

HOPE'S®

STEEL & BRONZE • WINDOWS & DOORS
HANDCRAFTED IN USA



• FIELD INSTALLATION MANUAL •

EMPIRE BRONZE™ PRODUCTS

OCTOBER 2012

HOPE'S®

STEEL & BRONZE • WINDOWS & DOORS
HANDCRAFTED IN USA

FIELD INSTALLATION MANUAL

RECOMMENDED GLAZING PROCEDURES
FOR HOPE'S EMPIRE BRONZE™ PRODUCTS

CONTENTS

Receiving and Storage.....	1
Protection of Finished Surfaces	2
Construction Notes	2
Window Installation Procedures	3
Door Installation Procedures.....	11
Glazing Windows and Casement Doors.....	15
Screen Installation	21

IMPORTANT

This manual contains general information for installation and glazing of Hope's products. Approved contract drawings and specifications should be used for your project.

If there are any questions regarding installation, glazing procedures or clarification of details, please do not hesitate to contact Hope's project management at 716-665-5124.

It is the installer's responsibility to properly install Hope's products and the glazier's responsibility to provide weather tight glazing. The procedures and illustrations provided by this informational manual are not specifications. They are provided for informational purposes and contain minimum procedures to be followed when using Hope's products. The installer and the glazier must refer to the project documents for specifications relating to their work. Hope's is not responsible for coordination of such specifications or for disseminating the information contained therein. Hope's will not be liable for any condition caused by or due to installation or glazing of its products that is not in accordance with the project specifications, Hope's approved shop drawings and the information provided herein.

RECEIVING AND STORAGE

Preparation for On-Site Storage

- Plan in advance.
- Consult with Job Superintendent for storage locations.
- The environment alone will affect the bead blasted finish of bronze product. Extreme care should be taken in handling the windows and doors. Use of cotton cloth gloves is strongly recommended. Oil from hands will leave residue on product causing discoloration of the bead blasted finish.
- Do not allow water or condensation to form on the window frames prior to installation. Hope's will not be held responsible for any moisture stains.
- Locate a secure area to store the boxes of hardware and erection material.

Receiving and Inspecting Materials

- Count and inspect all materials as received. **Hope's Shipping Notice** indicates the required quantities compared to the amount shipped on that particular shipment. The box and/or crate numbers are identified on this same notice to assist in inventorying your purchase. **Immediately notify Hope's project management of any error or deficiency in material shipped after reviewing this document.**
- **Check for freight damage and NOTE damage on the freight bill before signing it.**
- If there is a suspicion of damage after you have signed for the shipment, you have an opportunity within 5 days of arrival of shipment to request an inspection from the **freight company**. If this is not done, Hope's will not be held responsible for missing material.
- **Notify the freight company and Hope's project management immediately when shipping damage is discovered. Sending or e-mailing digital photographs assists us in understanding your particular situation; please consider this when notifying us. Failure to do so can result in loss of claim rights against the shipping company.**
- Do not attempt to correct any shipping damage before consulting with Hope's project management. Failure to do so may result in loss of Hope's warranty and the cost of remedial work.
- **Door leaves are not interchangeable. They must be installed with their corresponding frame to ensure custom fit and hinge alignment.**

Unloading Materials

- With the proper gloves, lift and carry materials. DO NOT DRAG!
- Store in upright position.

PROTECTION OF FINISHED SURFACES

- At all times, precautions must be taken to protect the factory bead blasted finish on Hope's windows and doors against scratching or oxidizing.
- Care should be taken to protect surfaces from contact with acid-based materials or other corrosive compounds. This can occur when applying sealant in close proximity.
- Cement, plaster, terrazzo, mortar, and alkaline or acid-based materials used to clean masonry are very harmful to finishes. These products will cause staining.
- **WARNING!** Wash down of masonry should be conducted before window installation. **Acid based chemicals typically used for masonry wash down will attack the finish surfaces.**
- Avoid getting bronze chemical finish treatment on the weatherstrip when applying the finish to the windows in the field.
- Do not allow masking tape or duct tape to be affixed to the window frames. The adhesive will damage the finish surface.
- Consult finishing company for care and maintenance of finished surfaces.

CONSTRUCTION NOTES

Shop Drawing Review

- **Review approved marked “FINAL SHOP DRAWINGS FOR FIELD USE” to become thoroughly familiar with the project. These drawings take precedence and include specific details for this installation. Confirm you have the latest set of shop drawings.**
- Coordinate building openings with the openings shown on Hope's final shop drawings. Refer to the architectural drawings for accurate coordination. **NOTE:** Hope's window and door elevations are viewed from the building exterior, unless otherwise noted.
- Determine the best order to proceed. The windows and doors in openings used for incoming construction materials should be installed last.

Inspection of Openings

- Openings should conform to Hope's final shop drawings.
- Check openings for plumb, square and level.
- Check details and opening dimensions. If there are discrepancies, notify Hope's immediately. Do not attempt to install Hope's products until the jobsite conditions have been corrected. Any attempt to cut down or modify Hope's products without consulting Hope's will result in loss of Hope's warranty. **Hope's will not be held liable for back charges if installation proceeds and product is not in accordance with Hope's shop drawings unless written authorization from Hope's has been provided.** These terms and conditions are outlined in our contract. Consult before expending field labor that may not be reimbursed.

- Wash down of masonry should be completed. Masonry cleaning materials may damage the finish of the windows.

Alignment and Tolerances

- All work should start from the benchmarks or column centers established by the general contractor.
- All materials are to be installed plumb, level, true and in proper alignment to established line grades.

Sealant Compatibility

- Consult the sealant supplier for recommendations on compatibility, adhesion, priming, tooling and shelf life.
- Surfaces must be clean and dry before sealants are applied.

WINDOW INSTALLATION PROCEDURES

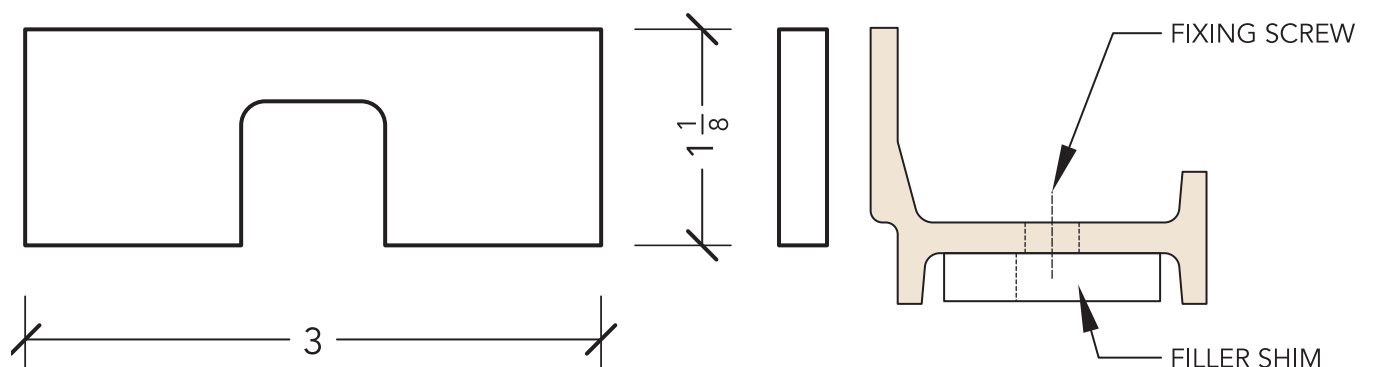
Prior to Installation

- Check Hope's final shop drawings to determine if weather bars or other items must be applied to the windows before the window is installed.
- Ensure all installation materials (shims, fasteners, backer rods, etc.) have been pre-purchased and are readily accessible. **NOTE:** If necessary, these items can be purchased through Hope's Windows.
- Be sure that the actual setting conditions match what is shown on the approved shop drawings.

Installing Windows to Flush Openings

- Plastic filler shims should be field attached by the installer to the window frame at each fixing hole location (see Fig. 1). Filler shims are field attached with sealant or adhesive.

FIGURE 1: PLASTIC FILLER SHIMS



- Between sash shims, glue a rectangular caulking poly filler or install a non-gassing poly backer rod (see Fig. 2).
- Insert window into opening being careful not to pull the back-up rod from the sash.
- Between sash shim and building structure use flat fixing shims (see Fig. 3). Fixing shims should be applied tight to structure to prevent window frames from twisting or racking during installation. Distance between the frame and the opening is at sealant manufacturer's recommendation.

