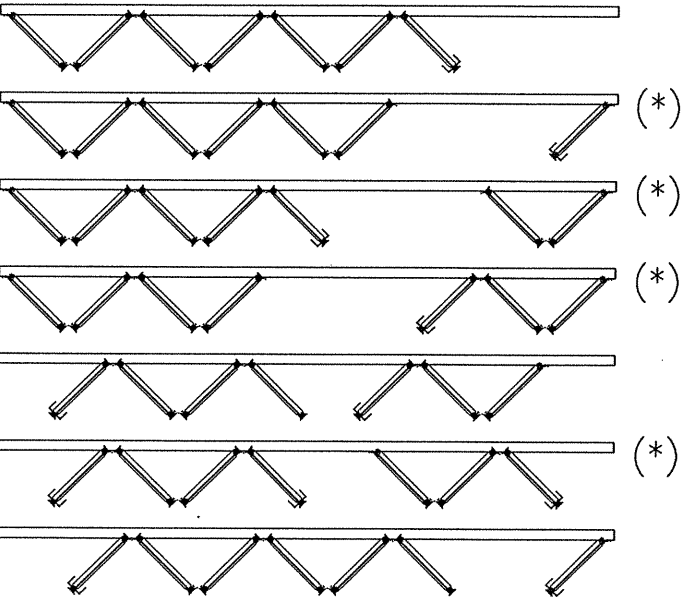
5-PANEL CONFIGURATIONS



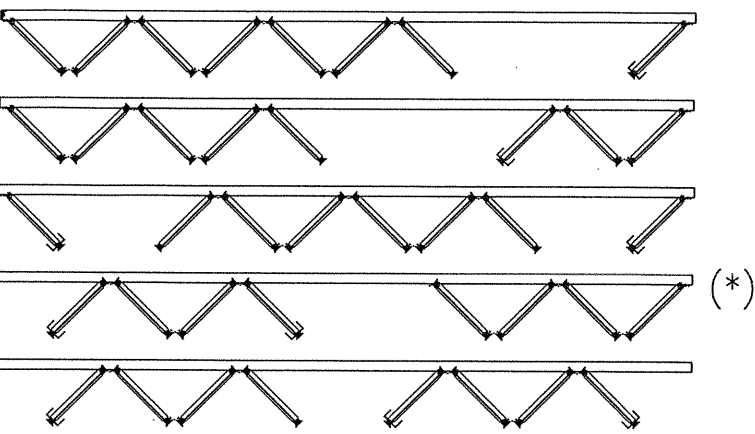
6-PANEL CONFIGURATIONS



