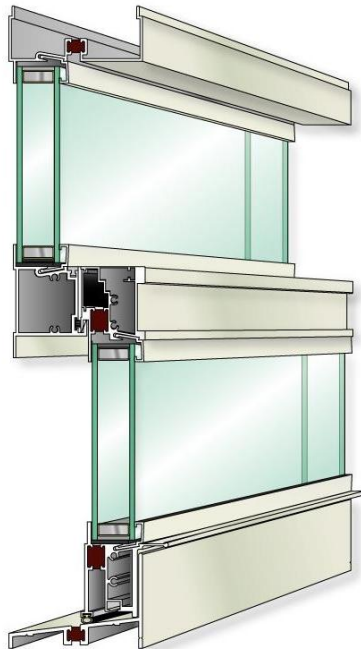


WINDOW INSTALLATION INSTRUCTIONS



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These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

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APPENDIX A: MASONRY CLEANING

These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

GENERAL OVERVIEW

1. GENERAL NOTES:

A. Inspection

1. Inspect all materials for accuracy and damage during the unloading process. Report any damaged or missing materials to Peerless Products and/or the freight carrier immediately.

B. Protection and Storage

1. Windows are finished products. Care must be taken in handling all finished products.
2. To avoid damage to assembled windows or stock length accessories, **DO NOT DROP OR DRAG MATERIALS** from the truck.
3. Store windows in the proper upright position. Provide spacers to separate the units and to prevent scratches.
4. Store and cover all units off the ground to protect them against the elements and to prevent access by other trades.
5. If units or accessories become damp or wet, remove them from their packaging, allow them to dry, repack them, and store them in a new location.

C. Check material

1. Check all material upon arrival for quantity and damage. Any visible damage must be noted on the freight bill at the time of receipt. If a claim is required, please contact the Peerless Shipping Department.

D. Cleaning Instructions

1. Cement, plaster, terrazzo, alkaline and acid based materials used to clean masonry are very harmful to finishes and should be removed with water and mild soap immediately to eliminate permanent staining (See Appendix. A). Spot test any cleanser prior to complete cleaning.
2. Refer to A.A.M.A. 609.1-85 Voluntary Guide Specification for cleaning of anodized aluminum surfaces.
3. Refer to A.A.M.A. 610.79 Voluntary Guide Specification for cleaning of painted aluminum surfaces.
4. Remove protective coatings, if applicable, prior to using field-applied sealants during installation.

Note: "Tape" used to mask a painted aluminum surface may induce permanent bonding to the painted surface, therefore creating an adhesion failure to aluminum.

Caution: Windows are not to be used for any purpose other than their intended use (i.e. ladders, scaffold supports, scaffolds, work benches, etc).

2. CONSTRUCTION NOTES:

A. Shop Drawings

1. Shop drawings must be thoroughly reviewed prior to beginning installation and should be used in conjunction with these installation instructions.

B. Check Openings

1. All openings must be prepared in accordance with contract documents prior to installation. If the openings do not meet the requirements, contact the G.C. in writing and resolve any differences before beginning.

C. Installation Reference Points

1. All work must begin from a reference point (i.e. column lines, edge of walls, etc.) established by the architectural drawings and/or G.C.

D. Plumb/Level/True

1. All materials must be installed plumb, level, and true within established line grades. Maintain a tolerance of 1/8" in a 12'-0" span.

E. Isolate Dissimilar Metals

1. All aluminum must be isolated from dissimilar metals by providing a coat of zinc chromate or bituminous paint. Plastic isolator shims may also be used.

F. Thermally Broken System

1. Erector shall not drill, punch, penetrate or otherwise alter the urethane bridge in any manner during installation.

G. Anchoring

1. Refer to shop drawings and/or actual project conditions to determine anchor requirements. Once the conditions are inspected and the requirements have been determined, consult the fastener manufacturer to determine the type and size to be used on the project.
2. Due to varying perimeter conditions and project performance requirements, anchor fasteners are not specified in these instructions.

H. Sealants

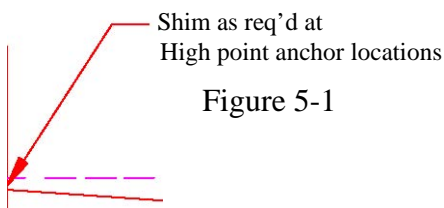
1. All perimeter sealants used must be compatible with all surfaces coming in contact with the sealant, including other sealants. Consult the sealant manufacturer to verify compatibility with adjacent surfaces.

3. BUILDING CODES:

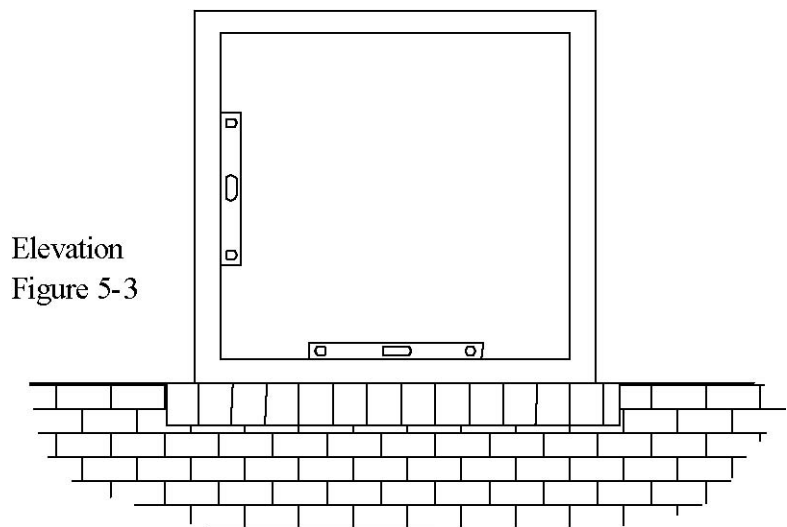
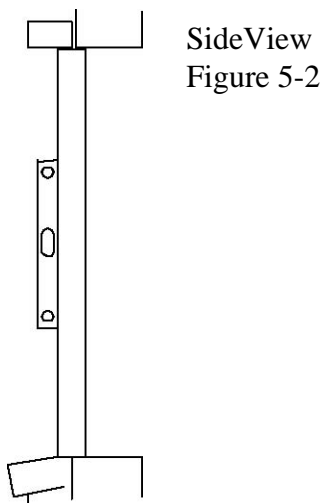
- A. Glass and glazing codes governing the use of products vary widely. Peerless Products, Inc. does not control the selection of products for specific projects, therefore, no responsibility is assumed in these areas. It is the responsibility of the owner, architect and installer to select materials in strict accordance to all applicable codes.

4. WINDOW INSTALLATION:

- A. The openings must be inspected for correct size as indicated in the architectural drawings and shop drawings.
- B. Establish the face of the window line at the head, jamb, and sill. Review the architectural plans, shop drawings and G.C. reference lines to determine this location.
- C. Determine the high point of the masonry sill using a string line or transit and shim the lower side to match (see Figure 5-1).

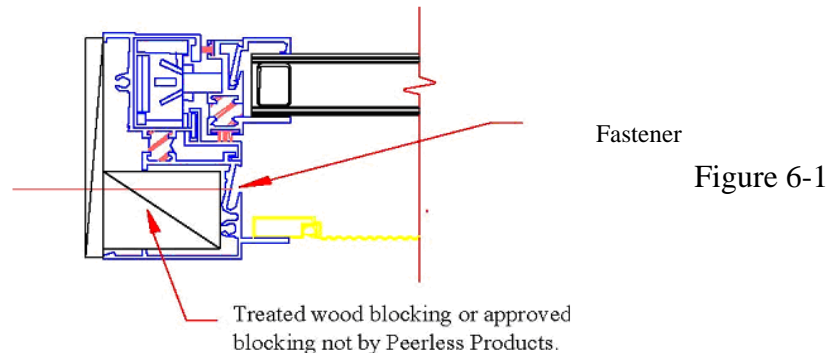


NOTE: For proper vent operation and weep drainage, the windows must be installed plumb and level.



WINDOW INSTALLATION CONT.:

- D. Determine the quantity, size and type of perimeter fasteners to be used from field conditions, shop drawings and/or structural review. Peerless Products does not provide perimeter fasteners. Refer to the appropriate section of the Installation Instructions as to the accessories being used.
- E. The type of fastener used depends on the project conditions and installers preference. Refer to fastener manufacturer recommendations for proper sizing and edge distance.
- F. Minimum fastener spacing:
1. No more than 3" from each side of jamb joints.
 2. No more than 3" from each side of locking points.
 3. No more than 16" O.C. between corners and locking points.
 4. These requirements apply unless otherwise specified.
- G. Seal all the anchor heads across the sill. Seal all of the other anchor heads unless the sealant will inhibit the proper operation of the hardware (i.e. flat head anchors at jambs of hung units).
- H. Install anchor support blocking in the window frames at anchor locations to eliminate disfiguring the frames during the anchoring process.



- I. Do not fasten unrelated items to window frames as expansion and contraction will occur (i.e. ceiling supports, drapery tracks and convector covers).
- J. Throughout these instructions the terms sealant and butyl sealant will appear and are defined as follows:
1. SEALANT: A skinning, non-hardening material (silicones, polysulfides, polyurethanes, and polymercapians). Federal spec: TT-S-00227E, TT-S001543A, TT-S-00230G (BUTYLS-FS-TT-001657).
 2. BUTYL SEALANT: A non-skinning, non-hardening material (NAAMM Reference Standard 5C-1).
- K. Seal all exposed perimeter joints and any metal-to-metal joinery.

5. VENT INSTALLATION:

Upon the completion of window installation, all operating vents must be checked for proper operation and alignment. In the event that the vents are removed during installation, proper care must be taken to replace the vent in the same location as prior to removal. Adjustment of locking and hinging hardware may be required for proper operation. All movable hardware must be lubricated and cleaned periodically for smooth operation.

GENERAL INSTALLATION PROCEDURE

1. GENERAL INSTALLATION WITHOUT PERIMETER ACCESSORIES:

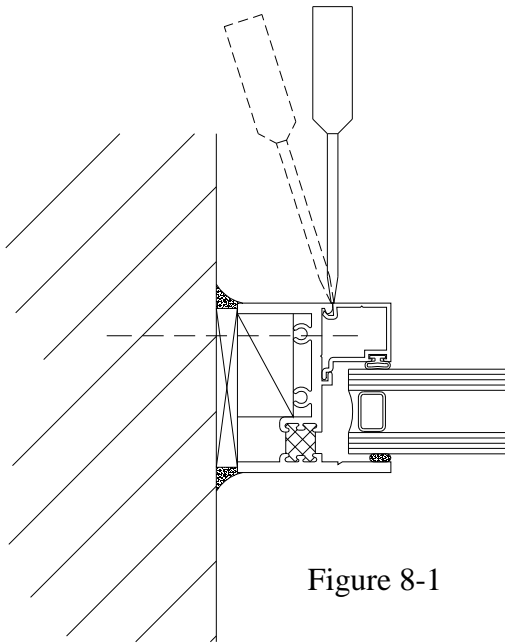


Figure 8-1

The glazing bead may need to be removed to anchor the fixed units. Care must be taken when removing the bead as not to damage the material and/or the finish. To remove the bead, first apply pressure at the metal-to-metal joint between the frame and the bead to compress the vinyl with a putty knife (see Fig. 8-1). Next, carefully pry and rotate the knife as to separate the frame and bead. Be sure and start at the end of the part that runs between. Repeat the process for all sides that need removal. Peerless Products will not be liable or accept responsibility for damage to materials resulting from this process.

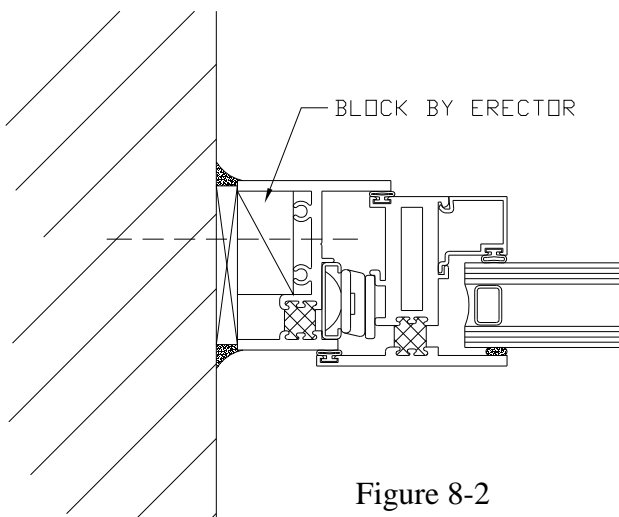


Figure 8-2

At the operating units, open the vent and install the fasteners at the required locations. Seal the fastener heads and return the vents to the closed position.

2. ARCHITECTURAL SILLS

- A. Determine the location of the sill from approved shop drawings.
- B. Locate the sill anchor clips at 3" from each end at 16" O.C. max.
- C. Drill anchor clip holes using the clip as a guide.
- D. Shim the anchor clips as required to achieve a level sill after placement.
- E. Provide a bed of grout or high impact resistance shims for the sill to rest on.
- F. Hook the exterior leg of the sill over the clip and rotate the sill over to rest in the bed of grout or sealant.

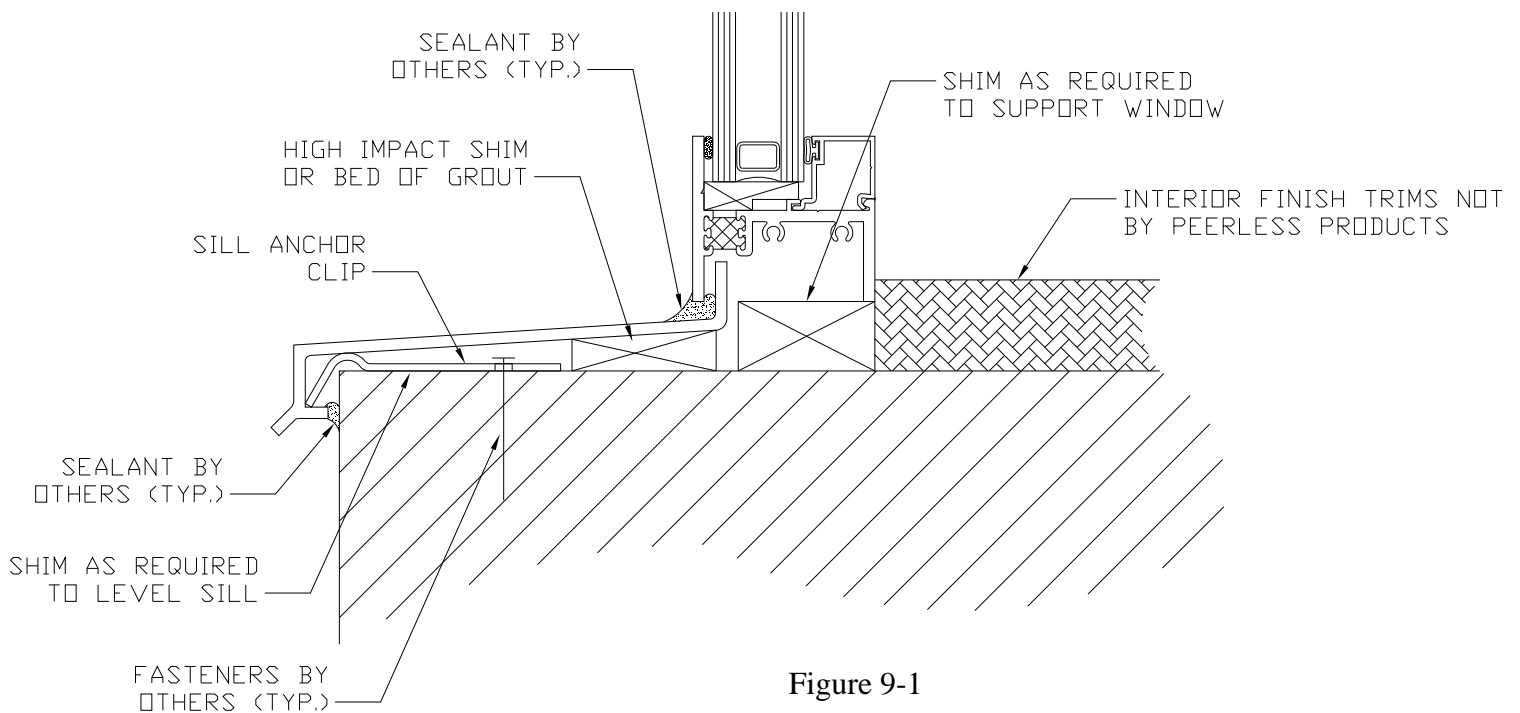


Figure 9-1

3. GRAVITY ANCHORS

A. Uses of gravity anchors:

1. To support the dead load of vertically stacked units. This will eliminate bowing and/or twisting of the head of the lower unit.
2. To hold one unit up off the other to allow for thermal expansion. See shop drawings for gravity anchor locations.