FIGURE 2: CAULKING BACK-UP

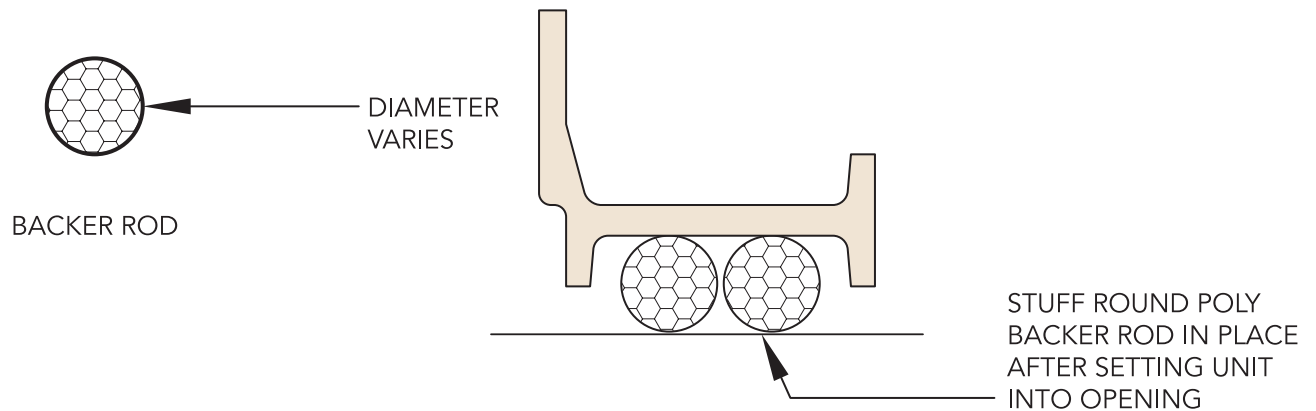
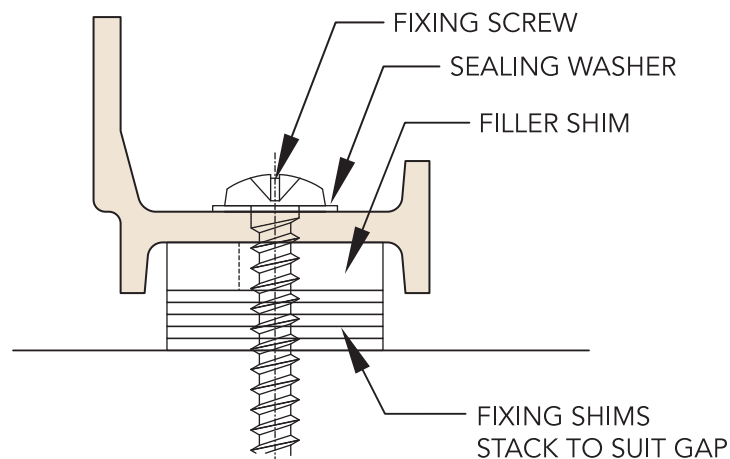
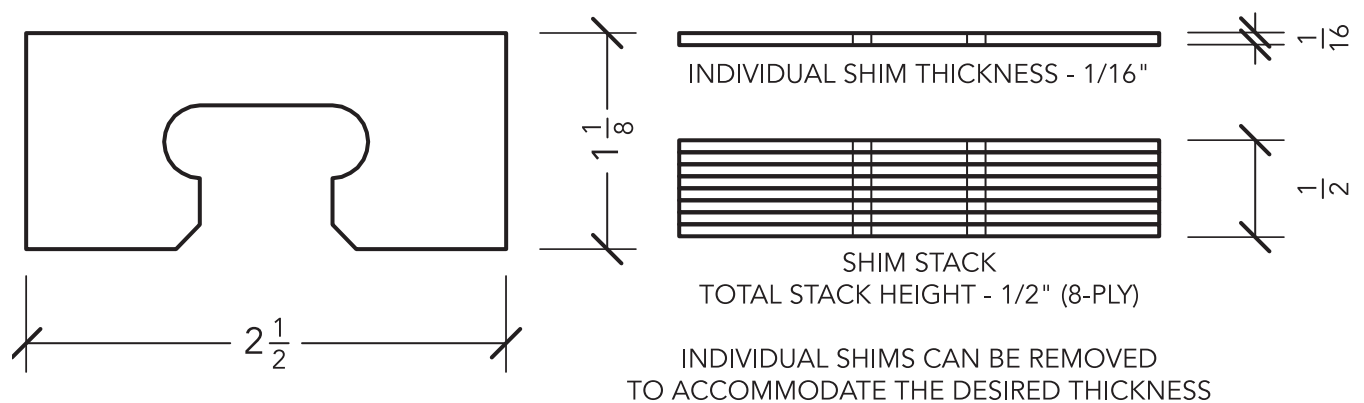
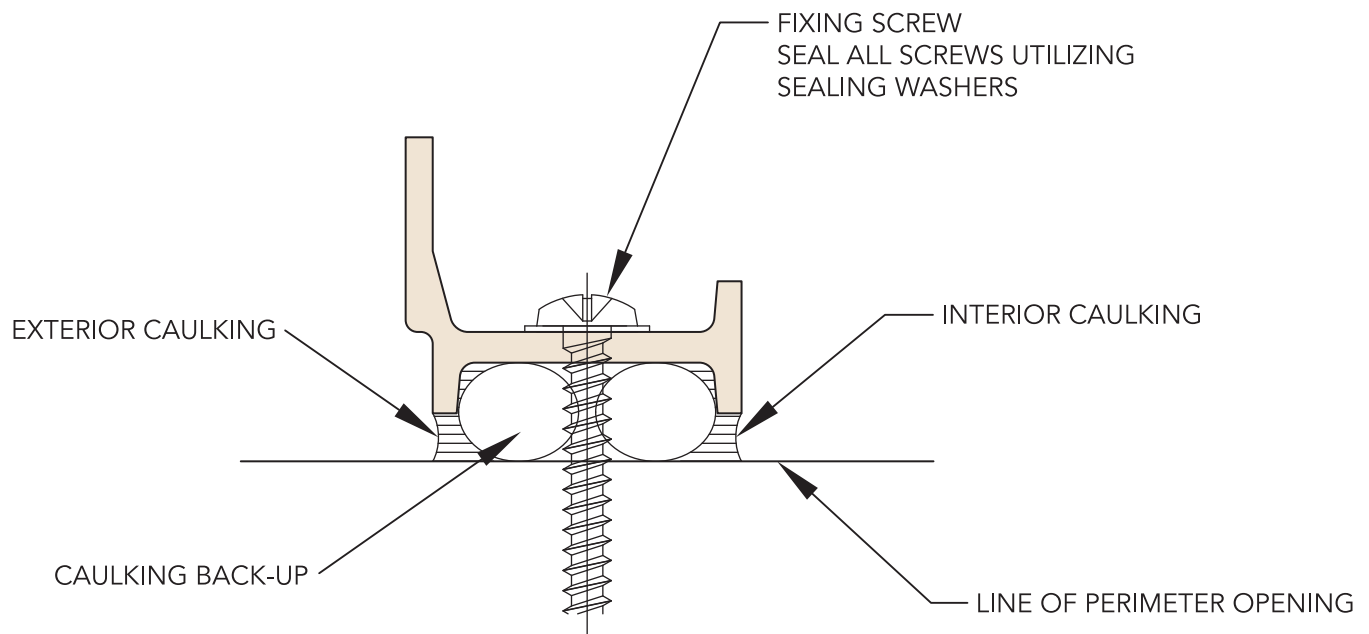


FIGURE 3: PLASTIC FIXING SHIMS



- Using a level, plumb the window vertically, then horizontally using shims as required.
- Line drill through fixing holes into opening and install proper screws to suit condition. Shim between sash shim and opening as required.
- Caulk the exterior joint between the sash and opening and neatly point (see Fig. 4). **IMPORTANT: Seal all fixing screw heads to the web of the sash. Utilize sealant washers at holes and seal with sealant at slots. WARNING! Fixing holes left vacant can allow water or air infiltration, distortion of the product and void warranty.**

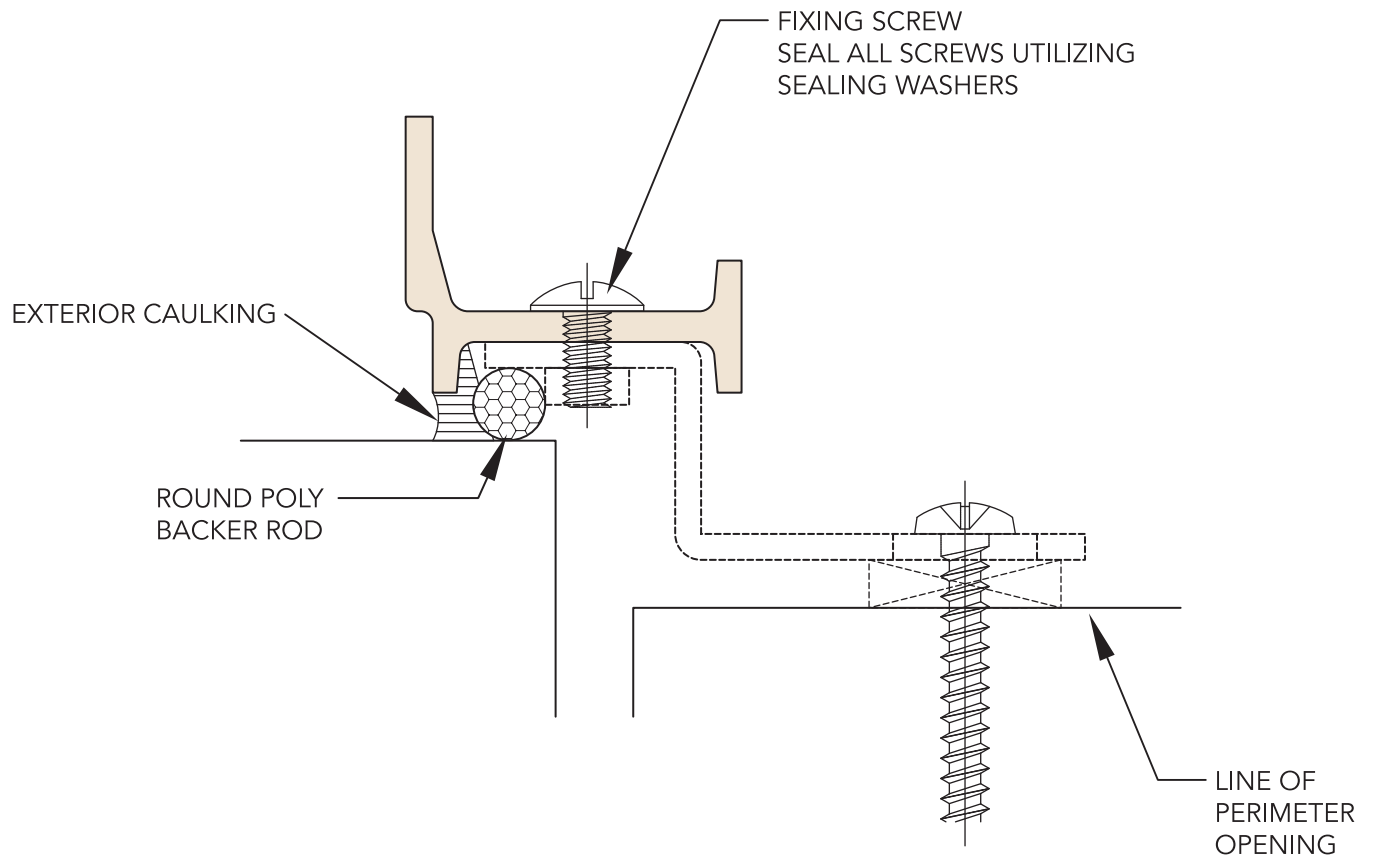
FIGURE 4: EXTERIOR AND INTERIOR PERIMETER CAULKING



Installing Windows with Anchors

- Attach all anchors to window frames as shown on approved shop drawings with bolts. Utilize sealing washers prior to insertion of bolt through frame into anchor (see Fig. 5).
- Insert window with anchors attached into opening.
- Using a level, plumb and level the window within the opening using shims between the anchors and the opening.
- Line drill through fixing holes into opening and install proper screws with sealant washers to suit condition. Shim between window shim and opening as required.
- Caulk the exterior joint between the sash and opening and neatly point. **IMPORTANT: Seal all fixing screw heads to the web of the sash. Utilize sealant washers at holes. WARNING! Fixing holes left vacant can allow water or air infiltration, distortion of the product and void warranty.**

FIGURE 5: OFFSET ANCHOR DETAILS



Installing Mullions

- Refer to Hope's approved shop drawings for mullion locations and anchorage conditions (see Fig. 6).
- Structural mullions (clipped) shall run to within 1/4" of the floor at the sill and have a 1/4" thick anchor that is welded to the mullion solidly supporting it to the floor. There should be no shimming the anchor at the floor.
- Structural mullions at the head shall use the standard 3" x 3" mullion clips nut and bolted to the mullion such that the clips can be initially loosely attached and slid up tight to the opening and then tightened down. Again, there will be no shimming at the head unless conditions do not allow the clip to be slid far enough to be tight.
- Mark mullion locations in opening.
- Install mullions in proper locations prior to window frames using anchors per approved shop drawings. The mullions are stamped with the proper opening type (see Fig. 7).
- For non-structural (unclipped) mullions, the mullion may be attached to the sash during sash installation. Place horse-shoe shim under mullion (at sill only) to add support and take weight off the sash screws. Please note that this will ensure the mullion is not in direct contact with sill materials which may cause corrosion (see Fig. 7a).