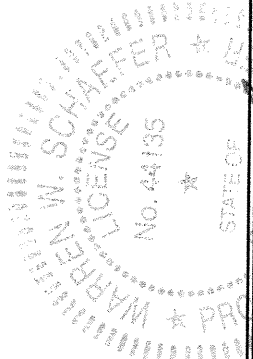
7-PANEL CONFIGURATIONS



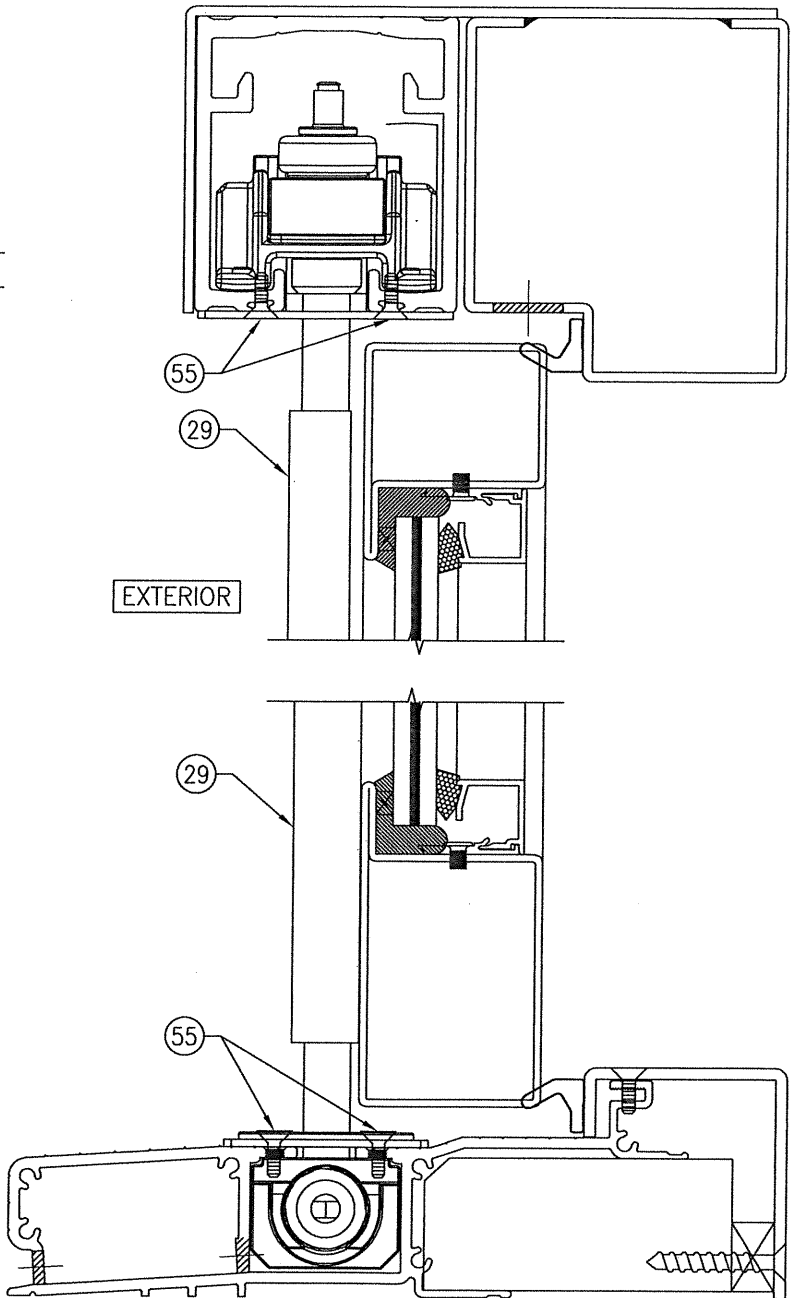
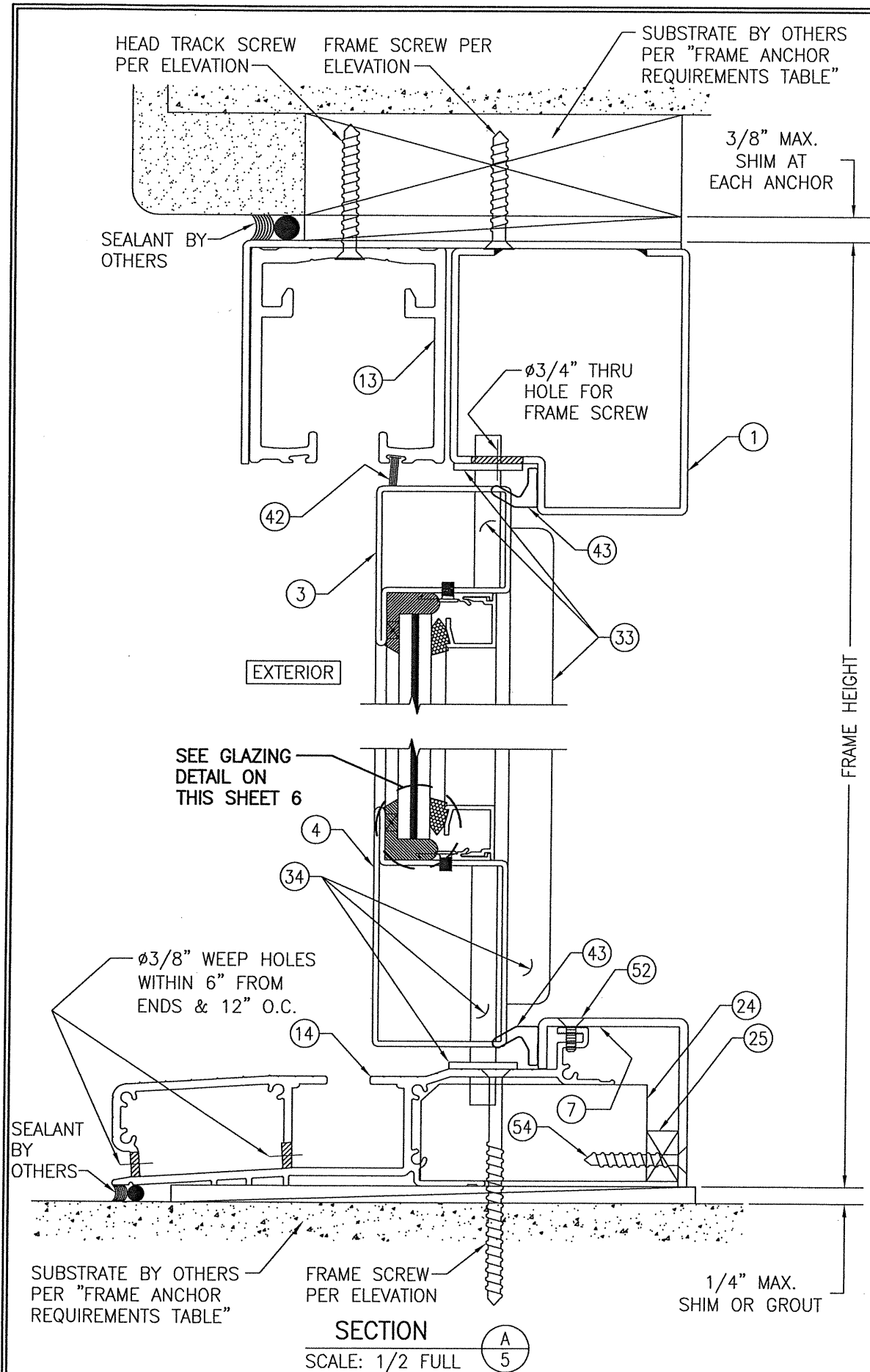
8-PANEL CONFIGURATIONS



