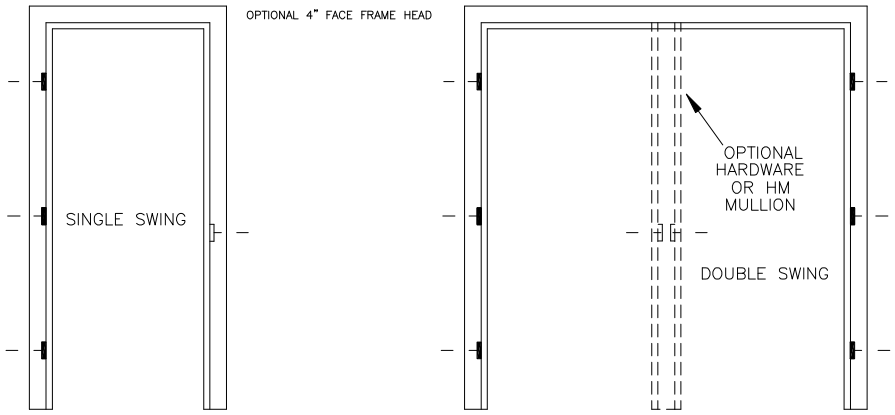
Windstorm Frame Installation Instructions
For Use With FL 10723

F0260 R1



3070 ± 100 PSF MAX. DESIGN LOAD
4080 ± 70 PSF MAX. DESIGN LOAD
4" MIN./14" MAX. DEPTH
16 GA. MIN.
KD OR WELDED (12 GA. WELDED)
IMPACT RATING = 350 FT–LBF

8080 MAX.
4" MIN./14" MAX. DEPTH
16 GA. MIN.
KD OR WELDED (12 GA. WELDED)
DESIGN LOAD = +/–70 PSF
IMPACT RATING = 350 FT–LBF

ANCHORS & METHOD OF ATTACHMENT	
ANCHOR TYPE	*LOCATION
EO – PIPE & SLEEVE (BUTTERFLY UP TO 3070 MAX.) WOOD BUCK 3/8" X 6" LAG SCREW	12" MAX. FROM EACH END & 19" O.C.
EO – PIPE & SLEEVE (BUTTERFLY UP TO 3070 MAX.) MASONRY BUCK 3/8" X 6" EXPANSION SHELL	12" MAX. FROM EACH END & 19" O.C.
MASONRY "T" – GROUTED (Head: 3/8" x 6" Expansion Shell)	16" – 24" O.C. @ GROUT JOINTS
WIRE MASONRY – GROUTED (Head: 3/8" x 6" Expansion Shell)	16" – 24" O.C. @ GROUT JOINTS
WOOD STUD METAL STUD (NO FLOOR ANCHORS)	6", 6" & EQUAL – 21" MAX. FOR INTERMEDIATE SPACES
Poured In Place Wall	NA

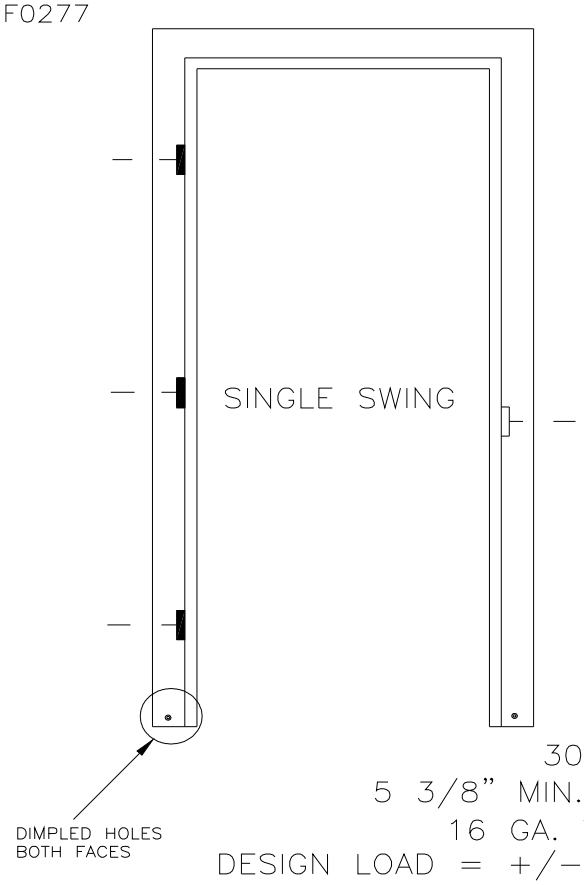
Trio & Trio–E Opening **Sizes Over 6070 Pairs
LOCATION
@ Jamb:12"Max. From Each End & 19" O.C. @ Head: (4) Total Req'd, 9" Max. From Centerline of Head, 9" Max. from Each Hinge Jamb
@ Jamb:12"Max. From Each End & 19" O.C. @ Head: (4) Total Req'd, 9" Max. From Centerline of Head, 9" Max. from Each Hinge Jamb
@ Jamb:16"–24" O.C.@ Grout Joints @ Head: (4) Total Req'd, 9" Max. from Centerline of Head, 9" Max. From Each Hinge Jamb.
@ Jamb:16"–24" O.C.@ Grout Joints @ Head: (4) Total Req'd, 9" Max. from Centerline of Head, 9" Max. From Each Hinge Jamb.
@ Jamb:6", 6" & Equal–21" Max for Intermediate Spaces. @ Head: (4) Total Req'd, 6" Max. From Centerline of Head, 6" Max from Each Hinge Jamb
NA

*FOR DOUBLE SWING FRAMES WITH 4" FACE FRAME HEADS, (2) EO ANCHORS REQUIRED WHEN INSTALLED IN MASONRY WALL OR (2) STUD ANCHORS REQUIRED WHEN INSTALLED IN STUD WALL. LOCATION OF ANCHORS TO BE 16" FROM CENTERLINE OF FRAME HEAD, OR CAN BE GROUTED FULL WITH 2000 PSI MIN. CONCRETE.

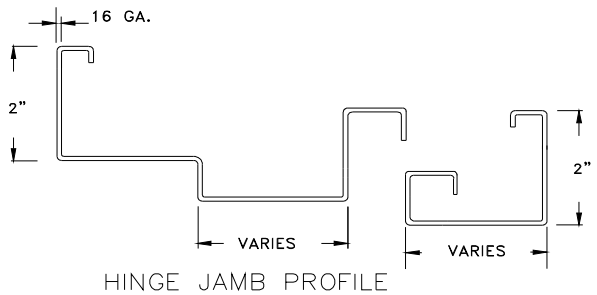
**FOR SIZES 6070 OR LESS REFER TO TABLE ABOVE.