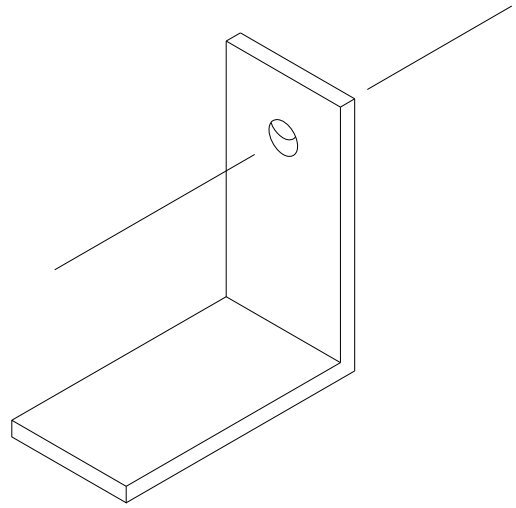
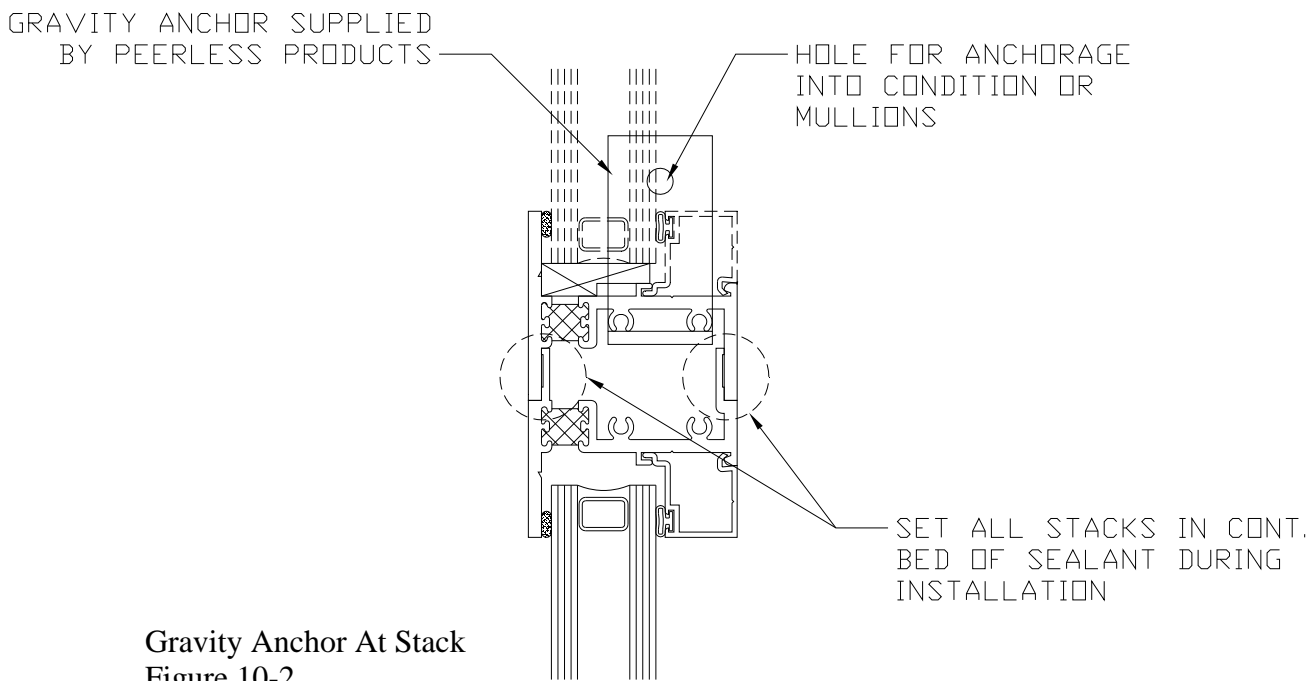
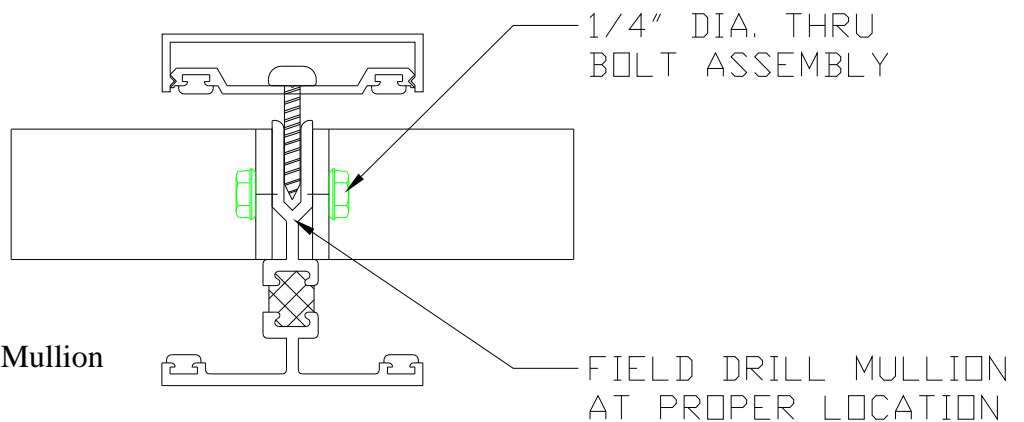


Figure 10-1



Gravity Anchor At Stack
Figure 10-2



Gravity Anchor At Mullion
Figure 10-3

4. SIDE STACK INSTALLATION

A. Prior to beginning the installation process, determine the most efficient and applicable procedure from the following:

1. If no receptor system is being used, the system may either be set together prior to setting in the opening or by setting the units in the opening all to one side and allowing room to install the last unit. Next, even out the expansion joints and perimeter sealant joints.
2. If a receptor system is being used, the recommended procedure is to set the units individually while applying a continuous bed of sealant to all joints (See Figure 11-1).

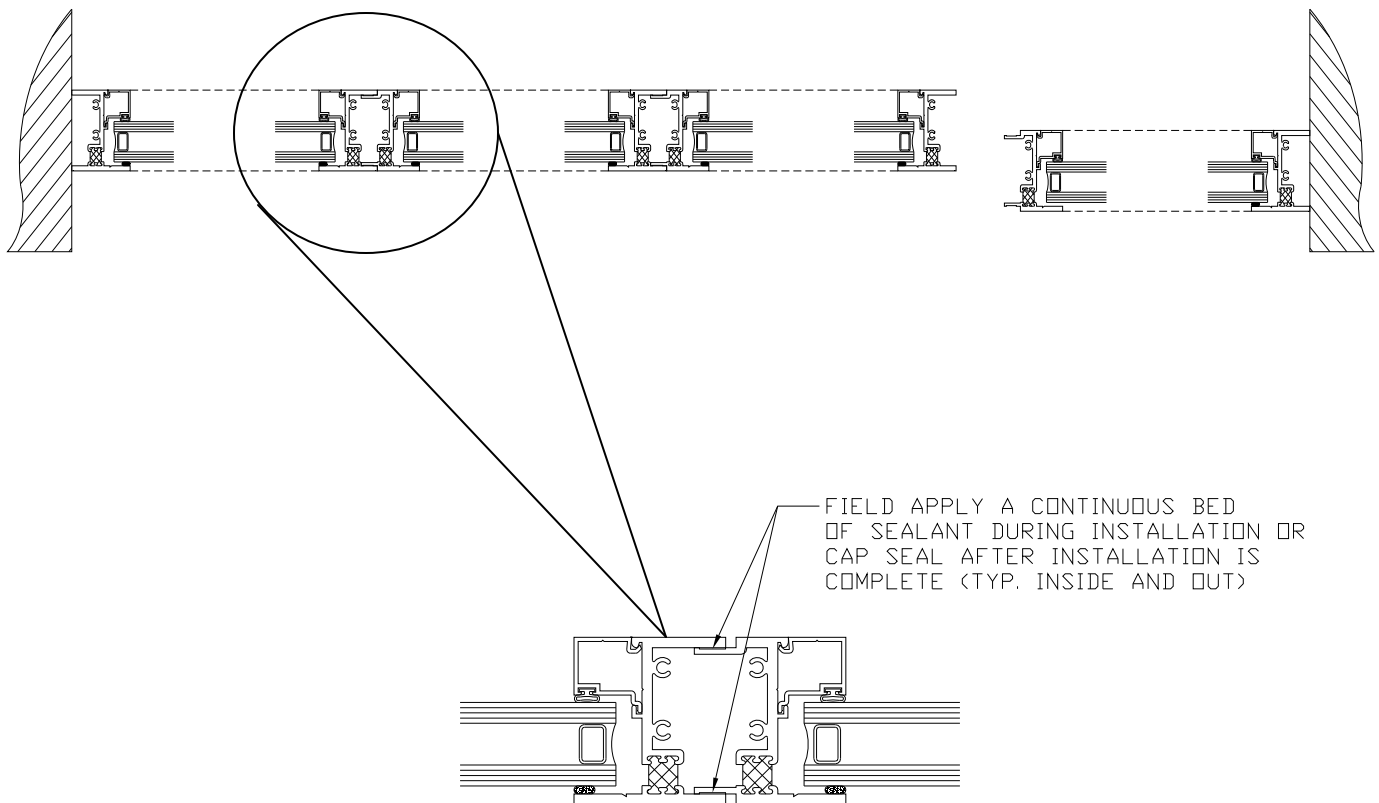


FIGURE 11-1

5. MULLION INSTALLATION WITHOUT PERIMETER ACCESSORIES

- A. Refer to project shop drawings for mullion locations.
- B. For elevations not using perimeter accessories (i.e. sub-frame or panning) mullions will be shipped long for field trim to suit opening.
- C. Set the mullion into the opening at the proper location and anchor it at the head and sill with the supplied mullion anchors. Attach the mullion anchor to the head and sill first with approved erector supplied fasteners, and then attach the mullion to the anchors with factory-supplied fasteners.
- D. Apply a continuous bed of sealant at the mullion where the window will bed. Set the window unit into the bed of sealant. If the mullion is accessible from the exterior, a cap bead may be used at the window mullion joint.
- E. Once the windows have been set and properly spaced, attach the mullion pressure plate with the factory-supplied fasteners 3 inches from each end and 16 inches on center.
- F. Pressure plates at the sill on conditions that have a sill pan (i.e. turned up break metal) must make contact with this sill pan and be sealed to maintain the integrity of the water dam. Screws at this particular area must also be sealed.
- G. At the mid-point of the opening height, fasten the pressure plate through the window jamb with a #6 fastener (See Figure 13-1).
- H. Field cut vertical interior mull cover and snap fit into pressure plates. The erector performs any notching required around field conditions.

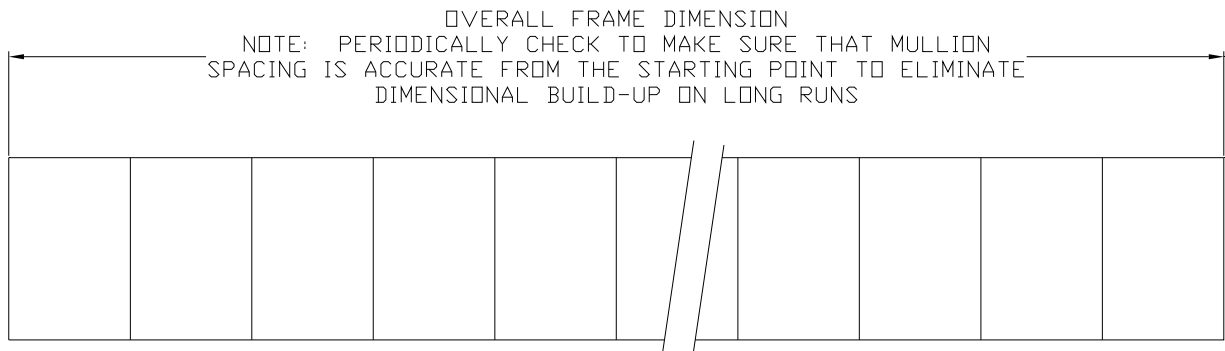


Figure 12-1

See Also Figures 13-1, 13-2

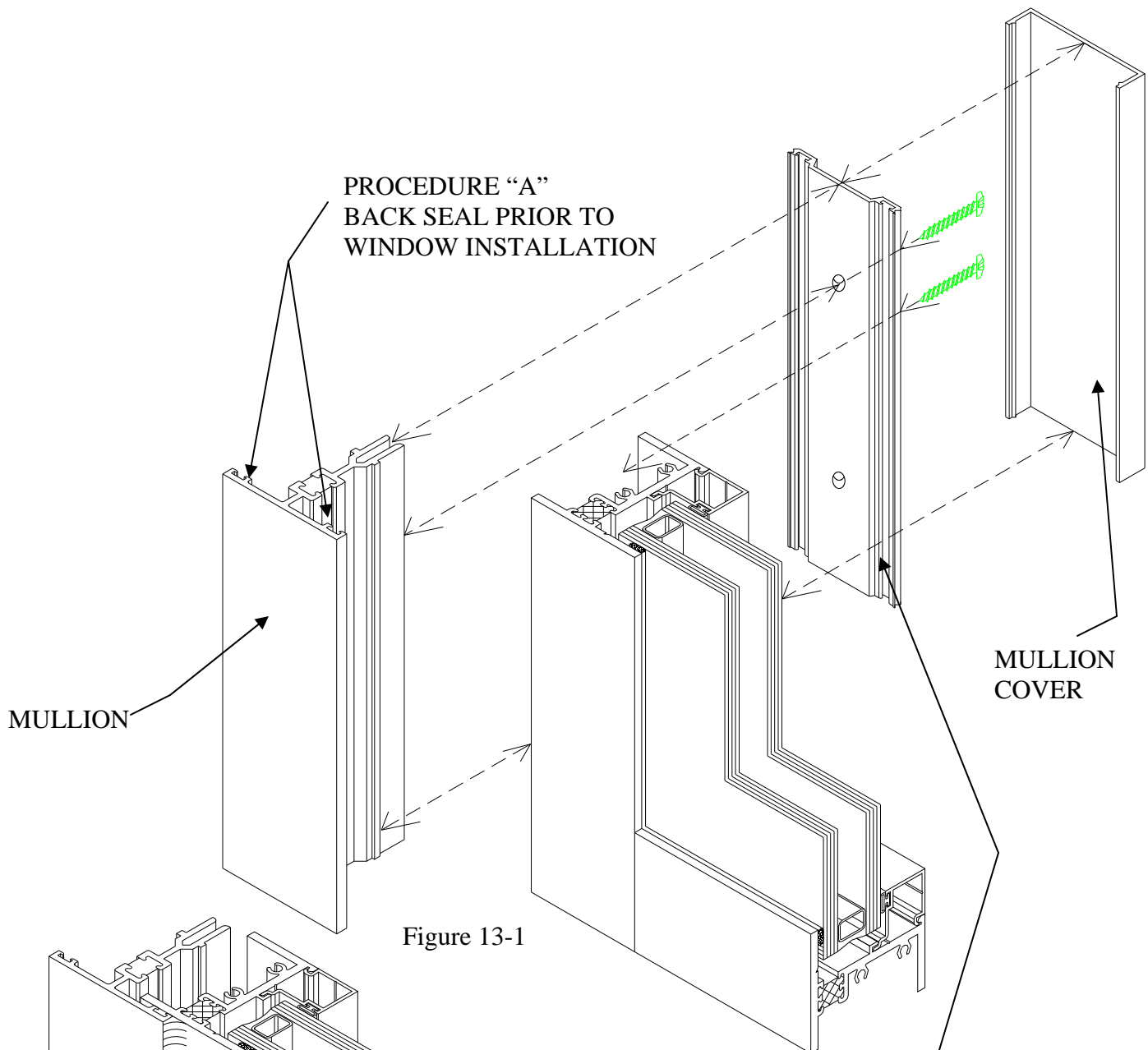
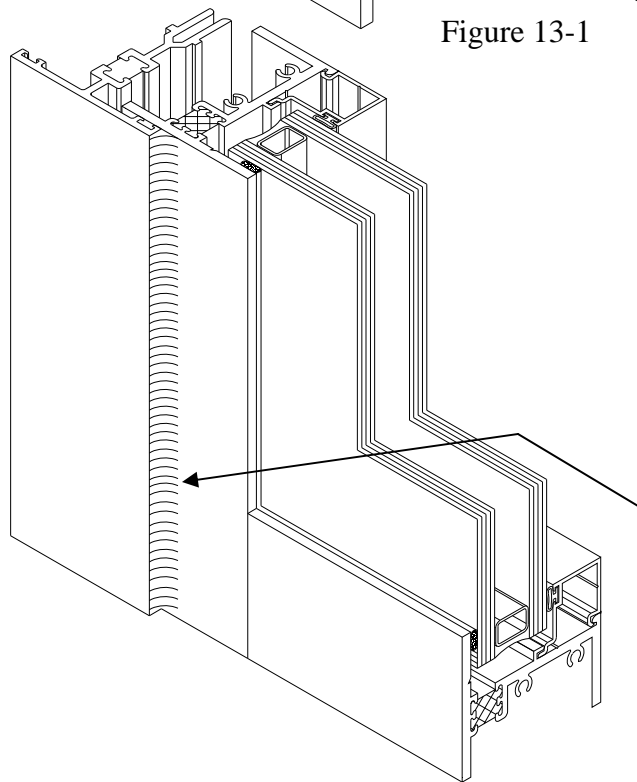


Figure 13-1



STANDARD PRESSURE PLATE.
 PRESSURE PLATE AT SILL MUST BE
 SEALED TO OPENING CONDITION OR
 FLASHING AT THE SILL TO MAINTAIN
 DAM HEIGHT INTEGRITY AND BE
 SEALED UP 8" ON EACH SIDE OF BULB
 VINYL.

PROCEDURE "B"
 CAP SEAL AFTER WINDOW INSTALLATION

Figure 13-2

These instructions are recommended installation instruction procedures.
 Please refer to project specific shop drawings (if applicable).

I. Peerless Products suggests installing batting insulation into any installation cavity even when using 3- Piece mullions in an opening prior to sealing off window opening (See Figure INS-3).