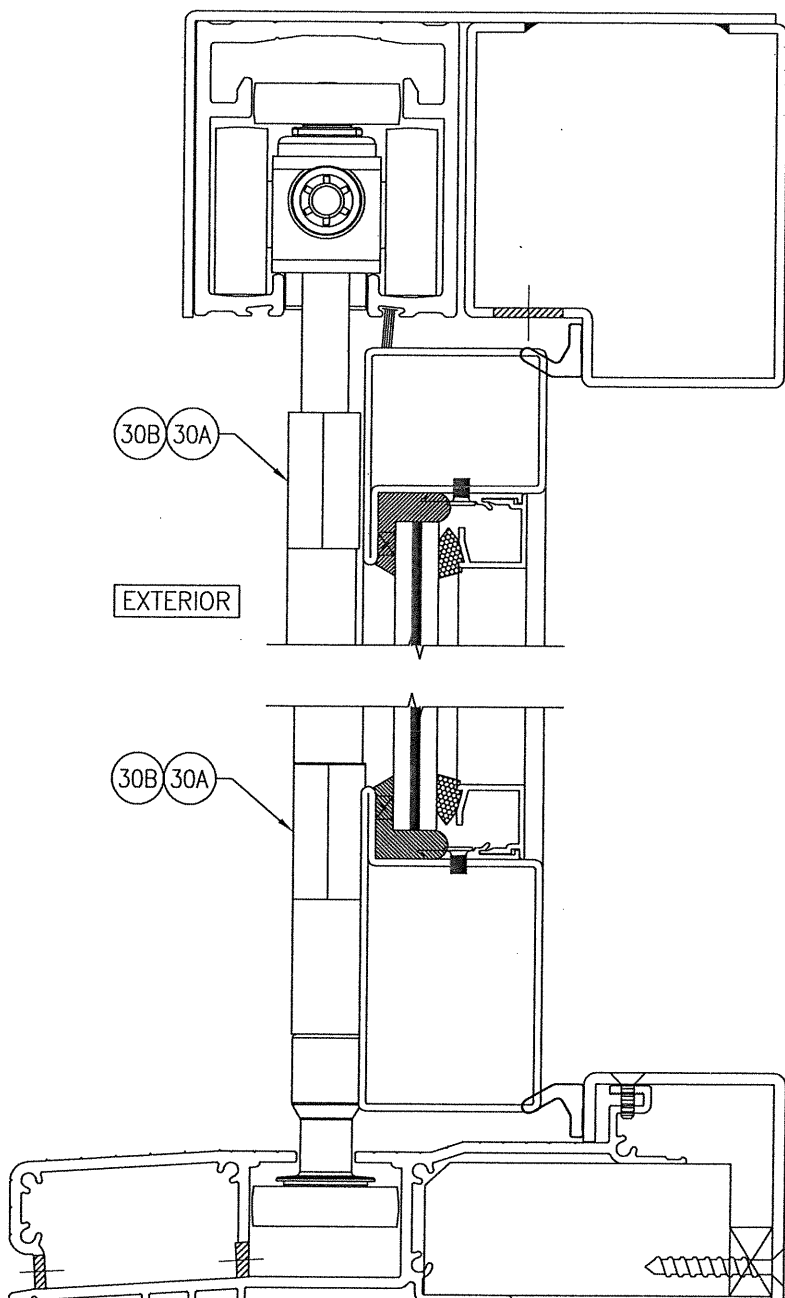
(*) THESE DOOR CONDITIONS DO NOT HAVE A WATER INFILTRATION RATING. SEE WATER INFILTRATION NOTE ON SHEET 1 FOR RESTRICTIONS.



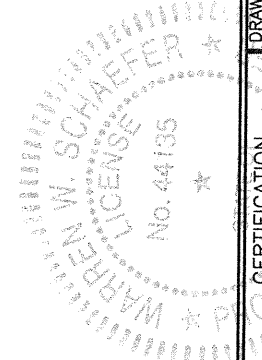
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 11/19/12	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		JOB INFORMATION: HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
CERTIFICATION JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1843	
SHEET NO. 4 OF 9		REV. A	