THREE-SIDED FRAMES

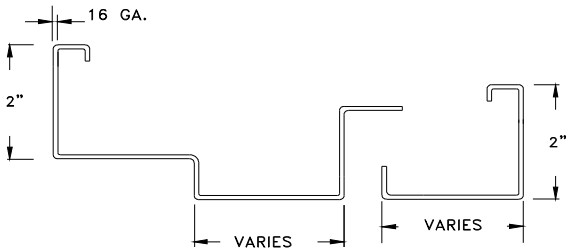
F0277



SEE SECTION 8, ILLUSTRATION 2 FOR FRAME DIMENSIONS



HINGE JAMB PROFILE



FRAME HEAD & LOCK JAMB PROFILE

3070 MAX.
5 3/8" MIN./14" MAX. DEPTH
16 GA. WELDED ONLY
DESIGN LOAD = +/−60 PSF (WITHOUT DEADBOLT)
DESIGN LOAD = +/−70 PSF (WITH DEADBOLT)
IMPACT RATING = 350 FT−LBF

ANCHORS & METHOD OF ATTACHMENT	
ANCHOR TYPE	LOCATION
PLUMB ANCHOR & WOOD STUD SCREW OR METAL STUD SCREW	TOP PLUMB ANCHOR @ STD LOCATION & BTM PLUMB ANCHOR @ 18" MAX. FROM BTM OF FRAME
	SEE SECTION 8, ILL. 2 FOR SCREW FASTENER KEY

TWO-PIECE THREE-SIDED FRAME

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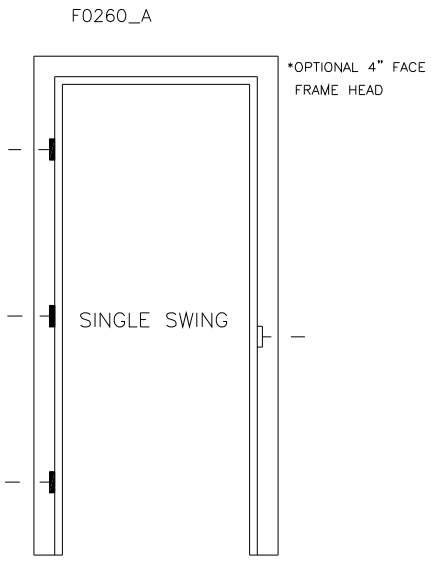
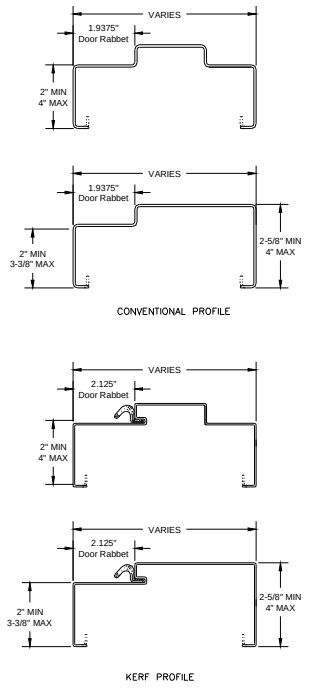


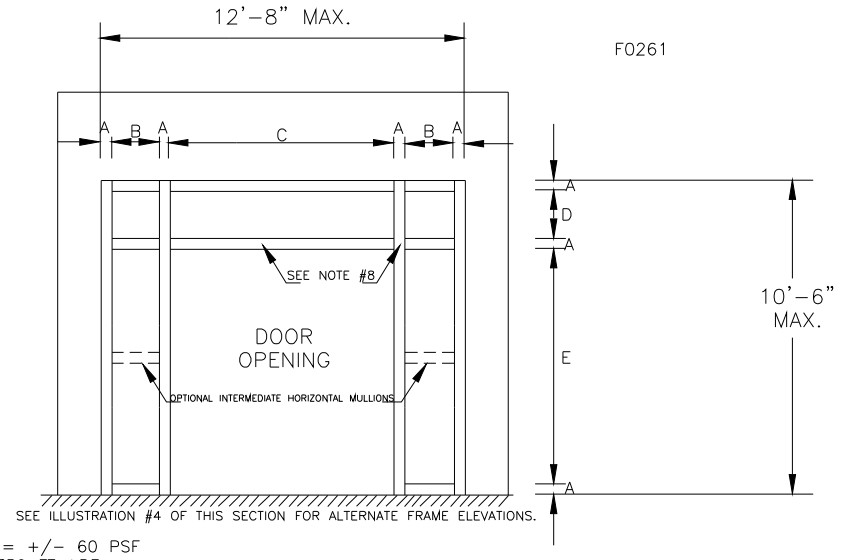
3070 MAX.
4" MIN./14" MAX. DEPTH
16 GA. MIN.
KD OR WELDED (12 GA. WELDED)
DESIGN LOAD = +/−100 PSF
IMPACT RATING = 350 FT−LBF



*ANCHORS & METHOD OF ATTACHMENT	
ANCHOR TYPE	*LOCATION
EO – PIPE & SLEEVE (BUTTERFLY UP TO 3070 MAX.) WOOD BUCK 3/8" X 6" LAG SCREW	12" MAX. FROM EACH END & 19" O.C.
EO – PIPE & SLEEVE (BUTTERFLY UP TO 3070 MAX.) MASONRY BUCK 3/8" X 6" EXPANSION SHELL	12" MAX. FROM EACH END & 19" O.C.
MASONRY "T" – GROUTED	16" – 24" O.C. @ GROUT JOINTS
WIRE MASONRY – GROUTED	16" – 24" O.C. @ GROUT JOINTS
WOOD STUD METAL STUD (NO FLOOR ANCHORS)	6", 6" & EQUAL – 21" MAX. FOR INTERMEDIATE SPACES
Poured In Place Wall	NA

THREE SIDED FRAMES

Windstorm Frame Installation Instructions
For Use With FL 10723



1. DESIGN PRESSURE = +/– 60 PSF
   IMPACT RATING = 350 FT–LBF
2. ALL FRAME PERIMETERS & HEADS OF FASTENERS SEALED WITH SILICONE.
3. CORNER CONSTRUCTION = WELDED ONLY
4. ANCHORS = SEE CHART BELOW
5. FRAME DEPTH = 4" MIN. / 14" MAX.
   16 GA. MIN.
6. DOOR OPENING = 3'–0" X 8'–0" SINGLE MAX.
   6'–0" X 8'–0" PAIRS MAX.
7. STOP HEIGHT = 5/8" MIN.
8. FULL HEIGHT VERTICAL & 6' HORIZONTAL MULLIONS MUST BE REINFORCED WITH (2) 10–GAUGE X 3/4" X FRAME DEPTH "C" CHANNELS INSTALLED BACK TO BACK TO FORM SIMULATED "I" BEAM. SEE DETAIL "A–A".

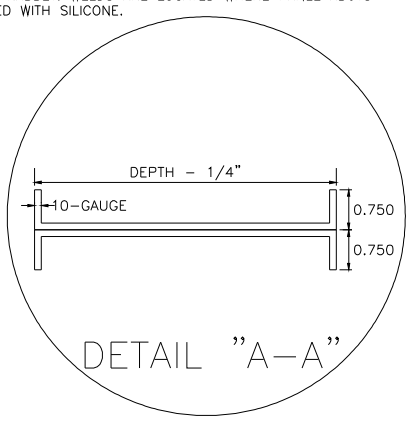
GLAZING MATERIAL	DIM. "B" MAX.	DIM. "C" MAX.	DIM. "D" MAX.	DIM. "E" MAX.	FRAME FACES DIM. "A" MIN.	FRAME FACES DIM. "A" MAX.
*GLASSLAM SAFETY PLUS 2 LAMINATED GLASS	36"	72"	36"	94"	2"	4"

*BEDDING IS CLOSED CELL FOAM TAPE 1/8" X 1/2" AND DOW CORNING 995 STRUCTURAL SILICONE. 1 3/4" STEEL STIFFENED, HONEYCOMB, POLYURETHANE, MINERAL CORE OR POLYSTYRENE CORE PANELS (18 Ga Min – 14 Ga Max) MAY BE USED IN LIEU OF GLASSLAM. PANELS ARE WELDED TO FRAME WITH WELDS LOCATED ON THE SIDES 3" MAX. FROM EACH END & 3" MAX. O.C. & ON THE TOP & BOTTOM 3" MAX. FROM EACH END & AT 12" MAX. O.C. THE WELDS ARE MIN. 1/4" WELDS X 1/2" LONG. PANELS TO BE INSTALLED IN EXTERIOR (OUTSIDE) RABBET. WELDS ARE LOCATED WHERE PANEL ABUTS FRAME SOFFIT. PANELS ARE SEALED WITH SILICONE.