FIGURE 6: STRUCTURAL MULLION ANCHORS

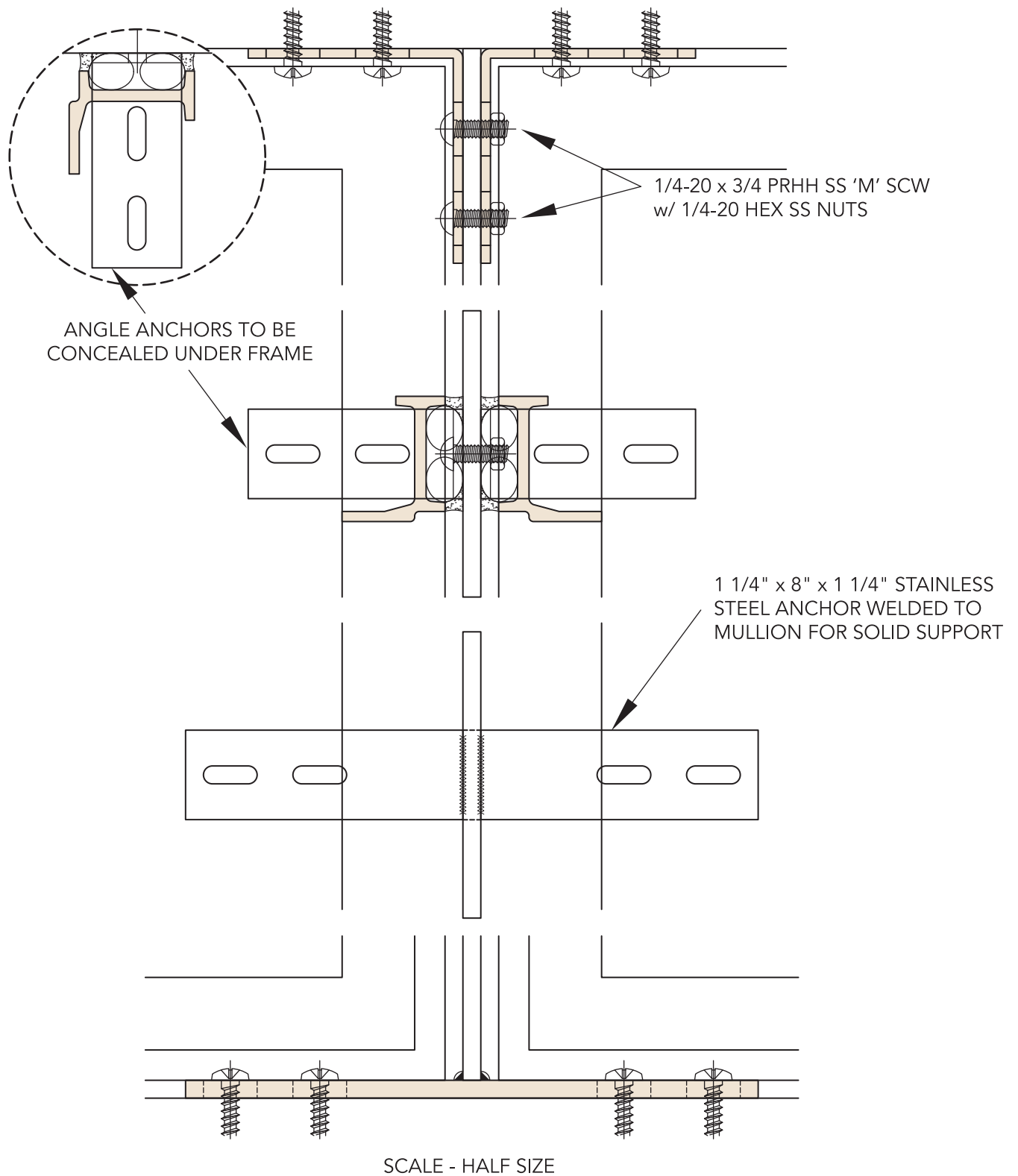


FIGURE 7: SASH ANCHORS AT FLAT MULLIONS

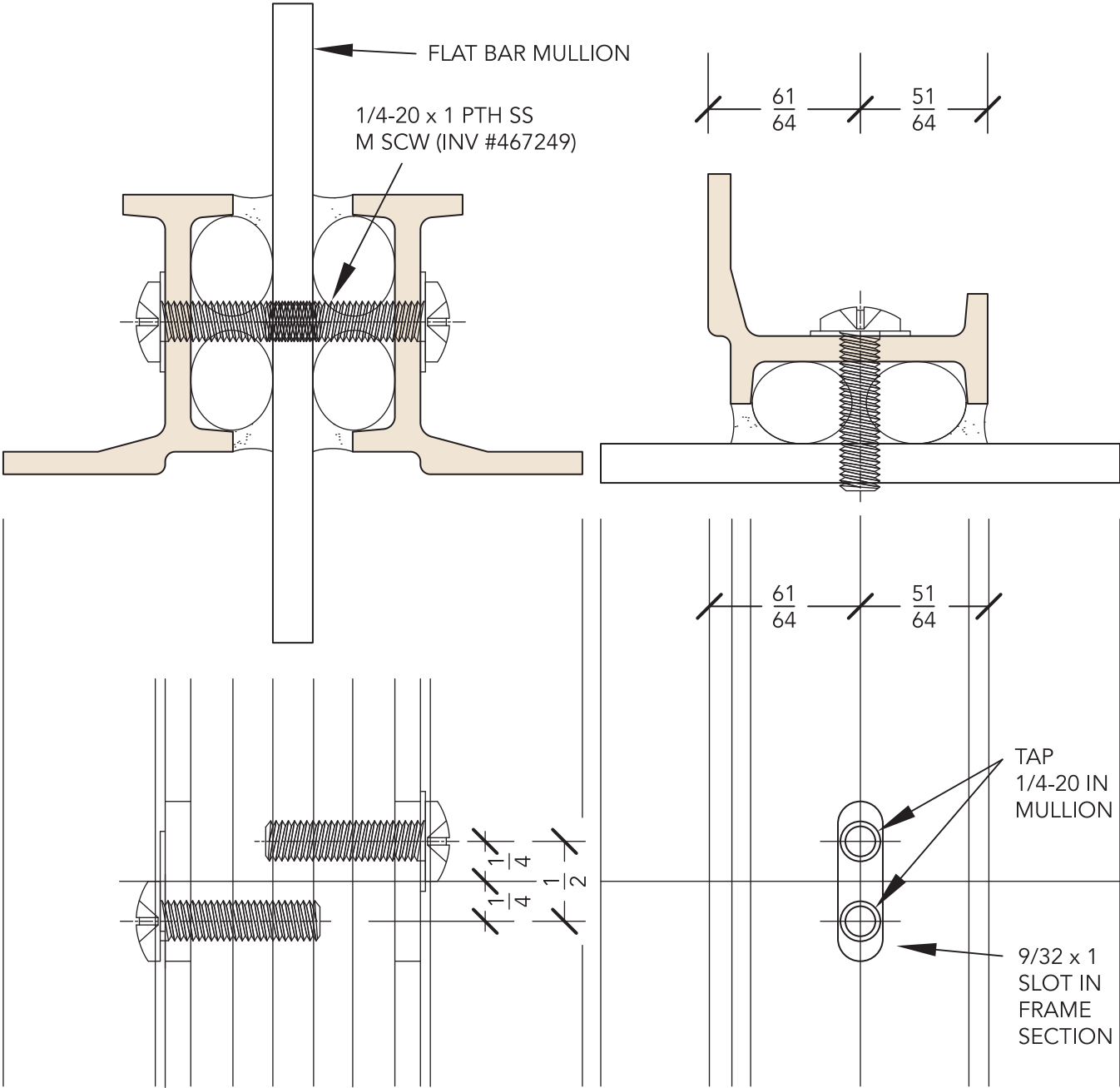
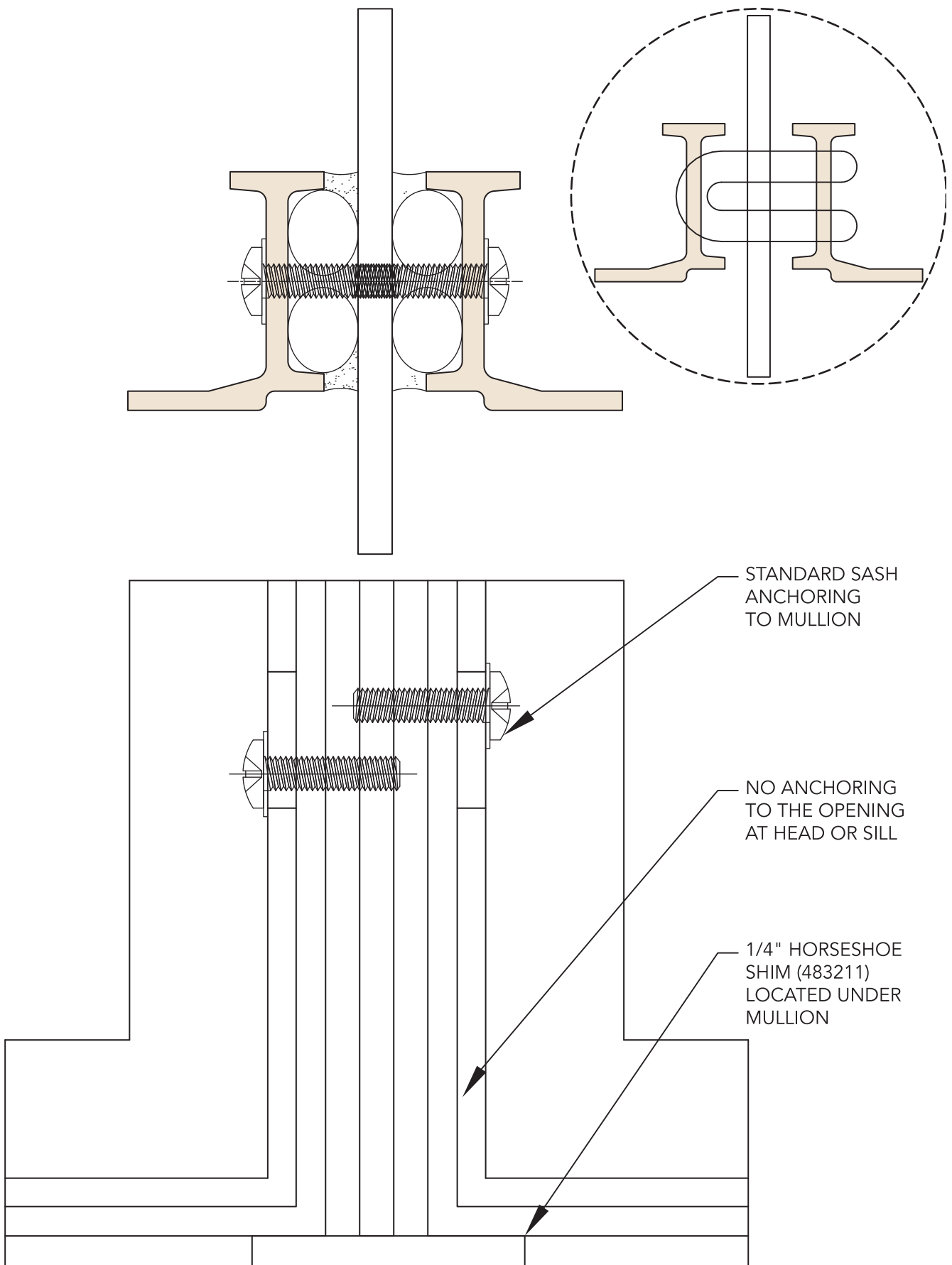


FIGURE 7a: NON-STRUCTURAL MULLION ANCHOR



Attaching Window Hardware

Hope's Loose Window Hardware

- In order to prevent shipping damage, Hope's ships roto operator crank handles loose. It is the installer's responsibility to correctly apply these hardware components to the windows.
- After installation of the windows, always check for proper operation and bedding of ventilator to insure weather-tight seal.