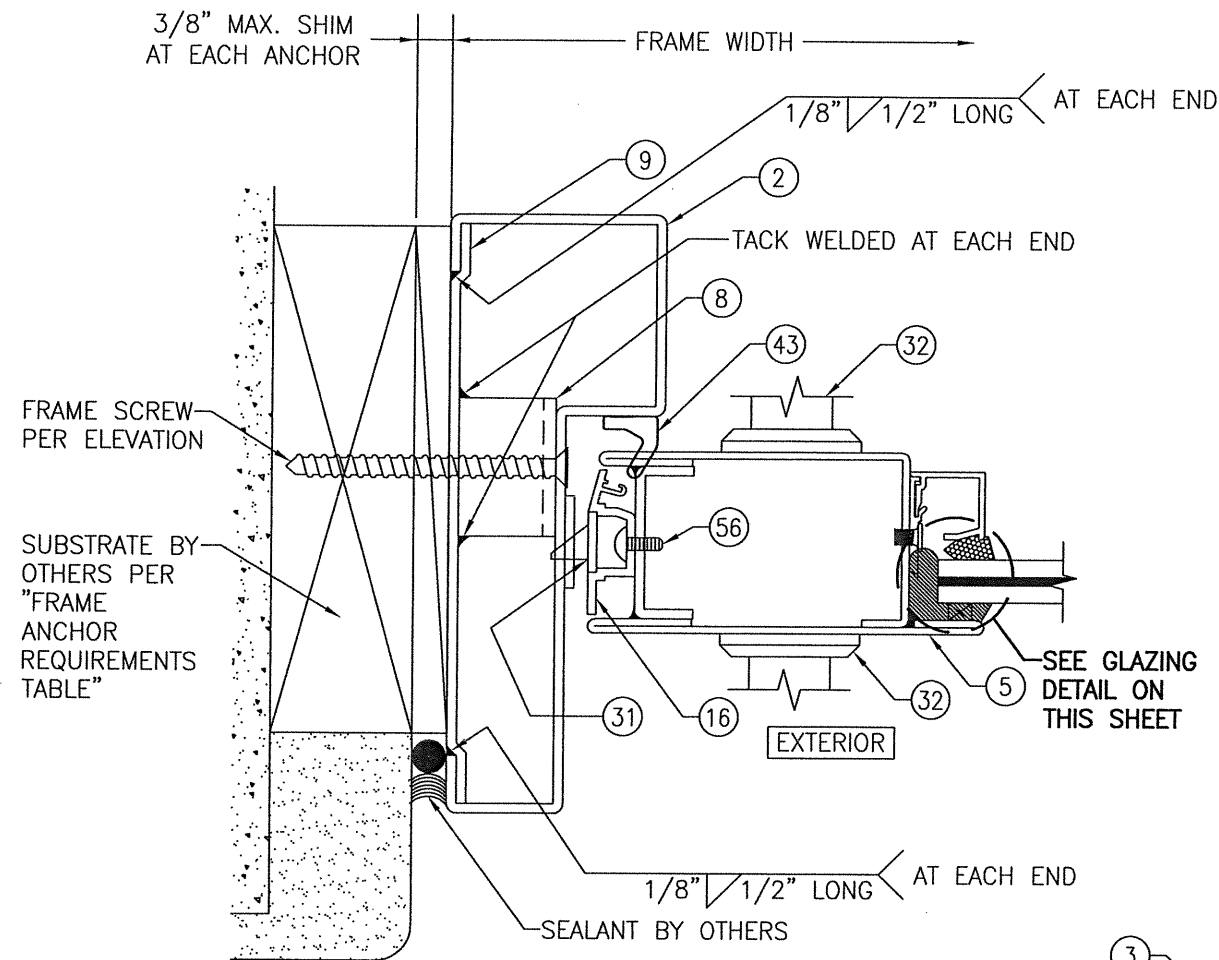
TYPICAL END PANEL ROLLER DETAIL
(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION A/5)



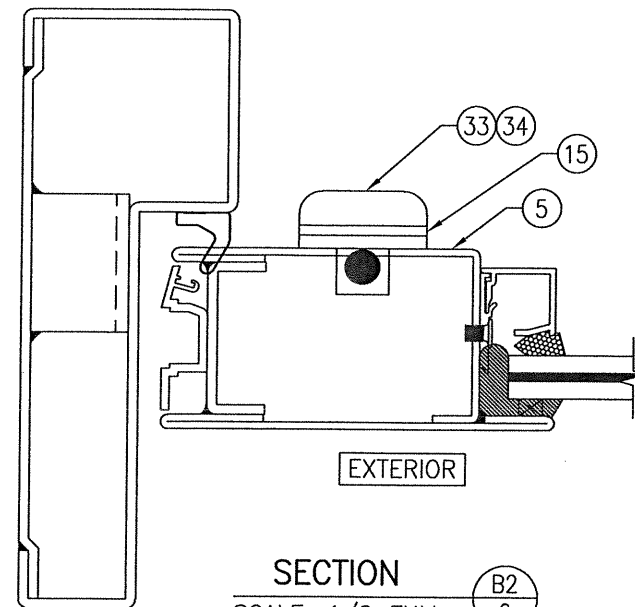
TYPICAL INTERMEDIATE PANEL CARRIER/ROLLER DETAIL
(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION A/5)



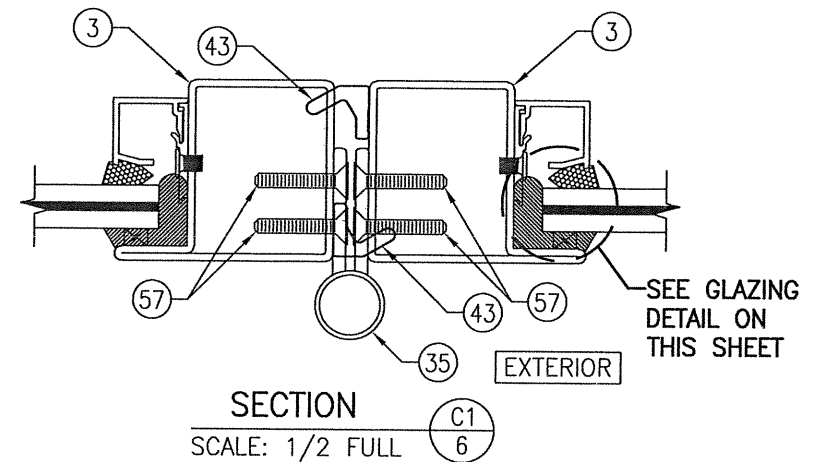
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 11/19/12	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR			
MANUFACTURER: HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1843		REV. B	
SHEET NO. 5		OF 9	