ANCHORS & METHOD OF ATTACHMENT		
ANCHOR TYPE		LOCATION
EO – PIPE & SLEEVE OR BUTTERFLY WOOD BUCK 3/8" X 6" LAG SCREW	@ JAMB	12" MAX. FROM SILL, 8" FROM HEAD & 20" O.C.
	@ HEAD	**2" FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
EO – PIPE & SLEEVE OR BUTTERFLY MASONRY BUCK 3/8" X 6" EXPANSION SHELLS	@ JAMB	12" MAX. FROM SILL, 8" FROM HEAD & 20" O.C.
	@ HEAD	**2" FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WIRE MASONRY OR MASONRY "T" – GROUTED, WELDED TO STEEL HEADER, EO P&S OR BUTTERFLY – 3/8" X 6" BOLTS	@ JAMB	8" MAX. FROM EACH END & 16" O.C.
	@ HEAD	***WELDED TO STEEL CHANNEL HEADER
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WELDED TO STEEL BUCK	@ JAMB	***5" MAX. FROM SILL & 27.5" MAX. O.C.
	@ HEAD	***WELDED TO STEEL CHANNEL HEADER
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WOOD STUD METAL STUD (NO FLOOR ANCHORS)	@ JAMB	5" MAX. FROM SILL & 27.5" MAX. O.C.
	@ HEAD	**2" MAX. FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN

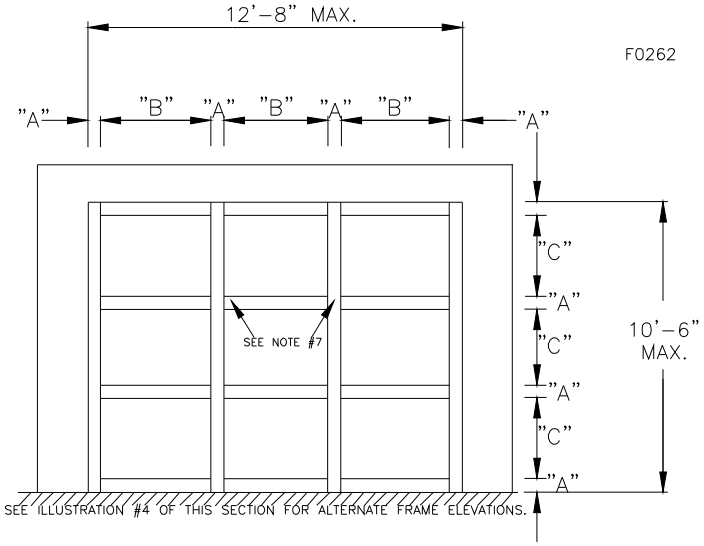
**FOR 6' & UP HEAD MEMBERS. FOR HEADS LESS THAN 6', LOCATE ANCHORS 2" MAX. FROM EACH VERTICAL MEMBER & @ MIDPOINT OF SPAN.

***1/4" THICK MAX. SHIM PLATES (2" WIDE X 7" LONG OR TO SUIT JAMB DEPTH) WELDED TO STEEL CHANNEL & FRAMES WELDED TO SHIM PLATES. SHIM PLATES TO BE 1–1/4" GREATER THAN JAMB DEPTH. HEADER WELDS LOCATED 3" FROM EACH JAMB & 3" FROM EACH SIDE OF VERTICAL MULLIONS & @ MIDPOINT OF SPAN OF HEAD ABOVE DOORS. WELDS ARE MIN. 3/16" X 1" LONG. SHIM PLATES ARE PROVIDED BY OTHERS. AFTER WELDING FRAME TO SHIMS, CAULK GAPS BETWEEN FRAME AND STRUCTURAL STEEL CHANNEL WHERE SHIM PLATES ARE VOID.



SIDE LITE AND TRANSOM FRAMES

Windstorm Frame Installation Instructions
For Use With FL 10723



1. DESIGN PRESSURE = +/– 60 PSF
   IMPACT RATING = 350 FT–LBF
2. ALL FRAME PERIMETERS & HEADS OF FASTENERS SEALED WITH SILICONE.
3. CORNER CONSTRUCTION = WELDED ONLY
4. ANCHORS = SEE CHART BELOW
5. FRAME DEPTH = 4" MIN. / 14" MAX.
   16 GA. MIN.
6. STOP HEIGHT = 5/8" MIN.
7. FULL HEIGHT VERTICAL & 6' HORIZONTAL MULLIONS MUST BE REINFORCED WITH (2) 10–GAUGE X 3/4" X FRAME DEPTH "C" CHANNELS INSTALLED BACK TO BACK TO FORM SIMULATED "I" BEAM. SEE DETAIL "A–A".

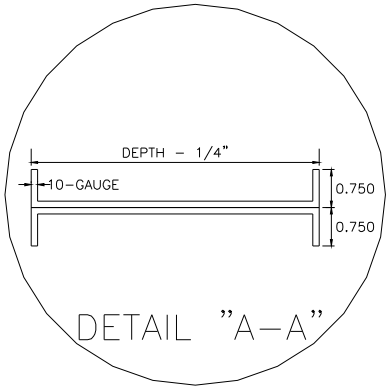
GLAZING MATERIAL	FRAME FACES DIM. "A" MIN.	FRAME FACES DIM. "A" MAX.	DIM. "B" MAX.	DIM. "C" MAX.	MAX. EXPOSED GLAZED AREA (in^2)
*GLASSLAM SAFETY PLUS 2 LAMINATED GLASS	2"	4"	72"	94"	3384

*BEDDING IS CLOSED CELL FOAM TAPE 1/8" X 1/2" AND DOW CORNING 995 STRUCTURAL SILICONE. 1 3/4" STEEL STIFFENED, HONEYCOMB, POLYURETHANE, MINERAL CORE OR POLYSTYRENE CORE PANELS (18 Ga Min – 14 Ga Max) MAY BE USED IN LIEU OF GLASSLAM. PANELS ARE WELDED TO FRAME WITH WELDS LOCATED ON THE SIDES 3" MAX. FROM EACH END & 3" MAX. O.C. & ON THE TOP & BOTTOM 3" MAX. FROM EACH END & AT 12" MAX. O.C. THE WELDS ARE MIN. 1/4" WELDS X 1/2" LONG. PANELS ARE SEALED WITH SILICONE.