Cleaning Windows After Installation

- Clean dust, dirt and debris from windows.
- Consult finishing company for materials to be used.

DOOR INSTALLATION PROCEDURES

General Instructions for Installing Casement Doors

- Casement doors are custom fabricated with thin-member, extruded bronze. They are subject to racking; therefore, great care is needed to be sure they are installed level and plumb. The installer should determine that the materials used will provide adequate support for the weight of the door and glass.
- Casement doors are normally shipped with Hope's standard hardware and standard threshold attached. Door leaves are shipped separate from the frames in order to minimize rubbing and scratching during shipment. In special cases where field applied hardware is called for, all hardware preparation has been done in the factory. **A pilot hole for the bottom bolts is provided; apply the strike plate (which may have been shipped separate) after installation for final adjustment and maximum weathertightness.**
- All Hope's casement doors are factory hung, bedded, fitted and inspected before they leave the factory. They are intended to be installed as a completed assembly. Match the door leaf(s) to the frame in the field as marked. Mismatching the doors and frames may adversely affect door operation upon reassembly. They are specific to each other and not interchangeable.
- Door strike has been designed with adjustment to allow for proper latching of the lock.
- **Any problems encountered with installing the doors, fitting hardware or obtaining proper operation should be referred to Hope's project management immediately.**

Installing Thresholds (Other Than Hope's Attached Threshold)

- Locate position of threshold in the opening. The threshold must be level end to end and also level outside to inside, as shown on approved shop drawings.
- Apply a bed of sealant on the sill of the opening and press threshold into position.
- Line drill holes into the opening and install proper attaching screws into a bed of sealant.

Installing Casement Doors to Flush Openings

- Check Hope's final shop drawings to determine if weather bars or other items must be applied to casement doors before doors are installed.
- Plastic filler shims should be field attached by the installer to the door frame at each fixing hole location (see Fig. 1). Filler shims are field attached with sealant or adhesive.
- Between door frame shims, glue a rectangular caulking poly filler or install a non-gassing poly backer rod (see Fig. 2).

FIGURE 1: PLASTIC FILLER SHIMS

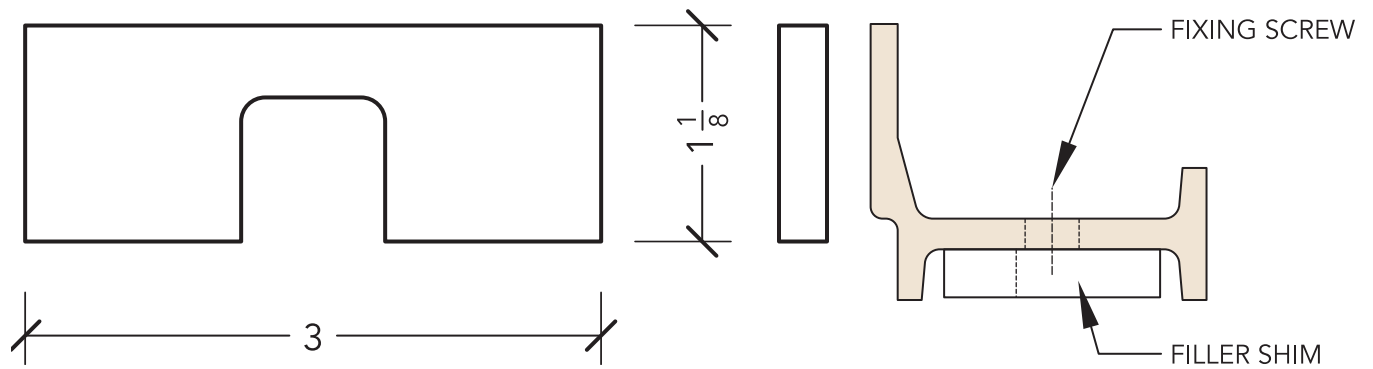
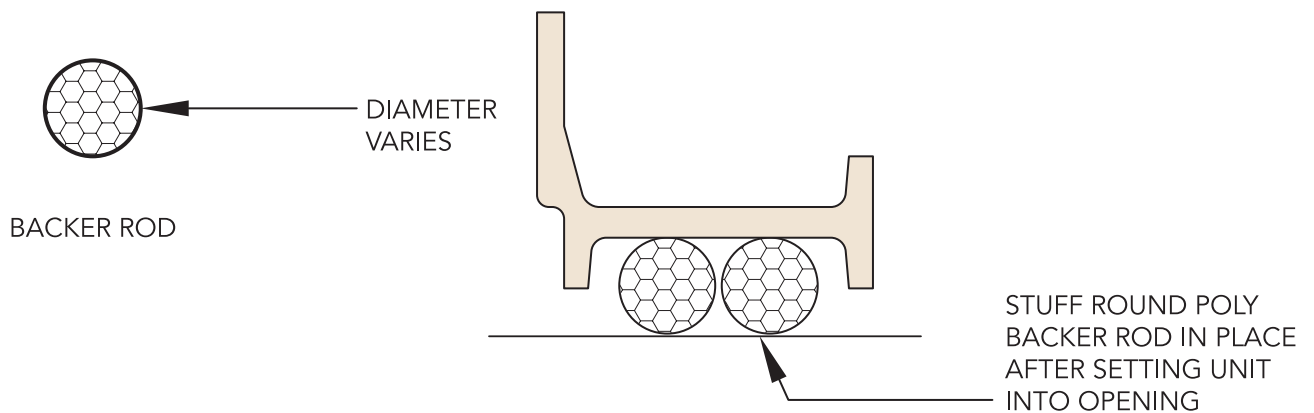


FIGURE 2: CAULKING BACK-UP



- Insert door frame into opening being careful not to pull the back-up rod from the sash.
- Between door frame shims and building structure use flat fixing shims (see Fig. 3). Fixing shims should be applied tight to structure to prevent door frames from twisting or racking during installation. Distance between the frame and the opening is at sealant manufacturer's recommendation.
- Using a level, plumb the door vertically, then horizontally using shims as required. Twisting of the frame will affect the bedding of the leaves. Please measure the in/out dimension around the opening to verify squareness. A simple string from corner to corner creating an "X" will show any twist in frame.
- Line drill through fixing holes into opening and install proper screws with sealant washers to suit condition. Shim between door shim and opening as required.
- Caulk the exterior joint between the sash and opening and neatly point (see Fig. 4). **IMPORTANT: Seal all fixing screw heads to the web of the sash. Utilize sealant washers at holes and seal with sealant at slots. WARNING! Fixing holes left vacant can allow water or air infiltration, distortion of the product and void warranty.**

FIGURE 3: PLASTIC FIXING SHIMS

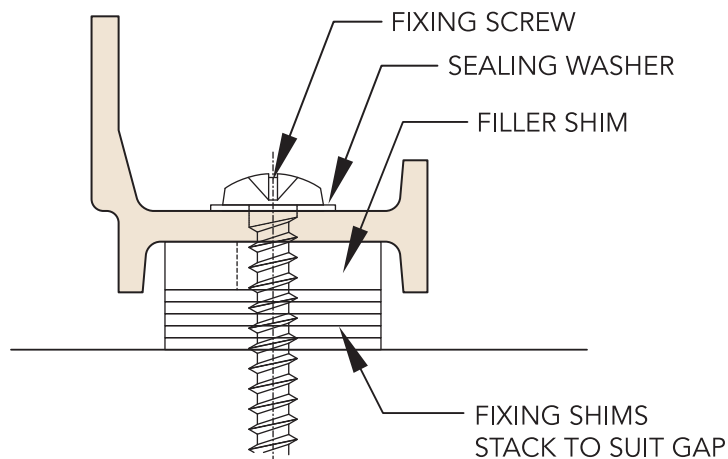
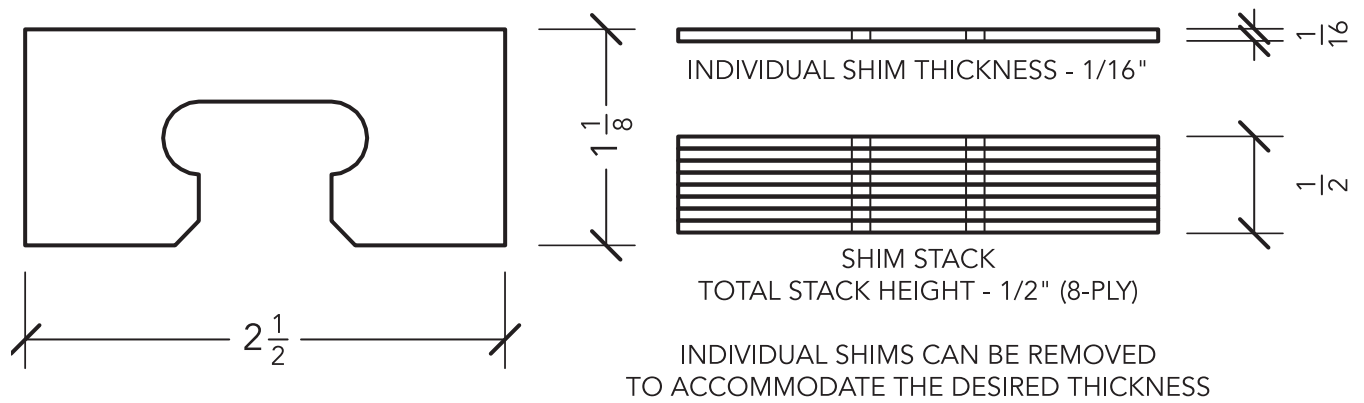
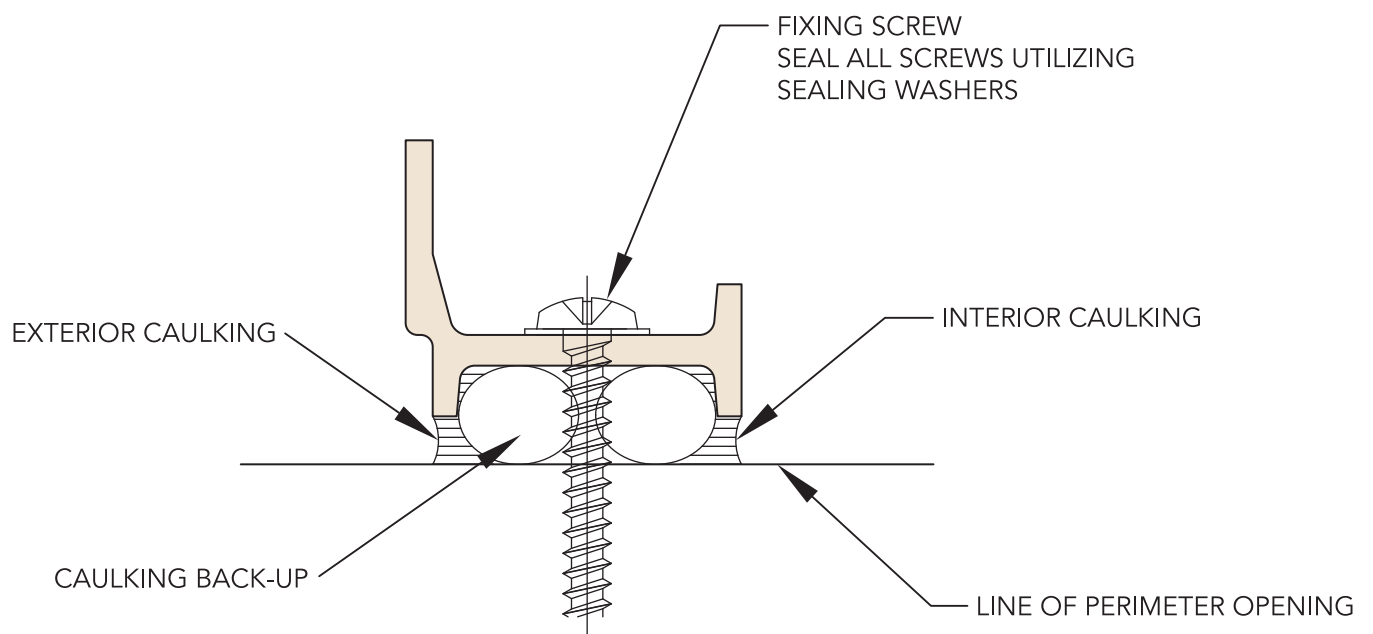