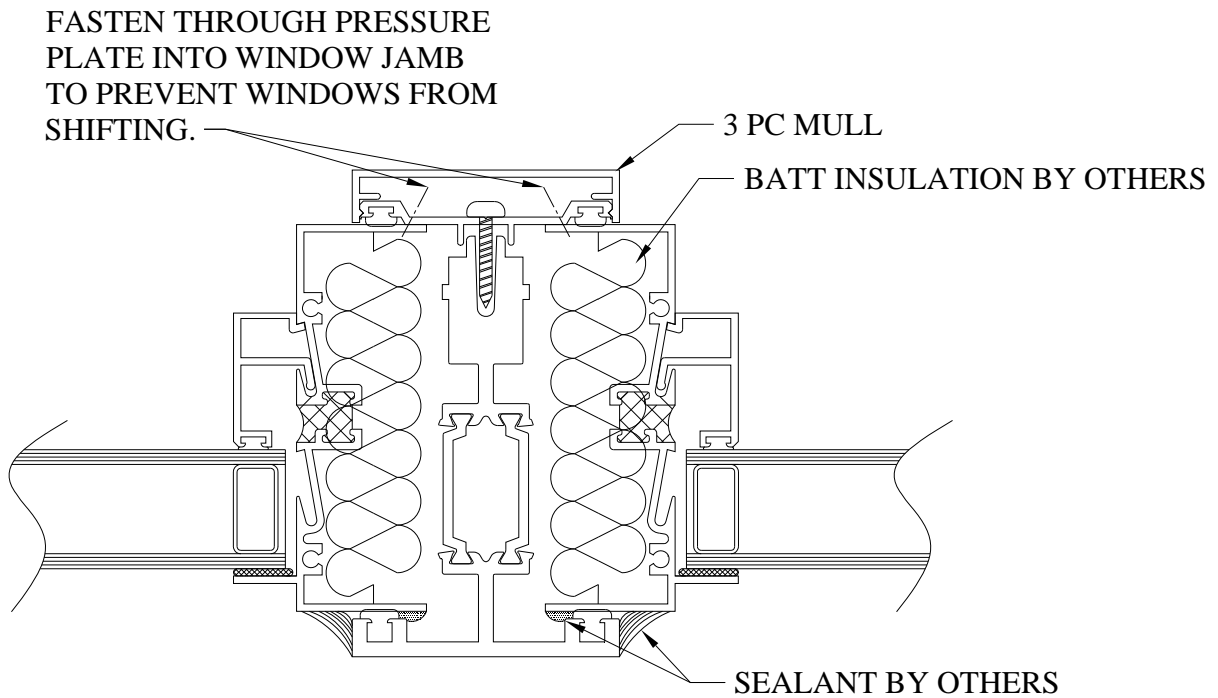
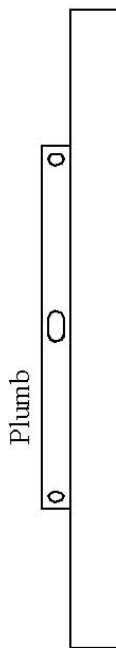


Figure INS-3

GENERAL HUNG WINDOW INSTALLATION PROCEDURES

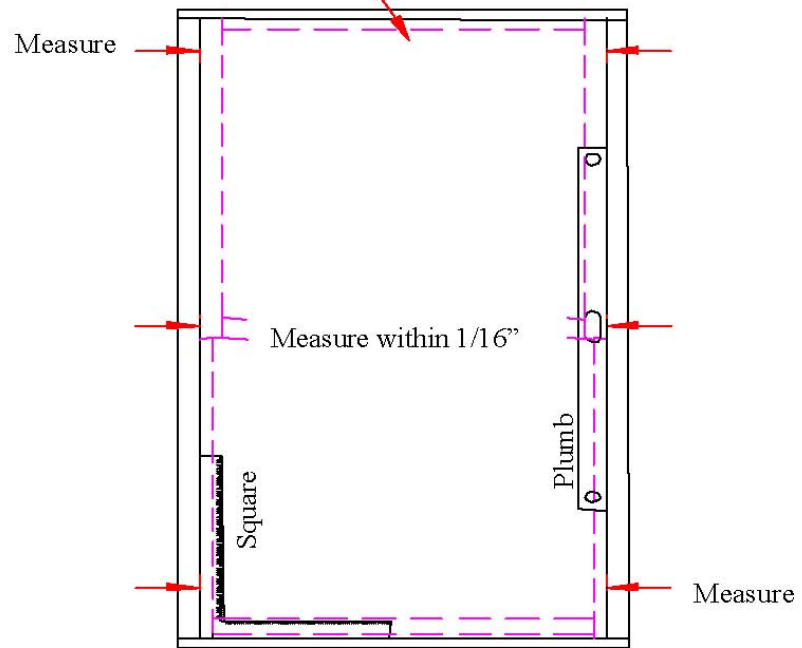
1. GENERAL NOTES:

- A. Install frame plumb, level and true. Maintain a constant width and height dimension throughout the entire vent opening.
- B. If the vent is removed during installation, be sure to identify the sash so as to reinstall it in the same frame from which it was removed.
- C. All hung windows must be blocked and anchored at mid-span of jambs to eliminate bowing and twisting of jamb member. The clear opening at the mid-span must be within 1/16" of the dimension at the head and sill.
- D. Double hung units are shipped with a temporary strap to maintain the engagement of all hardware, including sash balances. This strap shall remain on the window until the unit is set in the opening. Premature removal of this strap may cause disengagement of the hardware including balances and severe injury may occur.
- E. Refer to the project engineering documents for fastener type and location. All fasteners must be flat head types at jambs.



Side View
Figure 14-1

Hold all dimensions to within 1/16".
Full height of jambs. (Typ)



Elevation
Figure 14-2

2. TILT WINDOW CLEANING INSTRUCTIONS:

A. Lower sash:

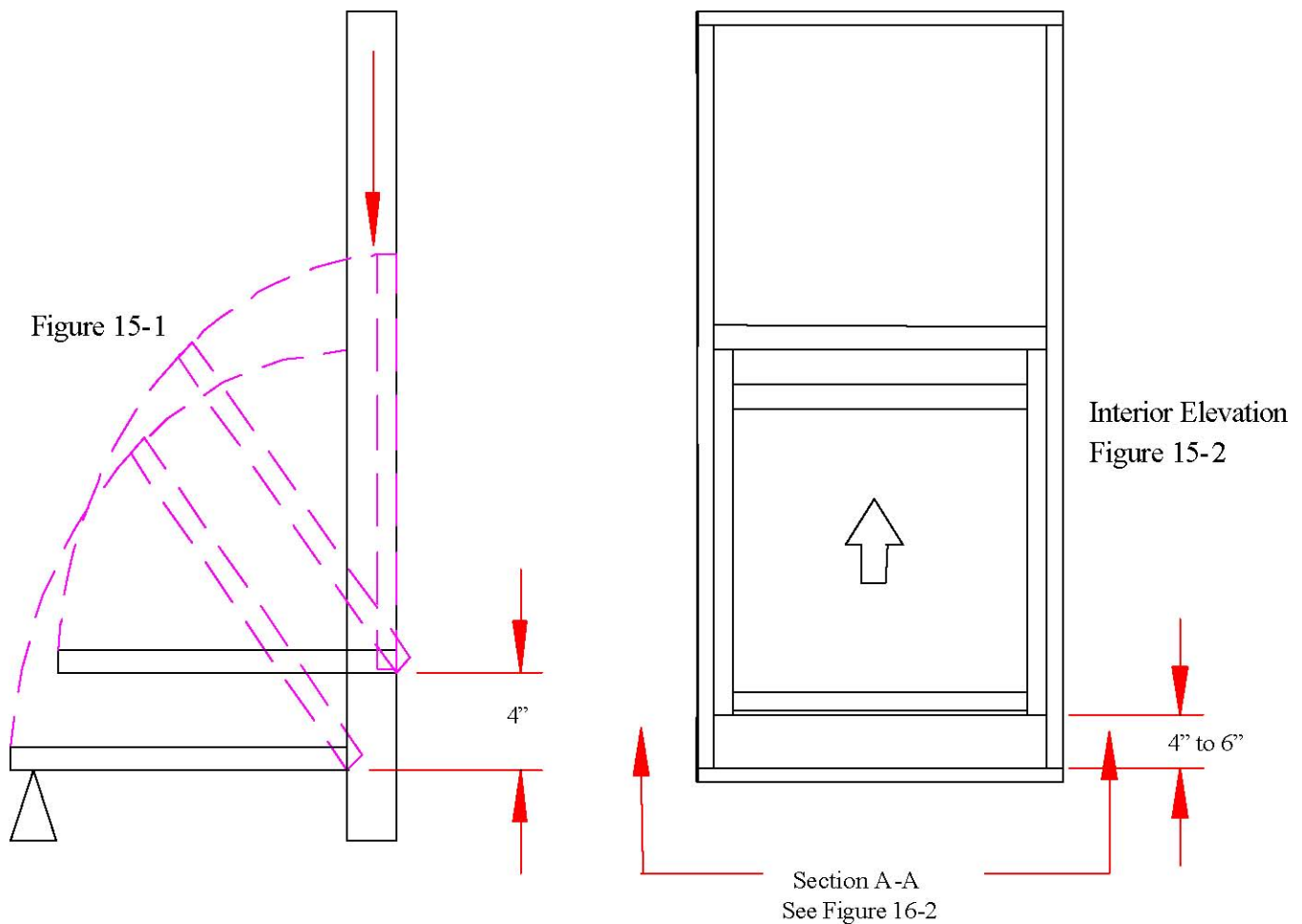
1. Unlock lower sash and raise approx. 4"-6".
2. Disengage tilt locks at each end of the top rail of the sash
3. Tilt the sash in to the horizontal position (See Figure 15-1).

B. Upper sash (if applicable):

1. Lower the upper sash to about 4" above lower sash.
2. Disengage tilt locks at each end of the top rail of the sash.
3. Tilt the sash in to the horizontal position (See Figure 15-1).

C. Return the sashes to their original positions by reversing the steps above.

D. Make sure the tilt sash screw is secured in the recessed pocket before operating sashes.



3. TILT WINDOW SASH REMOVAL INSTRUCTIONS:

A. Lower Sash:

1. Unlock lower sash and raise approx. 4"-6".
2. Disengage tilt locks at each end of the top rail of the sash
3. Tilt the sash into the interior, just far enough for the tilt latches to clear the jambs. Raise the sash up as far as it will go (See Figure 16-1).
4. Remove the screw from the pivot bar at one end of the bottom rail of the sash. Slide the pivot bar toward the center of the sash far enough to clear the balance shoe (Figure 16-2). Pull out on the sash and slide it horizontally to allow the pivot bar to slide out of the shoe on the opposite side.

B. Upper sash (if applicable):

1. Lower the sash 8"-10".
2. Remove sash by repeating steps 2-4 as above.

C. Replace the sashes in the reverse order of the steps above.

D. Make sure that the tilt latch screw is secured in the recessed pocket before operating the sashes.

NOTE: Sashes must be replaced into the same unit from which they were removed.

Tilt lock release screw.
Must be seated in pocket
any time the sashes are in
the operable position.

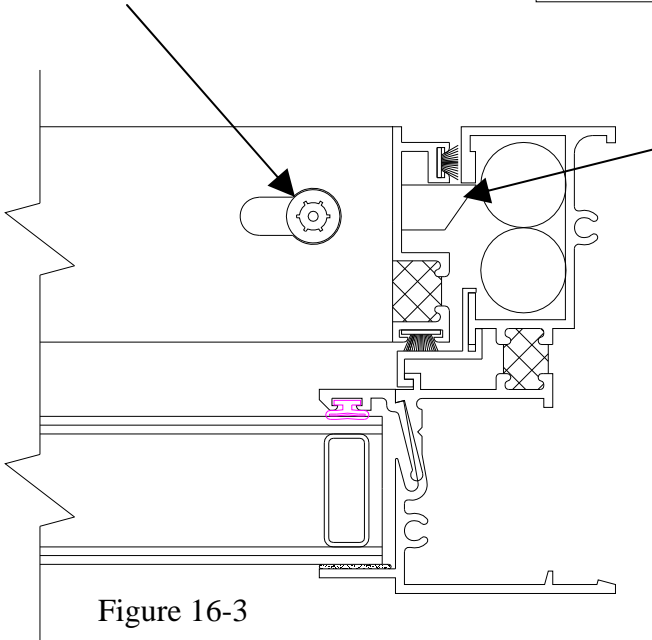
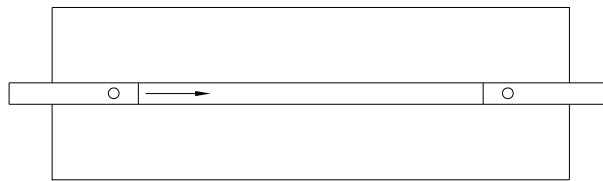


Figure 16-3

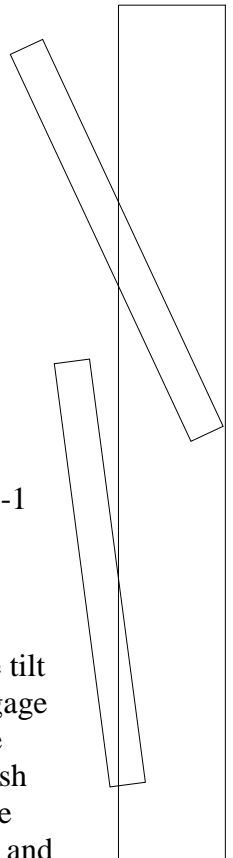


Section A-A
Figure 16-2

Tilt lock engagement area.
Must be fully engaged
during sash reinstallation.

Note: When reinstalling the sash, be sure the tilt pins at the lower corners of the sash fully engage into the pivot shoe housing prior to tilting the sash back to the closed position. Once the sash is tilted back to the closed position, make sure the tilt locks are fully engaged into the jambs and the tilt lock screw is tightened down. Personal injury and/or damage to the unit may occur if instructions are not followed carefully.

Figure 16-1



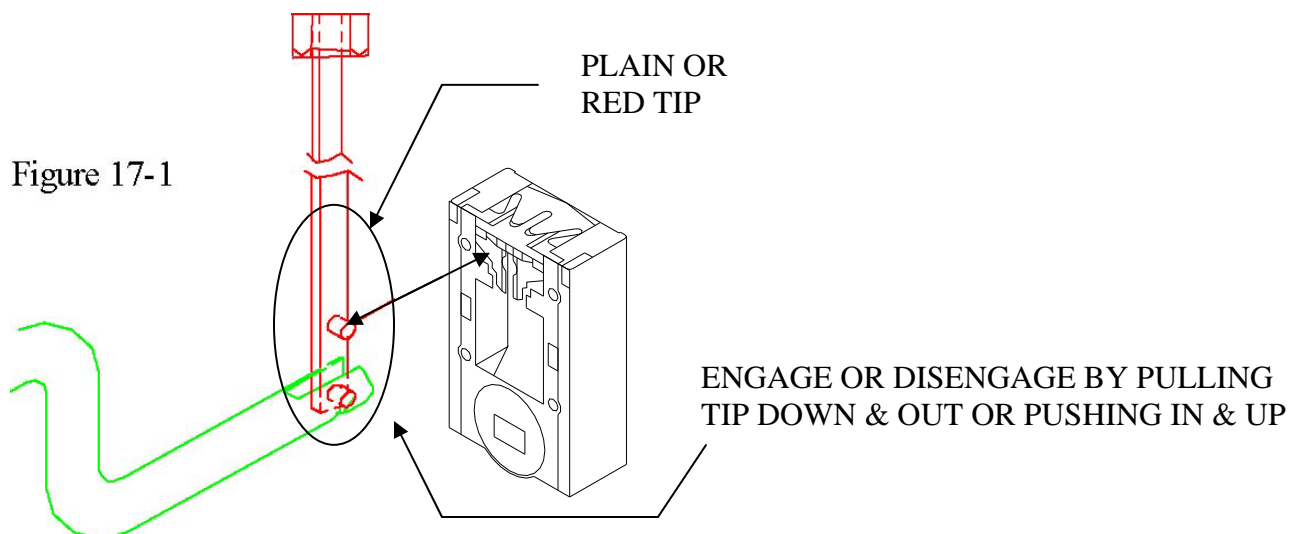
4. BALANCE REMOVAL / INSTALLATION – TILT WINDOWS:

A. Aluma-Tilt Balance Removal – Balance Tubes Have A Bright Aluminum Casing.

1. Carefully pull down on the bottom of the balance using the balance loading/unloading tool. While pulling down, pull the balance forward to disengage from the balance shoe (Figure 17-1).
2. Release the tension on the balance by slowly allowing the loading/unloading tool to turn counter-clockwise. On dual balances, one balance will turn clockwise while the other balance will turn counter-clockwise.
3. Remove the black vinyl stop blocks located at the head end of the window.
4. Remove the balances from the jamb by unscrewing the balance attachment screws.

B. Aluma-Tilt Balance Installation

1. Dual Balance Installation (Two (2) Balances Per Jamb) – One balance will have a plain tip while the other balance will have a red tip (See Figure 17-1). This type of balance application must be installed in a crossing pattern (See Figure 18-1).
 - a. Before tensioning balances, obtain the correct number of tensioning turns from Peerless Products. One (1) turn = One (1) full revolution of spiral.
 - b. Push the spiral all the way into the balance tube.
 - c. Attach the balance loading/unloading tool to the tip of the balance.
 - d. Pull the spiral down about 2”.
 - e. Plain tip - Turn the spiral in a clockwise direction to the correct number of tensioning turns provided by Peerless Products. Red Tip – Turn the spiral in a counter-clockwise direction to the correct number of tensioning turns provided by Peerless Products.
 - f. Reinstall the balances in the balance shoe by engaging the tips of the balances into the balance shoe. Be sure push the tips in and up into the balance shoes (See Figure 17-1).



These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

TILT WINDOW BALANCE REMOVAL/INSTALLATION (cont'd):

C. Ultra-Lift / SuperLift Balance Removal – These types of balances are pre-tensioned from the supplier. They have a hexagon shaped end that allow the balance to seat into the balance tube. The spiral of the balance must be contained and not be allowed to unwind during the removal or installation of the balance.

1. Carefully pull down on the bottom of the balance using the balance loading/unloading tool. While pulling down, pull the balance forward to disengage from the balance shoe. With a controlled motion, slowly allow the balance to retract.
2. Remove the black vinyl stop blocks located at the head end of the window.
3. Remove the balances from the jamb by unscrewing the balance attachment screws.
4. Reinstallation is a similar procedure in the reverse order.

D. Balance Shoe Removal

1. The balance shoes can be removed by sliding them to the top of the jamb and out of the balance shoe notches. For the upper sashes (double hung window), the balance shoes can be removed from the bottom of the jamb and out of the balance shoe notches.

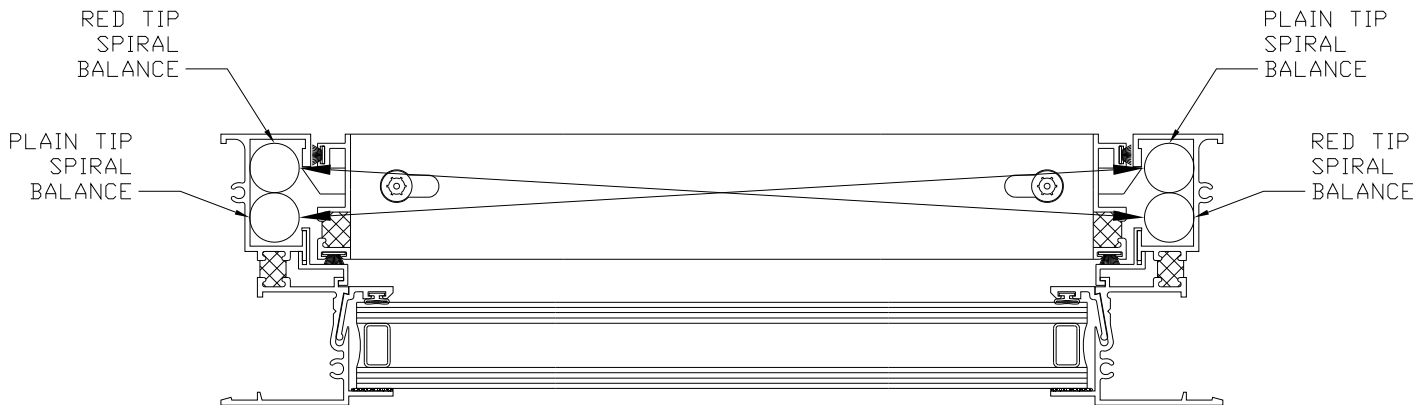


Figure 18-1

5. SIDE LOAD BALANCE REMOVAL / INSTALLATION:

A. Lower Sash / Upper Sash

1. Raise the lower sash until the underside of the lift rail can be reached. If the sash travel has a limited opening, the sash stops (limit stops) will need to be removed.
2. Locate the balance carrier that is within the jamb balance pocket at the bottom end of the lift rail of the sash. Insert a flathead screwdriver between the bottom of the balance carrier hook and the upturned edge of the latch. Pry the screwdriver towards the center using the corner of the sash as a pivot point until the latch disengages from the balance carrier.
3. The latch should be loose and hanging freely within the jamb balance pocket. Lower the sash until the balance carrier hook is below the notch that is within the jamb balance pocket. Raise the sash again until the balance carrier hook is engaged within the notch in the jamb balance pocket. The balance carrier will be held in place when the sash has been removed.