ANCHORS & METHOD OF ATTACHMENT		
ANCHOR TYPE		LOCATION
EO – PIPE & SLEEVE OR BUTTERFLY WOOD BUCK 3/8" X 6" LAG SCREW	@ JAMB	12" MAX. FROM SILL, 8" FROM HEAD & 20" O.C.
	@ HEAD	**2" FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
EO – PIPE & SLEEVE OR BUTTERFLY MASONRY BUCK 3/8" X 6" EXPANSION SHELLS	@ JAMB	12" MAX. FROM SILL, 8" FROM HEAD & 20" O.C.
	@ HEAD	**2" FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WIRE MASONRY OR MASONRY "T" – GROUTED, WELDED TO STEEL HEADER, EO P&S OR BUTTERFLY – 3/8" X 6" BOLTS	@ JAMB	8" MAX. FROM EACH END & 16" O.C.
	@ HEAD	***WELDED TO STEEL CHANNEL HEADER
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WELDED TO STEEL BUCK	@ JAMB	***5" MAX. FROM SILL & 27.5" MAX. O.C.
	@ HEAD	***WELDED TO STEEL CHANNEL HEADER
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN
WOOD STUD METAL STUD (NO FLOOR ANCHORS)	@ JAMB	5" MAX. FROM SILL & 27.5" MAX. O.C.
	@ HEAD	**2" MAX. FROM EACH VERTICAL MEMBER & 14" O.C.
	@ SILL	2" FROM EACH VERTICAL MEMBER & @ MIDSPAN

**FOR 6' & UP HEAD MEMBERS. FOR HEADS LESS THAN 6', LOCATE ANCHORS 2" MAX. FROM EACH VERTICAL MEMBER & @ MIDPOINT OF SPAN.

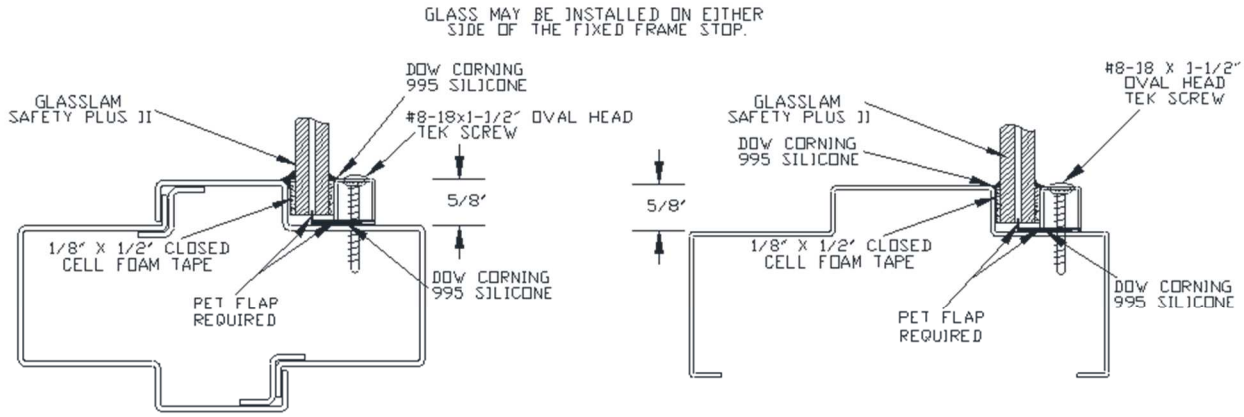
***1/4" THICK MAX. SHIM PLATES (2" WIDE X 7" LONG OR TO SUIT JAMB DEPTH) WELDED TO STEEL CHANNEL & FRAMES WELDED TO SHIM PLATES. SHIM PLATES TO BE 1–1/4" GREATER THAN JAMB DEPTH. HEADER WELDS LOCATED 3" FROM EACH JAMB & 3" FROM EACH SIDE OF VERTICAL MULLIONS & @ MIDPOINT OF SPAN OF HEAD ABOVE DOORS. WELDS ARE MIN. 3/16" X 1" LONG. SHIM PLATES ARE PROVIDED BY OTHERS. AFTER WELDING FRAME TO SHIMS, CAULK GAPS BETWEEN FRAME AND STRUCTURAL STEEL CHANNEL WHERE SHIM PLATES ARE VOID.



BORROWED LITE FRAMES

Windstorm Frame Installation Instructions
For Use With FL 10723

HURRICANE RESISTANT FRAMES-GLASSLAM SAFETY PLUS II GLAZING INSTRUCTIONS



1.) BEFORE REMOVING THE REMOVABLE STOPS, USING A PENCIL, MARK ALIGNMENT MARKS ON THE STOPS AND THE FRAME.
2.) UNSCREW THE #8 X 1-1/2" OVAL HEAD TEK SCREWS FROM THE REMOVABLE STOPS AND REMOVE THE STOPS.
3.) WIPE THE FIXED STOP CLEAN AND THEN APPLY THE CLOSED CELL FOAM TAPE TO THE FIXED STOP.
4.) IF THERE IS PLASTIC RELEASE ON THE FOAM GLAZING TAPE, PULL THE PLASTIC RELEASE BACK ABOUT 2" FROM EACH END OF THE FOAM TAPE. PULL THE PLASTIC RELEASE ABOVE THE FIXED STOP SO IT CAN BE GRASPED AFTER PLACING THE GLASSLAM ON THE UNEXPOSED FOAM TAPE.
STEP 5-MAY REQUIRE THE ASSISTANCE OF ANOTHER PERSON TO HELP HOLD THE GLASSLAM IN PLACE.
5.) IF THERE IS PAPER RELEASE ON THE FOAM GLAZING TAPE, REMOVE THE PAPER RELEASE BEFORE GLAZING. SPRAY THE EXPOSED FOAM TAPE WITH A MILD SOAP SOLUTION IMMEDIATELY BEFORE PLACING THE GLASSLAM ON THE EXPOSED FOAM TAPE.
6.) PLACE GLAZING SHIMS, AS NEEDED, THEN SET THE GLASSLAM ON THE FOAM GLAZING TAPE.
7.) ADJUST HE GLASSLAM ASSEMBLY, AS NECESSARY, TO CENTER THE ASSEMLY IN THE OPENING.
8.) IF THE RELEASE IS PLASTIC, GRASP THE FREE END OF THE PLASTIC RELEASE, WHILE HOLDING THE GLASSLAM TO KEEP IT FROM MOVING. THEN SLOWLY PULL THE RELEASE OFF THE FOAM TAPE THAT WAS APPLIED TO THE FIXED STOP. PRESS THE GLASSLAM AGAINST THE FOAM TAPE.
9.) INSERT A PUTTY KNIFE BETWEEN THE PET FLAP AND THE FRAME RABBET. USING THE PUTTY KNIFE PULL THE PET FLAP UP AND OFF THE FRAME RABBET.
10.) WHILE HOLDING THE PET FLAP BACK AWAY FROM THE FRAME RABBET WITH THE PUTTY KNIFE, USE A CAULKING GUN TO APPLY DOW CORNING 995 SILICONE BETWEEN THE PET FLAP AND THE FRAME RABBET.

IMPORTANT: ENSURE THAT THE DOW CORNING 995 SILICONE FULLY WETS OUT OR COVERS THE PET FLAP AND COMES IN CONTACT WITH THE FRAME RABBET.