FIGURE 4: EXTERIOR AND INTERIOR PERIMETER CAULKING



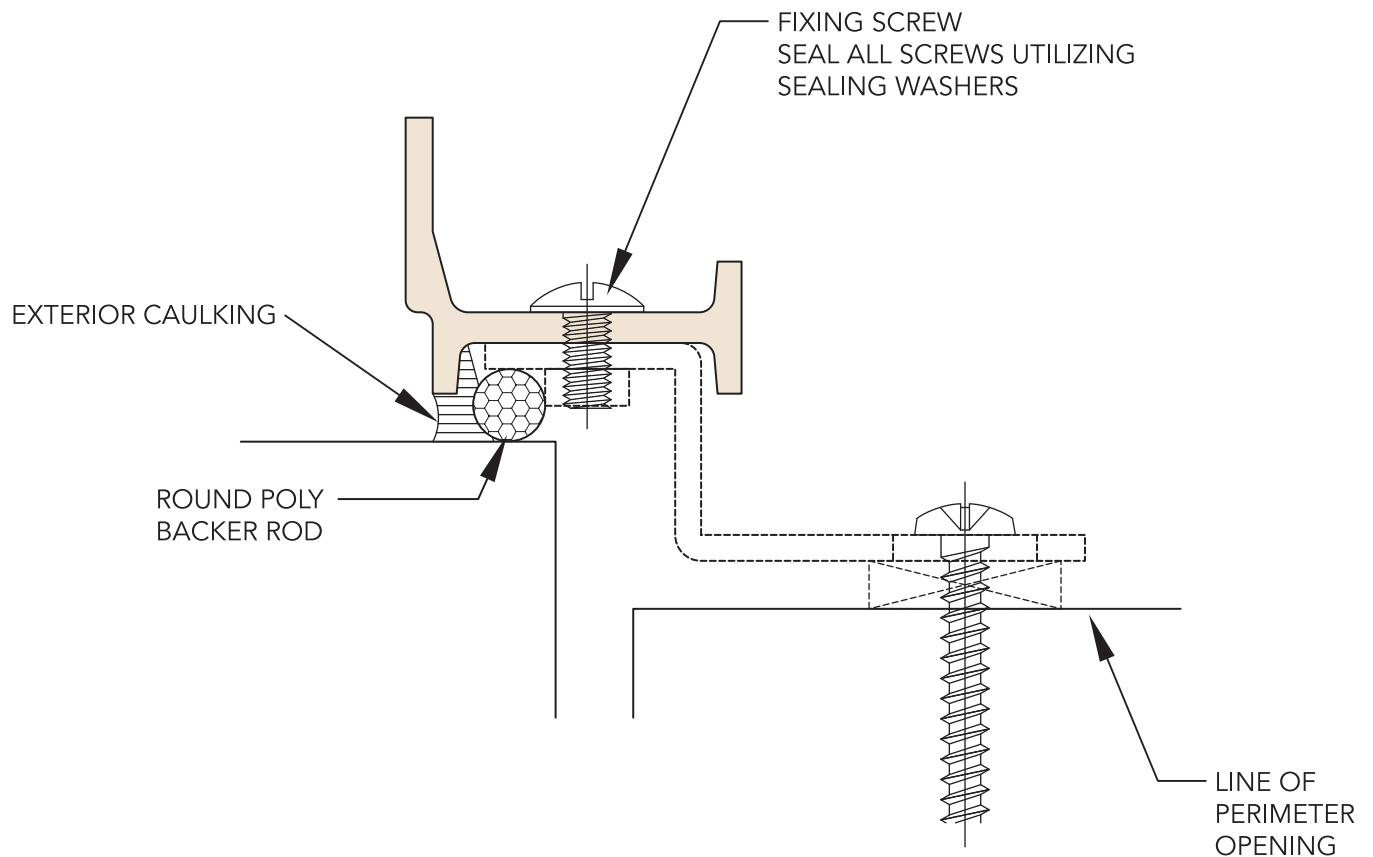
Installing Casement Doors with Anchors

- Attach all anchors to door frames as shown on approved shop drawings with bolts. Utilize sealing washers prior to insertion of bolt through frame into anchor. (See Fig. 5)
- Insert door with anchors attached into opening.
- Using a level, plumb and level the door within the opening using shims between the anchors and the opening.
- Line drill through the anchor slots into the opening and install proper screws and plugs to suit conditions.
- Caulk the exterior joint between the sash and opening and neatly point. **IMPORTANT: Seal all fixing screw heads to the web of the sash. WARNING! Fixing holes left vacant can allow water or air infiltration, distortion of the product and void warranty.**

Cleaning Doors After Installation

- Clean dust, dirt and debris from doors.
- Consult finishing company for materials to be used.

FIGURE 5: OFFSET ANCHOR DETAILS



GLAZING WINDOWS AND CASEMENT DOORS

(Applicable for either glazed-in or glazed-out conditions)

Preparation For Glazing

- Inspect the window glazing pocket. It should be clean and dry.
- Close and lock all ventilators and casement door leaves. Ventilators and casement door leaves must be glazed in the closed and locked position. Support door leaves with shims prior to glazing then remove after glazing.

Removing Hope's Factory Attached Glazing Beads

- Hope's windows and doors are shipped with factory attached glazing beads that are hand-cut and fitted around each glass lite. Before glass can be installed, the glazing beads must be removed and carefully set aside for reinstallation to the same location.
- **Hope's glazing beads are individually pre-fitted around each glass lite and are not interchangeable with other locations, even other lites with the same dimensions. Therefore, glazing beads must be reinstalled to the same location on the window or door from which each was removed.**
- When removing Hope's snap-in or hook-on glazing beads, observe the bead engagement with retainer; then reinstall the bead to become familiar with the attaching feature. **NOTE:** Glazing bead must fit tight against the frame section and remain in plane with face of the frame section.
- Figure 8 illustrates how Hope's snap-in beads should be removed to start the glazing process and how they should be reinstalled after the glass has been set. (See next section for glass blocking and setting procedures.)
- Figure 9 illustrates how Hope's hook-on beads should be removed to start the glazing process and how to reinstall them after the glass has been installed. Use the bent blade of a putty knife to apply pressure to the bottom of the bead forcing the lip of the bead under the glazing stud before installing the wedge.

FIGURE 8: REMOVING AND REINSTALLING SNAP-IN GLAZING BEADS

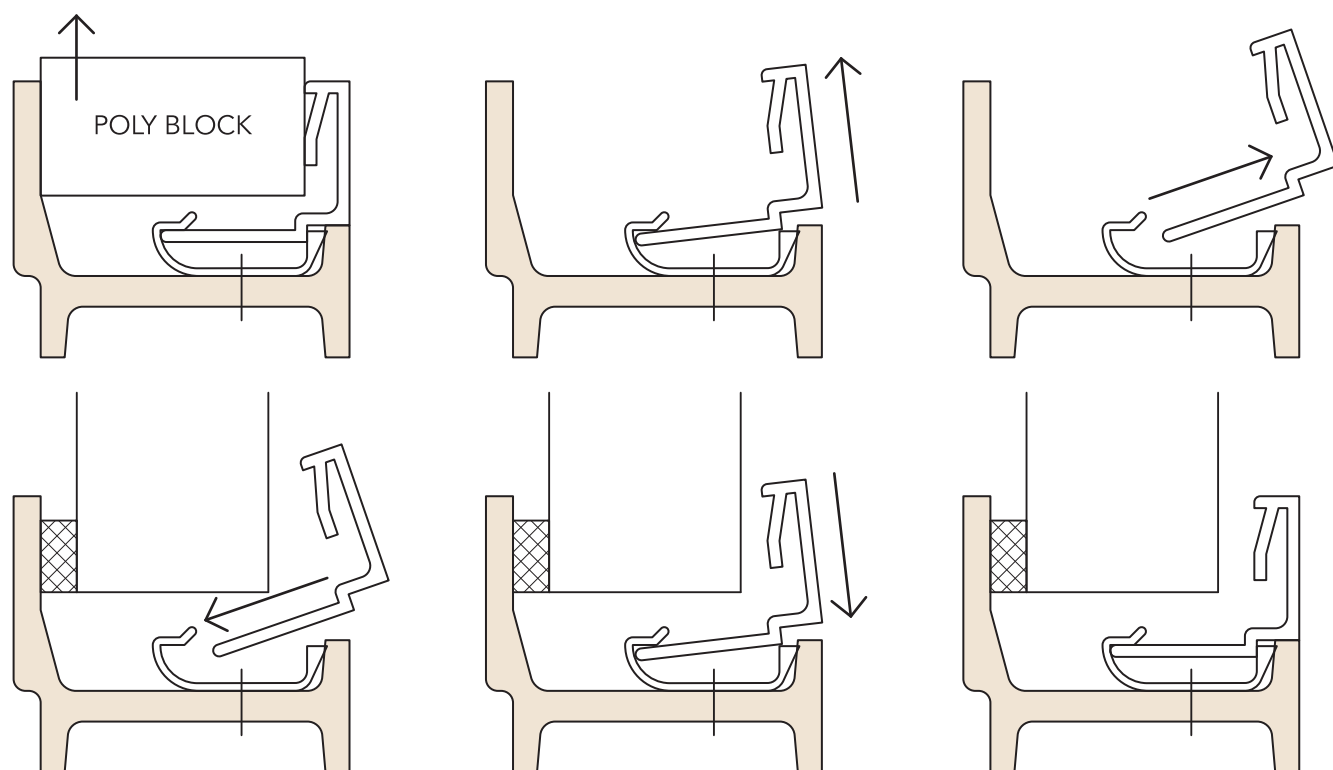
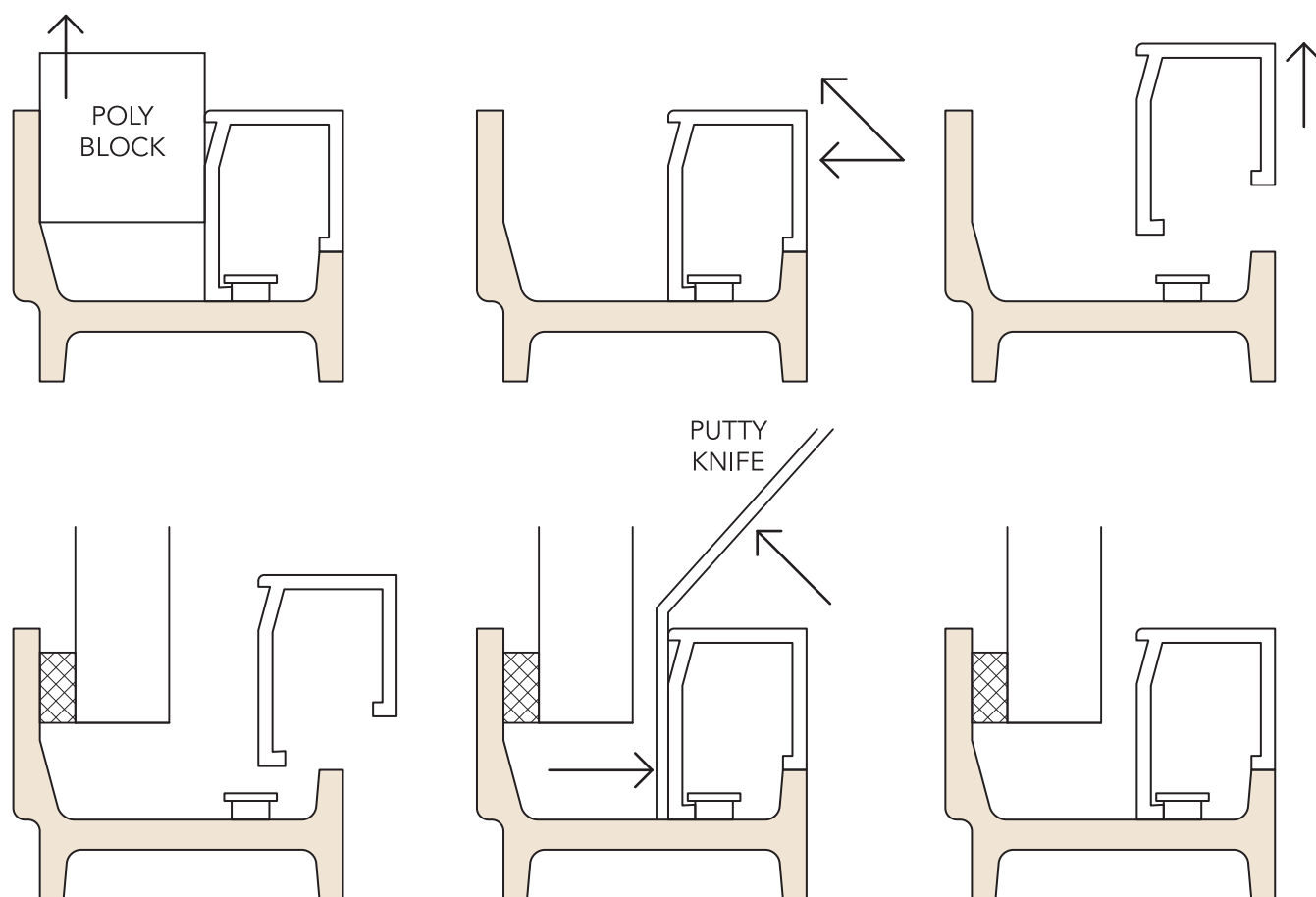


