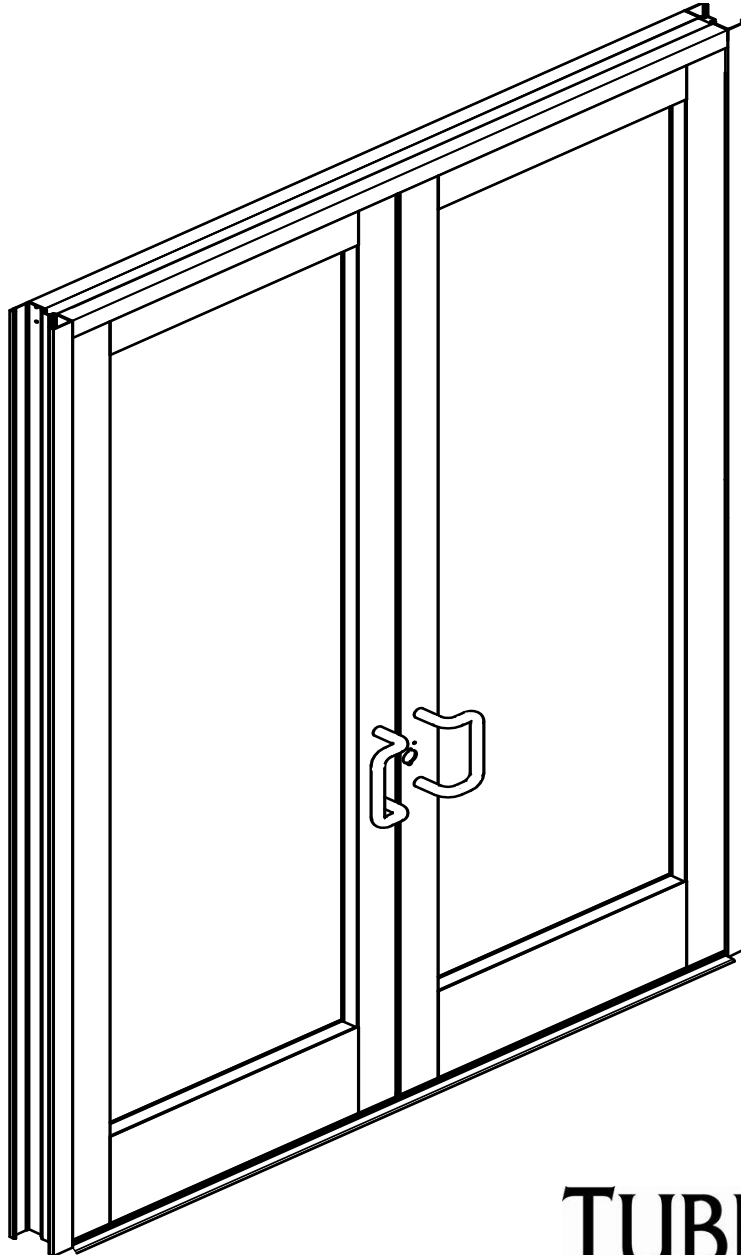


ENTRANCES AND FRAMES INSTALLATION MANUAL



TUBELITE[®]
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS

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INSTALLATION NOTES

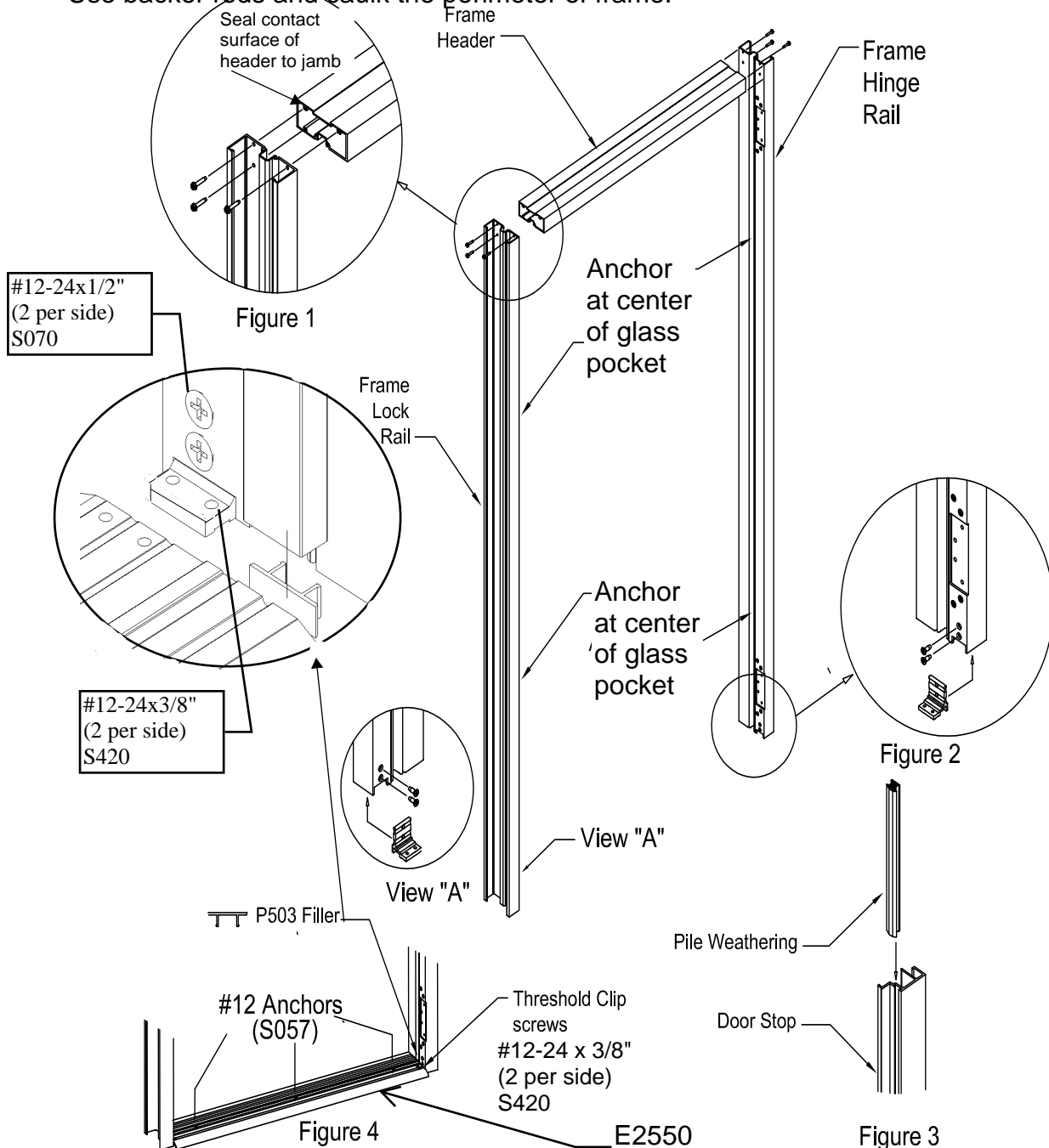
- Allow 1/4" minimum shim and sealant space at sides and top of door frame.
- Door opening must be plumb, square, level and true.
- Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.
- System to structure fasteners are not supplied by Tubelite. Due to the varying perimeter conditions and performance requirements perimeter anchors fasteners are not specified in these instructions or by Tubelite. Fasteners called out on shop drawings are to indicate minimum sizes for design loading.
- Install backer rod or insulation between frame and building opening then seal.
- Tubelite recommends snap in backs for added support and stability, such as P1713, P1714 or P1715.
- Ensure that the threshold is supported the entire length of threshold, if not shim as required.
- Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer.
- Protect erected frame. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are harmful to the finish. Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.
- Due to the diversity in state/provincial local and federal laws and codes that govern the design and application of architectural products it is the responsibility of the individual architect owner and installer to assure that products selected for use on projects comply with all applicable building codes and laws. Tubelite exercises no control over the use or application of its products, glazing materials and operating hardware and assumes no responsibility thereof.
- Check our website, www.tubeliteinc.com, for the latest installation manual update prior to commencing work.

BUTT HINGE FRAME INSTALLATION

- Attached threshold clips (P797) with provided screws. See Figure 2 and View A.
- Assemble frame as shown.

Install the frame into the opening:

- Shim and anchor frame so that it is plumb, square, level and true.
- Anchor jambs to structure per shop dwgs.
- Attached the threshold . (See Threshold Installation section for details.)
- Install vertical door stops and header door stops. (P503 filler can be installed at this time.)
- Use backer rods and caulk the perimeter of frame.

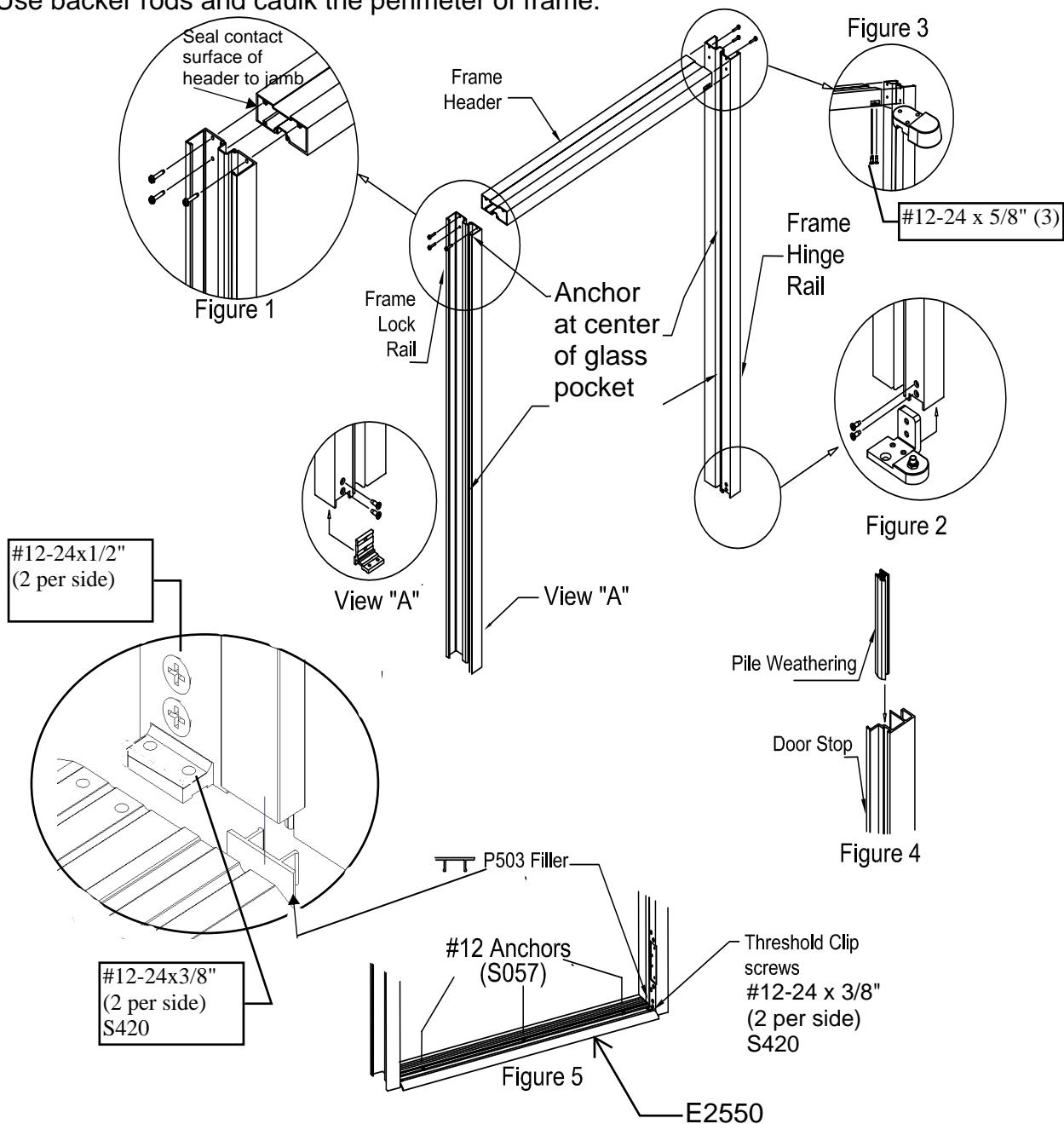


OFFSET PIVOT FRAME INSTALLATION

- Attached threshold clips (P797 with S070, #12-24 x 1/2") & pivots to frame.
 See Figure 2, 3 and View A. Assemble frame as shown.

Install the frame into the opening:

- Anchor jambs to structure per shop dwgs.
- Anchor bottom pivot to the opening. Shim if required.
- Shim and anchor frame so that it is plumb, square, level and true.
- Attached the threshold (See Threshold installation section for details).
- Install vertical door stops and header door stops. (P503 filler can be installed at this time.)
- Use backer rods and caulk the perimeter of frame.