11.) SLOWLY MOVE THE PUTTY KNIFE AROUND THE FRAME AHEAD OF THE CAULKING GUN AND APPLY THE SILICONE AROUND THE ENTIRE OPENING BETWEEN THE PET FLAP AND THE FRAME RABBET.
12.) APPLY 1/8" X 1/2" CLOSED CELL FOAM TAPE TO THE REMOVABLE STOP.
13.) IF THERE IS PLASTIC RELEASE ON THE FOAM GLAZING TAPE, PULL THE PLASTIC RELEASE BACK ABOUT 2" FROM EACH END OF THE FOAM TAPE. PULL THE PLASTIC RELEASE ABOVE THE REMOVABLE STOP SO IT CAN BE GRASPED AFTER PLACING THE REMOVABLE STOPS AGAINST THE GLASSLAM.
14.) IF THERE IS PAPER RELEASE ON THE FOAM GLAZING TAPE, REMOVE THE PAPER. SPRAY THE EXPOSED FOAM TAPE WITH MILD SOAP SOLUTION IMMEDIATELY BEFORE PLACING THE REMOVABLE STOPS AGAINST THE GLASSLAM.
15.) USING THE ALIGNMENT MARKS, POSITION THE REMOVABLE GLASS STOPS AGAINST THE GLASS. IF STOPS ARE TOO TIGHT LIGHTLY GRIND THE END OF STOP FOR ADDITIONAL CLEARANCE.
16.) INSTALL AND TIGHTEN THE #8 X 1-1/2" OVAL HEAD TEK SCREWS IN THE REMOVABLE STOPS. BE CAREFUL NOT TO OVER TIGHTEN.
17.) IF THE RELEASE IS PLASTIC GRASP THE FREE END OF THE PLASTIC RELEASE TAPE AND SLOWLY PULL THE PLASTIC RELEASE OFF THE FOAM TAPE.
18.) TRIM THE PET FLAP AS NEEDED.
19.)USING THE DOW CORNING 995 SILICONE OR OTHER HIGH QUALITY SILICONE, APPLY A SMALL CAP BEAD OVER THE CLOSED CELL FOAM TAPE.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

9-217
07/01/15

Windstorm Frame Installation Instructions
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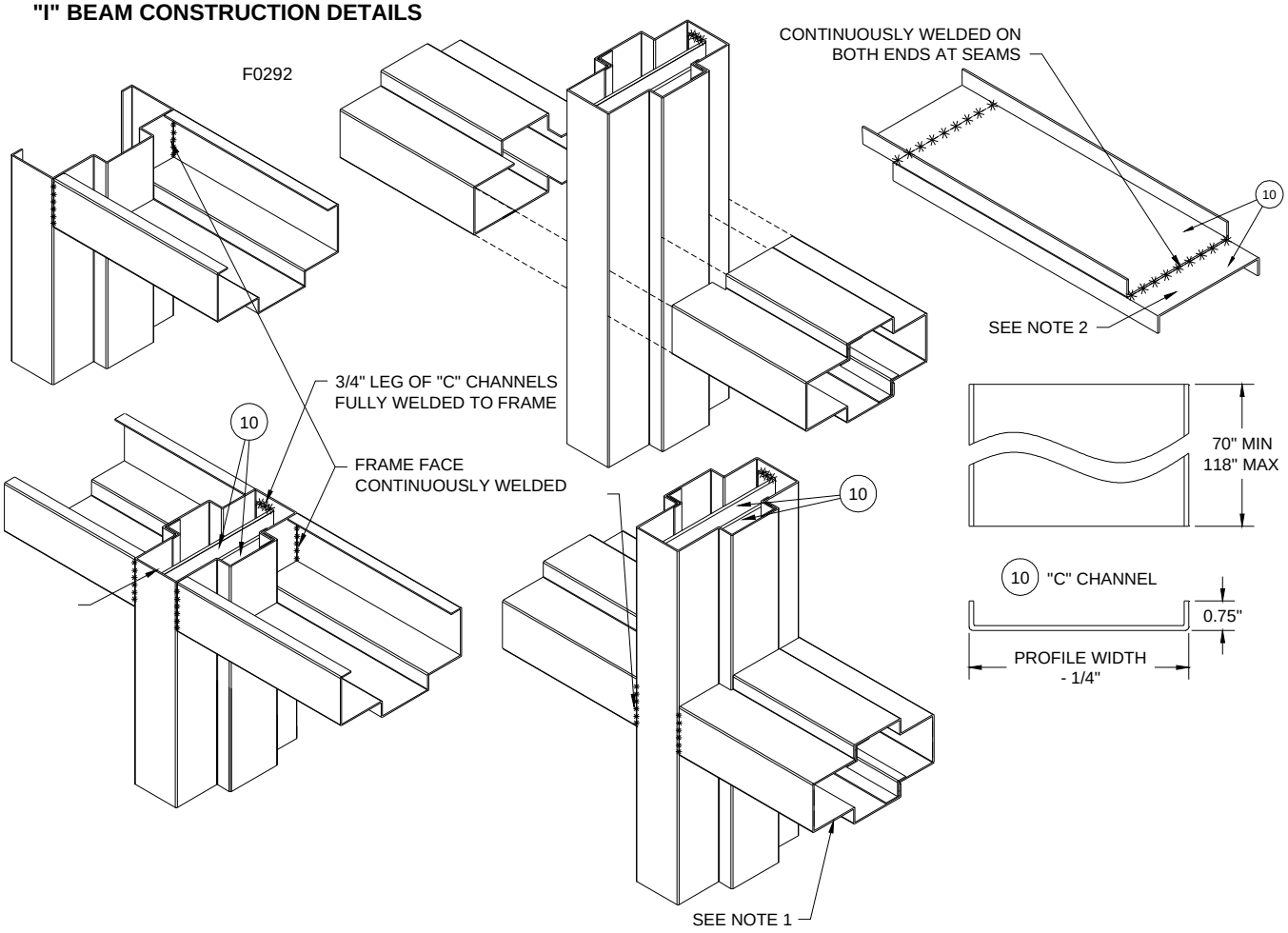
"I" BEAM CONSTRUCTION DETAILS