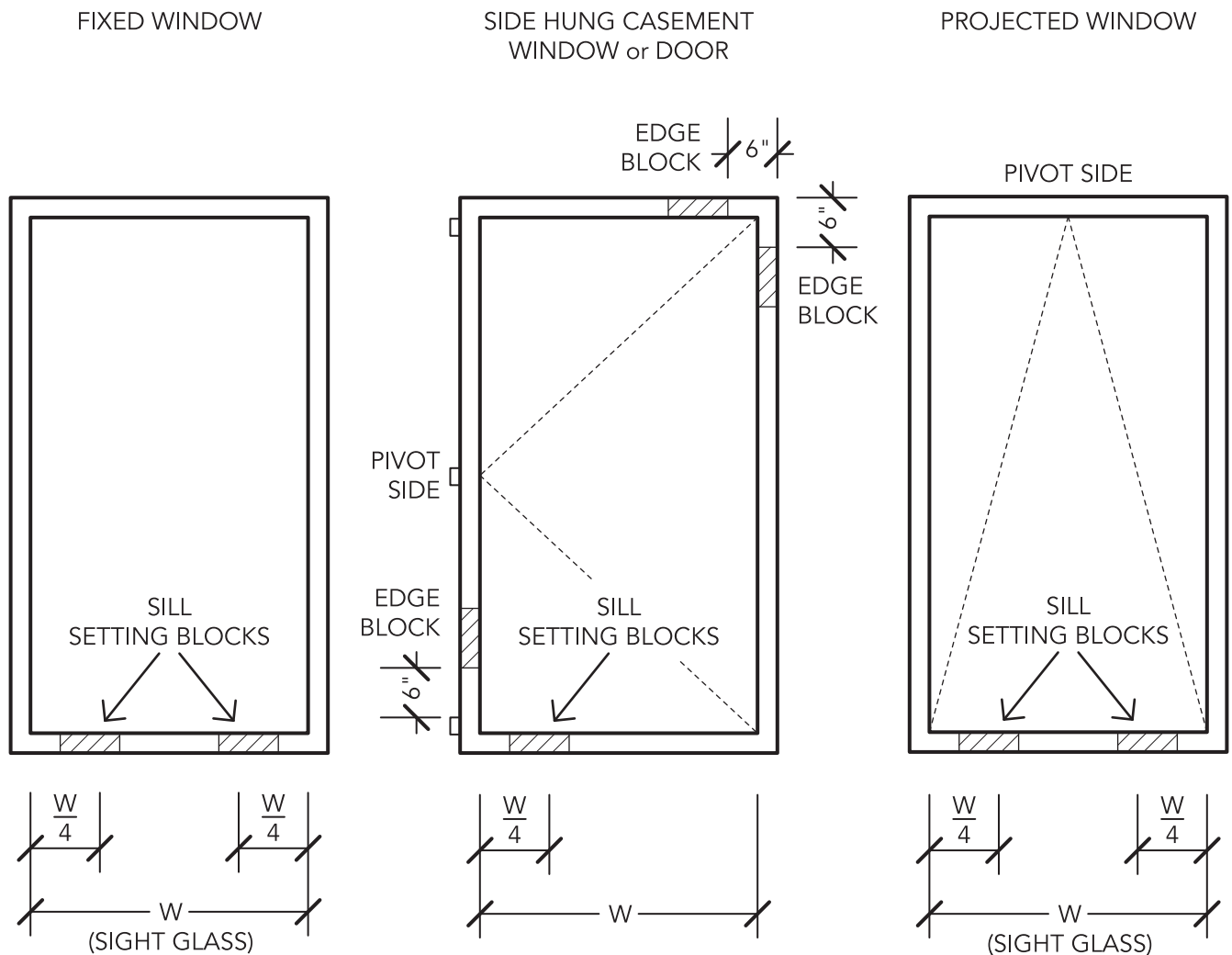
FIGURE 9: REMOVING AND REINSTALLING HOOK-ON GLAZING BEADS



Glass Blocking Recommendations

- Glass blocking should be placed as shown by the elevations in Figure 10. **WARNING! Failure to position blocking as recommended may result in racking of the window ventilator or casement door leaf and increase its inability to operate properly.** This may occur with large size units and heavy glass due to improper weight distribution.
- Hope's snap-in glazing beads are notched to accommodate the setting block positions indicated. Width of all setting blocks must fit within the notch in the glazing bead.

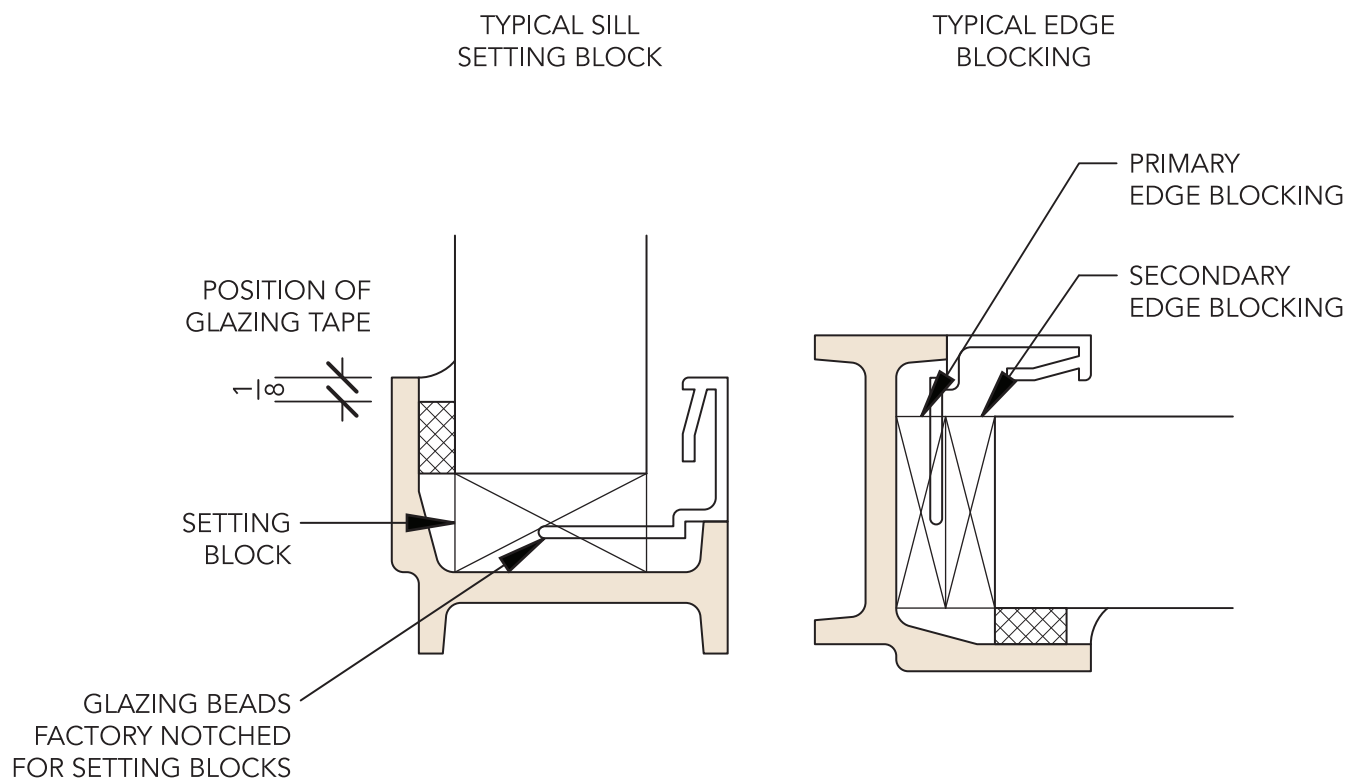
FIGURE 10: GLASS BLOCKING RECOMMENDATIONS



Glazing Procedure

- Refer to the shop drawings for product specific glazing details.
- Install glazing tape around the perimeter of the fixed glazing rebate (opposite side from glazing bead). The tape should be installed 1/8" below the edge of the rebate to provide a pocket for the sealant cap bead.
- Do not use a pre-shimmed tape on exterior unless otherwise noted on Hope's shop drawings. **A 3/16" foam tape compressed to 1/8" face clearance or a 1/4" foam tape compressed to 3/16" face clearance is recommended depending on glass thickness and tolerance.**
- Install setting block material at the sill to support glass and prevent sliding prior to curing of cap seal.
- For units that require edge setting blocks (vertically pivoted window vents, reversible window vents, casement window vents and casement door leaves) install 1/4" high head and jamb "primary" edge blocks prior to installing the glass. Attach with sealant or adhesive.
- Set glass on the sill setting blocks and firmly press against the back glazing (see Fig 11).
- Where required, wedge "secondary" edge block between primary edge block and glass edge.
- If a "structural" glazing procedure is required because of oversized units or special applications refer to the approved shop drawings for procedures or the sealant manufacturer's recommendations.