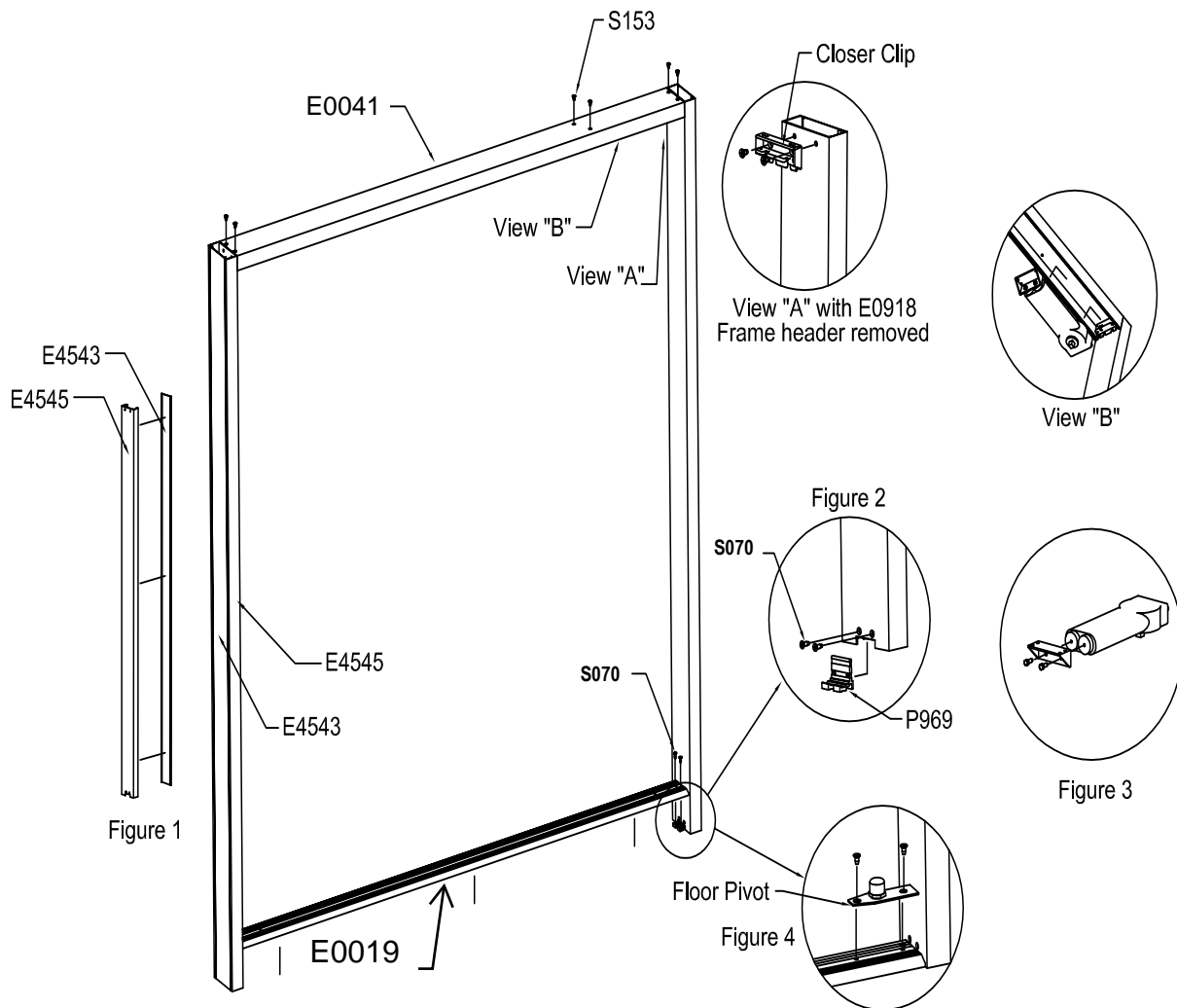
CENTER PIVOT FRAME INSTALLATION

- Attached threshold clips & pivot to frame. See Figure 2, 4.
- Assemble frame as shown.

Install the frame into the opening:

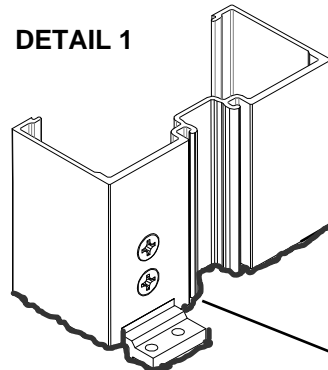
- Shim and anchor frame so that it is plumb, square, level and true.
- Anchor jambs to structure per shop dwgs.
- Anchor bottom pivot to the opening. Shim if required.
- Install vertical door stops and header door stops. (P503 filler can be installed at this time.)
- Attached the threshold (See Threshold installation section for details).
- Use backer rods and caulk the perimeter of frame.

Install the overhead door closer (s). See View A and B.



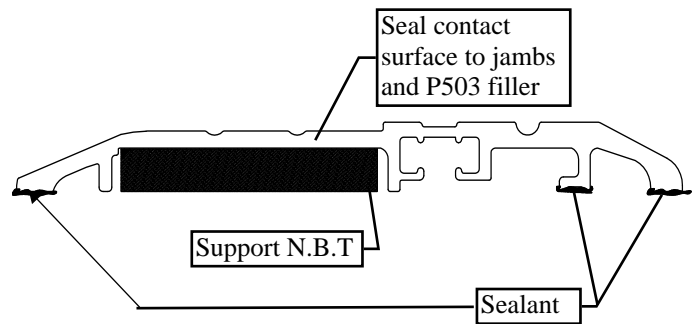
THRESHOLD INSTALLATION

- 1) Drill pilot holes in floor through pre drilled holes in threshold. See Detail 3.
- 2) Threshold needs to be leveled. Shim threshold if needed.
- 3) Be sure all surfaces are cleaned. Apply a liberal mount of sealant around the perimeter of jamb, hardware included. See Detail 1.



Seal entire bottom perimeter of the jamb and hardware.

- 4) Caulk ends of threshold, and under full length of legs. See Detail 2
- 5) Set threshold on a bed of sealant.



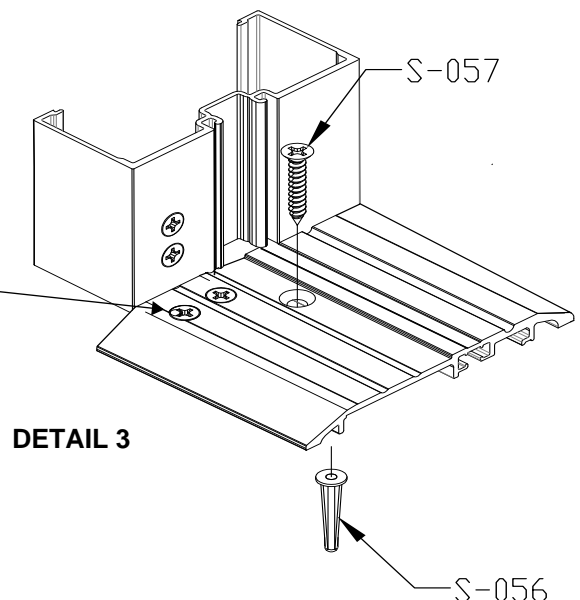
DETAIL 2

- 6) Attached anchor screws (#14 screw and plastic anchor and threshold clip screws (S420 #12-24 x 3/8"). See Detail 3.

Verify threshold is level

- 7) Cap and seal all screw heads.

Threshold Clip
Screws S420



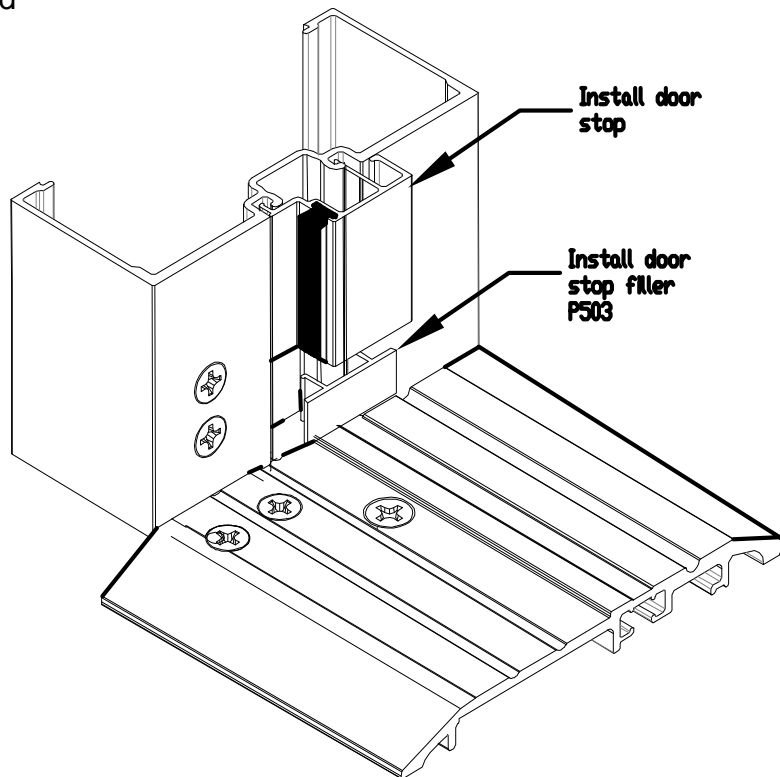
DETAIL 3

THRESHOLD INSTALLATION

- 8) Install weather pilling to door stops.
- 9) Snap in place P503 filler and door stop. See detail 4.
Door stop sit on top of the threshold.

DETAIL 4

- 10) Reseal around jambs and threshold if needed.



REMOVABLE MULLION INSTALLATION

- Removable mullion for Rim Panic (P3770, P3771, P3772)

Install the removable mullion:

- Attached shim if required (N.B.T.) See View A and View A&B.
- Attached top clip, drilling is required for #10 self tapping screw. See View B.
- Cut removable mullion to length if needed.
- Slip band clip over mullion before installing over top and bottom clip.
- Tip the top of removable mullion into the pockets of clip to allow clearance for the bottom of the mullion to slip over the pegs of the bottom clip. See Figure 9 & 10 on the next page.