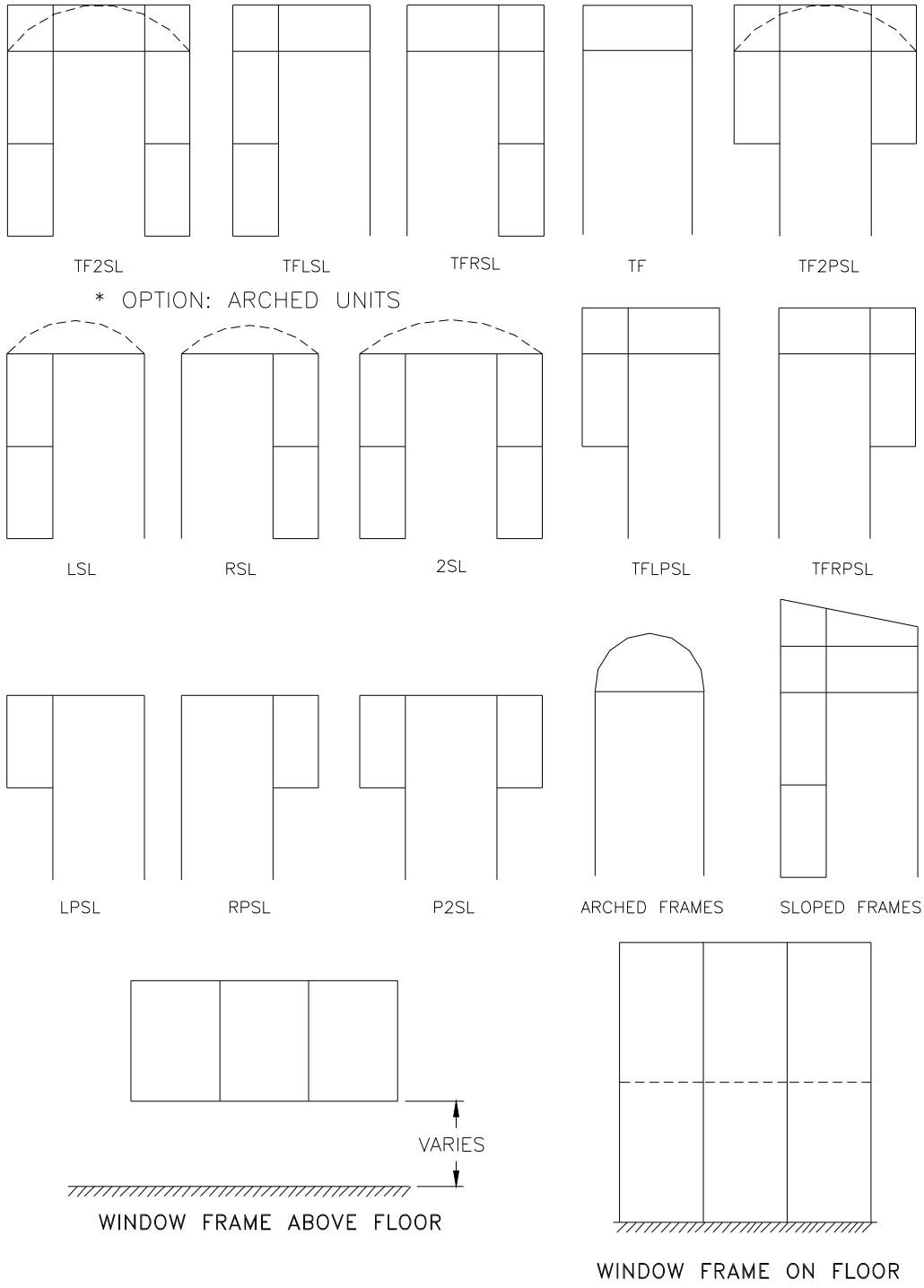


NOTE:

1. MULLIONS MUST RUN THROUGH HEADS, SILLS, OR JAMBS AND BE REINFORCED WITH 10 GAUGE "C" CHANNELS (ITEM 10) IF EQUAL TO OR GREATER THAN 6' IN LENGTH.
2. 10 GA. "C" CHANNELS MUST BE INSTALLED BEFORE WELDING TOGETHER. OFFSET 3/4" ON EACH END.
3. EQUALLY SPACED AT EACH END OF MULLION.

FRAME CONSTRUCTION AND MULLION DETAIL

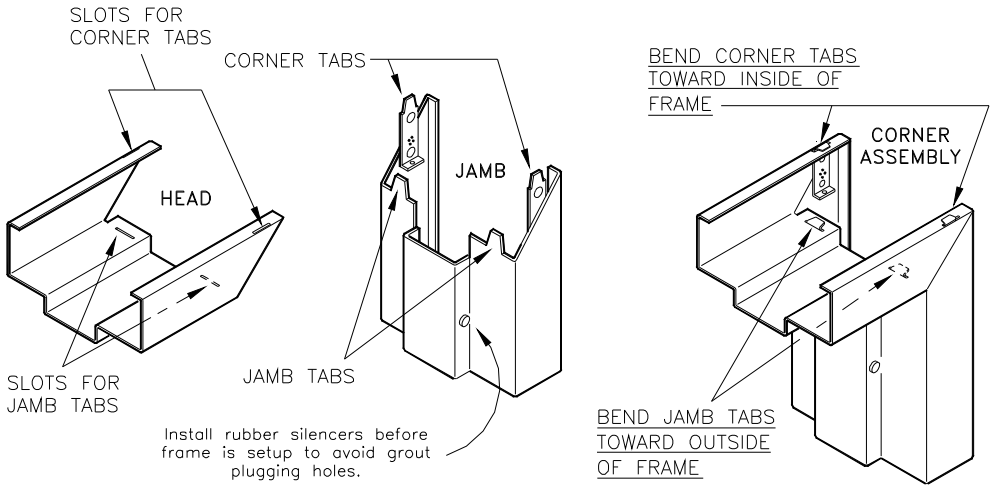
F0263



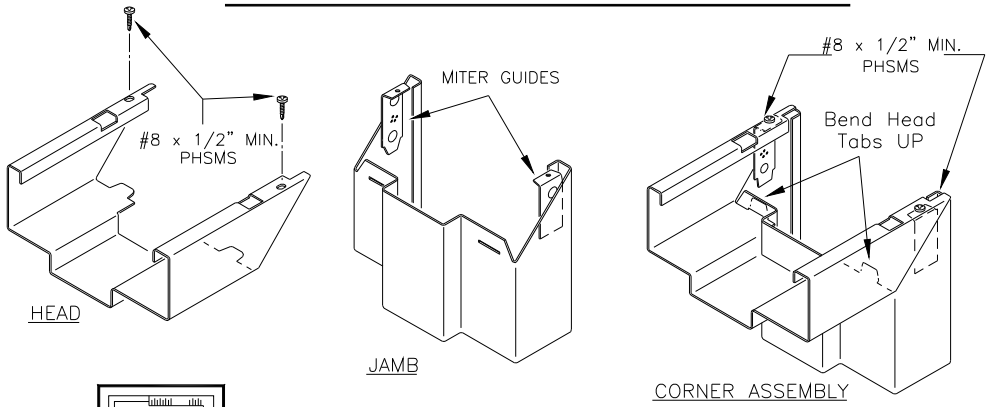
ALTERNATE FRAME DESIGN

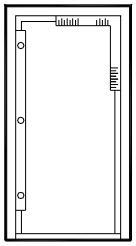
F0282

CONVENTIONAL FRAME CORNER ASSEMBLY



DRYWALL FRAME CORNER ASSEMBLY





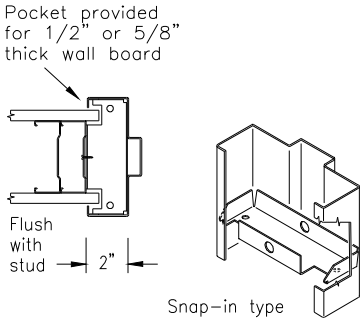
SQUARING THE FRAME

The installer should use wood spreaders, a carpenters level and a carpenters square. Set the frame in the desired location. Level head and plumb jambs. Shim under jambs if necessary.

SPREADER

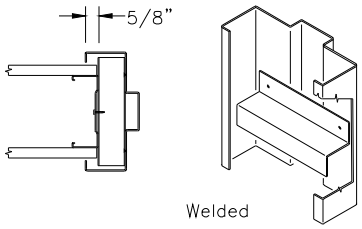
Typical wood spreader must be square and made from lumber at least 1" thick. Length of spreader equals door opening width at the head. Cut clearance notches for frame stops as shown. Spreader must be nearly as wide as frame depth for proper installation.