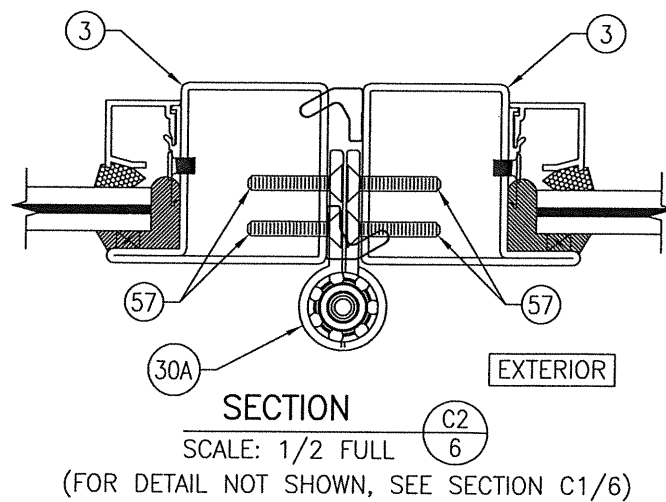
SECTION B1
SCALE: 1/2 FULL



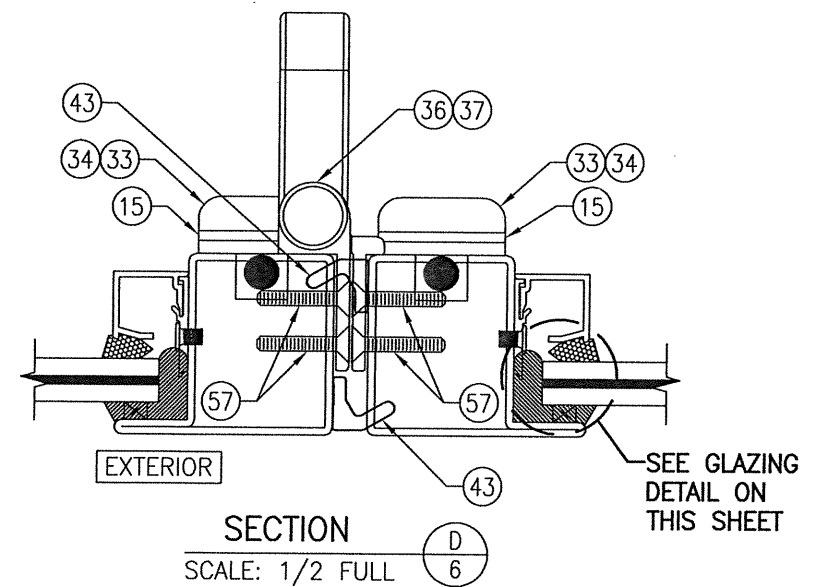
SECTION B2
SCALE: 1/2 FULL
(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION B1/6)



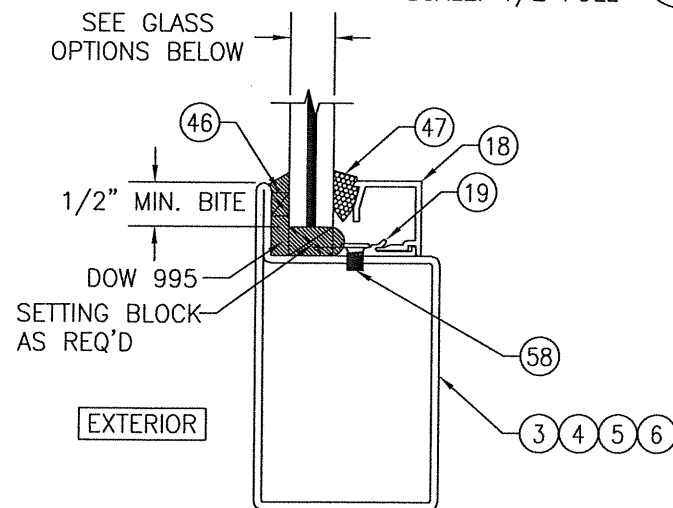
SECTION C1
SCALE: 1/2 FULL



SECTION C2
SCALE: 1/2 FULL
(FOR DETAIL NOT SHOWN, SEE SECTION C1/6)



SECTION D
SCALE: 1/2 FULL



EXTERIOR

TYPICAL GLAZING DETAIL

GLASS OPTION

OPTION 1: 9/16" LAMINATED GLASS (1/4" HT. ST./0.090" KURARAY SG/1/4" HT. ST.)

OPTION 2: 1/2" LAMINATED GLASS (3/16" HT. ST./0.090" KURARAY SG/3/16" HT. ST.)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 11/19/12
NO.	REVISION DESCRIPTION
BY	DATE
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR	
MANUFACTURER HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1843	REV. B
SHEET NO. 6 OF 9	

SECTION E1
7

SCALE: 1/2" = 1' FULL

OPTIONAL DIRECT MOUNT DETAIL TO SUBSTRATE WITH SPACER

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

SECTION _____
SCALE: 1/2" = 1' FULL

(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION E1/7)