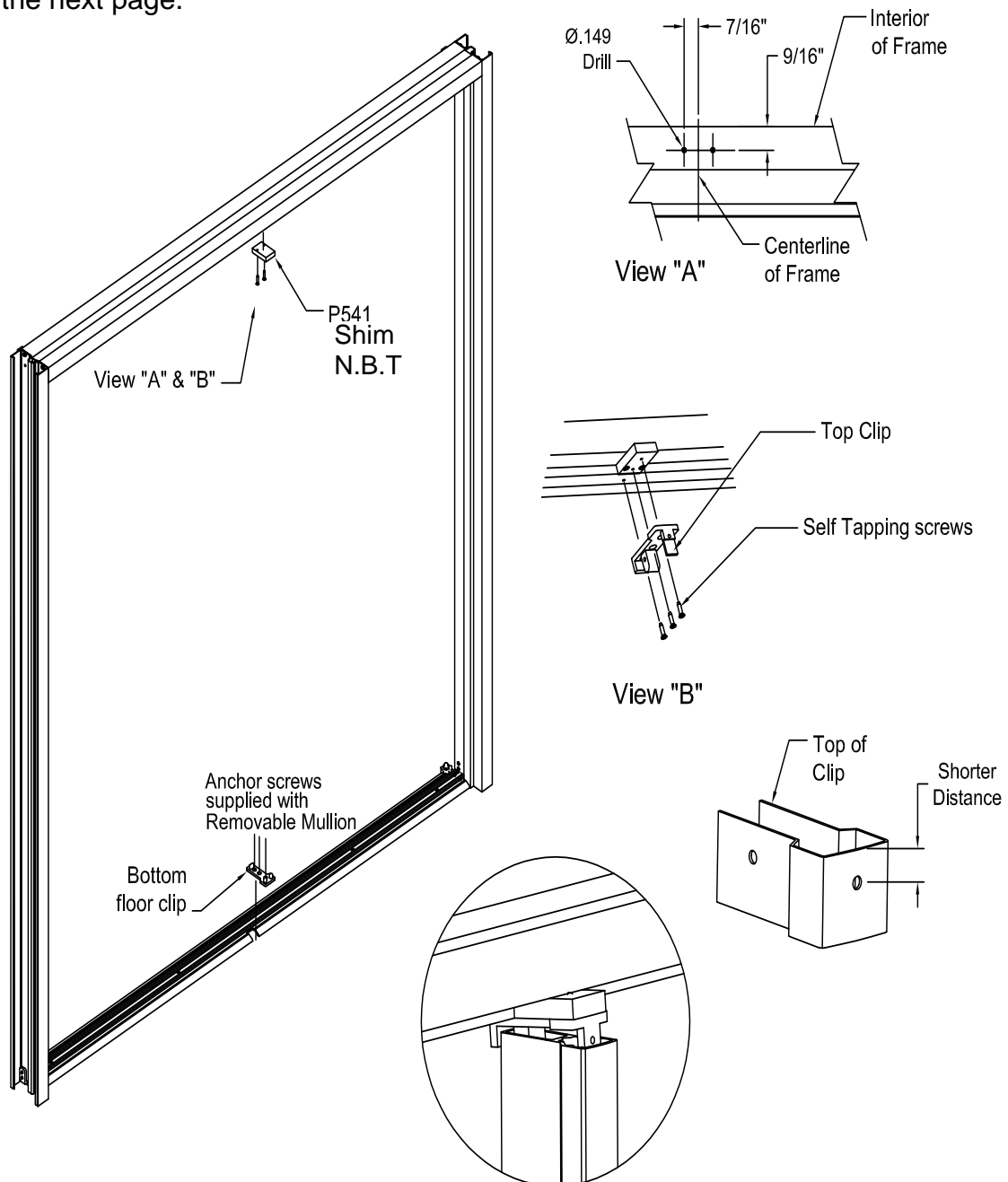


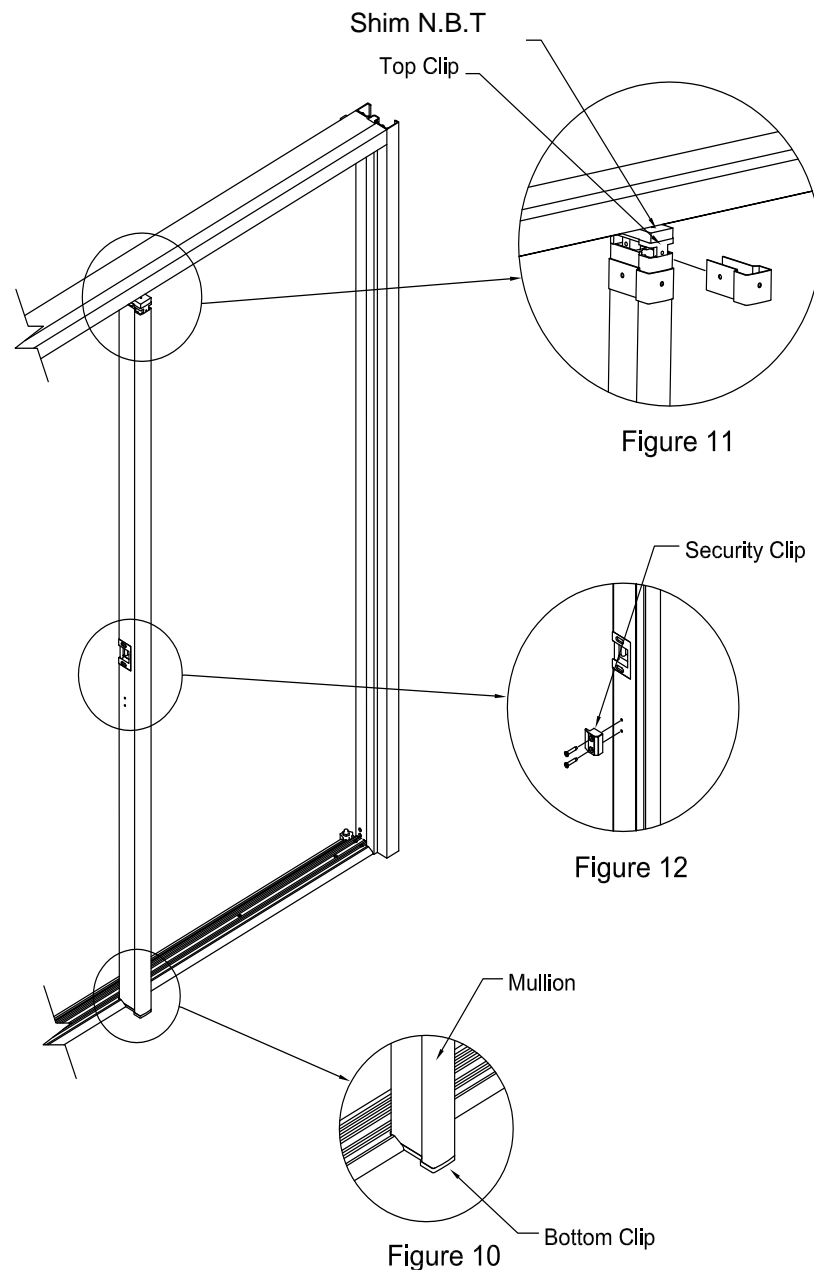
Figure 9

REMOVABLE MULLION INSTALLATION

- Removable mullion for Rim Panic (P3770, P3771, P3772) continue.

Install the removable mullion:

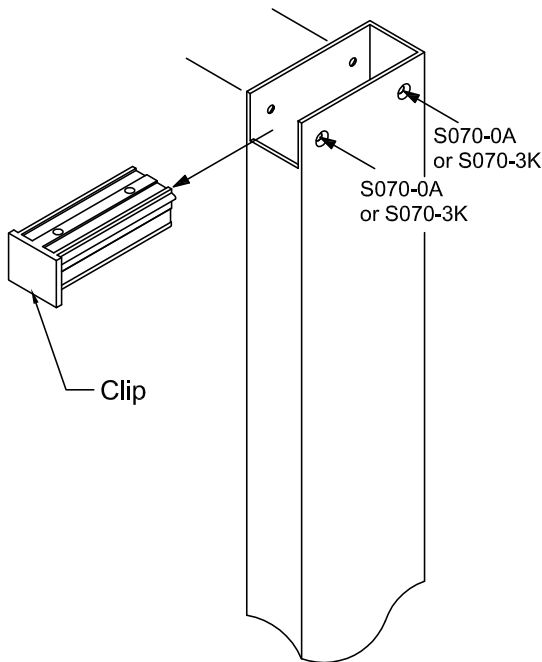
- Move top of mullion into place by catching the lip of clip with the mullion. See Figure 11.
- Attach security clips to the removable mullion into pre drilled holes with #10 screws provided. See Figure 12.



REMOVABLE MULLION INSTALLATION

- Removable mullion (P1646 & P1013). Install as shown below.

Removable Mullion Installation Information

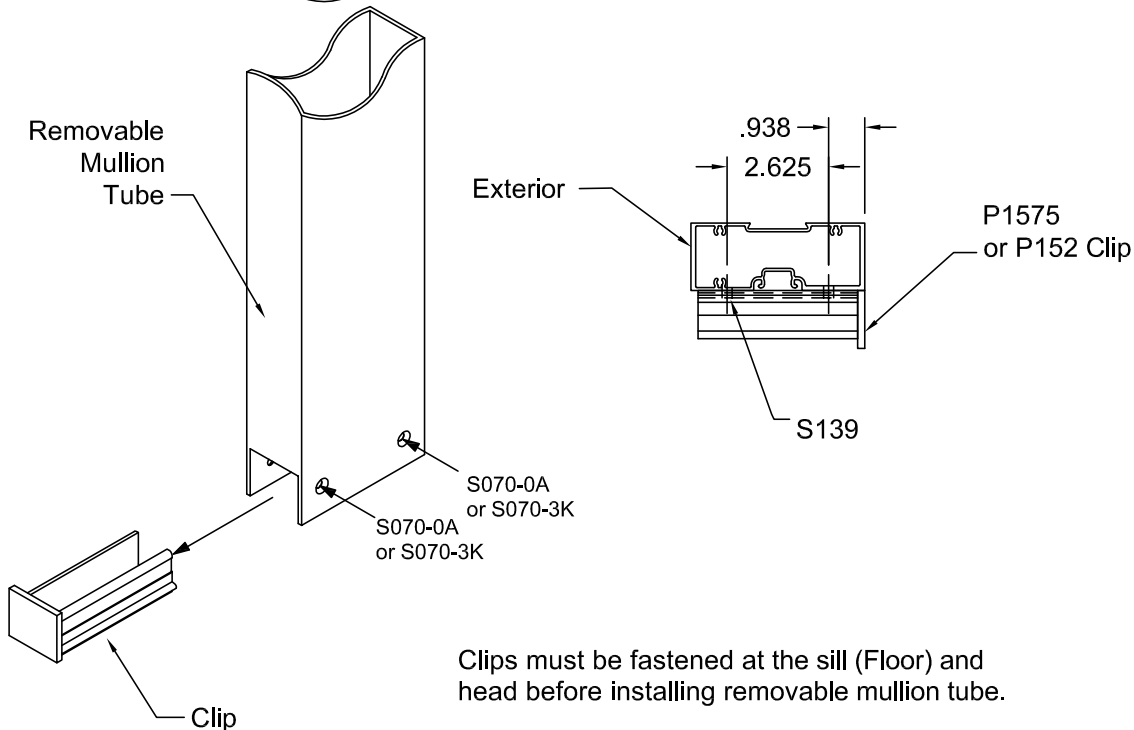


P1646 Parts List

- (2" x 4 1/2" Removable Mullion)
- (8) S070-3K or 0R Finish (Attachment Screws)
- (2) S139-0R (Header Screws)
- (2) S056-0R (Plastic Anchors)
- (2) S057-0R #14 x 1 1/2 (Wood Screws)
- (2) P1575 x Finish (Clips for Header & Sill)
- (1) P1851 x Finish (Mullion)

P1013 Parts List

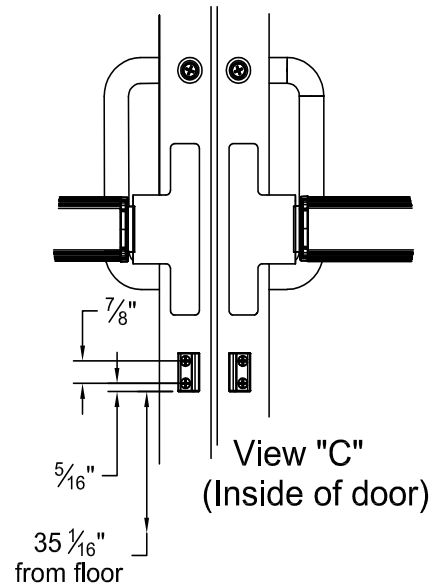
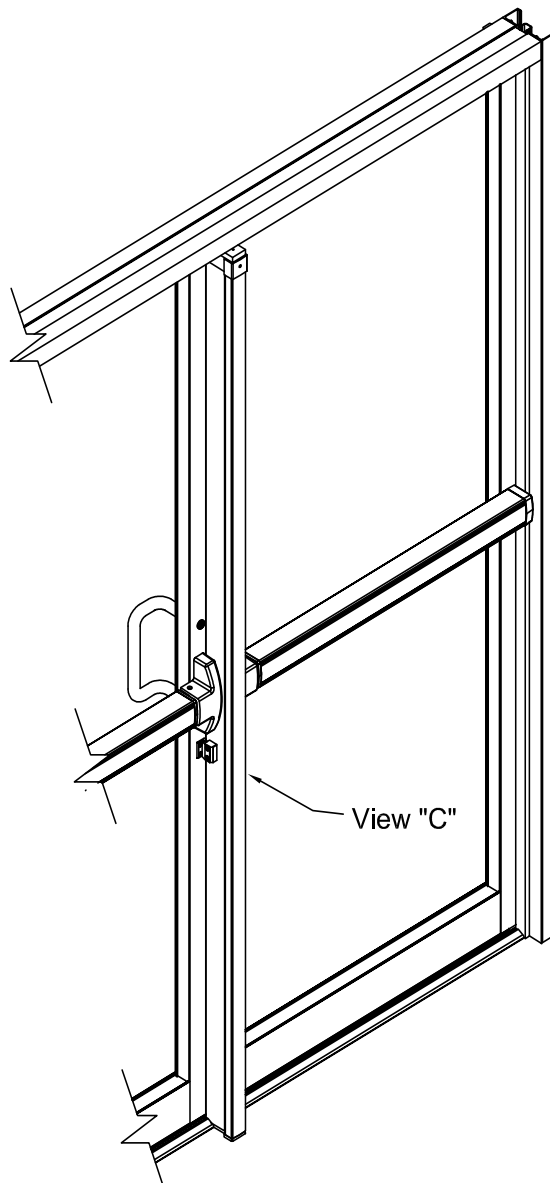
- (1 3/4" x 4 1/2" Removable Mullion)
- (8) S070-3K or 0R Finish (Attachment Screws)
- (2) S139-0R (Header Screws)
- (2) S056-0R (Plastic Anchors)
- (2) S057-0R #14 x 1 1/2 (Wood Screws)
- (2) P152 x Finish (Clips for Header & Sill)
- (1) P1843 x Finish (Mullion)



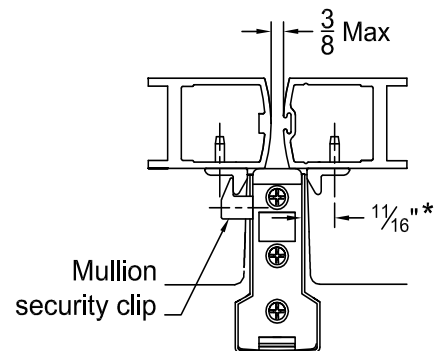
Clips must be fastened at the sill (Floor) and head before installing removable mullion tube.

SECURITY CLIPS INSTALLATION

- Attaching security clips on doors and removable mullion.
- Install as shown below.



Section through mullion and door

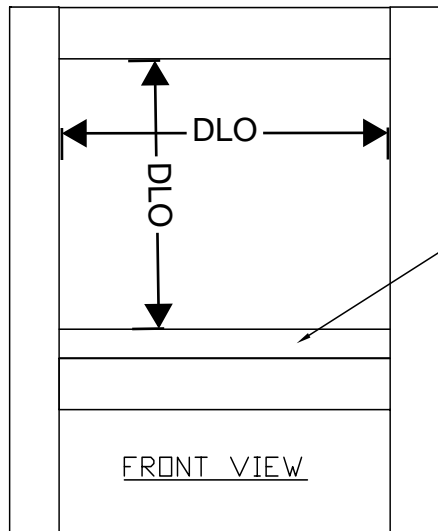


* This dimension may vary slightly depending on gap between doors

TRANSOM GLASS INFORMATION

E4500 SERIES - 1/4" GLASS:

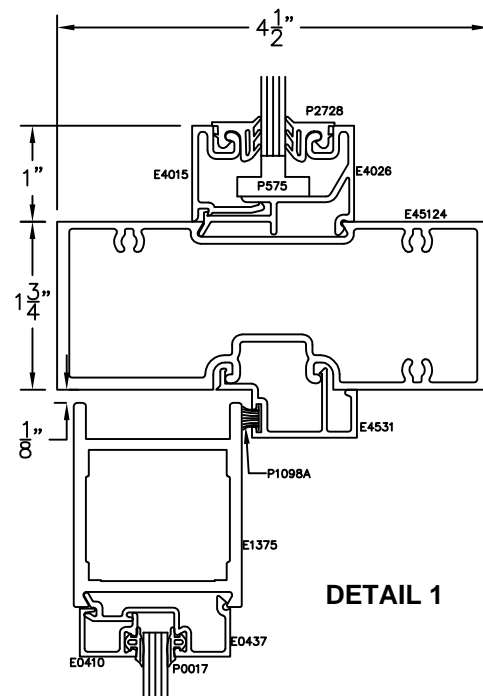
- Transom sash/glass stop at transom header only. See Detail 1.
- Recessed pocket at jambs and frame header.
- DLO + 5/8" max for glass size. This does not apply for tubular door jamb.