KD FRAME CORNERS

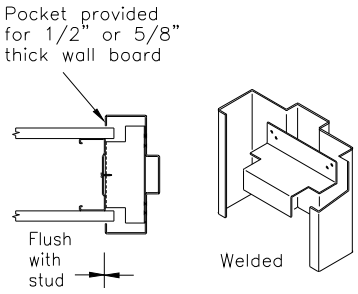


METAL STUD ANCHOR

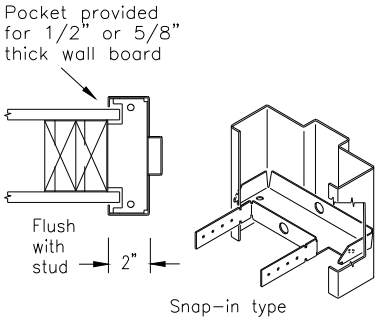
F0283



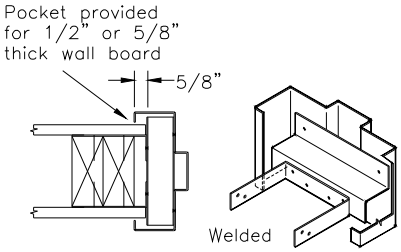
METAL STUD "Z" ANCHOR



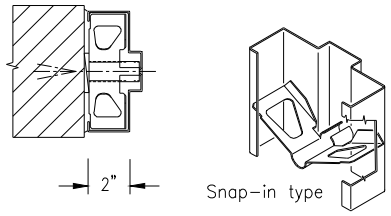
METAL STUD "Z" ANCHOR



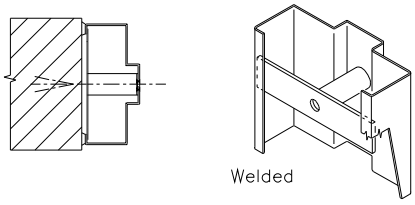
WOOD STUD ANCHOR
(Used also for METAL STUD Walls)



WOOD STUD "Z" STRAP ANCHOR

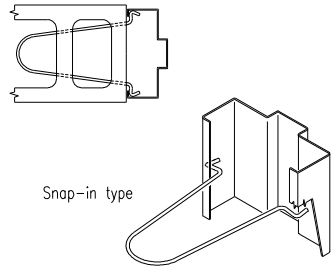


EXISTING OPENING ANCHOR

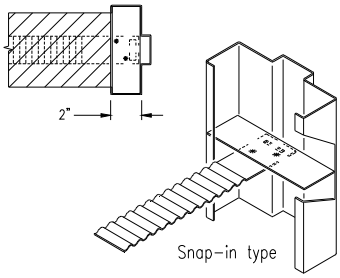


EXISTING OPENING ANCHOR

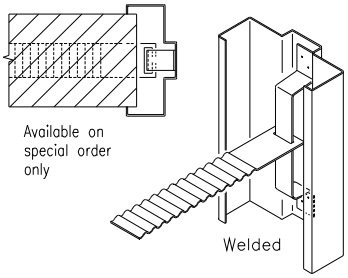
STUD WALL FRAME ANCHORS



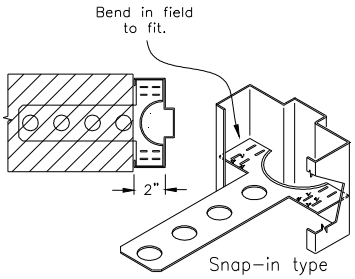
WIRE MASONRY ANCHOR



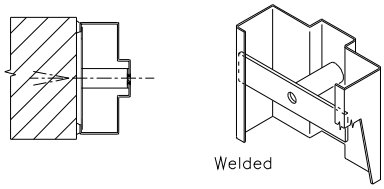
MASONRY "T" ANCHOR



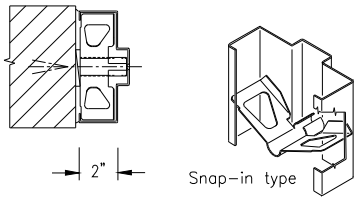
YOKE AND STRAP
MASONRY ANCHOR



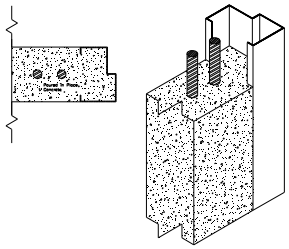
MASONRY "T" ANCHOR
(ADJUSTABLE)