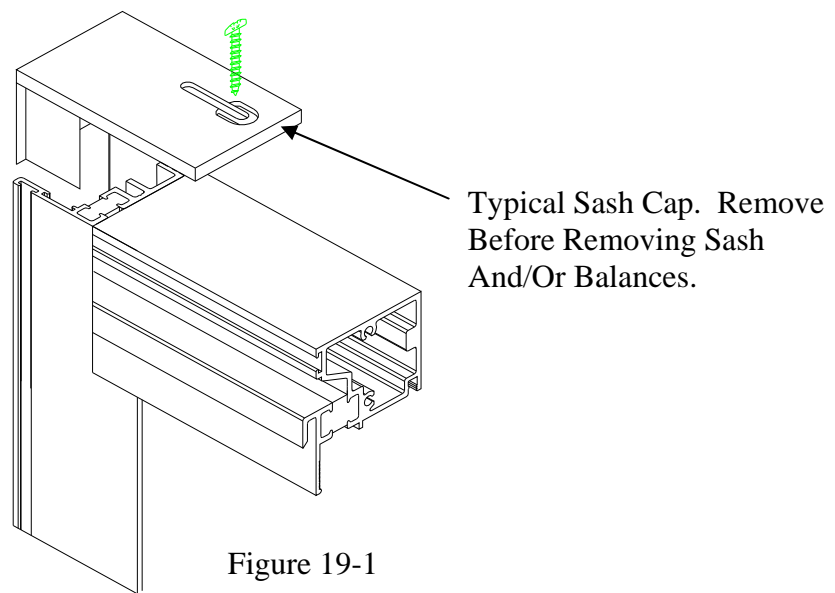


Figure 19-1

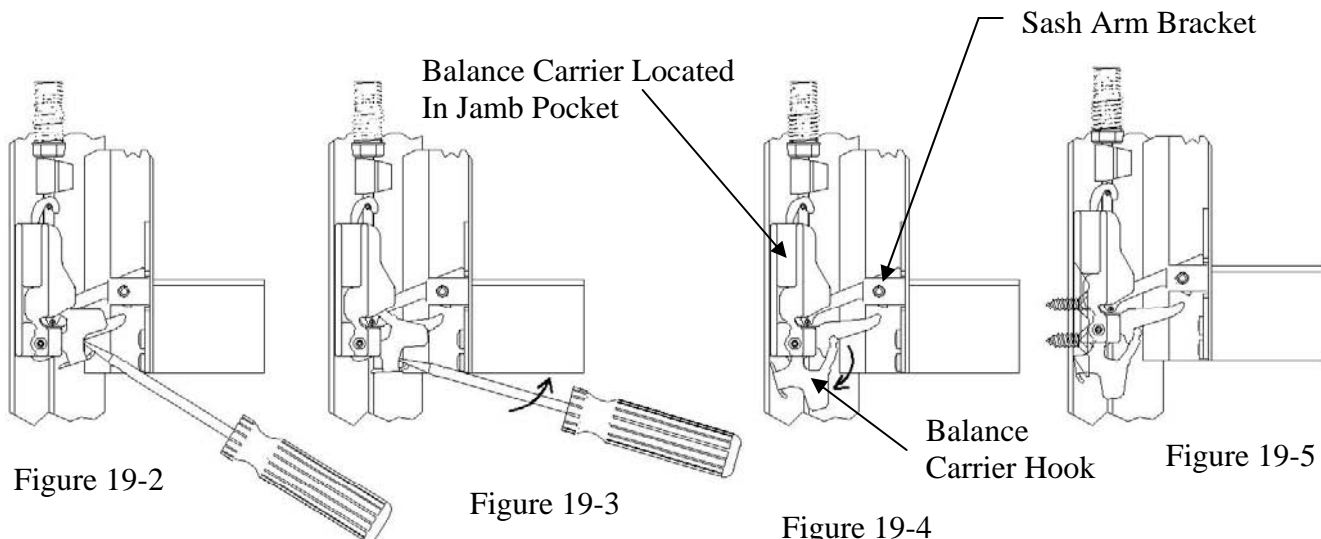


Figure 19-2

Figure 19-3

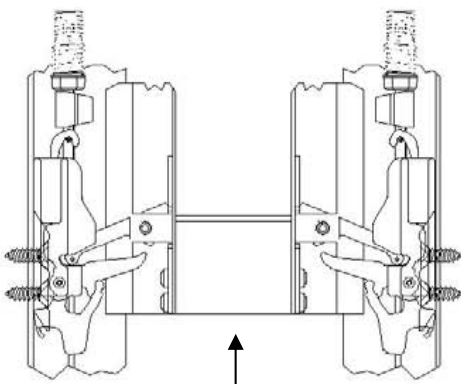
Figure 19-4

Figure 19-5

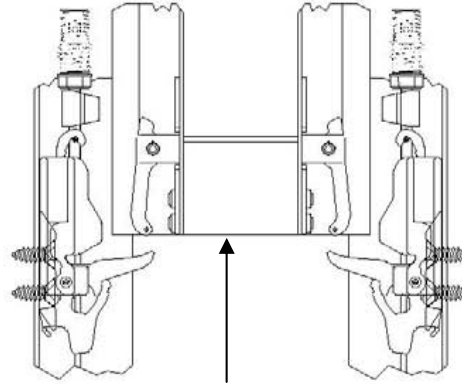
These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

SIDE LOAD BALANCE REMOVAL (cont'd):

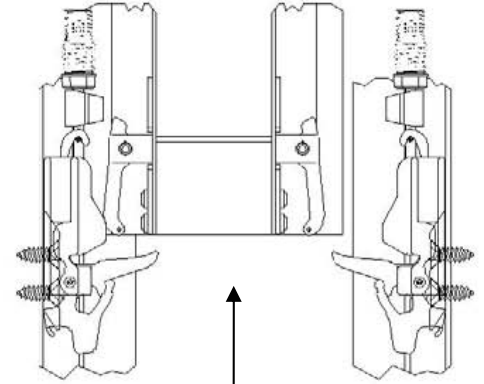
4. Lift the sash off of the balance carrier about 2"-4".
5. Shift the jamb into one of the jamb balance pockets as far as the sash will go. Pull the opposite end of the sash inward and remove the sash.



Sash at rest after the balance carrier hooks have been disengaged

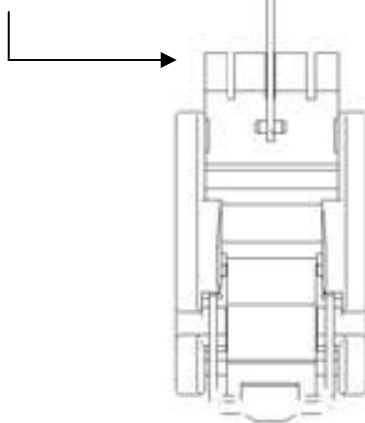


Lift the sash off of the balance carrier 2"-4"

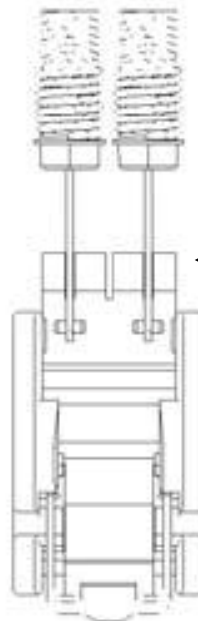


Move the sash into jamb balance pocket. Pull sash inward to remove.

Use center slot for single balances. Using the outside slots for single balances will result in higher operating forces.

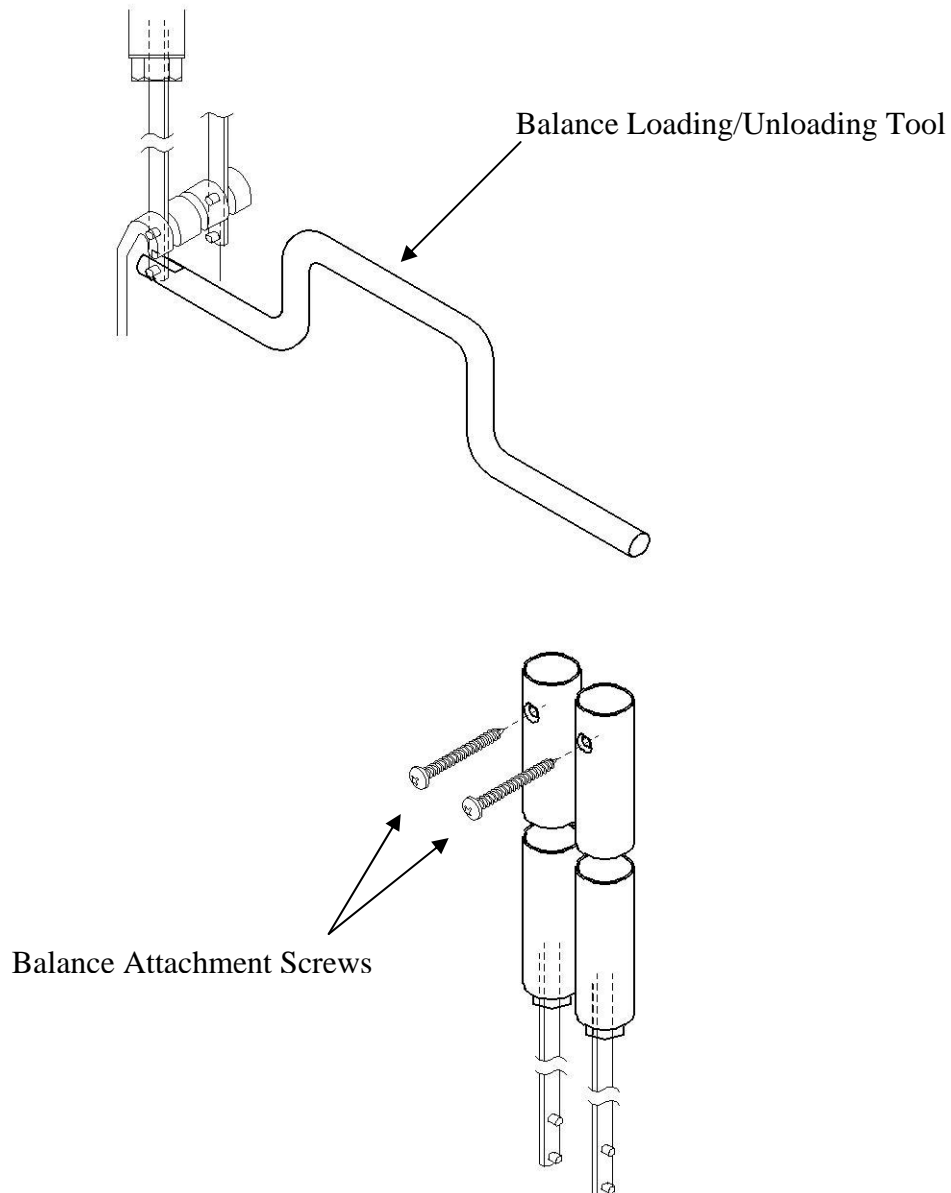


Dual balances use the outside slots.



SIDE LOAD BALANCE REMOVAL (cont'd):

6. Carefully pull down on the bottom of the balance using the balance loading/unloading tool. While pulling down, pull the balance forward to disengage from the balance carrier. With a controlled motion, slowly allow the balance to retract.
7. Remove the balances from the jamb by unscrewing the balance attachment screws.
8. The balance carriers can be removed by sliding them to the top of the jamb and out of the balance carrier notches. For the upper sashes (double hung window), the balance carriers can be removed from the bottom of the jamb and out of the balance carrier notches.
9. Reinstallation is a similar procedure in the reverse order.



These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

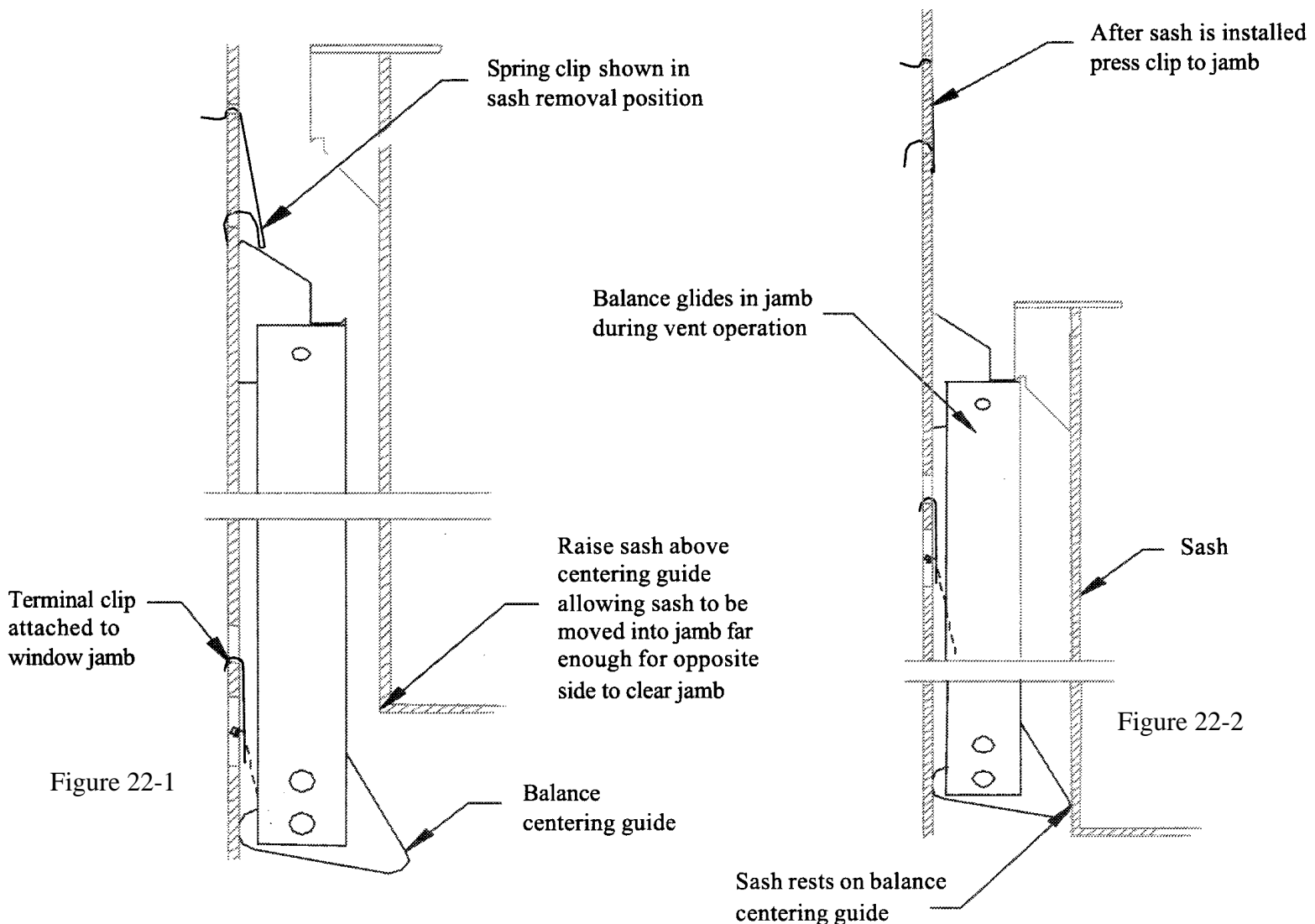
5. SIDE LOAD BALANCE REMOVAL AND INSTALLATION

A. Removal of lower sash and balance:

1. Remove the sash stop at the head of the window.
2. Pull the spring clips outward.
3. Raise and lower the sash until the balance slides under the spring clip.
4. Lift the sash 2"- 3" above the balance. Move the sash right or left as far as possible and swing the opposite side out away from the jamb pocket.
5. Remove the balance by pressing downward on the balance, moving it out from under the spring clip. Then relax the tension and remove the terminal clip from the square hole in the window jamb.

B. Removal of the upper sash and balance:

1. Lower upper sash to expose the spring clip and pull the clip outward.
2. Repeat steps 1-5 as stated above.



These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

HORIZONTAL SLIDER SASH REMOVAL AND INSTALLATION

1. HORIZONTAL SLIDER SASH REMOVAL

- A. Remove the anti-take out channel from the head. Remove sash stop if required.
- B. Remove sash by opening slightly (4" to 6"). Lift the sash up to the head channel and pull out at the bottom (see Figure 23-1).
- C. Reinstall by reversing procedure.