E4026 (1 PC)
 E4015 (1 PC)



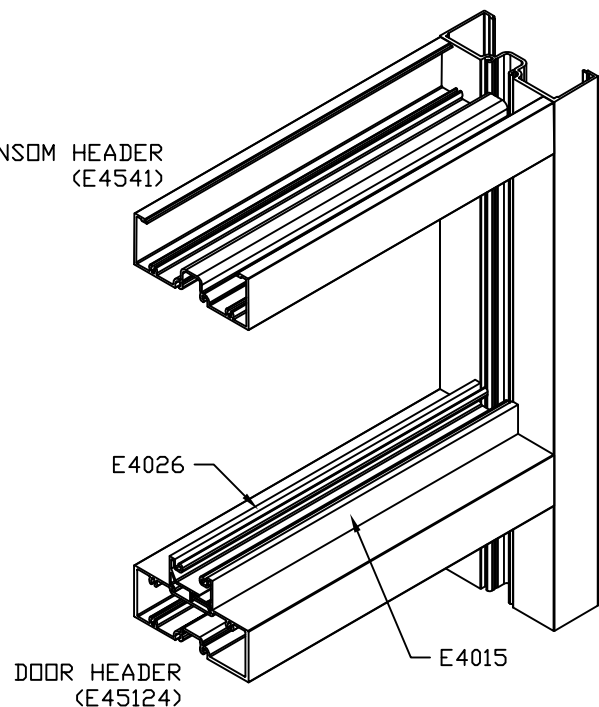
Glass Stop



DETAIL 1

TRANSOM HEADER
 (E4541)

JAMB
 (E4544)

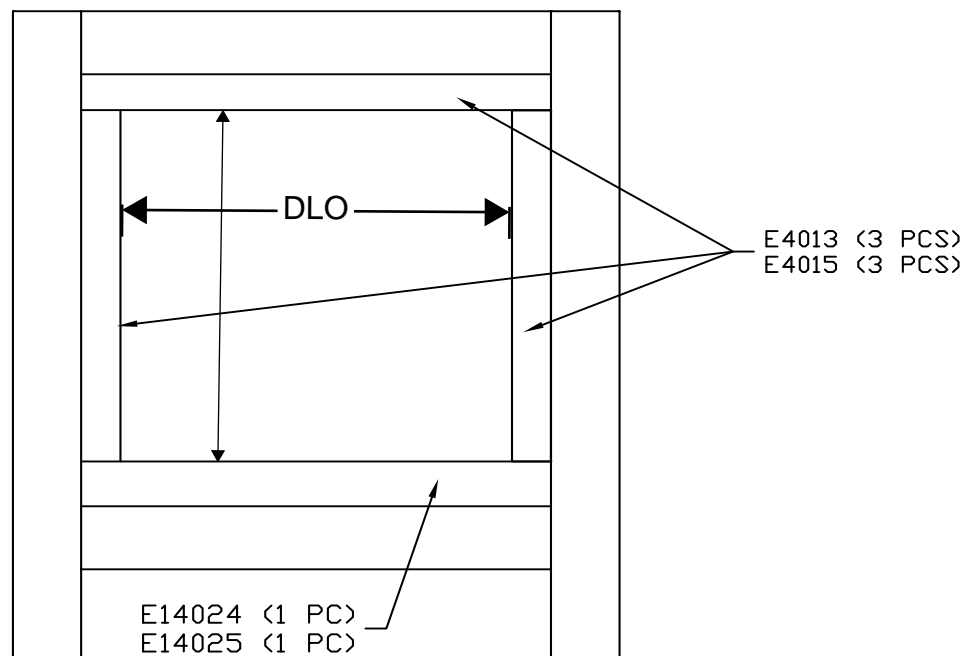
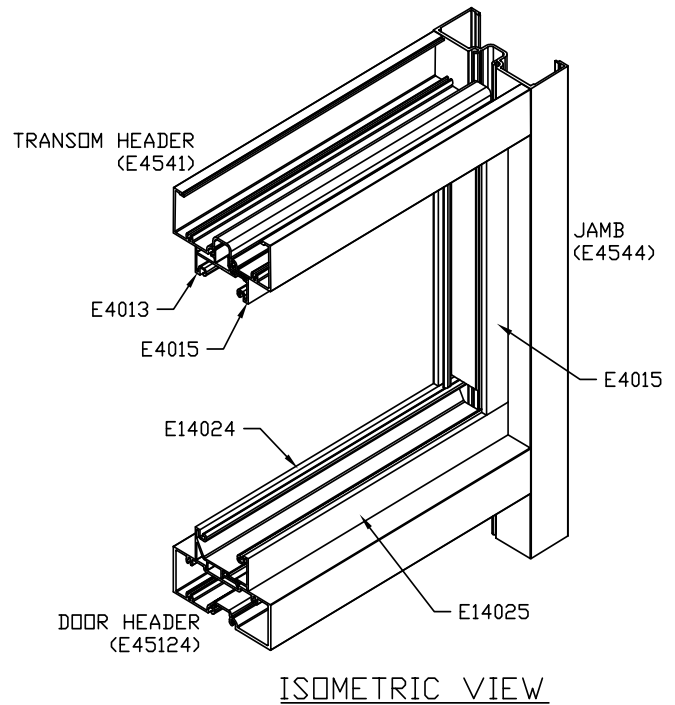
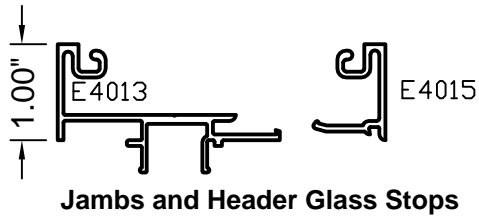
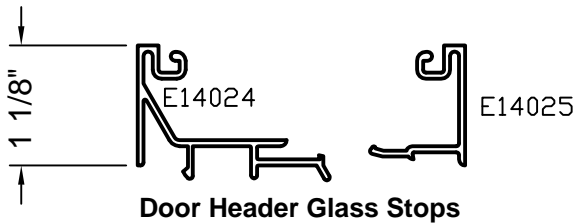


ISOMETRIC VIEW

TRANSOM GLASS INFORMATION

E4500 SERIES - 1" GLASS:

- Transom sash/glass stop at all sides.
- DLO + 3/4" max for glass size.

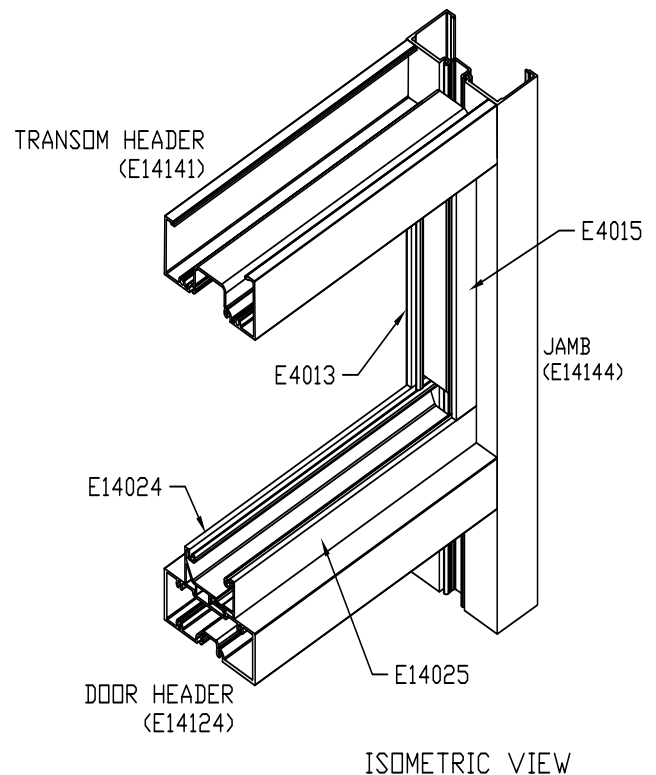
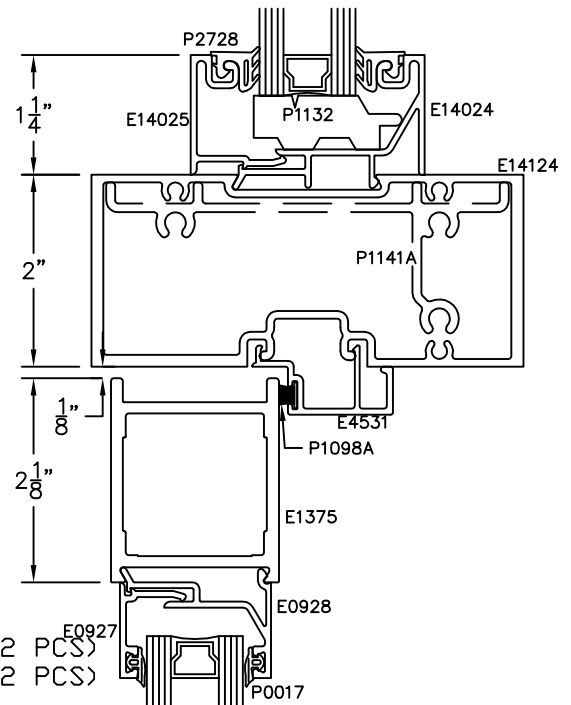
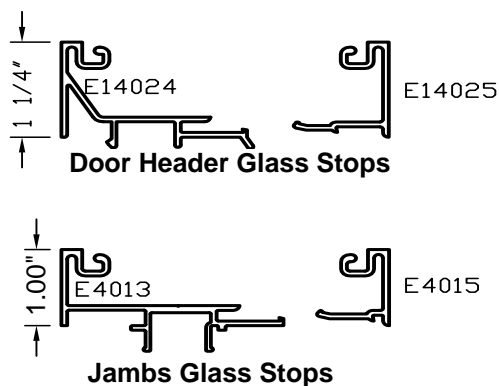
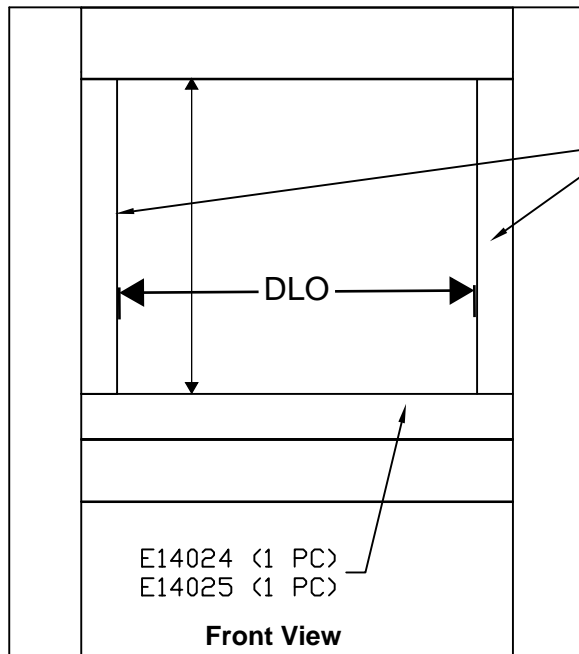


FRONT VIEW

TRANSOM GLASS INFORMATION

E14000 SERIES - 1" GLASS:

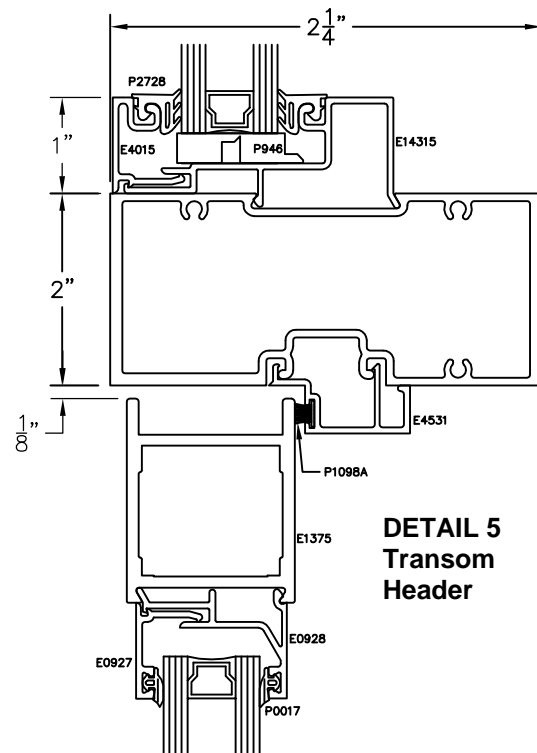
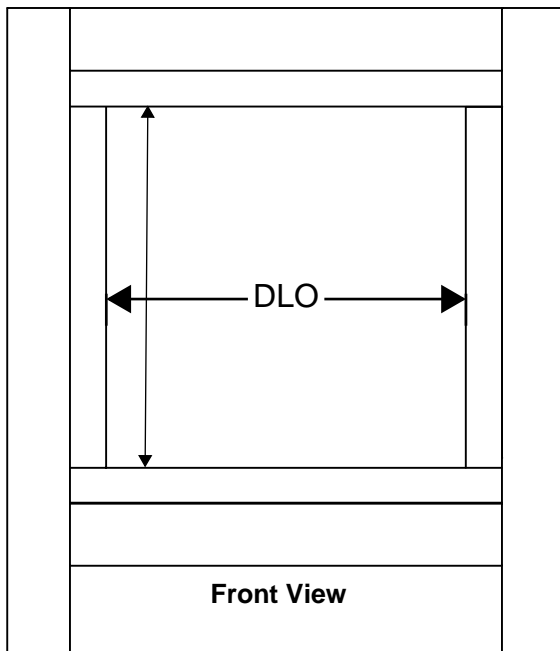
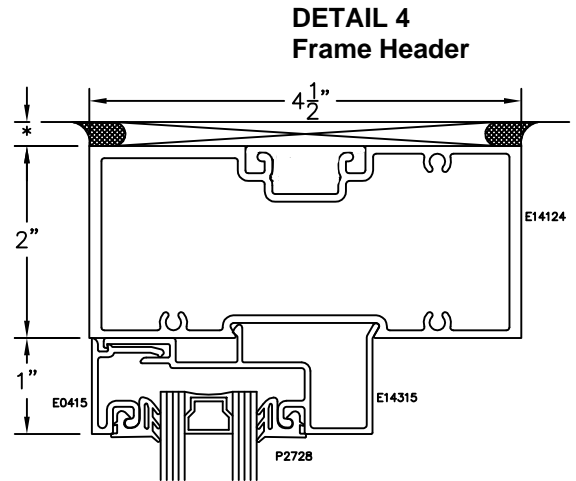
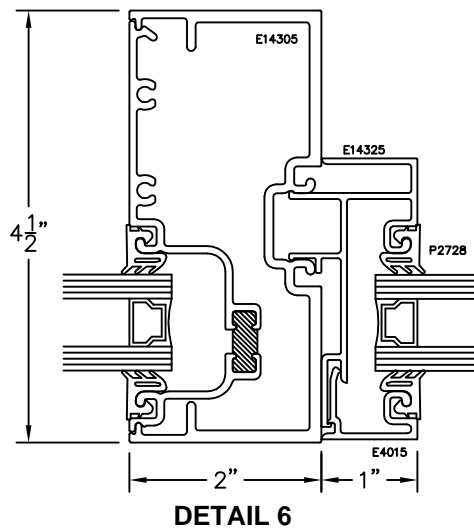
- Transom sash/glass stop at transom header and jambs. See Details.
- Recessed pocket at frame header.
- DLO +3/4" max for glass size.



TRANSOM GLASS INFORMATION

E14000 I/O SERIES - 1" GLASS:

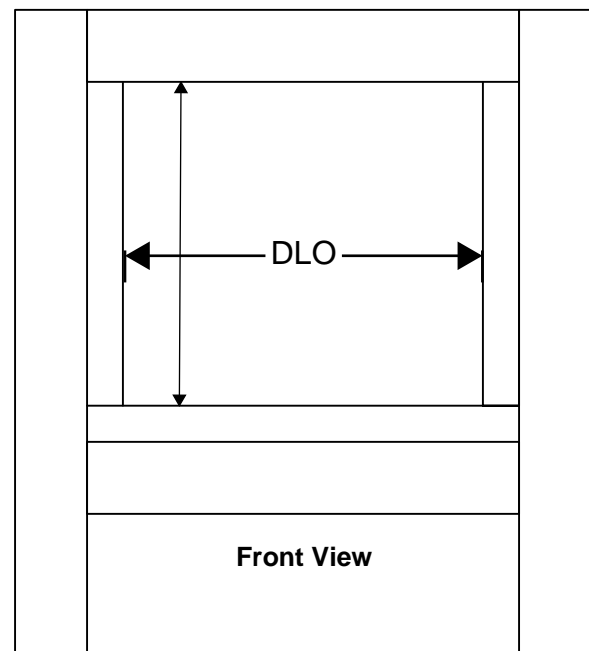
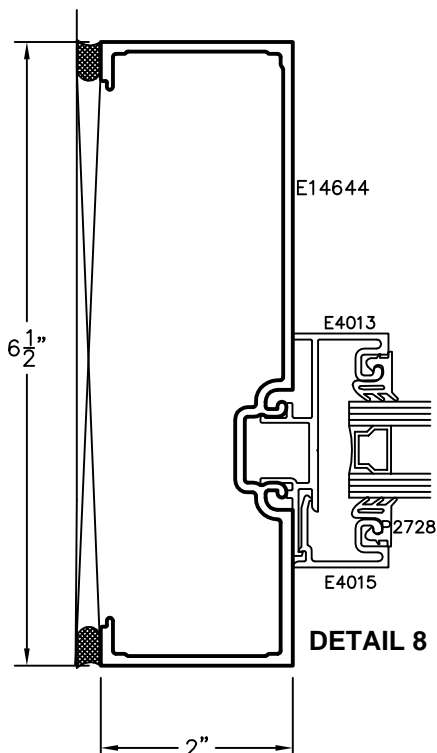
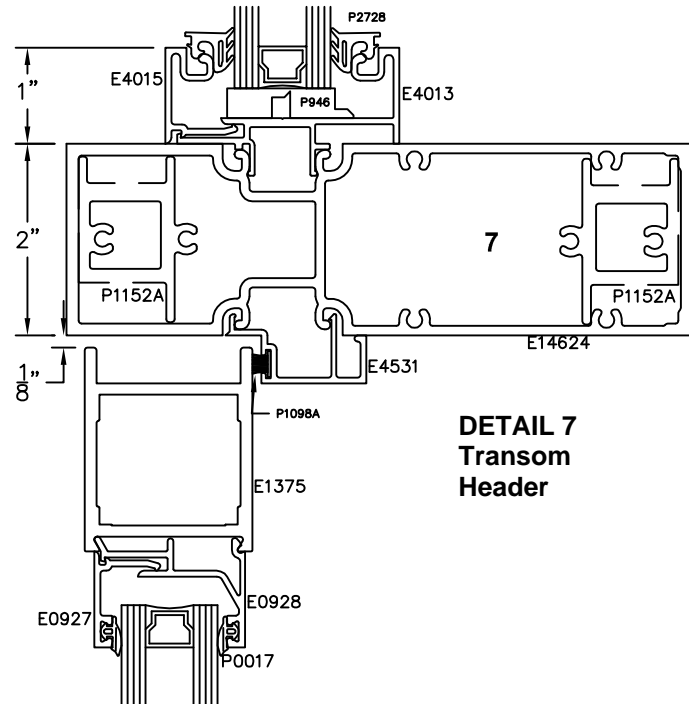
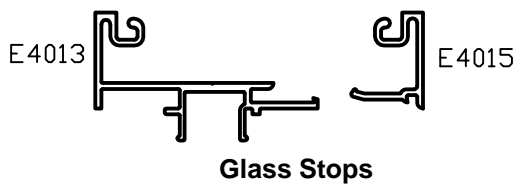
- Transom sash/glass stop at transom header, frame header and jambs. See Detail 4, 5 and 6.
- DLO +3/4" max for glass size.



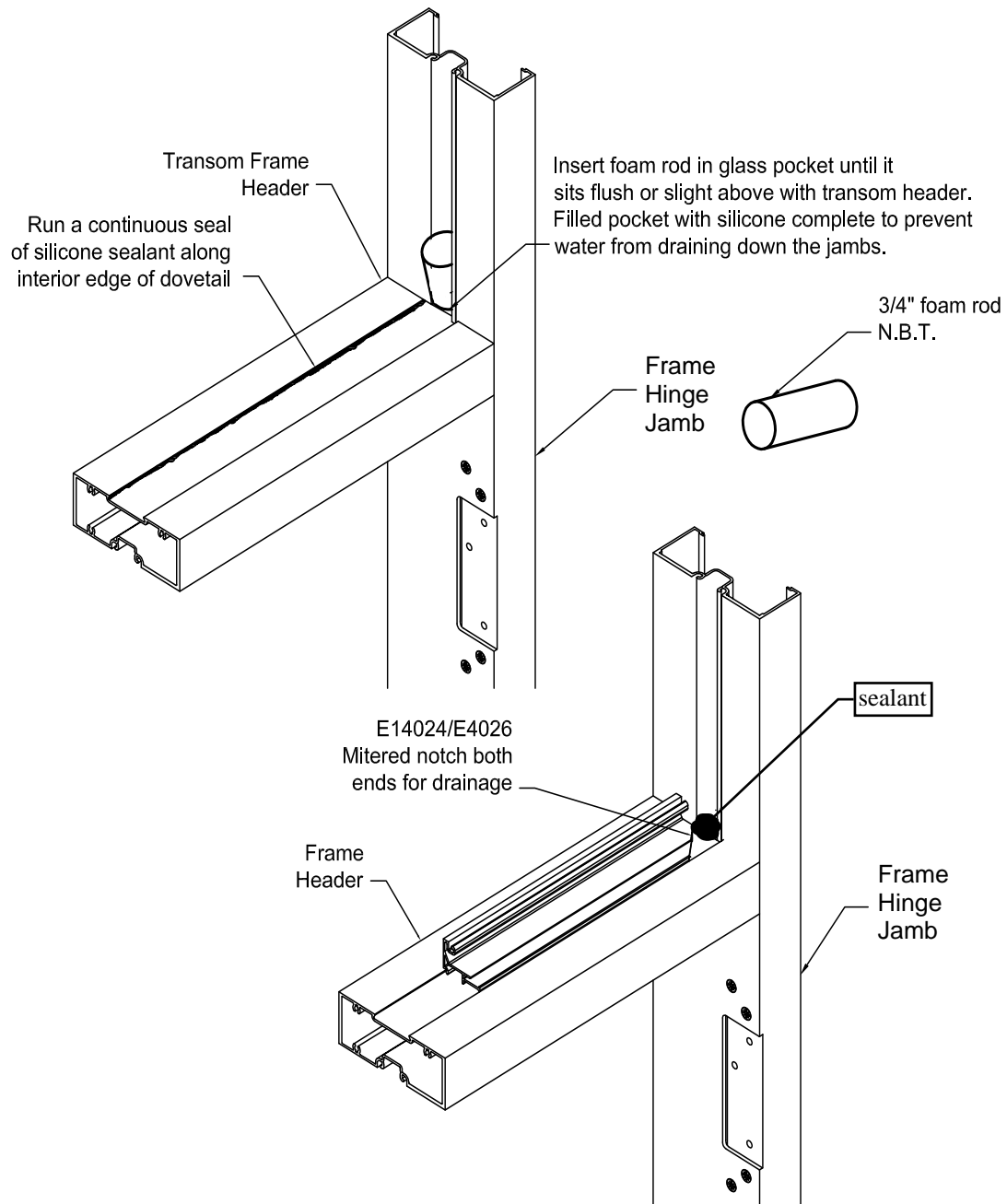
TRANSOM GLASS INFORMATION

E14650 SERIES - 1" GLASS:

- Transom sash/glass stop at transom header, and jambs. See Detail 7 & 8.
- Recessed pocket at frame header.
- DLO +3/4" max for glass size.

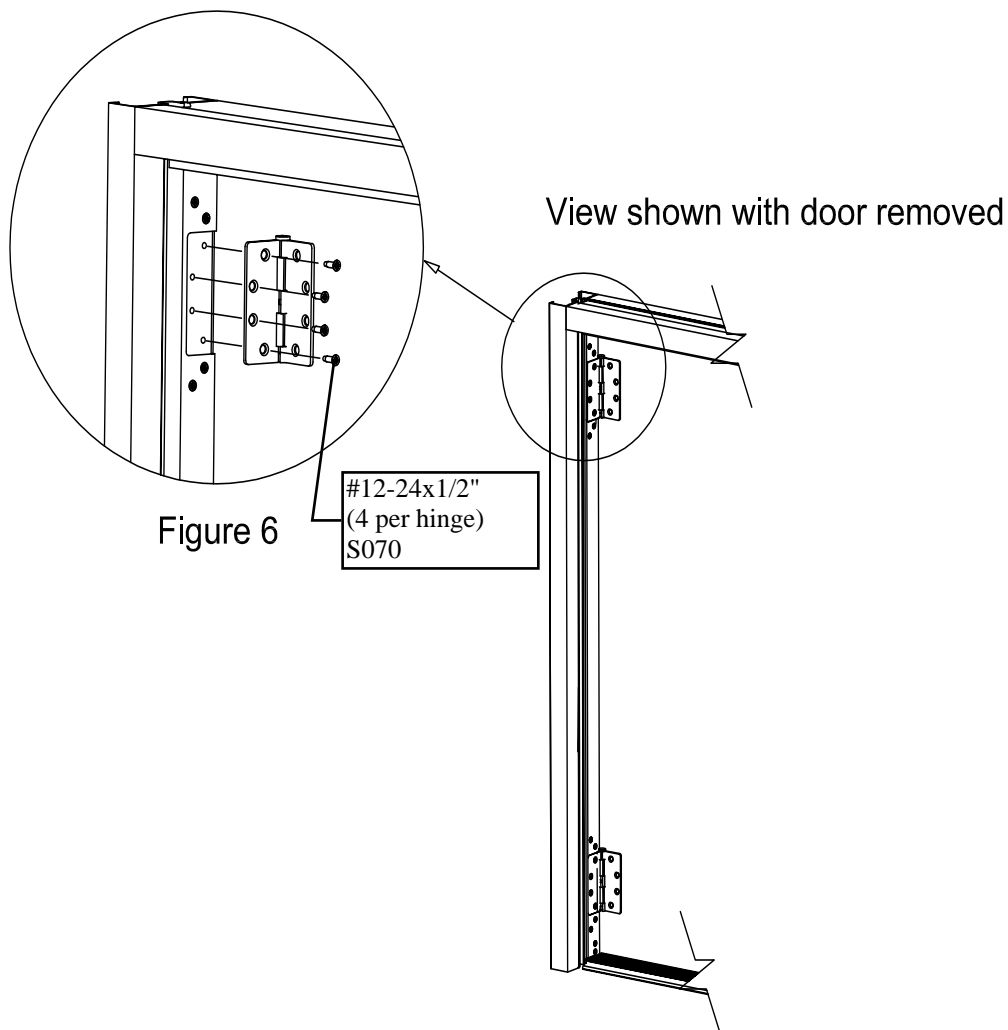


TRANSOM END DAM INSTALLATION



BUTT HINGE DOOR INSTALLATION

- Support door and line up butt hinge mounting holes and screw into place. See Figure 6.
- Check the alignment of the door to frame. Alignment can be adjusted by adjusting cross-blocking of glazed door. See glazing section for more details.