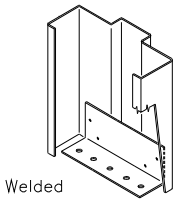
EXISTING OPENING ANCHOR



EXISTING OPENING ANCHOR



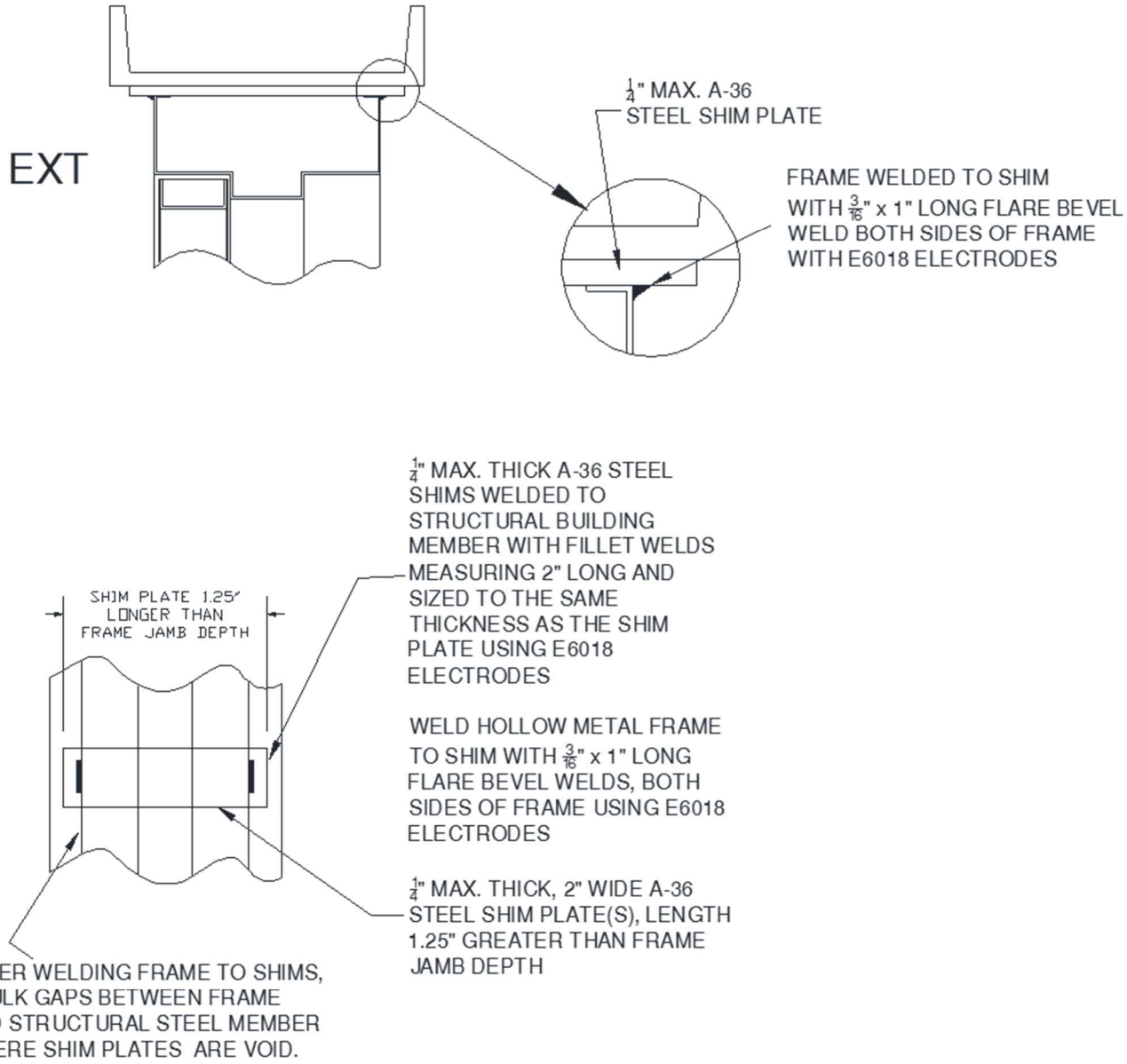
POURED IN PLACE WALL



STANDARD
FLOOR ANCHOR

F0284 A

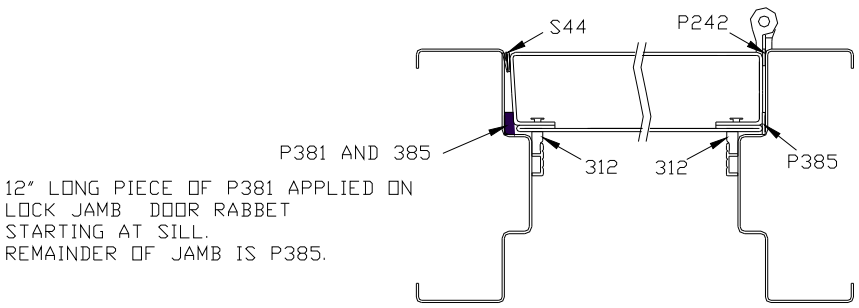
MASONRY WALL FRAME ANCHORS

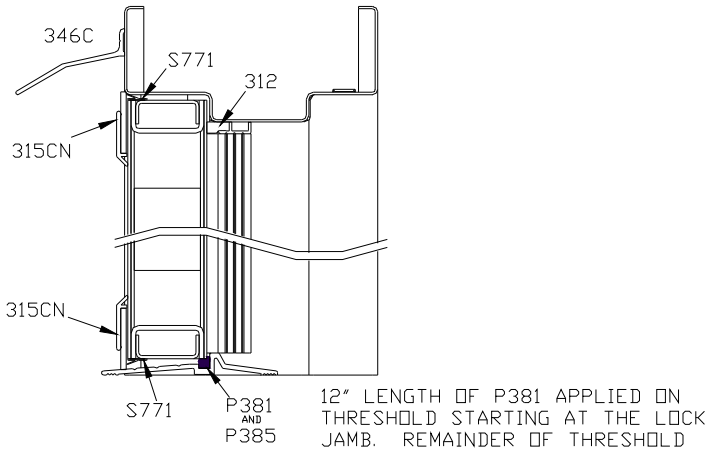


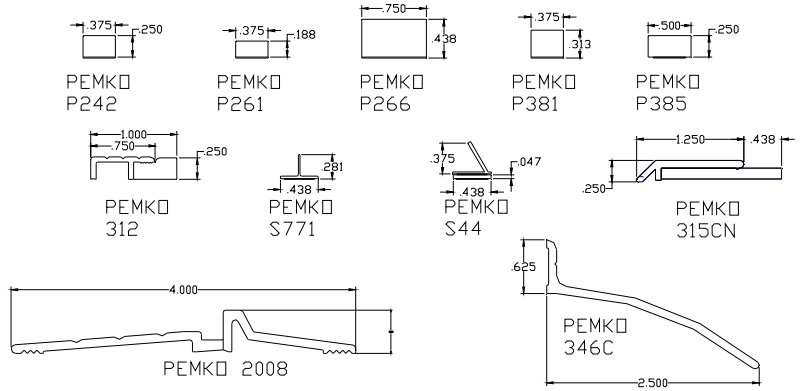
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

9-214
12/07/12

HURRICANE RESISTANT FRAMES – SHIM PLATE DETAIL





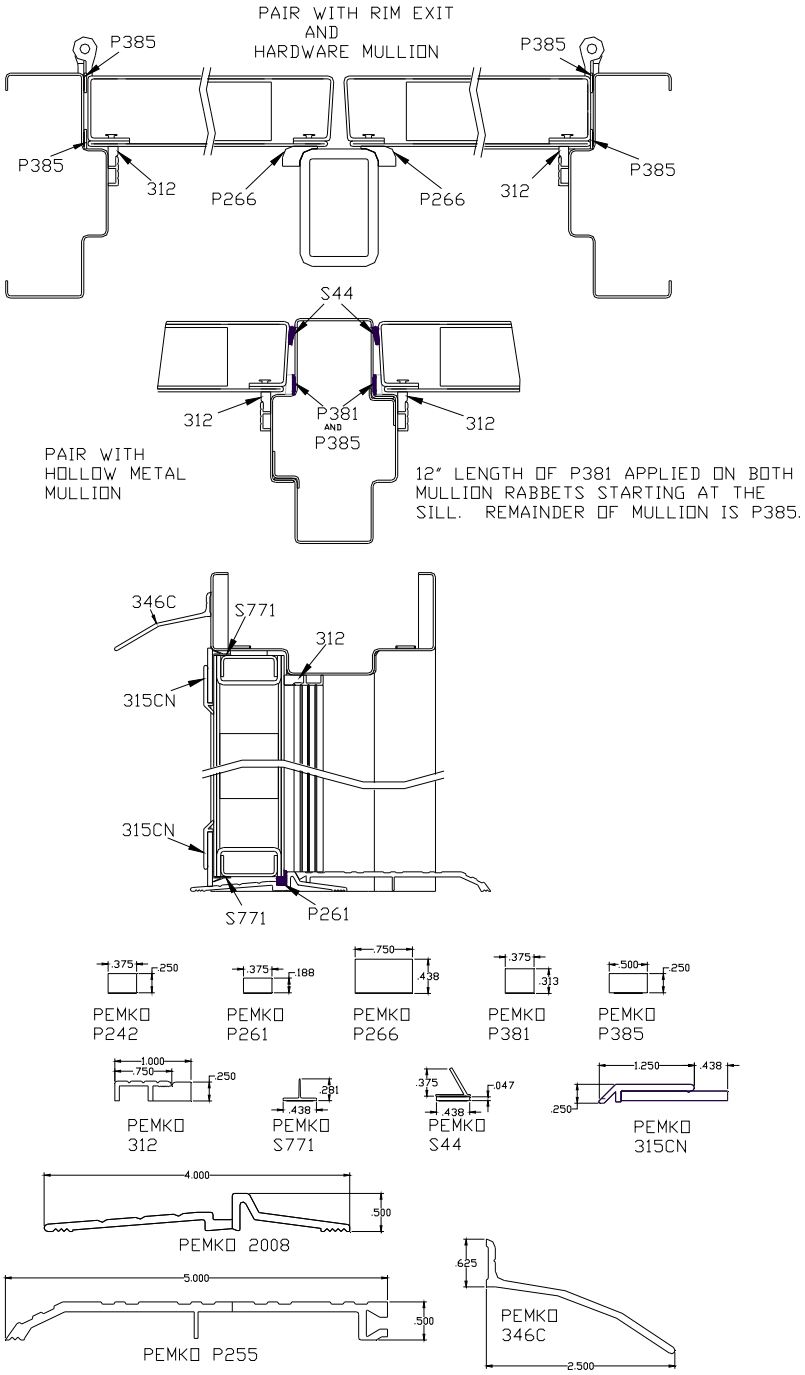


WEATHER STRIP FOR WATER INFILTRATION SINGLE DOORS PER TAS DESIGN PRESSURE 50 PSF

F0305

WATER INFILTRATION PREPARATIONS SINGLE SWING

Windstorm Frame Installation Instructions
For Use With FL 10723



WEATHER STRIP FOR WATER INFILTRATION
PAIRS OF DOORS PER TAS 202 DESIGN PRESSURE 60 PSF

F0306

WATER INFILTRATION PREPARATIONS STANDARD SWING PAIR