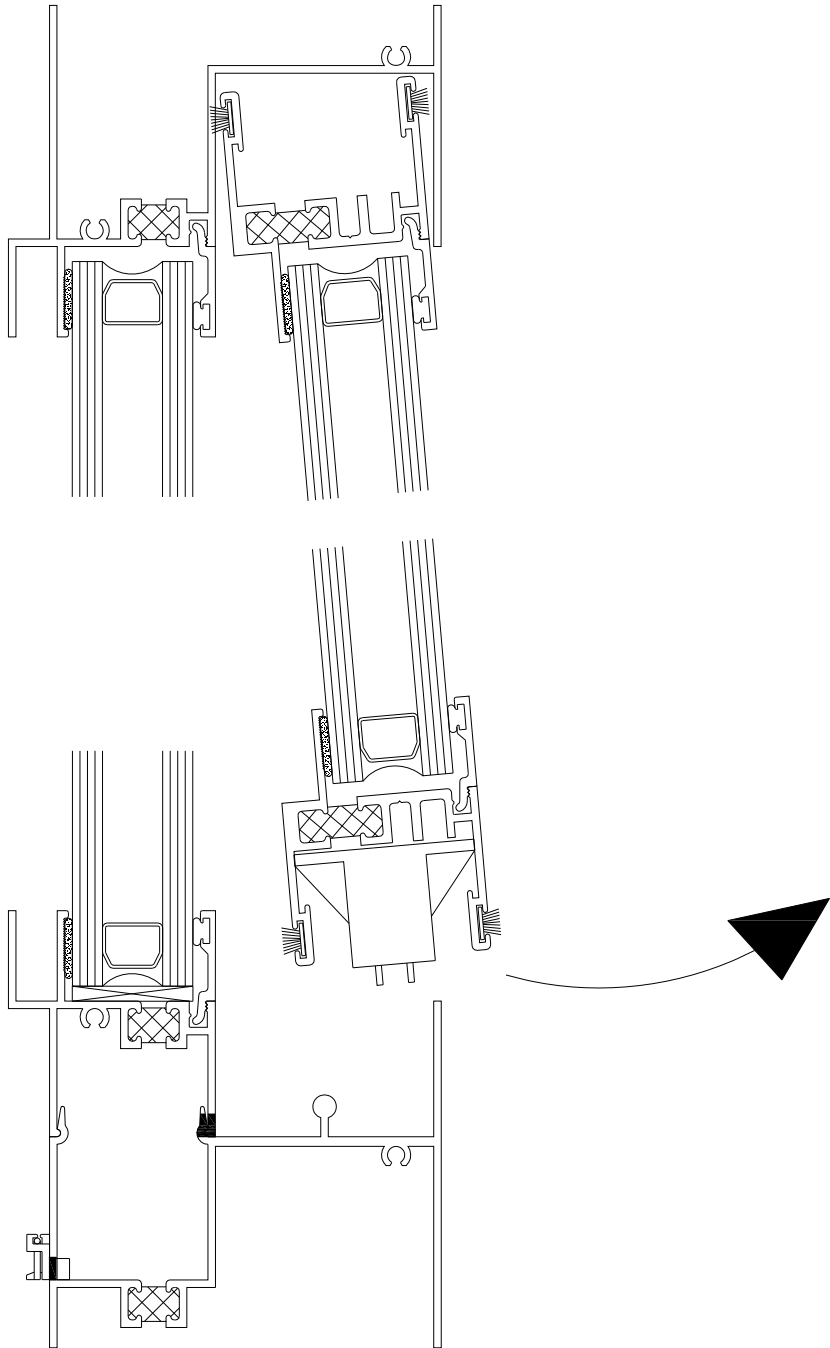


FIGURE 23-1

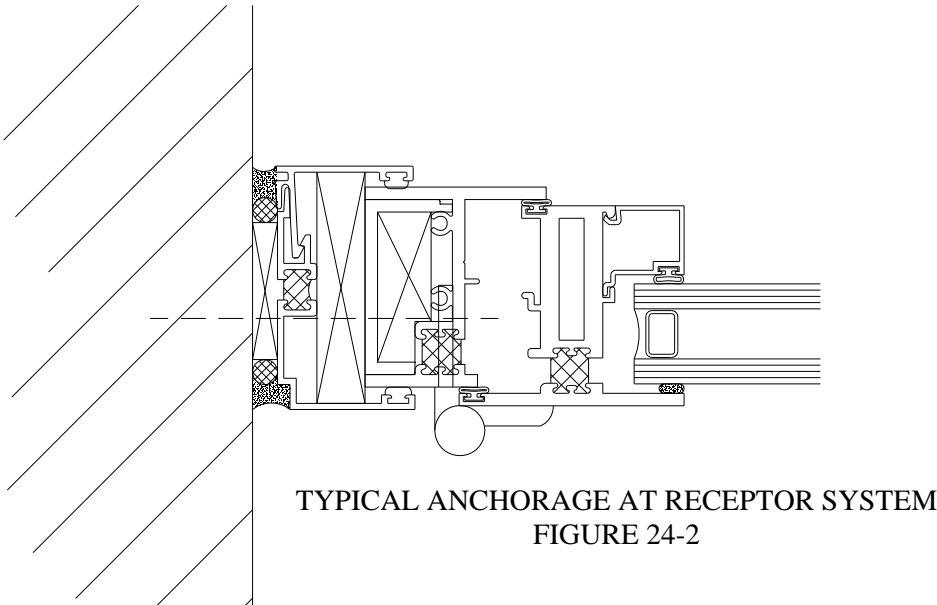
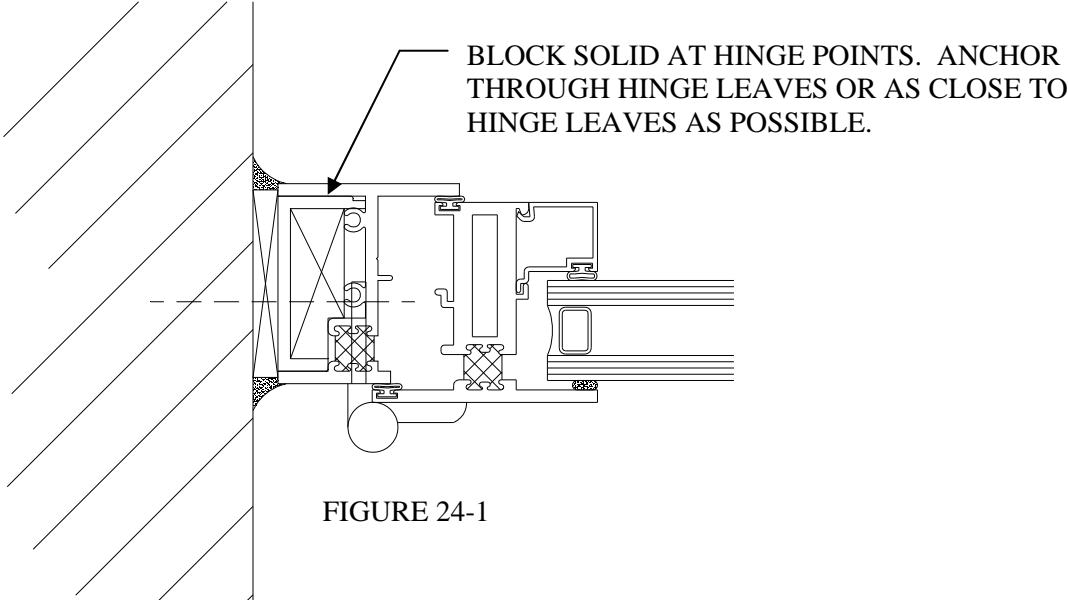
These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

CASEMENT INSTALLATION INSTRUCTIONS

1. CASEMENT INSTALLATION

The hinge jamb must be installed plumb. All hinges shall be securely blocked and anchored to the surrounding condition thru the hinge leaves or as close as possible to the hinge leaves.

For proper vent operation, field drill thru the window frame at the two unused holes in the hinge. Run screws thru the frame and solid backing into the surrounding condition. Repeat for each hinge.



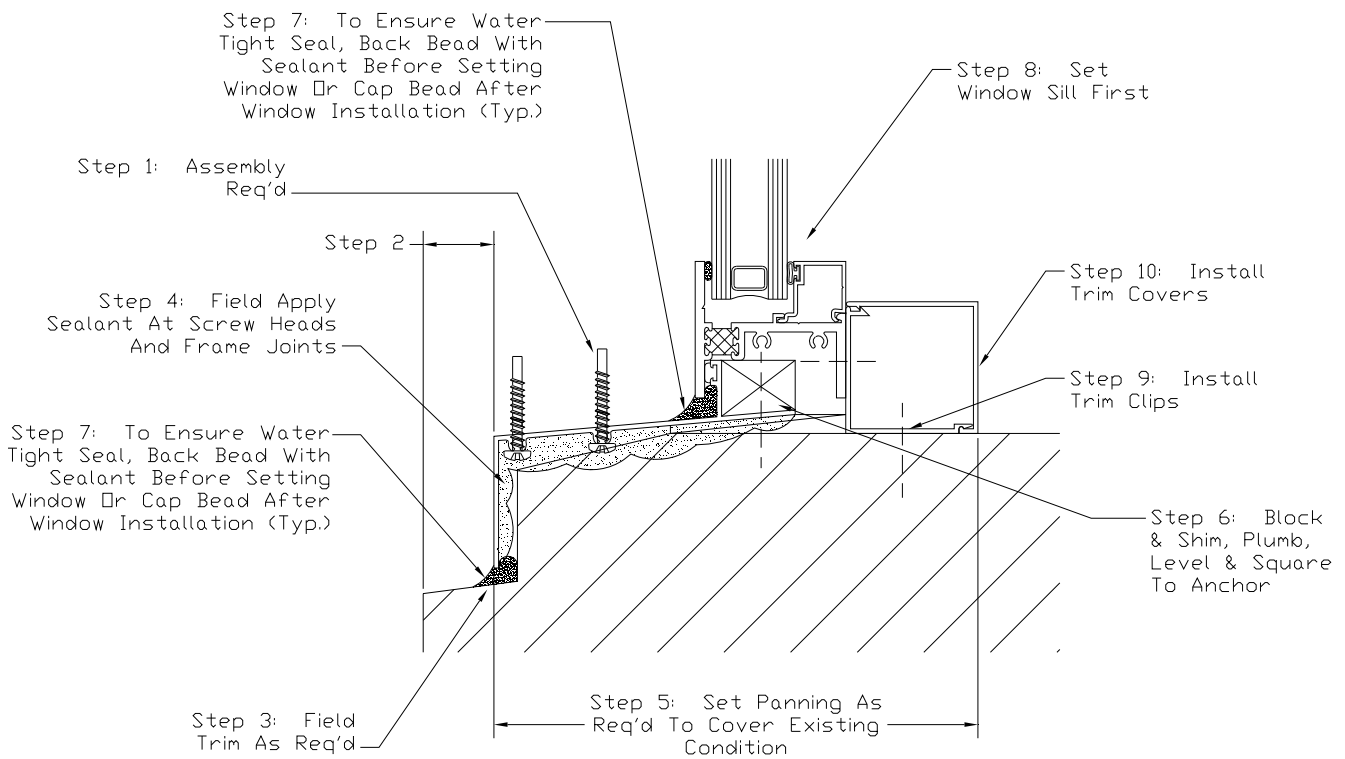
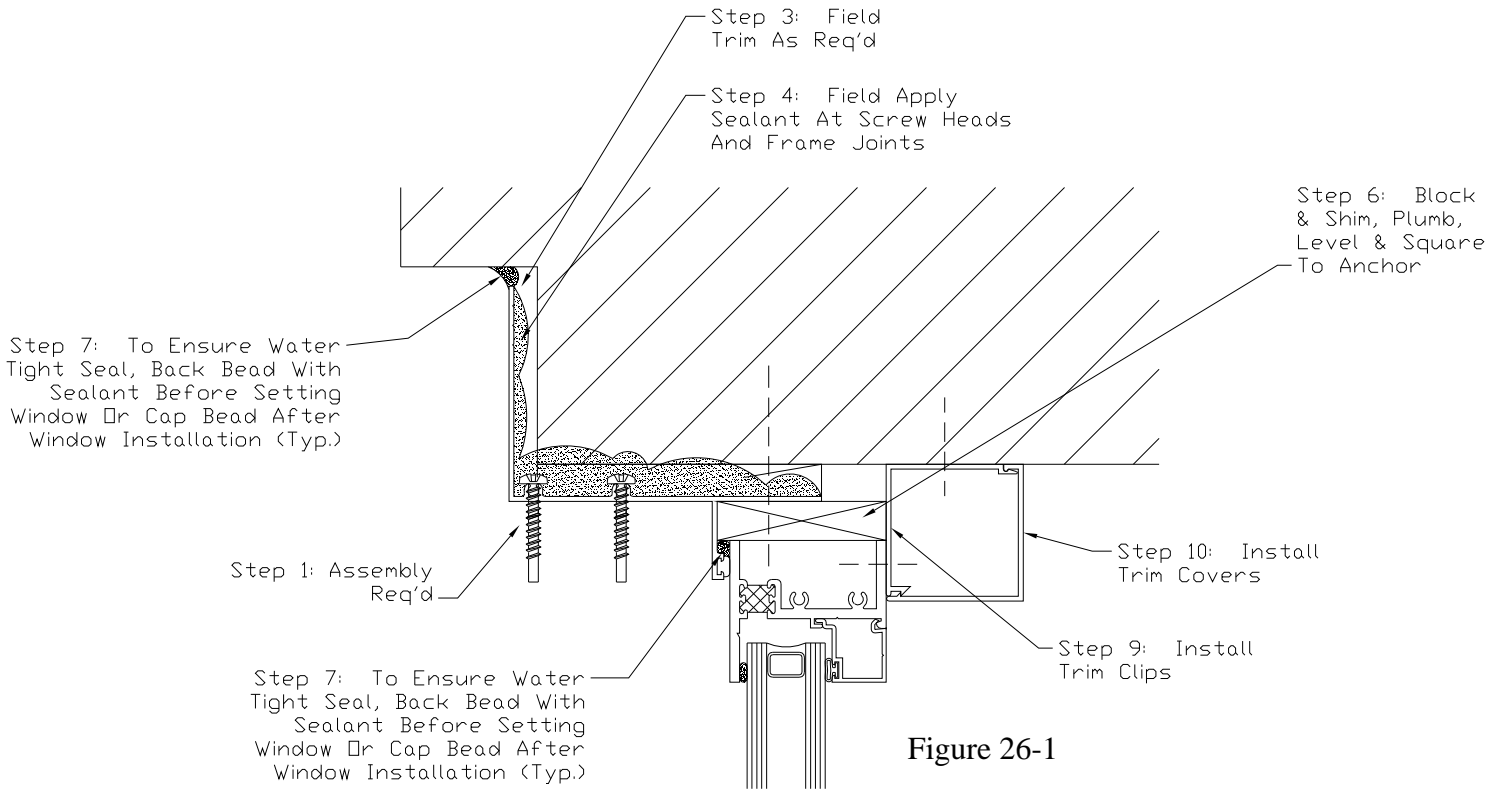
PANNING INSTALLATION

1. GENERAL NOTES

Typical panning material is shipped fabricated to fit exact window size. Perimeter flange may be field trimmed as required to suit the surrounding conditions. Be sure to coordinate the panning frame with the correct window frame. Note: the steps below correspond with Figures 26-1, 26-2, and 27-1.

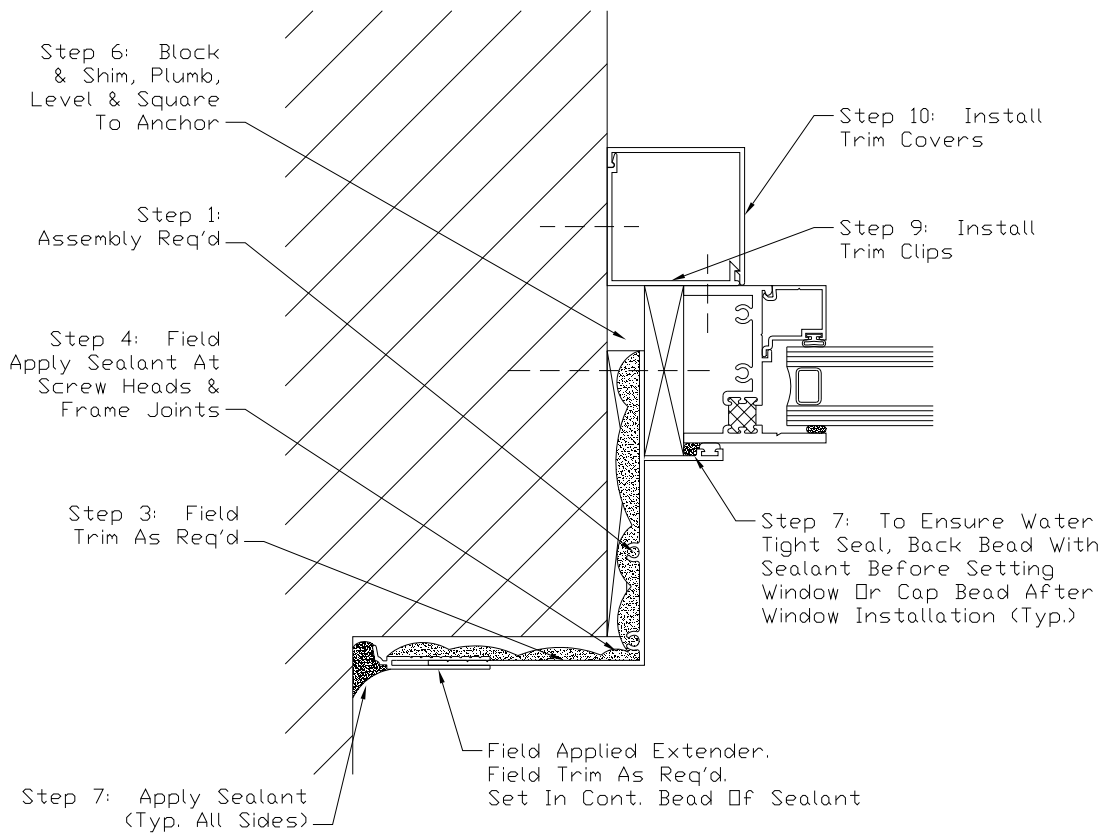
1. Field assemble the panning frame with the supplied assembly screws.
2. Determine the correct location of the panning in the opening to allow for proper coverage of the old window system. Refer to shop drawings if applicable.
3. Once the location is determined, measure the distance (if any) to trim the flange of the panning at head, sill and jambs.
4. Use siliconized sealant to cover all assembled screws. Profile the ends of the panning shape before assembly. Seal all frame joints on the non-exposed side of the panning frame.
5. Pull the panning frame into the opening from the exterior. Make sure that the assembled system depth, including panning plus window plus trim, will cover the existing condition as required prior to anchoring the panning frame in place.
6. Attach the panning frame plumb, square and level with erector supplied fasteners to suit at 16" O.C. If a three-piece mullion is used, refer to mullion installation in this section.
7. Once the panning is set, caulk the perimeter of the panning to the surrounding condition. Prior to setting the window, back-bed the panning vinyl leg that the window will set against with sealant or cap seal the window to the panning frame joint from the exterior. The system must be wet sealed by either method, as the vinyl bulb seal is not an adequate weather seal.
8. Set the window system into the panning by setting the sill first and then pushing the window up against the head and jamb.
9. Install the trim clips by starting at 6" from the corner each direction, then at 16" O.C. around the entire perimeter. Attach the clips to the window with factory-supplied fasteners. Attach to the surroundings with erector supplied fasteners. **IMPORTANT:** The trim clips provide the structural support for the window unit. Each trim clip must be attached to the window leg and the opening to hold the window in place. All interior trim covers are shipped long for field trim to suit condition.
10. All horizontal trim runs thru unless otherwise noted. To install: first field measure the horizontal opening width and cut the horizontal trim covers accordingly and snap in place. Repeat for the vertical covers after both horizontal covers are in place.