OFFSET PIVOT DOOR INSTALLATION

- If pivot is not supported by the finished floor, grout or block under it as required. If door will be hung and operated prior to finished floor installation. Block under pivot and anchor to floor.
- Set bottom pivot on door over the pin on bottom frame pivot. See Figure 6.

- Compress the retractable pivot pin in the top pivot and set door up into position so the pivot pin engages the frame pivot. See Figure 8 & 7.

- Align the pivot stile by adjusting the screw in the bottom pivot.

-Unscrew top dress cap and adjust the screw inside the pivot with an allen wrench. See Detail A.

- Remove top dress cap, Fig. 6.
- Clockwise to raise the corner.
- Counter-clockwise to lower.

- Door should swing freely.

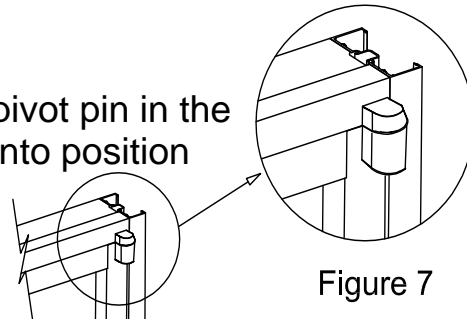
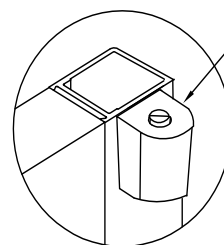


Figure 7



Compress retractable pin in pivot

Figure 8

Top dress cap

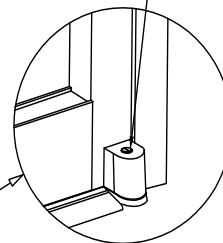
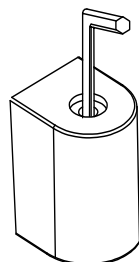


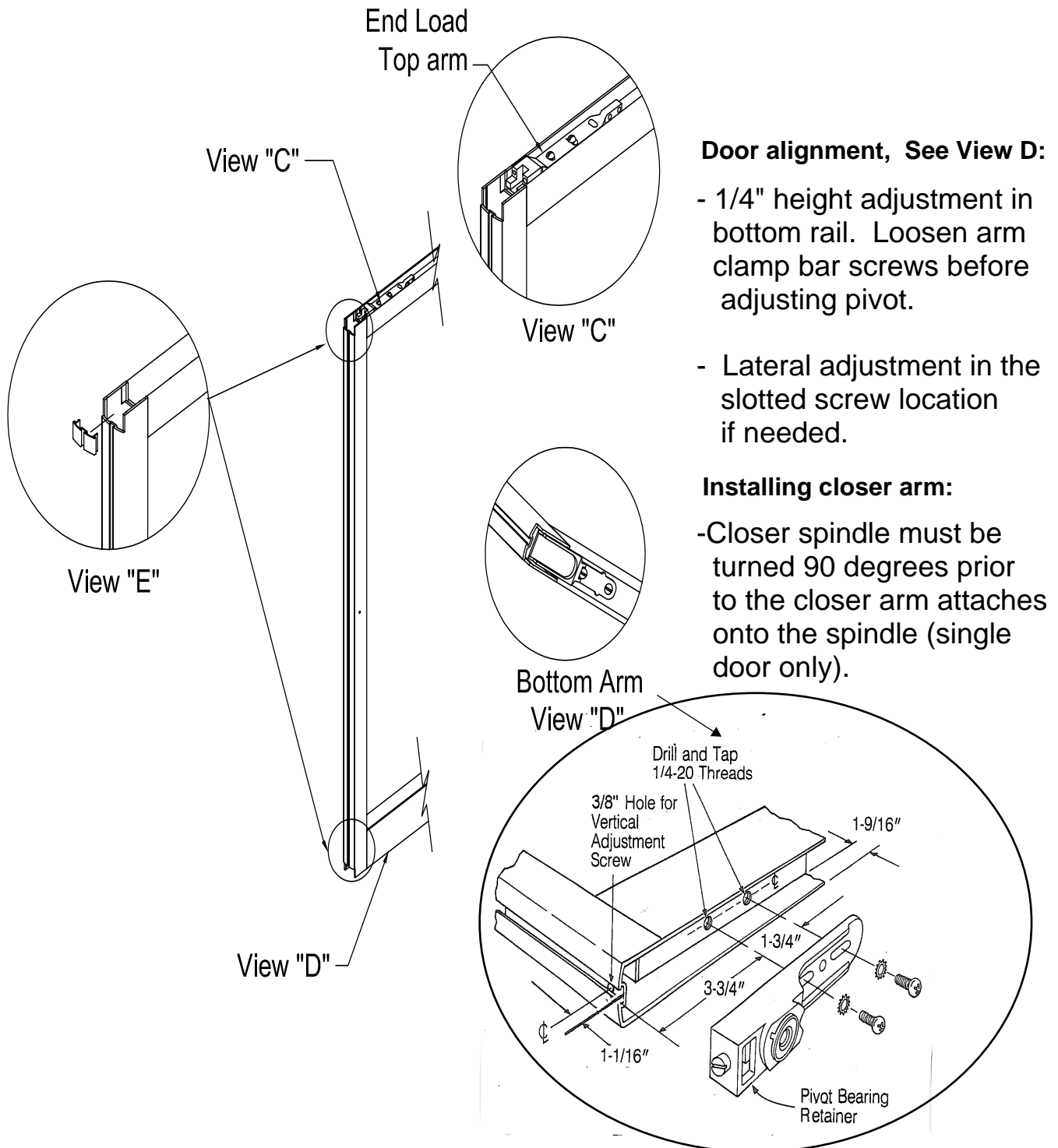
Figure 6



Detail A

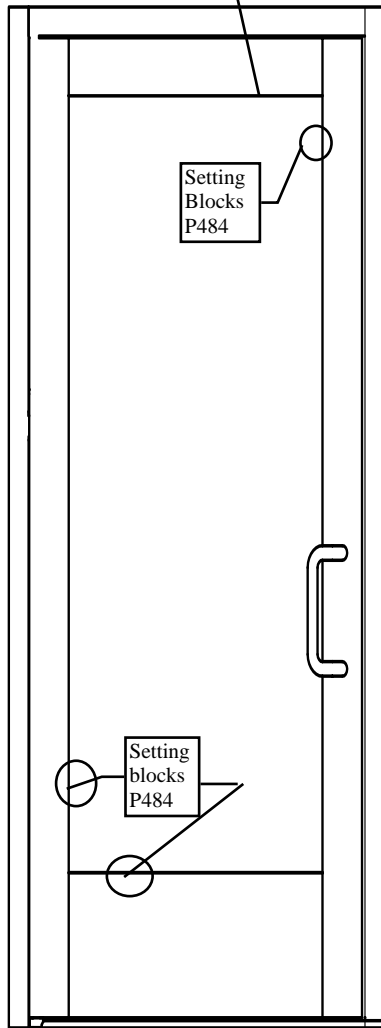
CENTER PIVOT DOOR INSTALLATION

- Set door down onto the bottom pivot and slide door in.
- Holding door vertical as possible, push door into closed position.
- Once door is located onto the square peg on the closer, the keeper bar that is included with the overhead closer, can be installed and secured.

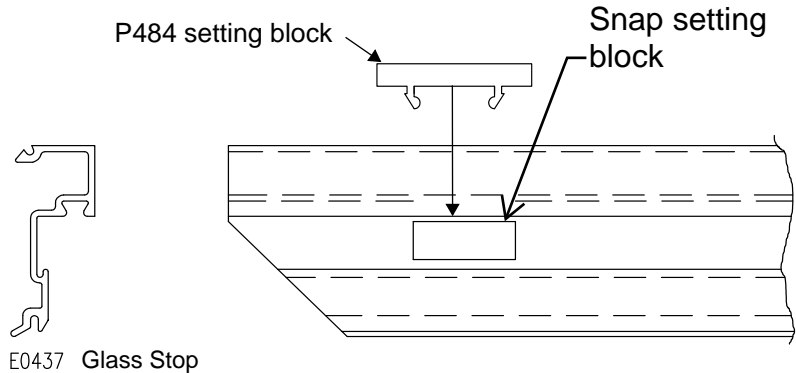


GLAZING DOOR INSTALLATION 1/4" GLASS

Adj. Setting
 Block, narrow stile
 door only.



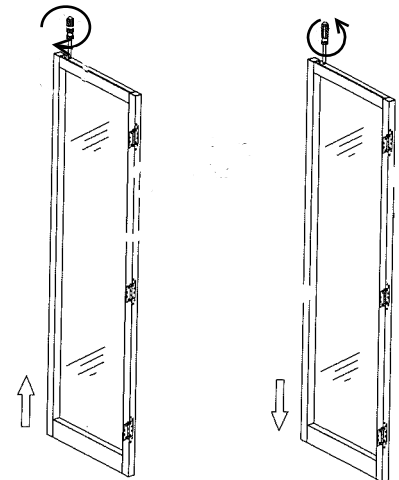
NARROW STILE DOOR WITH 1/4" GLASS



1) Snap the P484 setting block into the factory prep location in the glass stops (3 places). See detail above.

2) Install glass (see website for glass size calculator) and exterior glass stops.

3) Adjust the alignment of the door by turning the screw located in the top rail.



Clockwise to raise
 corner.

Counter clockwise to
 lower.

MEDIUM & WIDE STILE DOOR WITH 1/4" GLASS

- Follow steps #1 & #2 list above. Adjustable setting blocks are not available for Medium and Wide Stile doors.

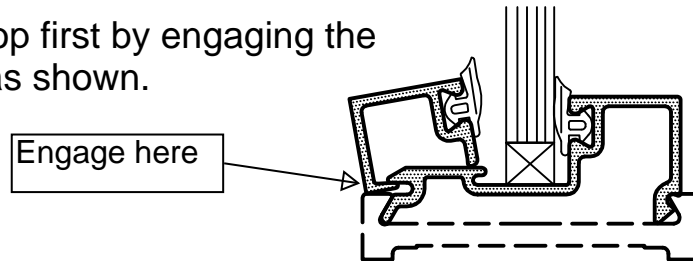
** Top rail block is not provided by Tubelite.

DOOR GLAZING INSTALLATION 1/4" GLASS

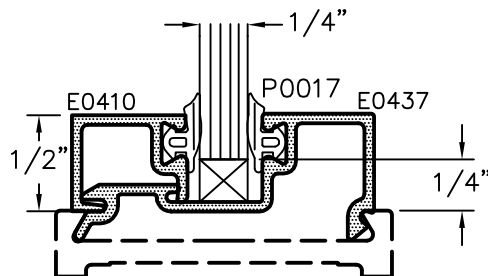
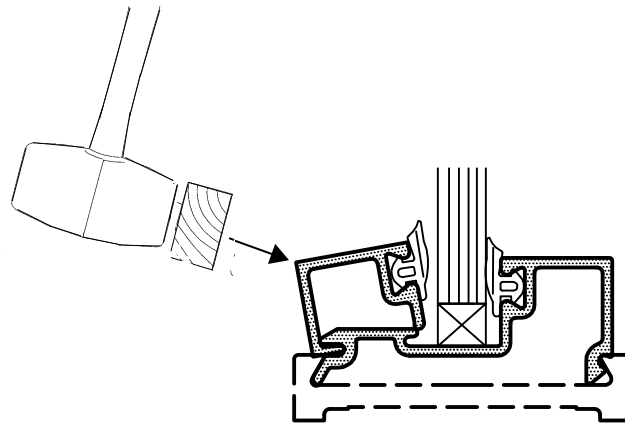
Continue - Install exterior 1/4" glass stops:

4) Trim glazing gasket leaving 1/8" excess at each end.