SECTION F2
7

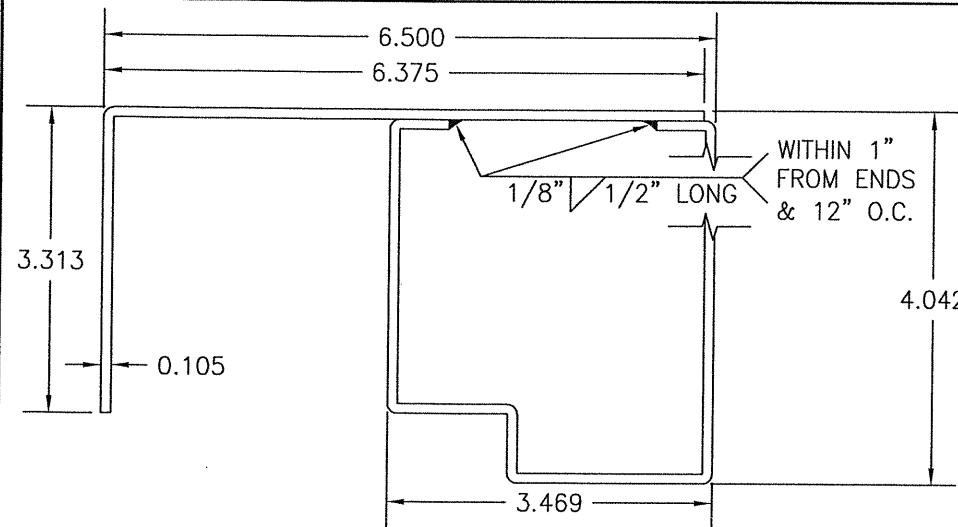
(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION F1/7)

SECTION F1
SCALE: 1/2 FULL 7

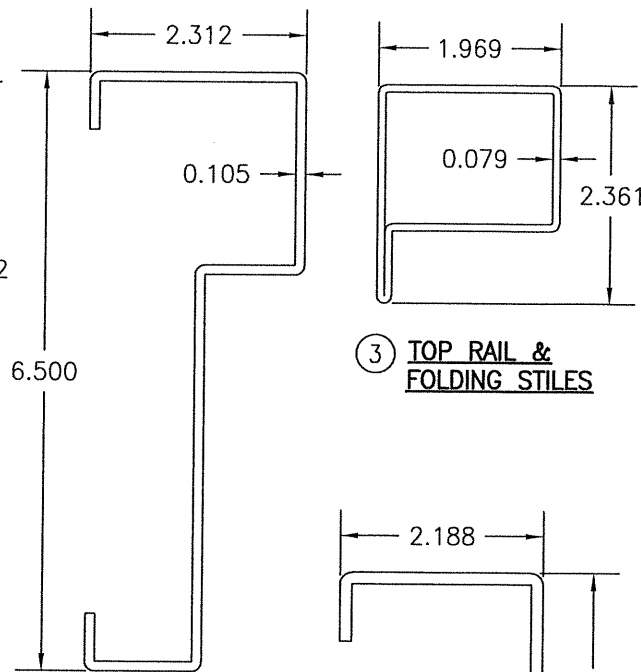
SECTION
SCALE: 1/2 FULL

(FOR DETAIL & INSTALLATION NOT SHOWN, SEE SECTION F1/7)

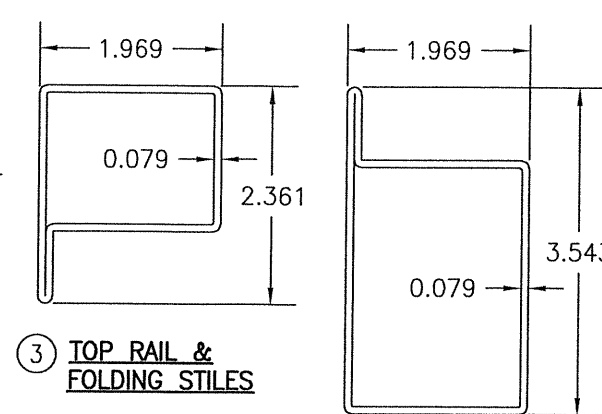
CERTIFICATION 	DRAWING NO. 1843		REV. B
	SHEET NO. 7 OF 9		
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		MANUFACTURER HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
NO. 		REVISION DESCRIPTION 	BY
DATE 		DATE 	
PLOT: 1-2		CHECKED BY: W.W.S.	
DRAWN BY: W.R.M.		DATE: 11/19/12	