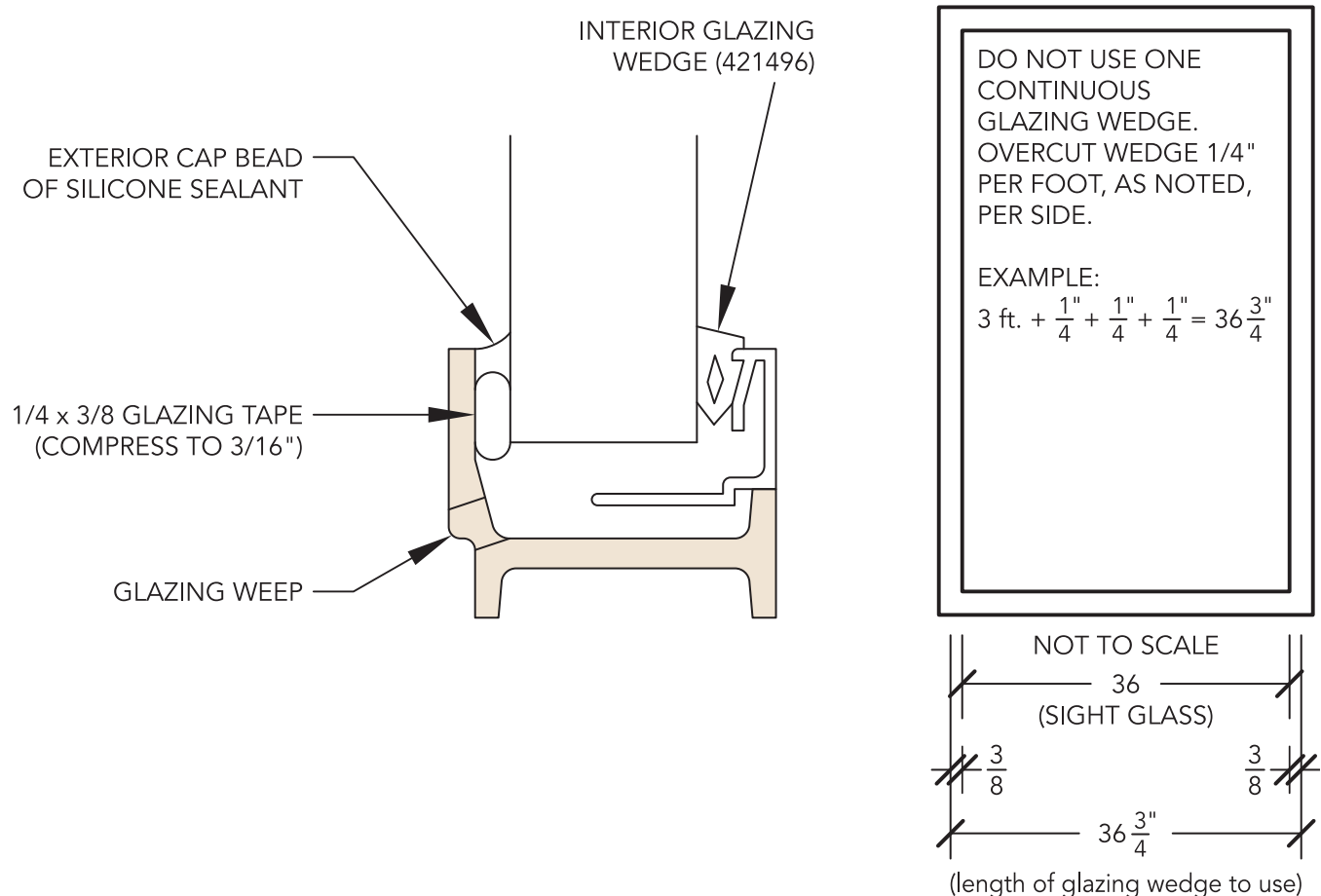
FIGURE 11: GLASS BLOCKING DETAILS



Reinstalling Beads, Installing Glazing Wedge and Cap Bead

- Insert head and sill glazing beads into retainer. Insert shims or short pieces of glazing wedge between the bead and glass to temporarily hold the glass in position.
- Insert jamb beads into position.
- Cut a length of glazing wedge $\frac{1}{4}$ " longer per linear foot than the daylight opening of the lite (see Fig 12).
- Insert the glazing wedge between the glass and glazing bead beginning at the center working to half the distance to the corner. Spray soapy water to receive wedge. This will aid wedge installation.
- Insert the end of wedge at the corner and work back toward the center. Install the remaining opposite side of the drive wedge in the same manner. Rolling tools and soapy warm water are recommended for ease of installation.
- Complete the installation of the glazing wedge on the remaining three (3) sides. **NOTE:** Do not use one continuous strip, cut each side individually.
- Cap bead the perimeter between fixed glazing rebate and the glass with sealant and neatly point.
- See Figure 12 for detail of complete glazing components and example of how to figure proper length of glazing wedge.
- If the glazier elects to add a heel bead of sealant, it must not interfere with the factory prepared glazing weep system.

FIGURE 12: TYPICAL GLAZING DETAIL



After Glazing

- Do not unlock or operate ventilators or casement doors until glazing has been cured.
- If nylon vent aligners or rider blocks are used for casement windows and the vent drags on the vent aligner, do one of the following: loosen the attaching screw and adjust downward the aligner height (1/16") or remove the 1/16" shim under the vent aligner.

FIGURE 13: ROTO OPERATOR HOUSING WITH SCREEN

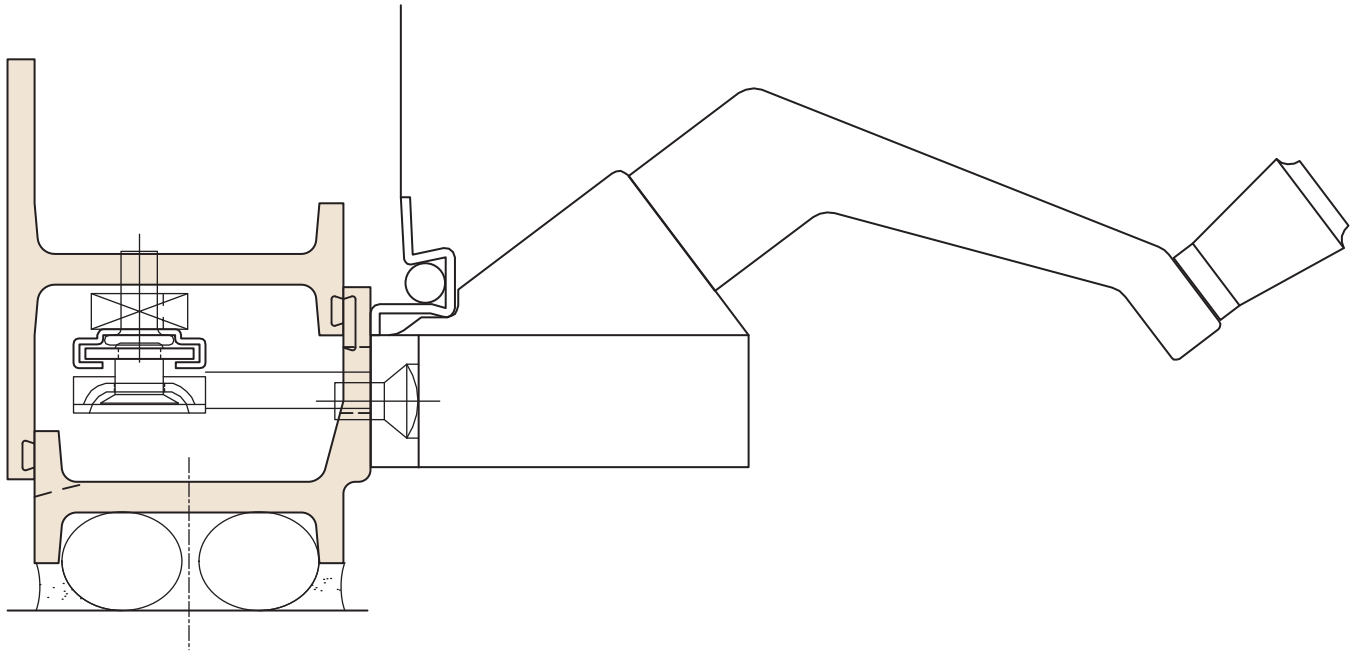
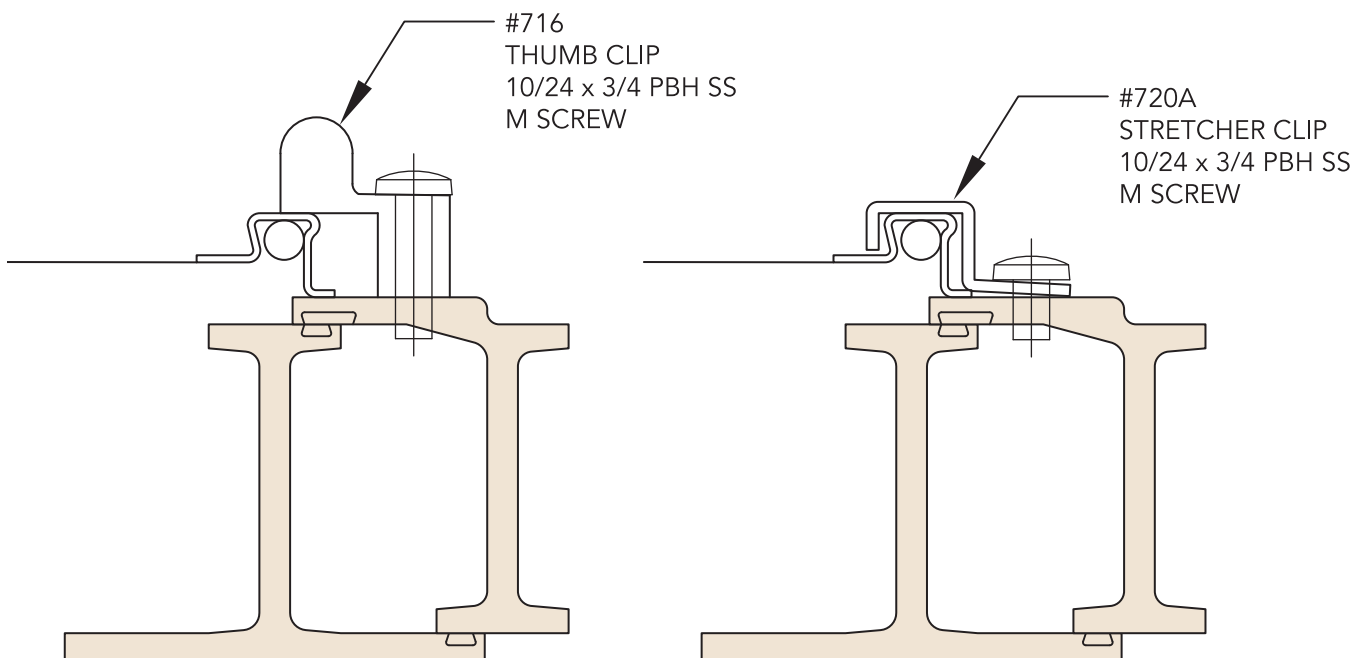