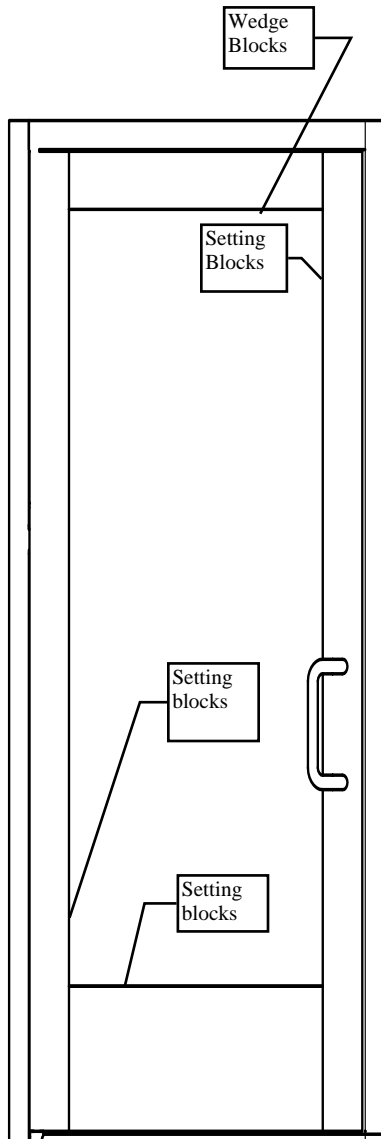
5) Install vertical glass stop first by engaging the toe of E0410 into E0437 as shown.



6) Start at one end of the glass stop. Use a wood stick and mallet to snap the door stop into place.

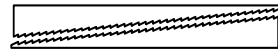


GLAZING DOOR INSTALLATION 1" GLASS



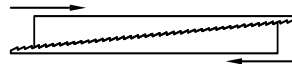
SETTING BLOCK / WEDGE BLOCK INSTALLATION

1. - AFTER HANGING THE DOOR INSTALL THE E0928 GLAZING GUTTERS INTO THE RAILS AND STILES.
2. - PLACE SELF ADHESIVE SETTING BLOCKS IN 3 LOCATIONS ON E0928 GLAZING GUTTER. **P1912**
 - (1) @ BOTTOM HORZ. 3-4' FROM HINGE STILE
 - (1) @ HINGE STILE 3-4' UP FROM BOTTOM HORZ.
 - (1) @ LOCK STILE 3-4' DOWN FROM TOP HORZ.
3. - INSTALL GLASS IN DOOR.
4. - **INSTALL VERT THEN HORZ. GLASS STOPS.**
5. - SQUARE UP DOOR AS DESIRED AND BLOCK IN PLACE.
6. - PLACE TWO WEDGE BLOCKS AS SHOWN IN PICTURE BELOW. IF TOGETHER PROPERLY THE WEDGE BLOCKS WILL INTERLOCK AND FORM TWO FLAT SURFACES.



P1911

7. - WITH THE WEDGE BLOCKS IN PLACE PUSH THEM TOGETHER INCREASING THE THICKNESS. PUSH TOGETHER UNTIL THEY PRESS TIGHTLY AGAINST THE UNDERSIDE OF THE GLAZING GUTTER AND TOP OF THE GLASS HOLDING THE DOOR SQUARE.



8. - INSTALL TOP HORZ. GLASS STOP
9. - TO SQUARE UP THE DOOR IN THE FUTURE REMOVE TOP HORZ. GLASS STOP AND REPEAT STEPS 5-8.

P1914 - 1" Glass setting block Kit

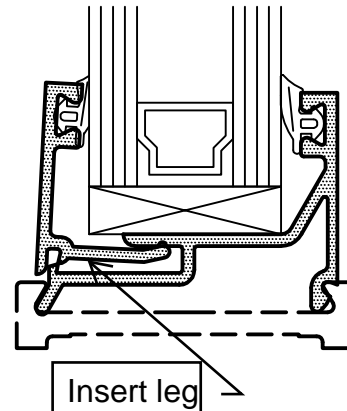
*** See website for glass size calculator.**

DOOR GLAZING INSTALLATION 1" GLASS

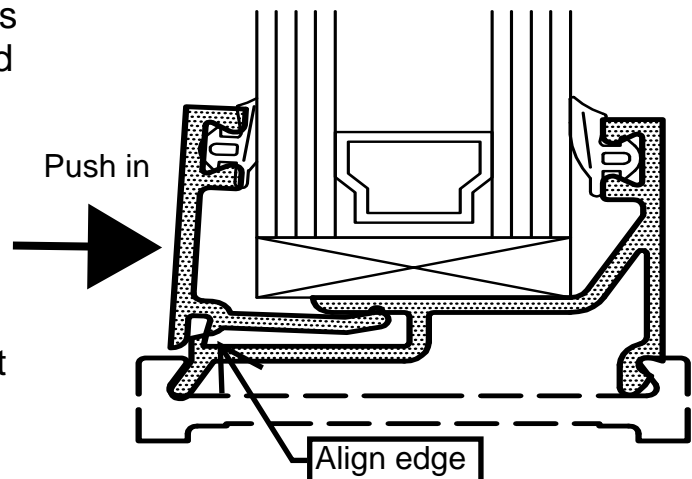
Continue: Install exterior 1" glass stops

10) Trim glazing gasket leaving 1/8" excess at each end.

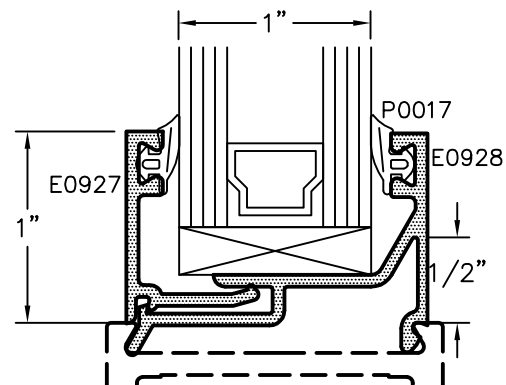
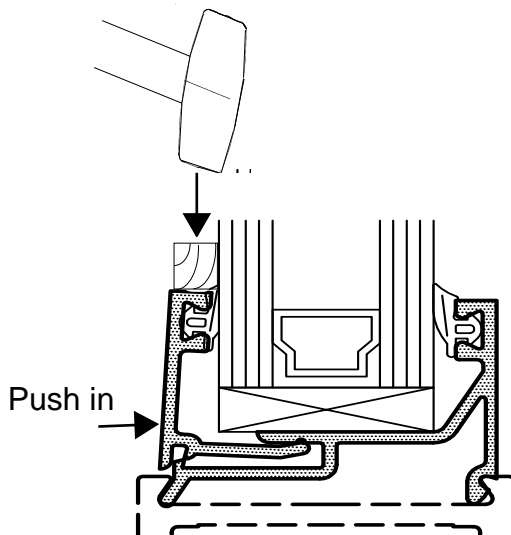
11) Install vertical glass stop first by sliding the leg of E0927 into E0928 as shown.



12) Start at one end of the glass stop. Push glass stop in toward the glass at the top of E0927. Align the snap fit detail.

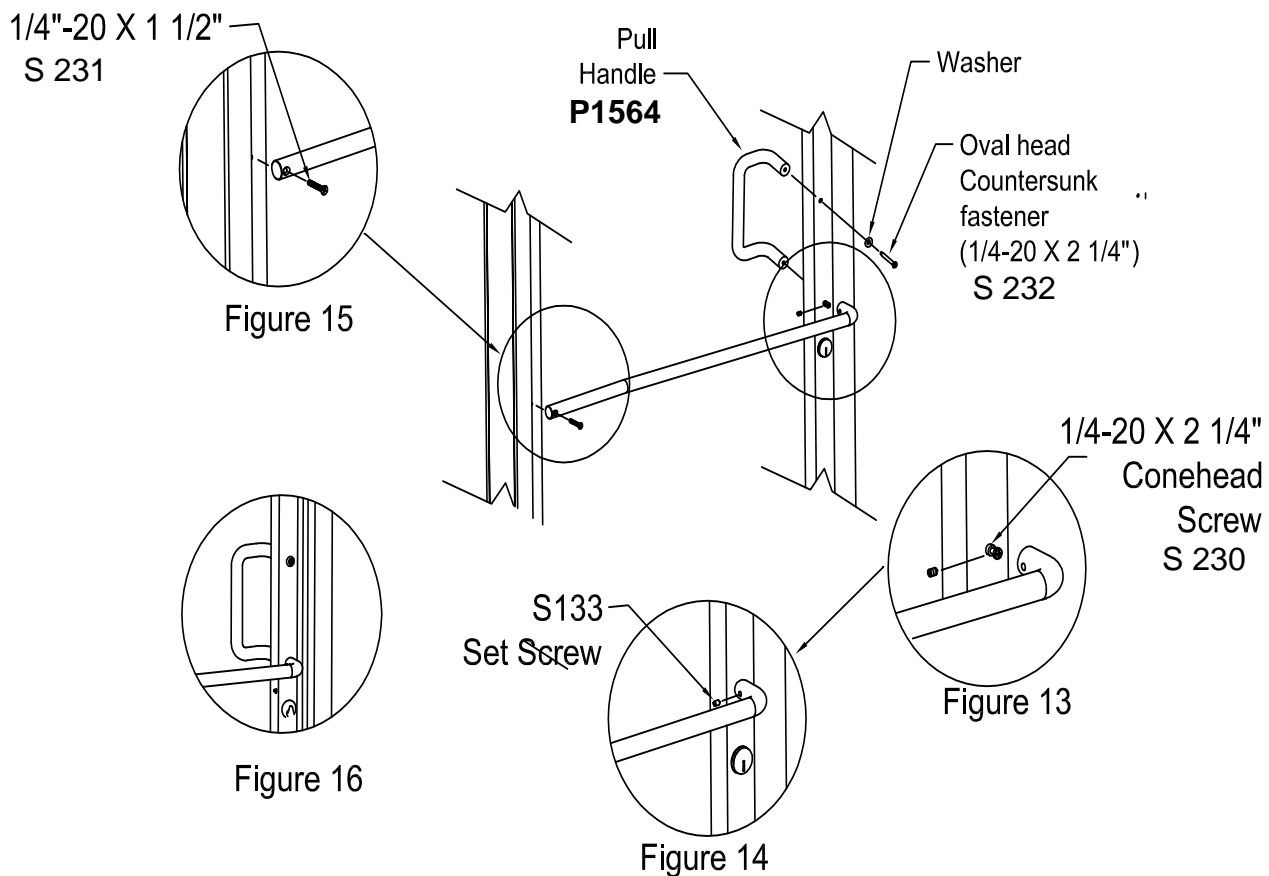


13) Use a wood stick and a mallet tap down on E0927 for engagement. See below.



PUSH/PULL INSTALLATION

- Attached 2 1/4" cone head screw for push bar and bottom pull handle mounting location. Attached pull handle. See Figure 13.
- Attached push bar at the hinge stile. See Figure 15.
- Set push bar onto the conehead fastener. Insert set screw and tighten. See Figure 14. (Hardware kit - P1553)
- As completed. See Figure 16.



BACK TO BACK PUSH BAR INSTALLATION

- Install onto lock stile S234 conehead screw in door stile. (Hardware kit: P1556). See Figure 13.
- Attached push bar into the hinge stile. See Figure 15.
- Set push bar onto the conehead fastener. Insert set screw and tighten. See Figure 14.
- Repeat above steps for the other side push bar.