2. PANNING FRAME INSTALLATION SEQUENCE



These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

2. PANNING FRAME INSTALLATION SEQUENCE (CONT'D)



JAMB DETAIL

Figure 27-1

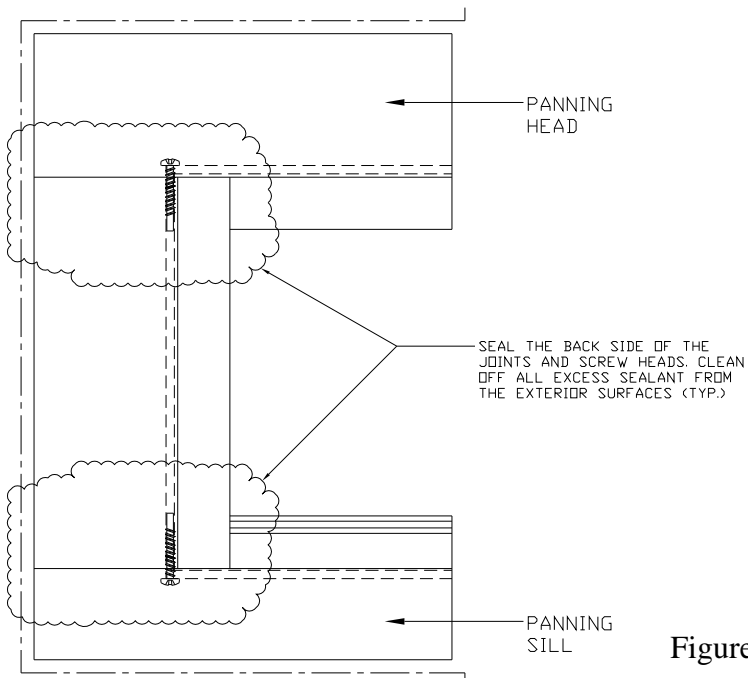


Figure 27-2

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

3. MULLION INSTALLATION IN PANNING FRAMES

1. First complete steps 1 thru 6 on Panning Frame Installation in this section.
2. Refer to the shop drawings for the correct centerline location of mullion.
3. Set the mullion into the panning frame. Plumb the mullion to the opening. Fasten the mullion to the opening using the two Peerless supplied mullion anchor angles (one at head and one at sill). Attach the angles to the opening with erector supplied fasteners. Then attach the mullion to the angles with Peerless supplied fasteners.
4. Seal horizontal joint at top and bottom end of mullion.
5. Now follow steps 7 thru 10 of the Panning Frame Installation instructions in this section.
6. Attach the mullion plate to the mullion as close as possible to each end and then at 16" O.C. between with Peerless supplied fasteners.
7. Attach the mullion clip to each window jamb with Peerless supplied fasteners. Be sure the window remains square and plumb during fastening.
8. Field cut the mullion cover to fit between the horizontal and vertical trim covers. Snap the mullion cover onto the mullion clips.

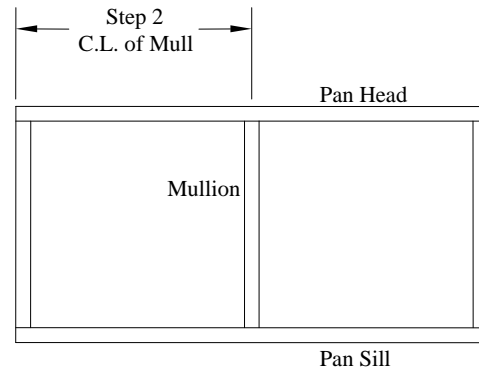


Figure 28-1

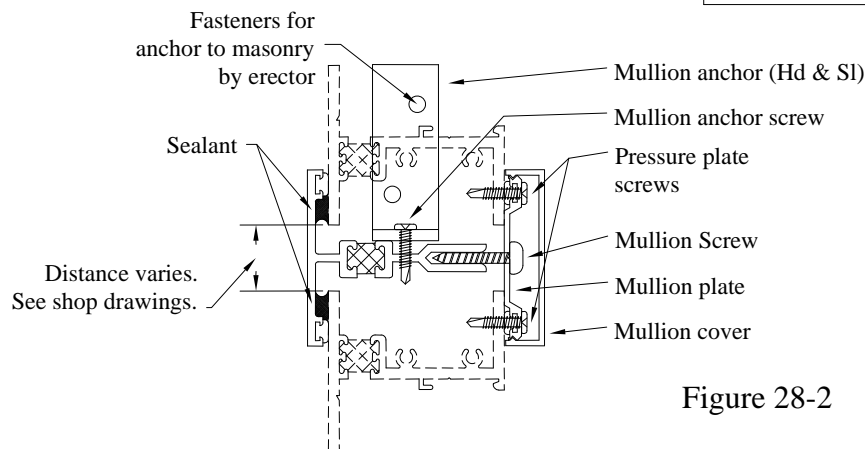


Figure 28-2

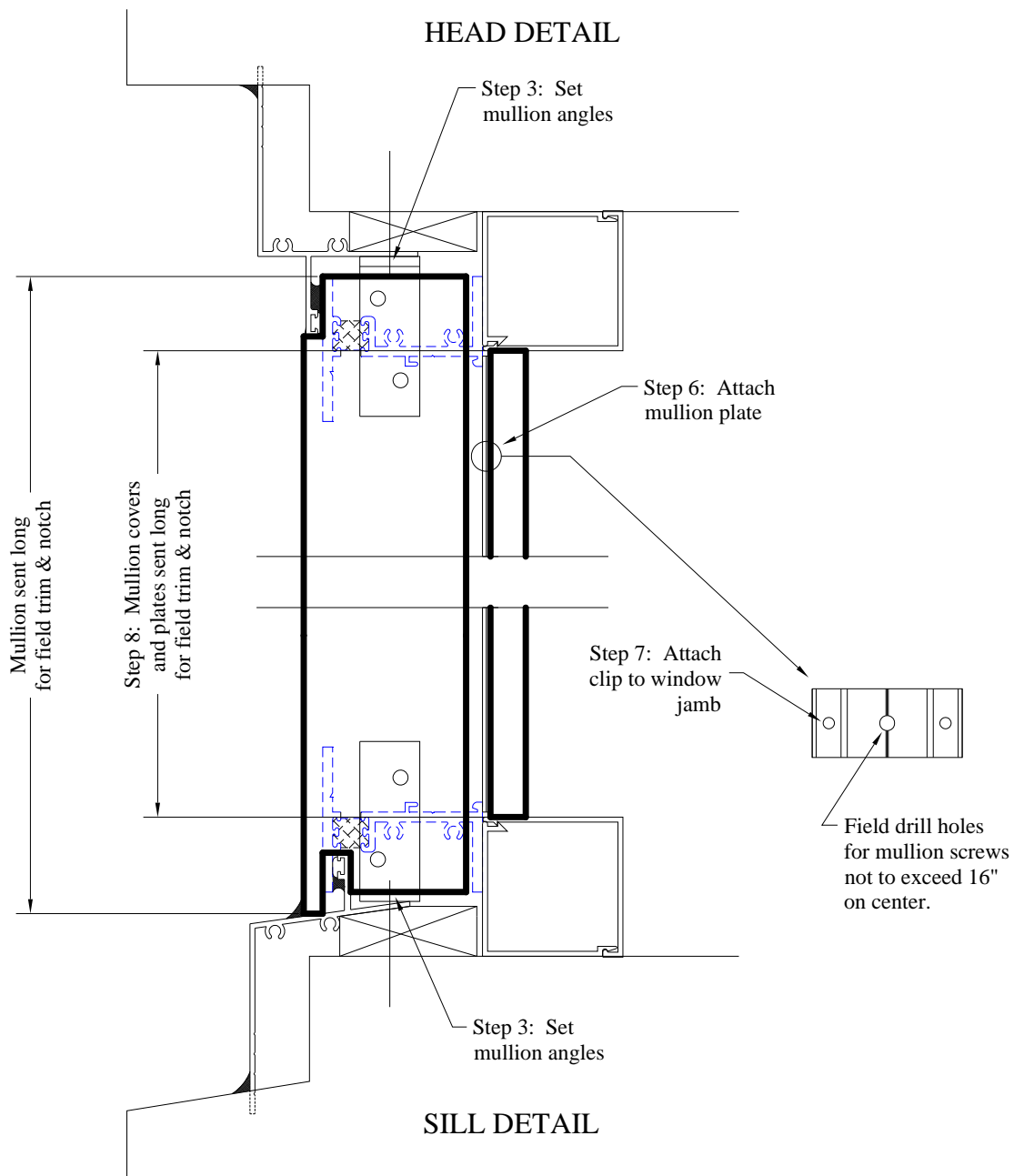


Figure 29-1

SUB-FRAME INSTALLATION

1. GENERAL NOTES

- A. Measure the opening for the horizontal dimension
- B. Weeps
 - 1. If purchased cut to size, the sub-sill is supplied with factory weeps and a baffle cover.
 - 2. If purchased in 16' lineals, the erector must field weep the sub-sill by drilling two 1/4" holes side-by-side 6" from each end and cover them with open cell foam.
- C. Square cut the sub-sill to 1/2" less than the horizontal opening dimension. Cut the head receptor and the head receptor closure to the opening dimension length. Trim the weather-stripping to the same length. Be careful not to stretch the weather-stripping during this process.
- D. Apply the factory provided end dams to the sub-sill by "buttering" the end with sealant then pressing the end dam to the sub-sill. Use fasteners where applicable (See Figure 30-1).
- E. Install the sub-sill into the opening with erector supplied fasteners. All fastener heads must be sealed to ensure a water tight seal. (See Figure 30-2)
- F. Apply a continuous bead of sealant to interior and exterior of subsill before setting window. (See Figure 30-2)

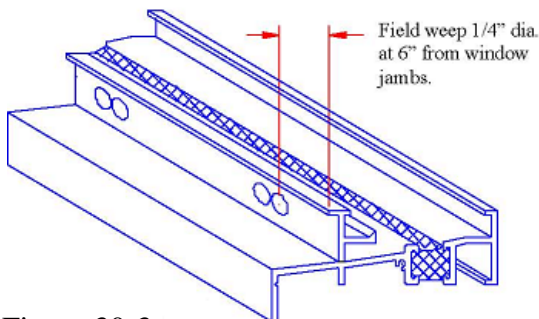


Figure 30-3

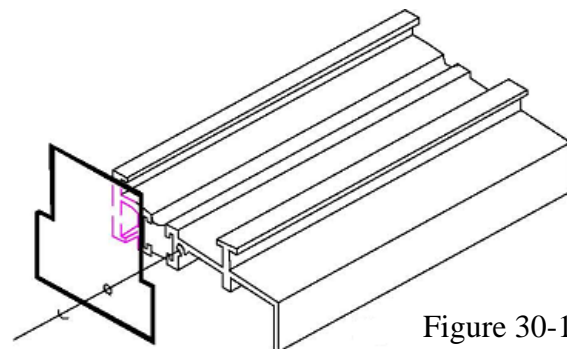
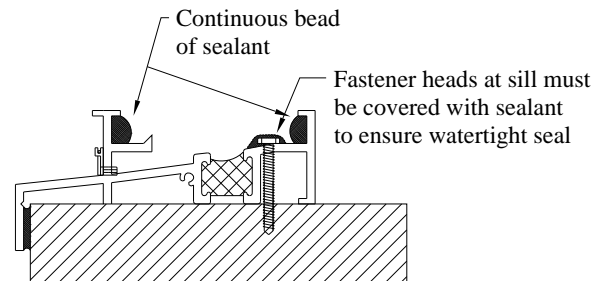


Figure 30-1

Figure 30-2



GENERAL NOTES (CONT.)

- G. Measure for the jamb receptor length. See the vertical “X” and “Y” dimensions as indicated in this section (See Figures 33-1, 33-2).
- H. Subtract the “Y” dimension from the “X” dimension. Square cut the sub-jamb to this length from the top end on the jamb receptor. The sill end may be factory tooled to fit the sill, do not cut this end.
- I. Install the jamb receptor plumb, shim as required. Next, install the head receptor aligning it with the jamb receptor. All fasteners and shims provided by erector. Seal all fastener heads.
- J. Field seal all butt joints tooling sealant from inside the receptor with adequate sealant. Seal the end dams to the sub-sill (See Figure 31-1).

Important: It is the erector's responsibility to properly clean and seal end dams to ensure a watertight seal. Test sills periodically by plugging weep holes and filling sill with water to check for leaks. Peerless will not be held responsible for improperly installing or missing end dams.

Sealant by others to be cont. from sub-sill to jamb receptor. Silicone should have a min. contact of a 1/2" on each surface.

Cont. seal all across butt joint to form a "water tank".

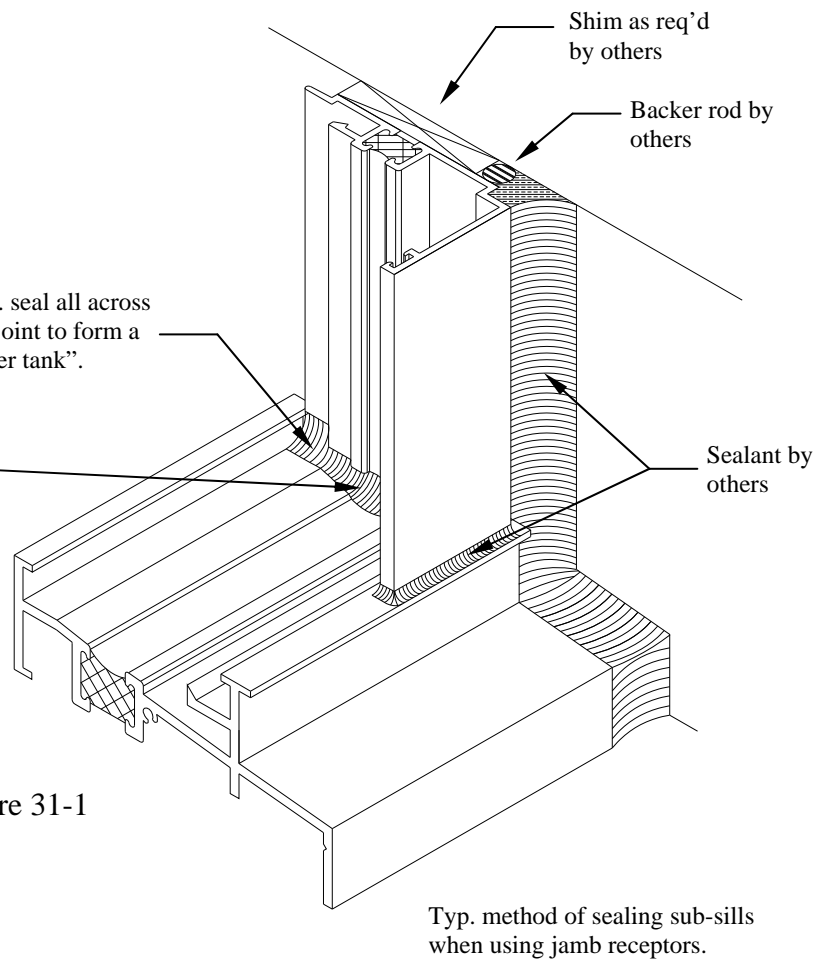


Figure 31-1

Typ. method of sealing sub-sills when using jamb receptors.

GENERAL NOTES (CONT.)

- K. For jobs with a head receptor, field cut to length and install the head receptor closure tight to the opening condition. Peerless Products suggests installing batting insulation into any installation cavity prior to sealing off window opening (See Figure INS-1 and INS-2 below).

Without Sub-Frame

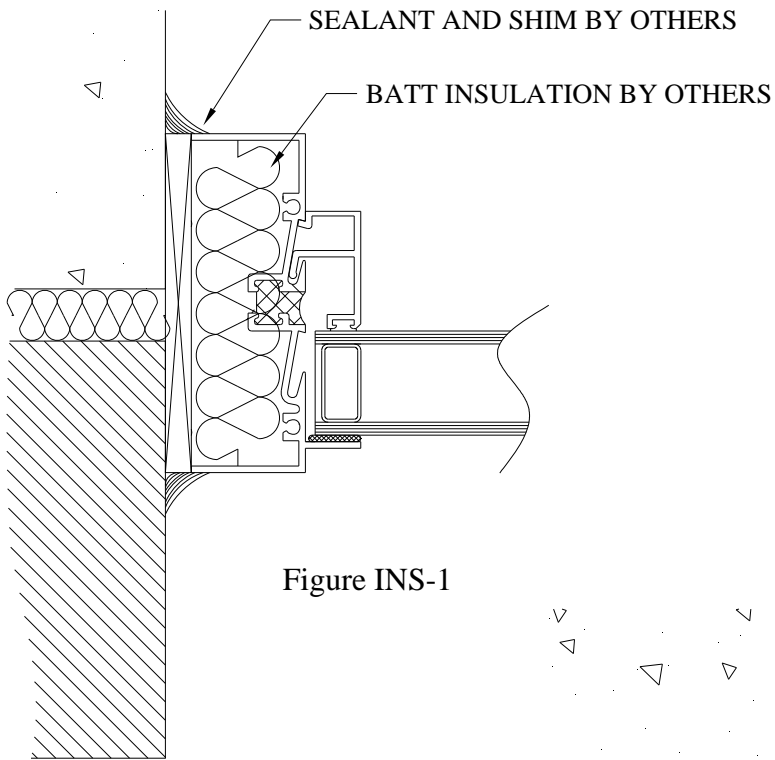


Figure INS-1

With Sub-Frame

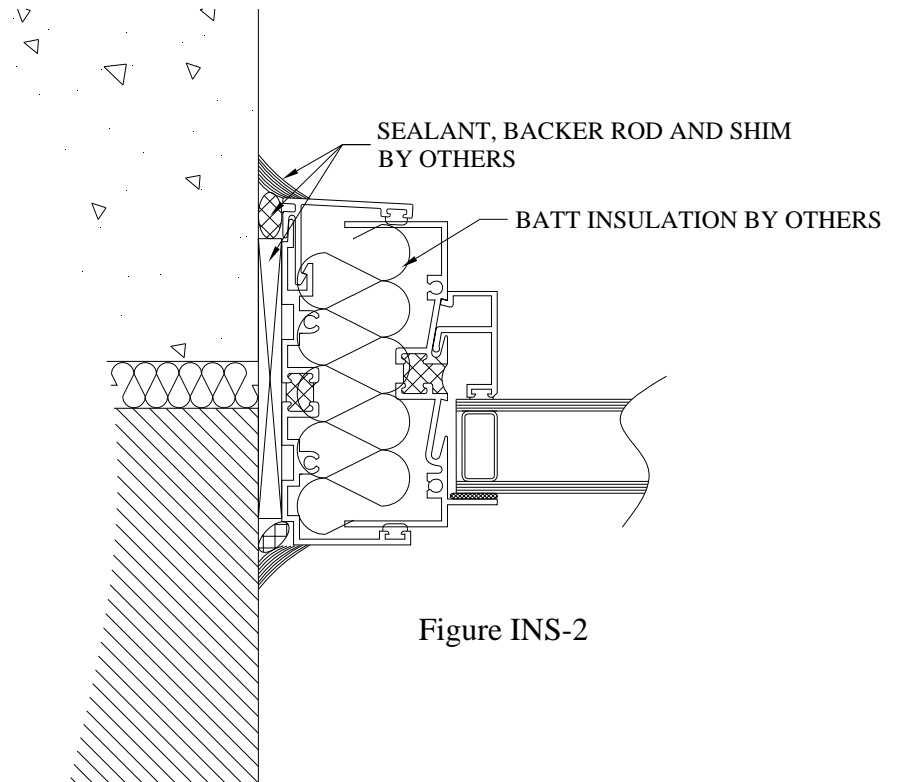


Figure INS-2

L. Measure and cut the jamb receptor closure to length (See “Z” dimension Figure 33-3).

M. To ensure a watertight seal at the interior, set the closure in a bead of sealant and cap seal to the window 6” up on each jamb receptor.