FIGURE 14: ATTACHING SCREENS FOR SWING-OUT VENTILATORS



SCREEN INSTALLATION

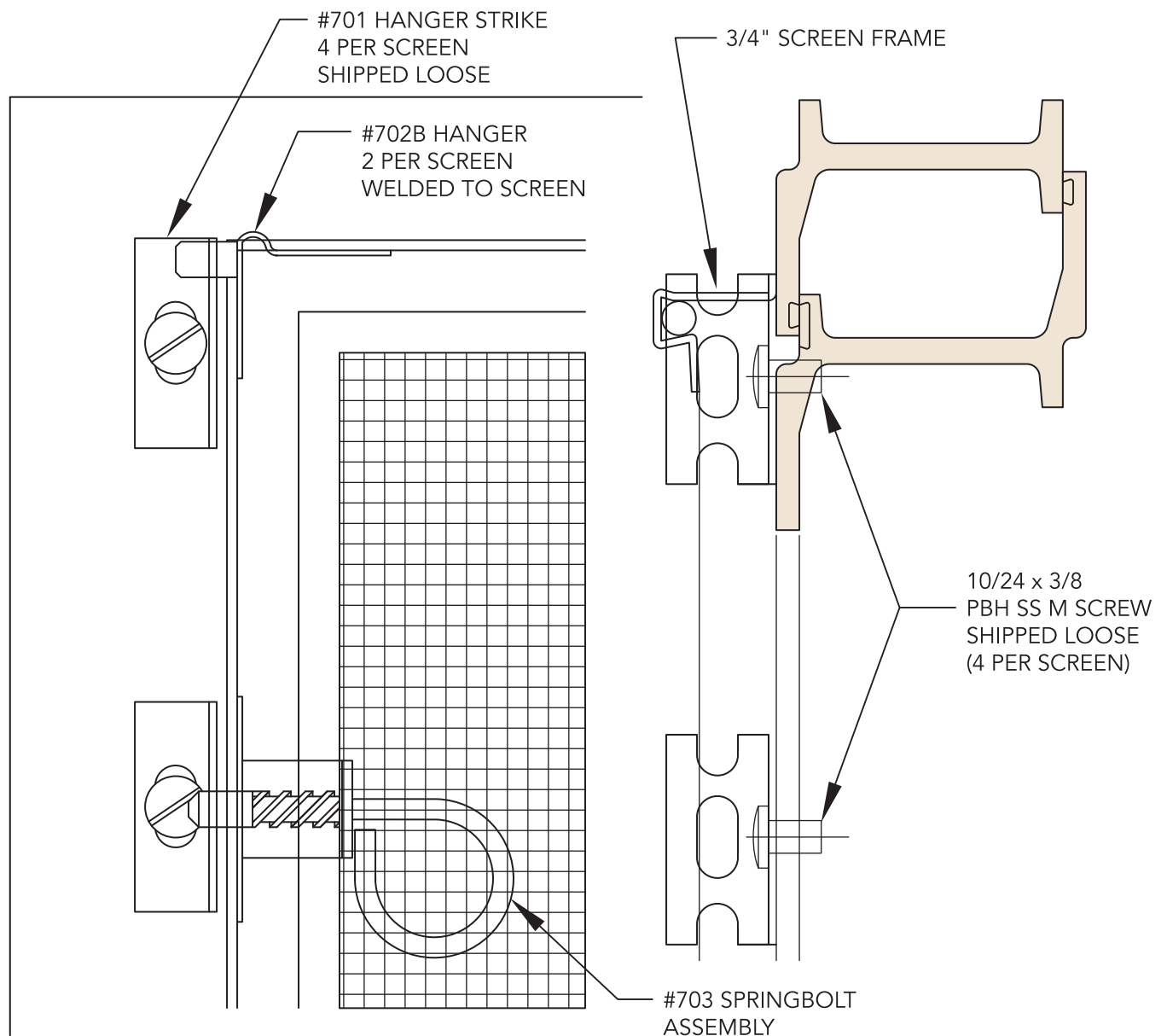
Installing Screens for Swing-Out Ventilators

- Position screen on screen support studs or on the roto operator housing (see Fig. 13).
- Attach screen clips using screws provided. **NOTE:** Taller screens may have preparation for additional clips that must be used (see Fig. 14).

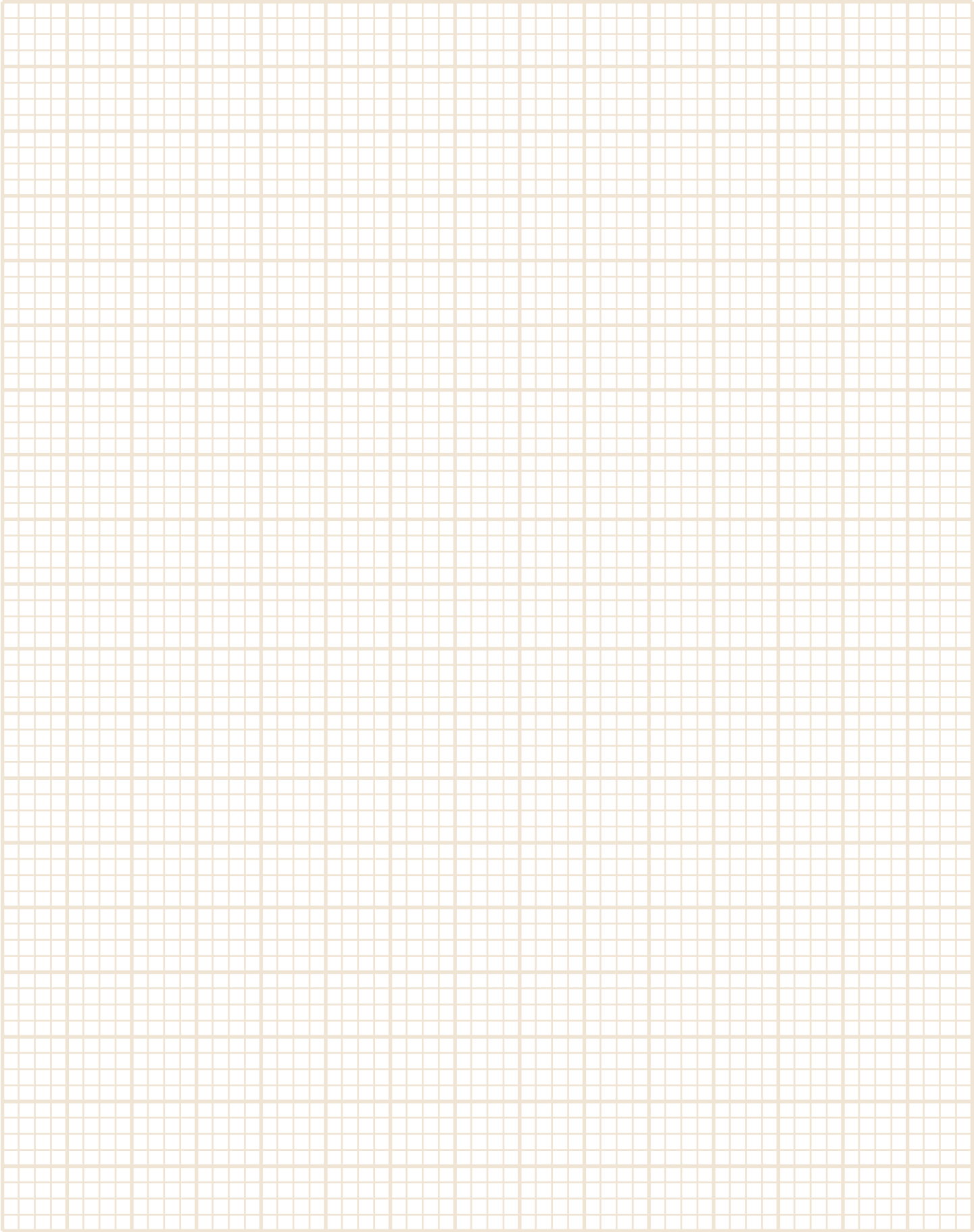
Installing Screens for Swing-In Ventilators

- Attach four (4) hanger strikes to the exterior of the frame as shown in Figure 15. The screen can be installed from exterior or, using the ring pulls, from the interior.

FIGURE 15: ATTACHING SCREENS FOR SWING-IN VENTILATORS



NOTES



Hope's Field Installation Manual

This manual contains general information for installation and glazing of Hope's products. Approved contract drawings and specifications should be used for your project.

If there are any questions regarding installation, glazing procedures or clarification of details, please do not hesitate to contact Hope's project management at 716-665-5124.



Hope's Windows, Inc.
84 Hopkins Avenue, PO Box 580
Jamestown, NY 14702-0580
Phone 716.665.5124 • Fax 716.665.3365
www.hopeswindows.com

Copyright © 2012 Hope's Windows, Inc. All rights reserved. Hope's is a registered trademark of Hope's Windows, Inc. Empire Bronze is a trademark of Hope's Windows, Inc. The names and logos of other companies mentioned herein may be trademarks of their respective owners. This document is for informational purposes only. Hope's Windows, Inc. makes no warranties, expressed or implied, in this document.



Printed in U.S.A.

Prop 65 Notification

To our valued customers:

The State of California requires this notification regarding product warning and labeling requirements pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986, also known as Proposition 65 ("Prop 65").

Under the current Prop 65 regulations, manufacturers and distributors may provide notice to retailers and/or their immediate downstream distributors that a product requires a warning and provide the necessary warning materials to those retailers or distributors. Cal. Code Regs. tit. 27, § 25600.2(b). If the manufacturer/distributor chooses to provide notice and warning materials to the downstream entity, the latter is then responsible for placement and maintenance of the warning materials received from the manufacturer/distributor. Cal. Code Regs. tit. 27, § 25600.2(d) (2018). The downstream entity must confirm receipt of the notice electronically or in writing. Cal. Code Regs. tit. 27, § 25600.2(b)(4).

As required by Prop 65, this notice is to inform you that the following products may result in exposure to the identified Prop 65 listed chemicals and thus require a Prop 65 warning label:

Door and window hardware made from brass

- Potential exposure to lead
- Affected product lines and product types:
 - Handle sets, hinges and strikes in the finishes ORB (F79), Unlacquered Brass (F71) finish, Dark Bronze (F881), Antique Bronze (F883)
 - Keys included in handle sets with keyed cylinders, with keyed cylinders or keys sold separately
 - Handle sets and brass-based strikes that have been painted, coated or plated where the painted surface, coating or plating has become damaged or worn to expose the brass base material
 - Applicable Prop 65 warning label:



Hope's Windows, Inc. will renew this notice annually by February 28 as required by current Prop 65 regulations.