1/4"-20 X 1 1/2"
S 232

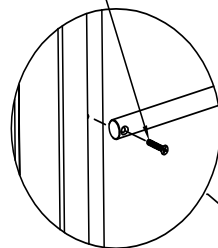


Figure 15

S133
Set Screw

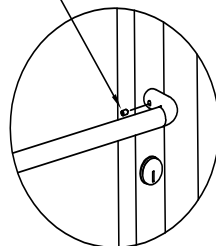


Figure 14

S234 1/4"-20 X 1/2"
Conehead
Screw

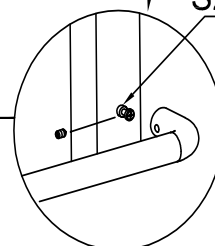
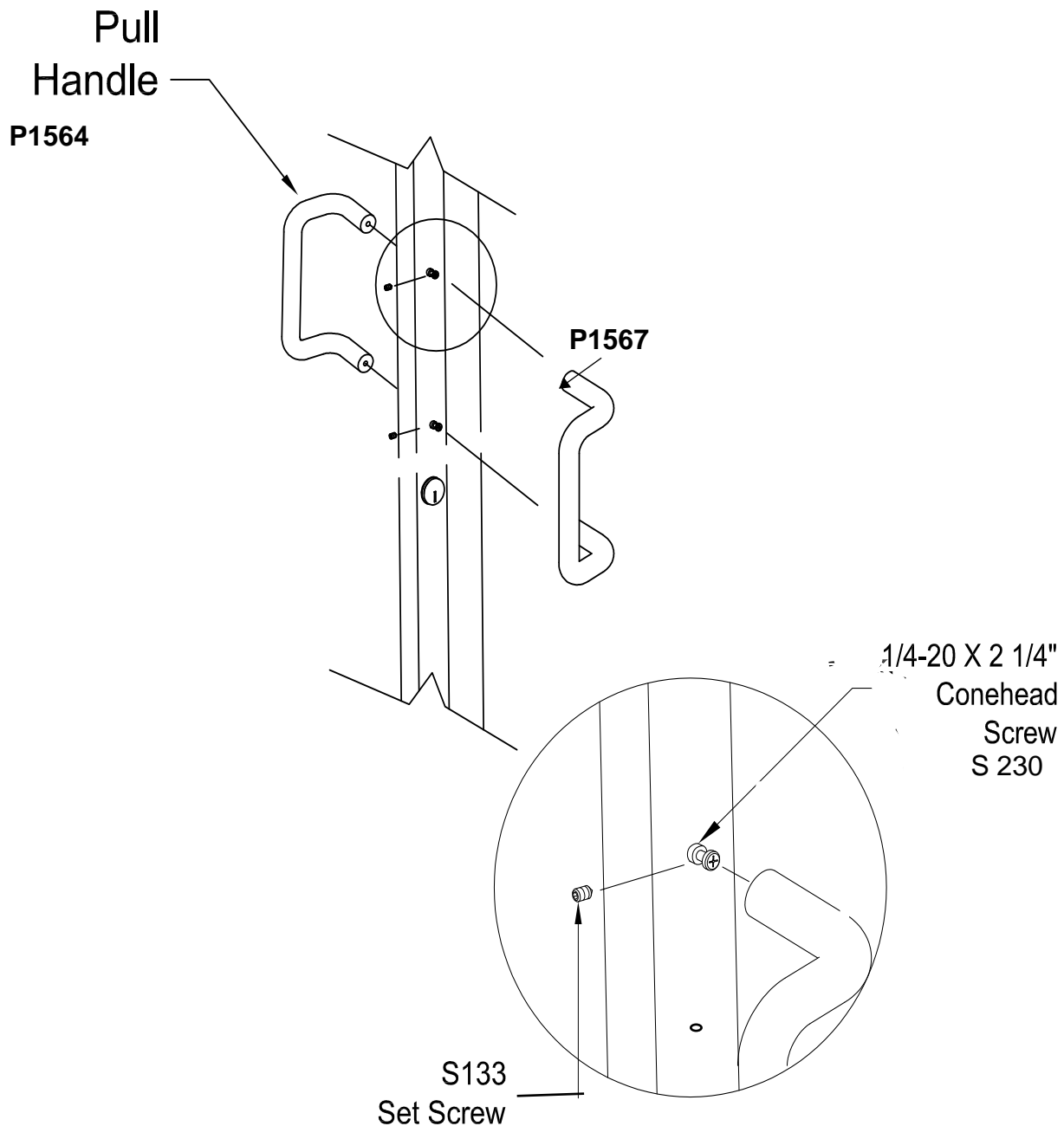


Figure 13

BACK TO BACK PULL

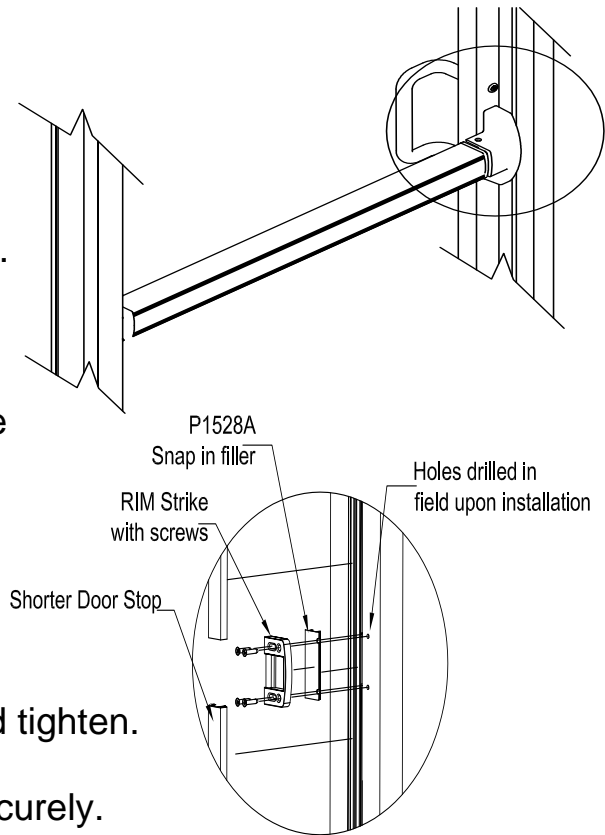
- Install onto lock stile S234 conehead screw in door stile and attached pull P1564. (Hardware kit: P1554).
- Set pull P1567 onto the conehead fastener. Insert set screw and tighten. See Figure 14.



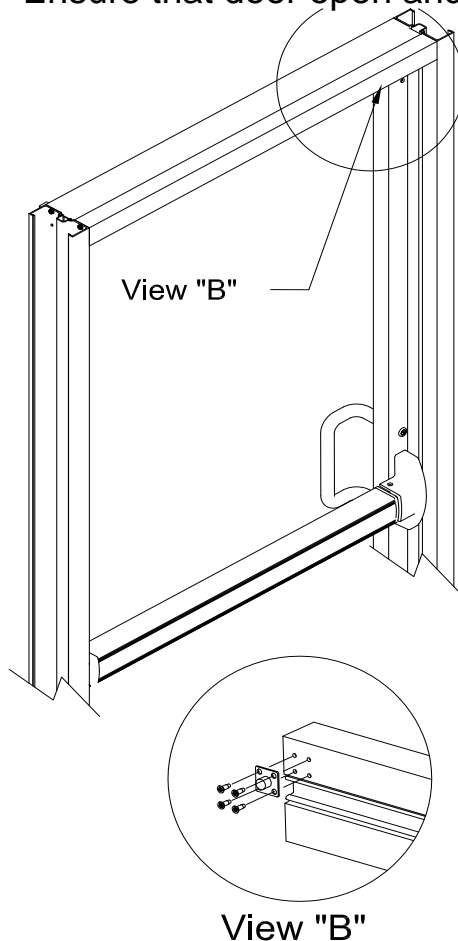
PANIC STRIKES

RIM PANIC STRIKE

- Snap on lower door stop and P503 filler.
- Screw on the strike plate See View A. Shim if required.
- Close door and ensure that panic latches into strike. If not, adjust strike by loosening screws and readjusting strike then re-tighten screws.
- Once adjustment is made, interior side holes will have to be drilled.
- Screw into holes that were drilled and tighten.
- Ensure that door open and closes securely.



VIEW "A"



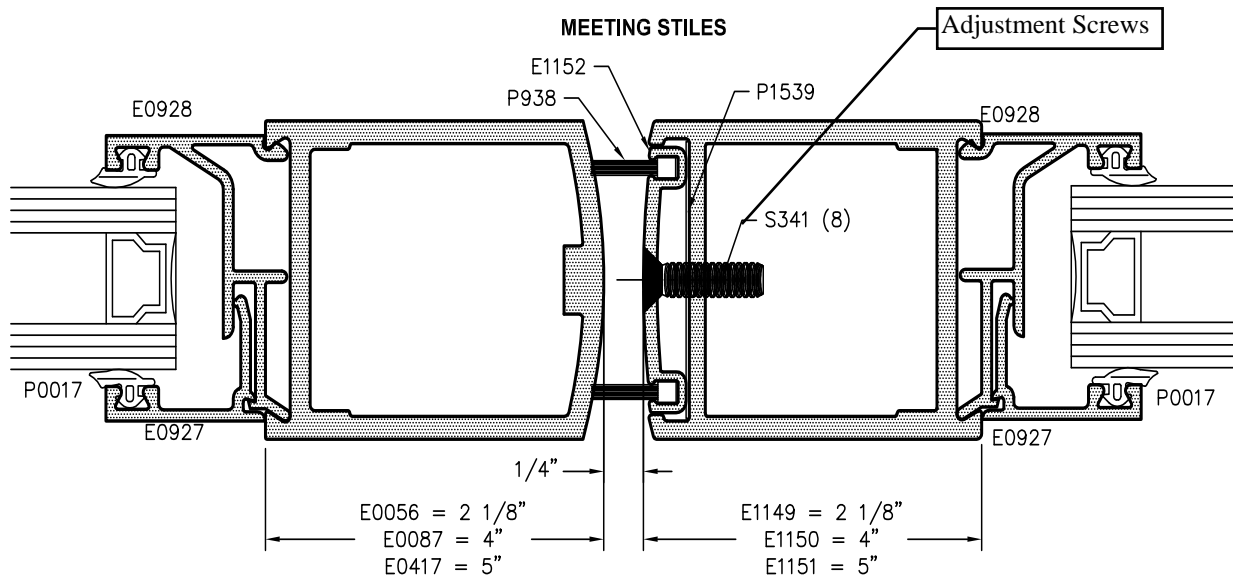
View "B"

CVR TOP STRIKE:

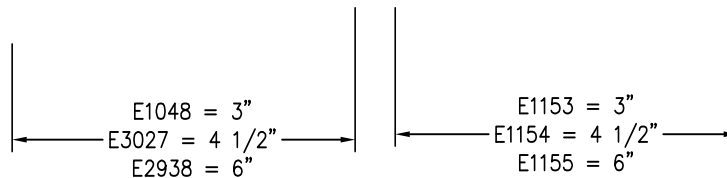
- Install top strike plate into pre-punch holes. Shim if required. See View B.
- Install vertical door stop then header stops and P503 filler.
- Open and close door to ensure proper secure engagement of concealed vertical panic device. If panic does not engage properly refer to panic manufacture installation instructions.

ADJUSTABLE ASTRAGAL FOR PAIR OF DOORS

- Adjust the weather astragal by turning the adjustment screws located along the meeting stile of the active leaf.
 - Clockwise to increase the distance between leafs.
 - Counter clockwise to reduce the clearance between leafs.
- See detail below:

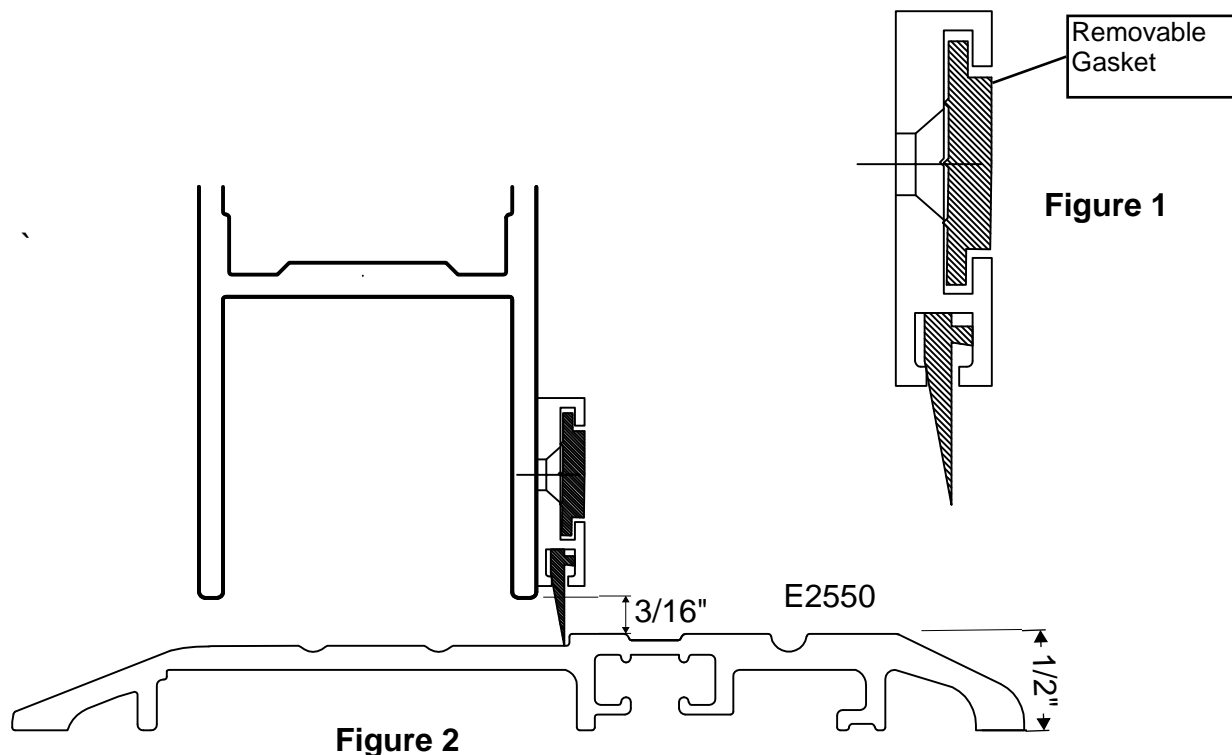


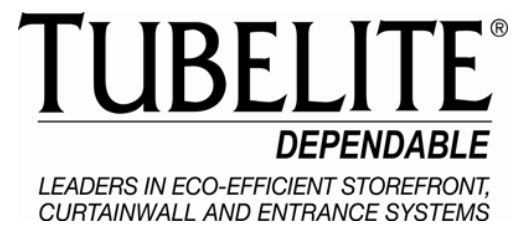
Monumental Meeting Stiles



DOOR SWEEP INSTALLATION

- Sweeps are designed to be attached to the interior face of the bottom rail.
- Transfer the pre drill hole locations in the door sweep to the interior surface of the bottom rail. See Figure 1.
 - Center sweep to rail.
 - Align the bottom edge of door sweep to threshold. The door sweep blade must make full contact with the threshold to obtain the full benefit of the door sweep.
 - Mark the center of hole locations to the bottom rail.
- Attached door sweep to bottom rail.
- Slide gasket back into the door sweep. See Figure 2.





Tubelite Inc.
3056 Walker Ridge Drive NW, Suite G
Walker, Michigan 49544
Phone 800.866.2227
Fax 877.299.2414
www.tubeliteinc.com