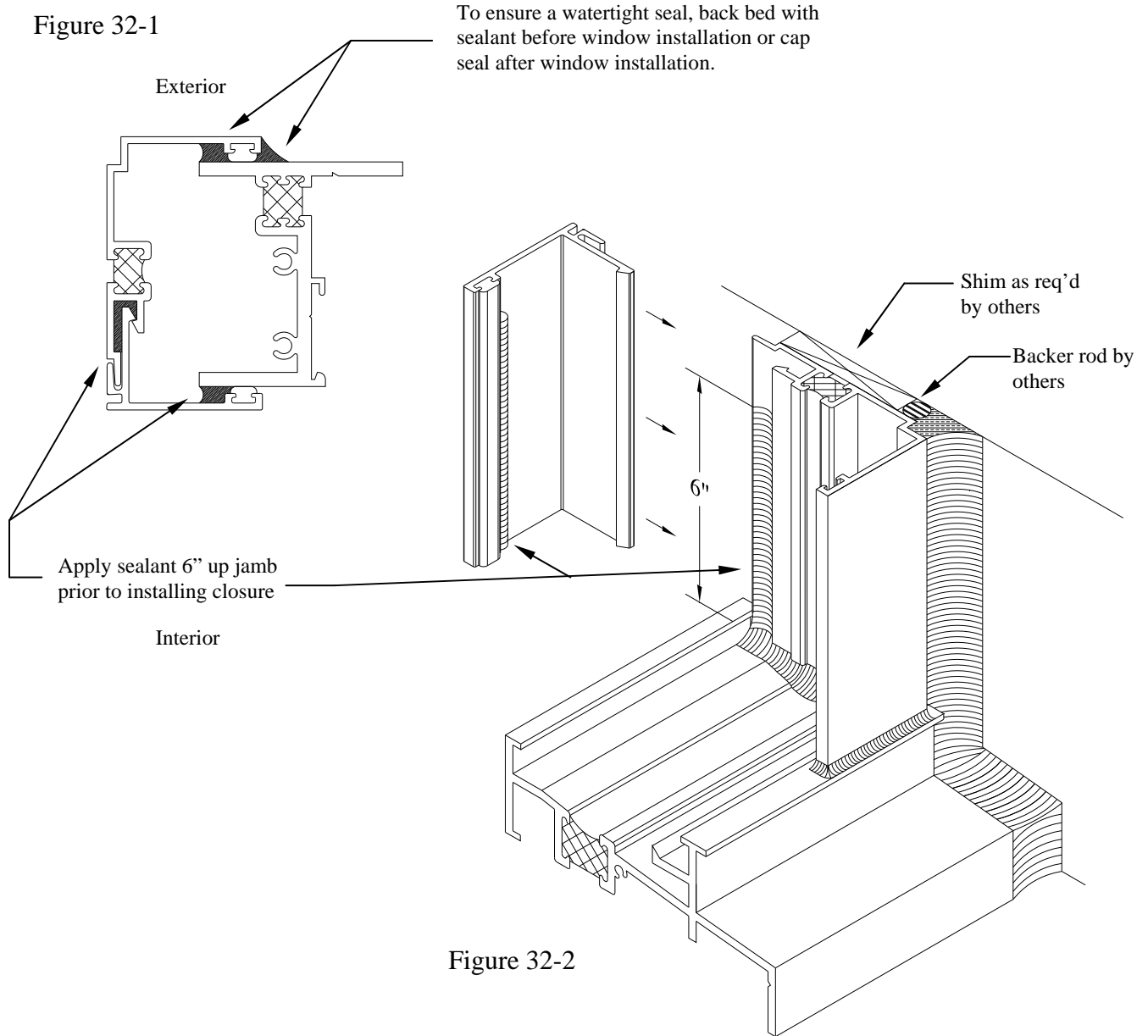


Figure 32-2

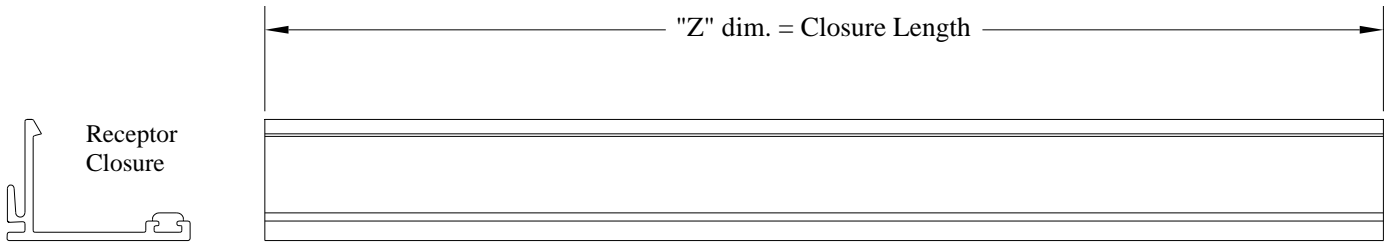


Figure 33-1

Erector Note: Field drill all fastener holes in receptor and subsill to suit condition

Field attach end dams. Seal the end dam to the subsill and the surrounding condition

Fastener heads at sill must be sealed to ensure a watertight seal.

Figure 33-2

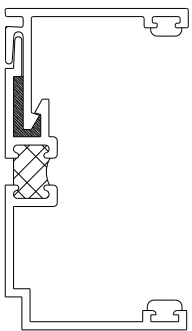
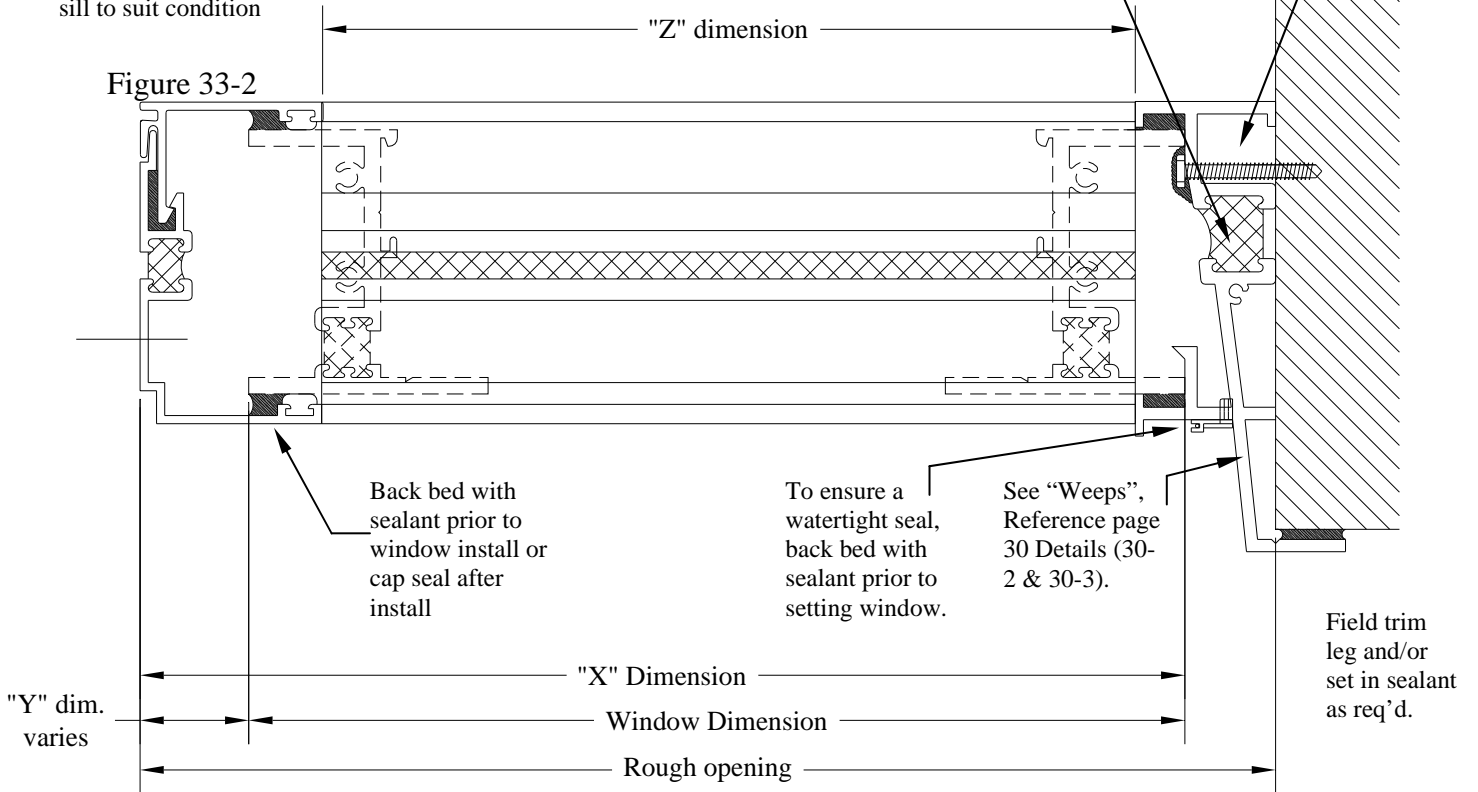
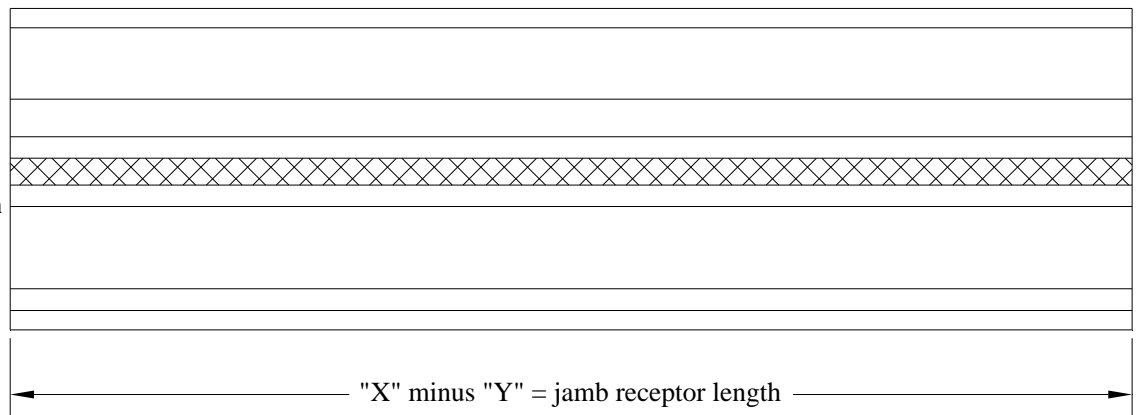


Figure 33-3

Left Jamb Shown
Right jamb opp.



These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

2. SUB-SILL INSTALLATION WITHOUT JAMB RECEPTOR

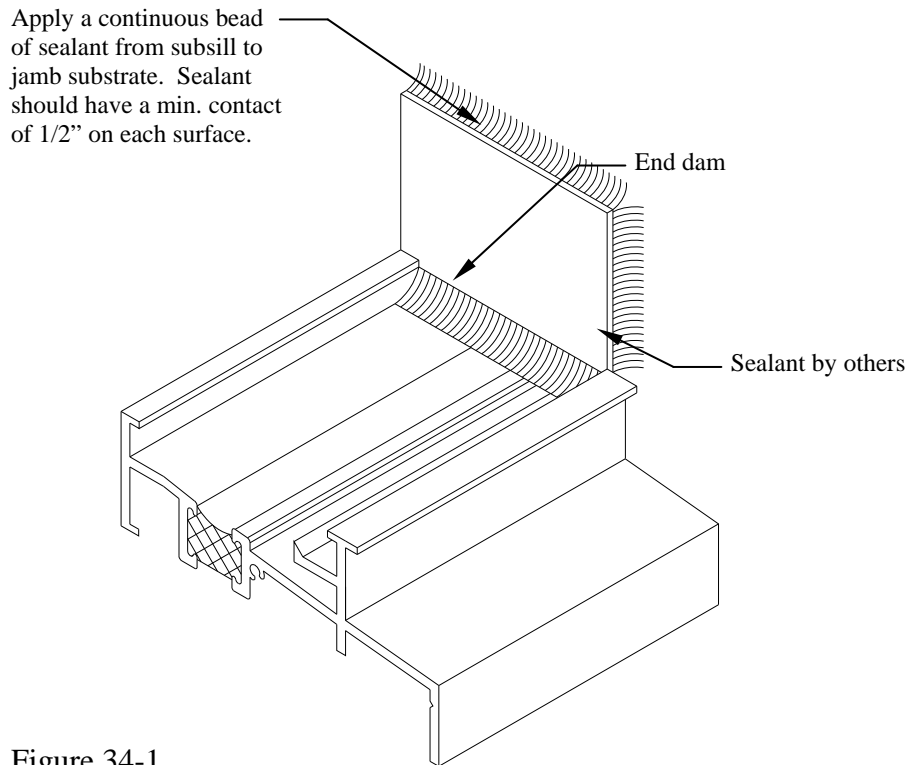


Figure 34-1

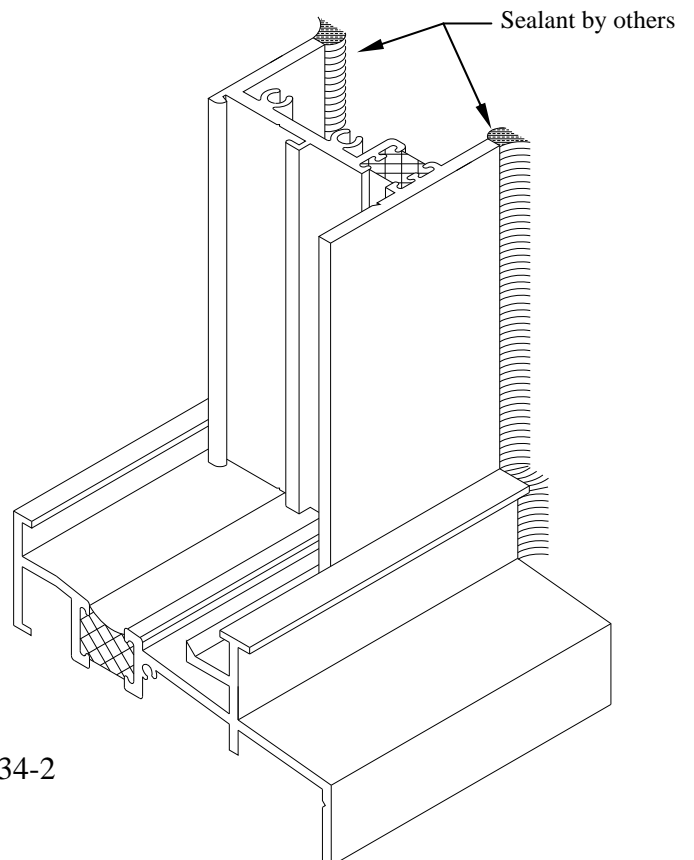


Figure 34-2

These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

3. MULLION INSTALLATION IN SUB-FRAME

- A. First complete steps A-I in the General Notes in this section.
- B. Refer to the shop drawings for the correct centerline of the mullion.
- C. Set the mullion into the sub-frame. Plumb the mullion to the opening. Fasten the mullion to the opening by using two Peerless supplied mullion anchor angles. Locate one angle at the top and one at the bottom. Attach the angles to the opening with erector supplied fasteners; attach the angle to the mullion with erector supplied fasteners.
- D. Now follow steps J and K in the General Notes in this section.
- E. Attach the pressure plates to the mullion as close to the top end as possible and then attach at intervals per project specific locations with Peerless supplied fasteners.
- F. Attach the mullion plates to the window jambs with Peerless supplied fasteners. Make sure the window jambs remain plumb and square during the process.
- G. Attach the plate directly on top of the sub-sill. The plate should set directly on the sub-sill or other horizontal surface. This plate maintains the water dam height across the sill. Seal the plate to the sill and 8" up the sides. The screw heads on this plate must also be sealed.
- H. Field cut the vertical mullion cover to fit between the horizontal and vertical surfaces. If the ends are factory tooled, field cut the square ends.

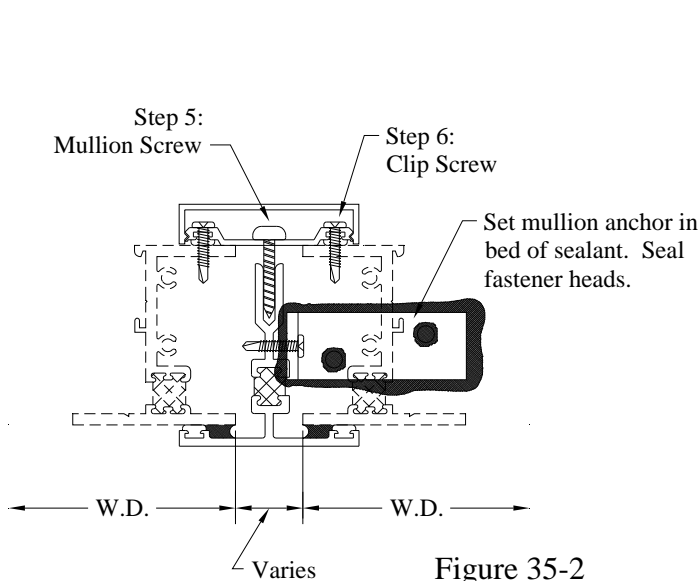


Figure 35-2

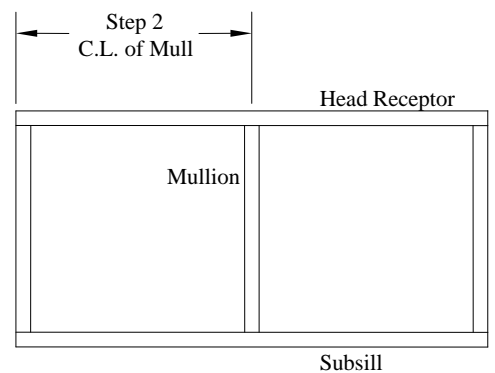


Figure 35-1

MULLION INSTALLATION IN SUB-FRAME (CONT.)