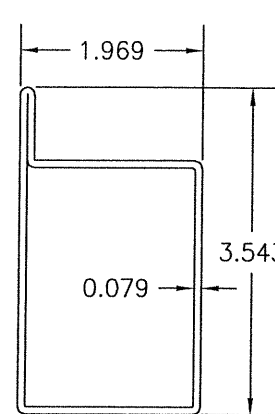
① HEAD FRAME



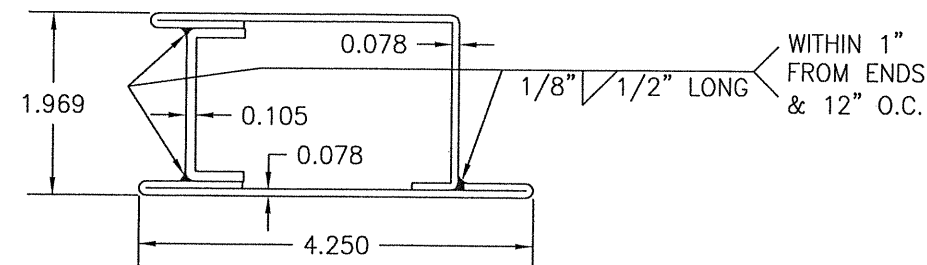
② JAMB FRAME



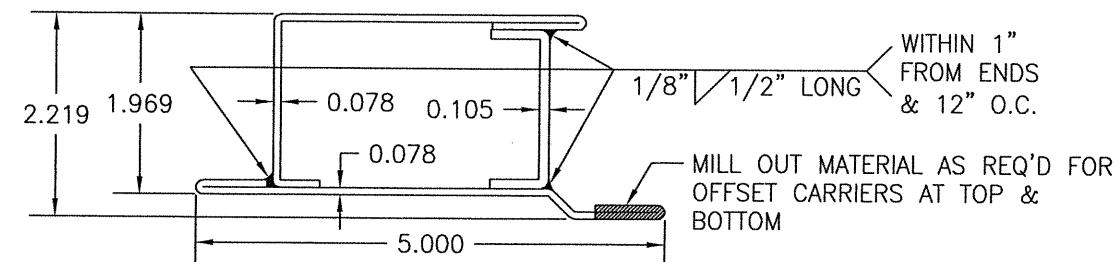
③ TOP RAIL & FOLDING STILES



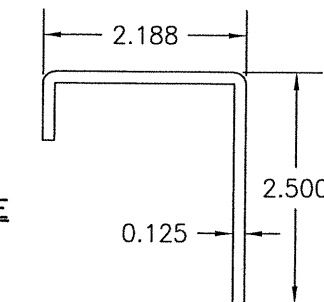
④ BOTTOM RAIL



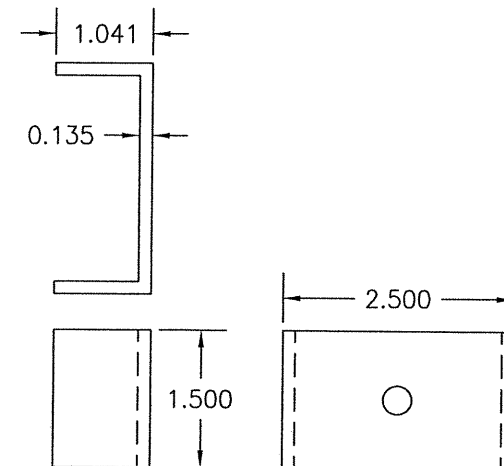
⑤ LOCK JAMB SWING STILE



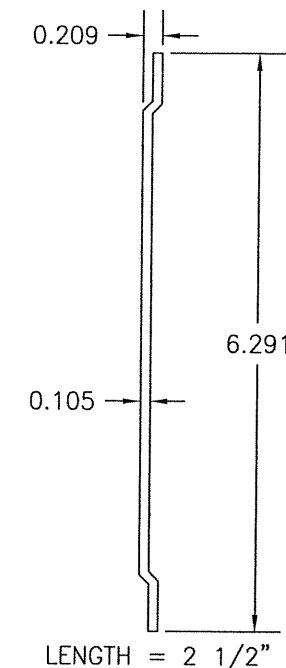
⑥ ACTIVE SWING STILE



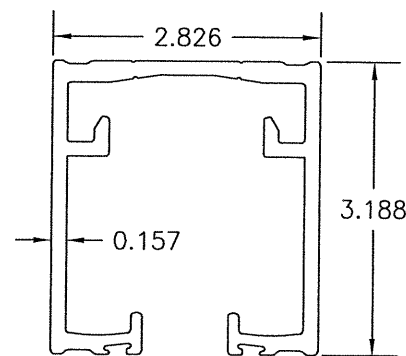
⑦ THRESHOLD COVER



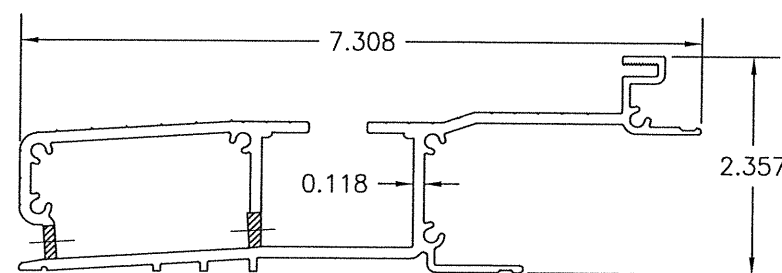
⑧ JAMB FRAME - FRAME SCREW REINFORCEMENT



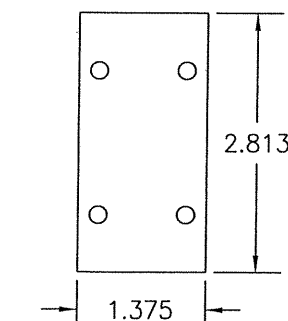
⑨ JAMB FRAME - BACKER PLATE



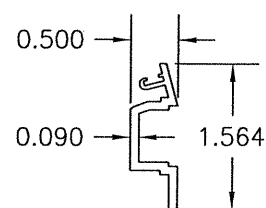
⑬ HEAD TRACK



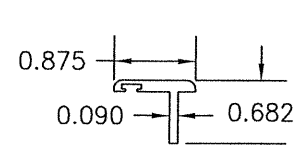
⑭ THRESHOLD/SILL TRACK



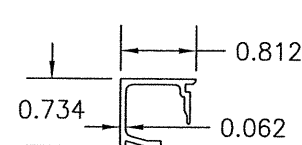
⑮ LOCK BOLT REINFORCEMENT PLATE



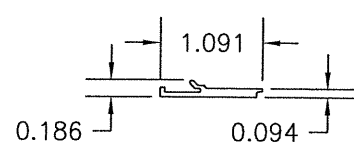
⑯ LOCK ADAPTOR



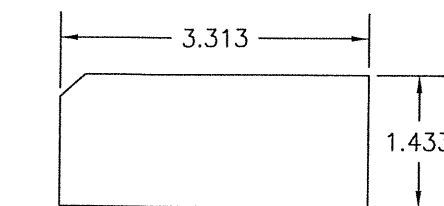
⑰ ASTRAGAL



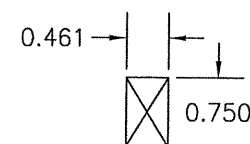
⑱ GLAZING BEAD



⑲ GLAZING BEAD RETAINER



⑳ THRESHOLD/SILL TRACK FILLER



㉑ FILLER BLOCK

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-2	DATE: 11/19/12
NO.	DATE
REVISION	DESCRIPTION
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR	
MANUFACTURER HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION JUL 01 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1843	REV. B
SHEET NO. 8 OF 9	

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD FRAME	A-36 STEEL
2	JAMB FRAME	A-36 STEEL
3	TOP RAIL & FOLDING STILES	A-36 STEEL
4	SASH (USED WITH EXTERIOR GLAZING)	A-36 STEEL
5	LOCK JAMB SWING STILE	A-36 STEEL
6	ACTIVE SWING STILE	A-36 STEEL
7	THRESHOLD COVER	A-36 STEEL
8	JAMB FRAME – FRAME SCREW REINFORCEMENT	A-36 STEEL
9	JAMB FRAME – BACKER PLATE	A-36 STEEL
13	HEAD TRACK	CENTOR E4TM75R 6063-T5 ALUMINUM
14	THRESHOLD/SILL TRACK	CENTOR E4 941 6063-T5 ALUMINUM
15	LOCK BOLT REINFORCEMENT PLATE	STAINLESS STEEL PLATE INSTALLED WITH 4 NO. 10-24 SCREWS
16	LOCK ADAPTOR	6063-T5 ALUMINUM
17	ASTRAGAL	6063-T5 ALUMINUM
18	GLAZING BEAD	6063-T5 ALUMINUM
19	GLAZING BEAD RETAINER	6063-T5 ALUMINUM
24	THRESHOLD/SILL TRACK FILLER	DOUGLAS FIR
25	FILLER BLOCK	DOUGLAS FIR
HARDWARE		
29	PIVOT SET HINGE (TOP & BOTTOM SET)	CENTOR E4PSOL
30A	INTERMEDIATE CARRIER (TOP & BOTTOM SET)	CENTOR E4ICSOL
30B	OFFSET CARRIER (TOP & BOTTOM SET)	CENTOR E4OCSOL
31	5-POINT LOCK SYSTEM	GU RHINO-SHOOT
32	HANDLE	AS REQUIRED TO OPERATE 5-POINT LOCK
33	TOP LOCK BOLT (KEYED)	CENTOR DBSY200KROL
34	BOTTOM LOCK BOLT (NON-KEYED)	CENTOR DBSY200NROL
35	HINGE	CENTOR E4HOL
36	OFFSET HINGE	CENTOR E4HHOL
37	OFFSET HINGE WITH HANDLE	CENTOR E4HHSOL
38	WALL PIVOT HINGE	CENTOR E4WPOL
SEALS & SEALANTS		
42	PILE WEATHERSTRIP	SUPPLIED WITH ITEM #13 HEAD TRACK
43	WEATHERSTRIP (SELF ADHERING)	SCHLEGEL QDST 675 POLYETHYLENE
44	WEATHERSTRIP (SELF ADHERING)	SCHLEGEL QDS 375 POLYETHYLENE
46	GLAZING SHIM	TREMCO TR2178W EPDM
47	GLAZING WEDGE	TREMCO 496E EPDM
FASTENERS		
52	10-24 X 1/2" PFH S.S. MACHINE SCREW	WITHIN 2 1/2" FROM ENDS & 18" MAX. O.C.
54	NO. 12 X 1 1/2" WOOD SCREW	WITHIN 2 1/2" FROM ENDS & 18" MAX. O.C.
55	10-24 X 1/2" PFH S.S. MACHINE SCREW	2 PER EACH TOP & BOTTOM PIVOT SET HINGE
56	10-24 X 3/8" PPH S.S. MACHINE SCREW	WITHIN 2 1/2" FROM ENDS & 10" MAX. O.C.
57	12-24 X 1" PFH S.S. MACHINE SCREW	5 PER HINGE INTO SASH
58	10-24 X 1/4" S.S. SELF SEALING MACHINE SCREW	WITHIN 2 1/2" FROM D.L.O. EDGE & 12" MAX. O.C.
59	10-24 X 1" PFH S.S. MACHINE SCREW	2 PER HINGE INTO JAMB FRAME

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 11/19/12	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE HOPKINS SERIES OUT-SWING IMPACT BI-FOLD DOOR		MANUFACTURER HOPE'S WINDOWS, INC. 84 HOPKINS AVENUE JAMESTOWN, NY 14702 (716) 665-5124	
CONSULTANTS 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 WARREN W. SCHAEFER, P.E.	
CERTIFICATION JUL 07 2020		DRAWING NO. 1843	
SHEET NO. 9		REV. B	
OF		9	