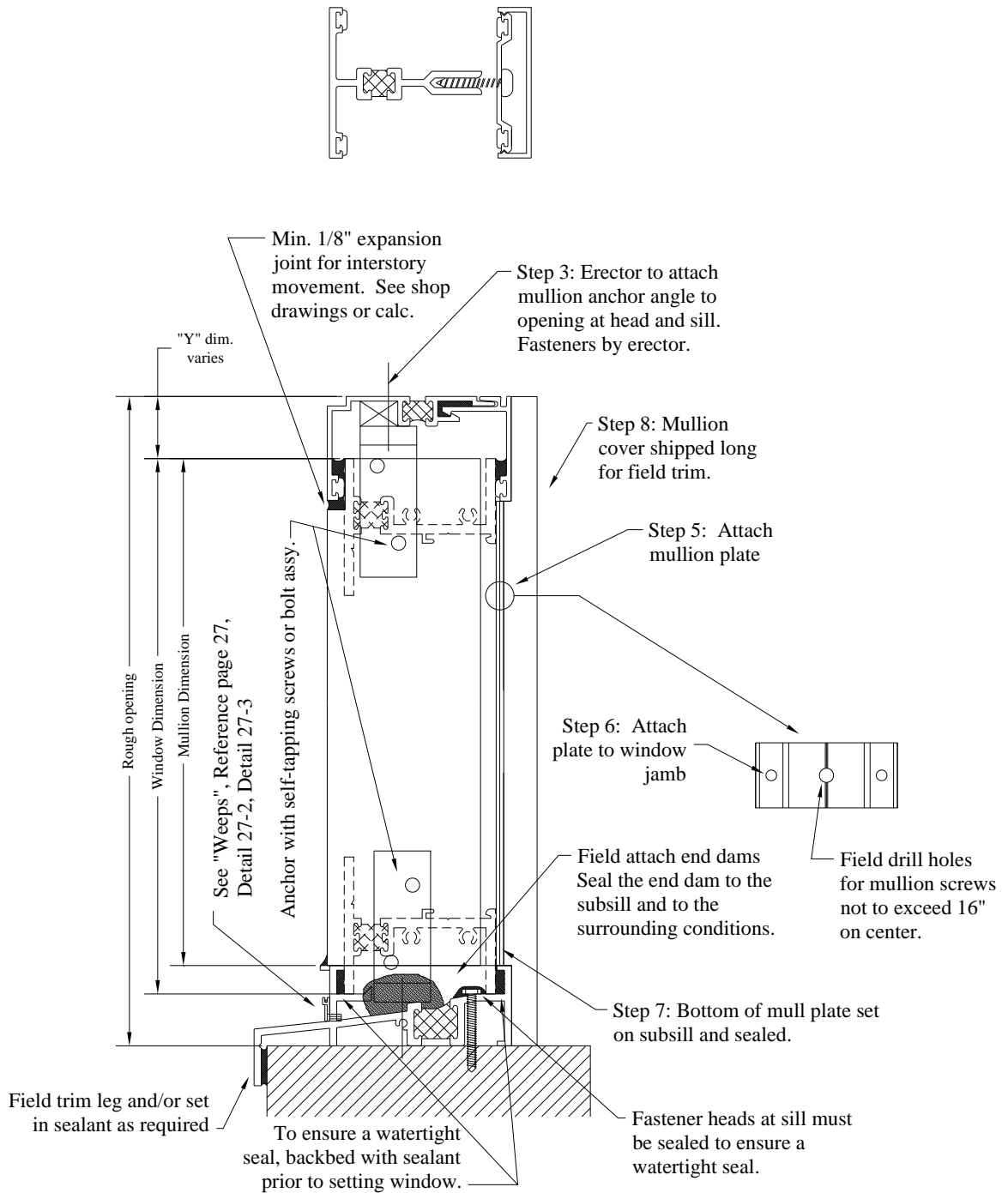
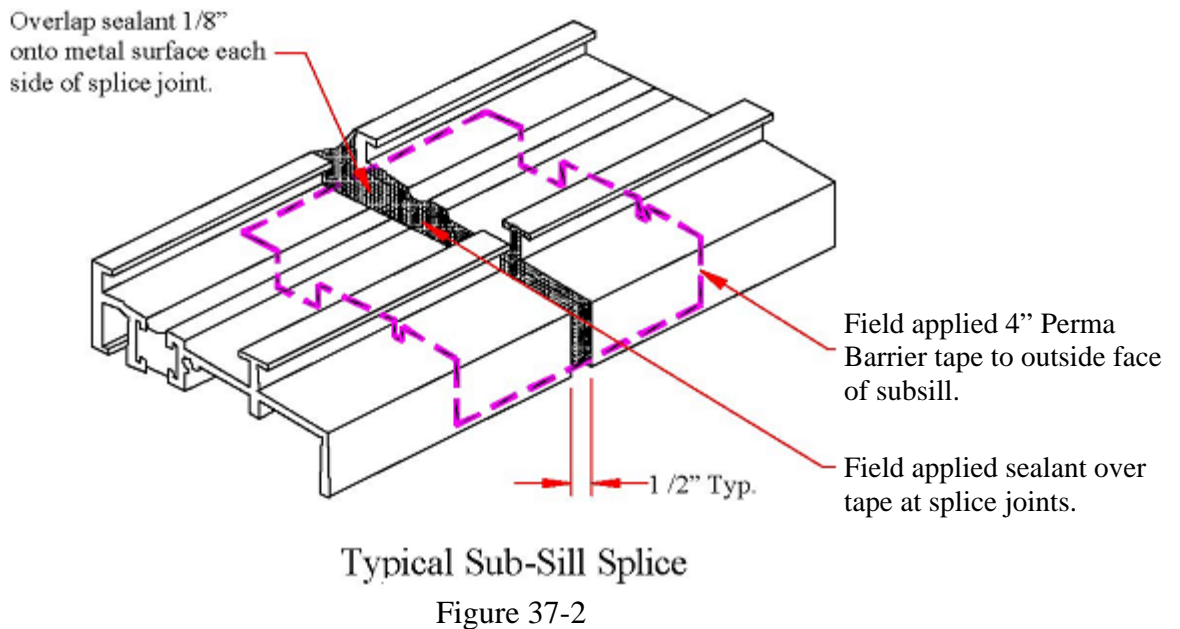
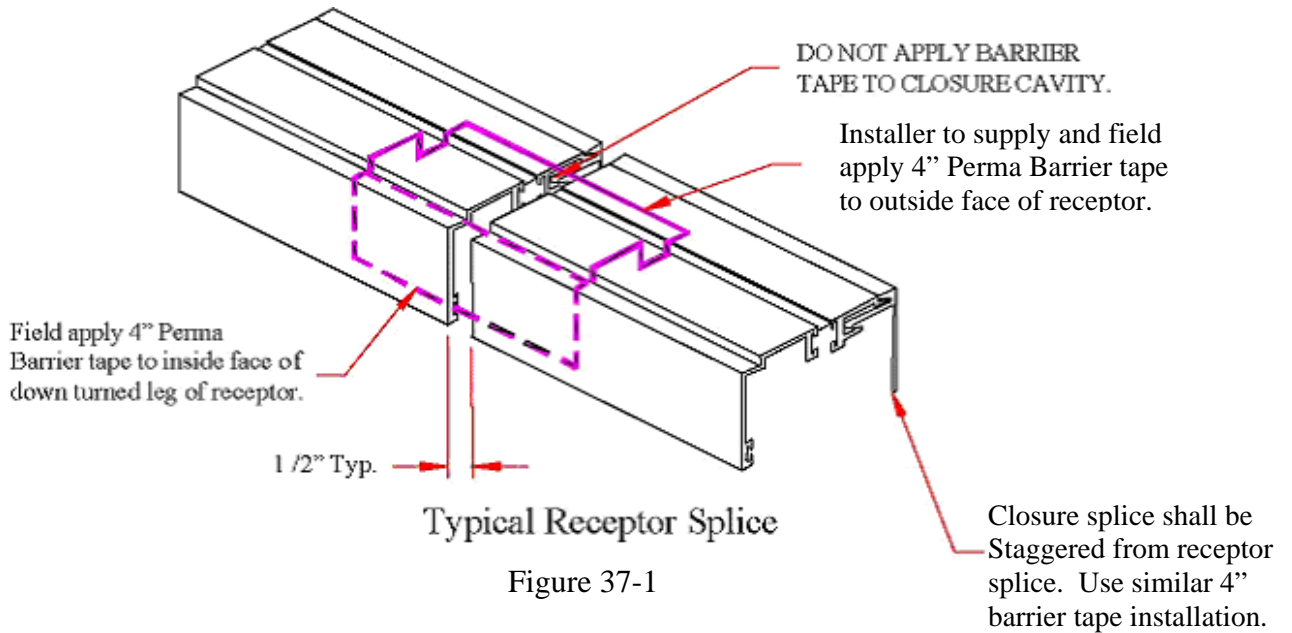


Figure 36-1

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

4. SUB-SILL AND RECEPTOR SPLICE DETAILS

- A. Splice should be every 16' maximum with 1/2" separation.
- B. Field apply 4" Perma-Barrier tape to the seal/splice joint.
- C. Field apply non-hardening, skinning, sealant over the tape at the joints.



These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

5. SNAP ON NAILING FIN DETAILS

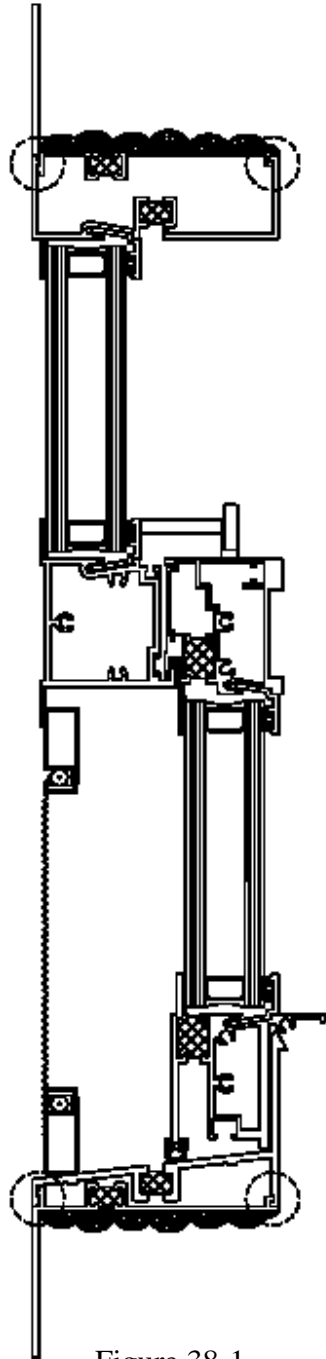



Figure 38-1

 = CONTINUOUS BEAD OF SEALANT TO BE APPLIED TO THE NAIL FIN ADAPTER BEFORE IT IS AFFIXED TO THE WINDOW FRAME (TYP.)

 = ALL CONNECTION JOINTS ARE TO BE SEALED WITH SILICONE BEFORE WINDOWS CAN BE INSTALLED INTO OPENING (TYP.)

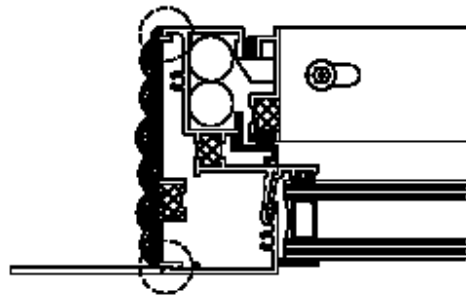


Figure 38-2

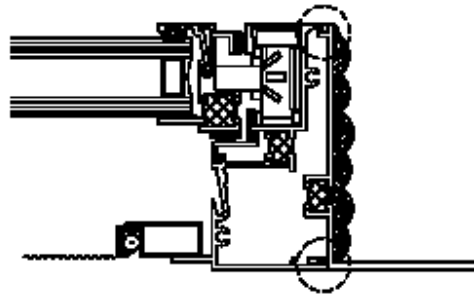


Figure 38-3

SCREEN LOCATIONS AND REMOVAL

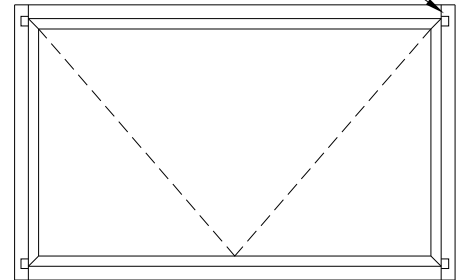
1. PROJECT-IN SCREENS

A. Screens come from factory attached to windows.

B. If screens are ordered separate, locate screens at dimensions shown. Field drill holes for clip screws as req'd.

C. Four clips req'd at each location.

Screen clips attached with #6 x 3/8" screws.



Elevation
Figure 39-1

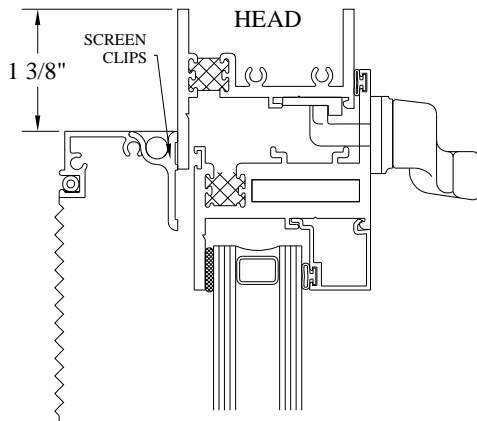


Figure 39-3

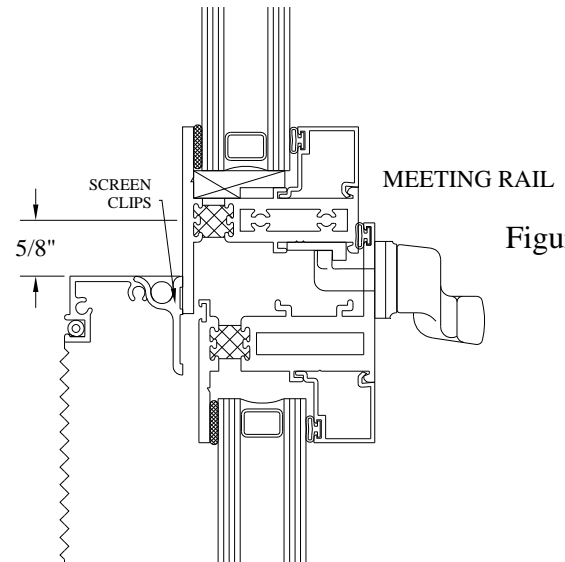


Figure 39-2

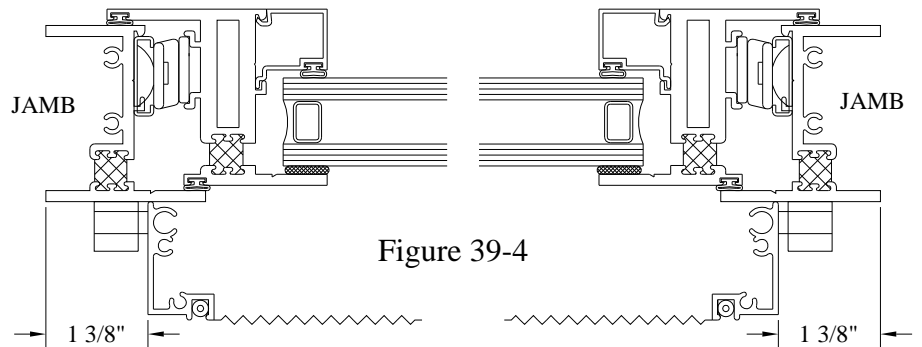
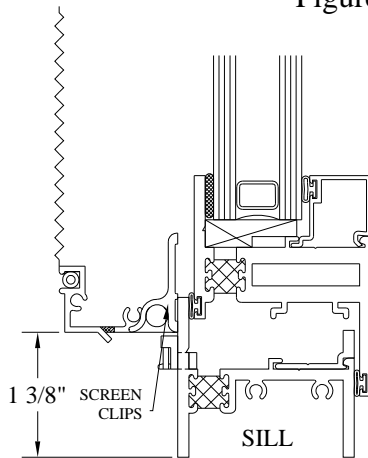


Figure 39-4

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

2. PROJECT-OUT SCREENS

- A. Screens come from factory attached to windows.
- B. If screens are ordered separately, locate screens at dimensions shown. Field drill holes for screws as req'd for wicket or flat screens (see figures below for each type).

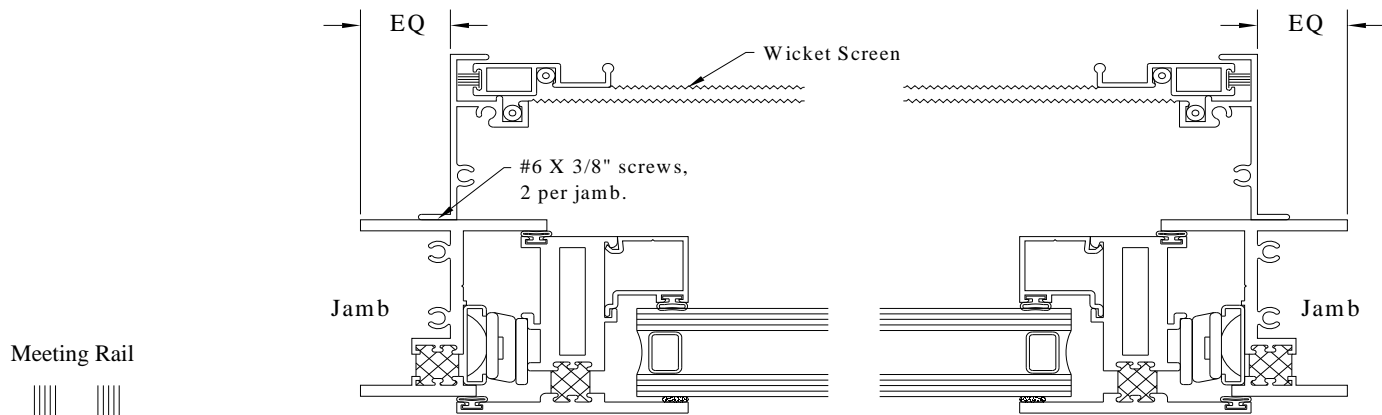


Figure 40-1

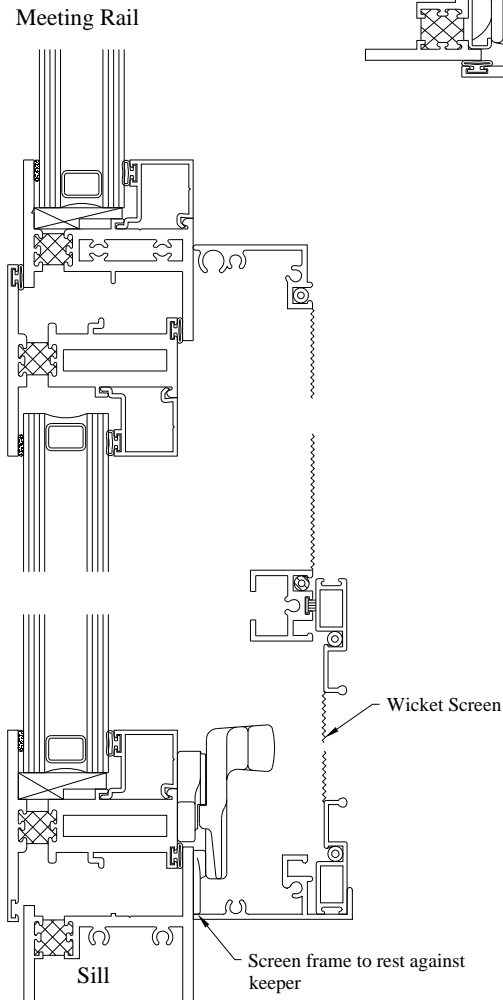


Figure 40-2

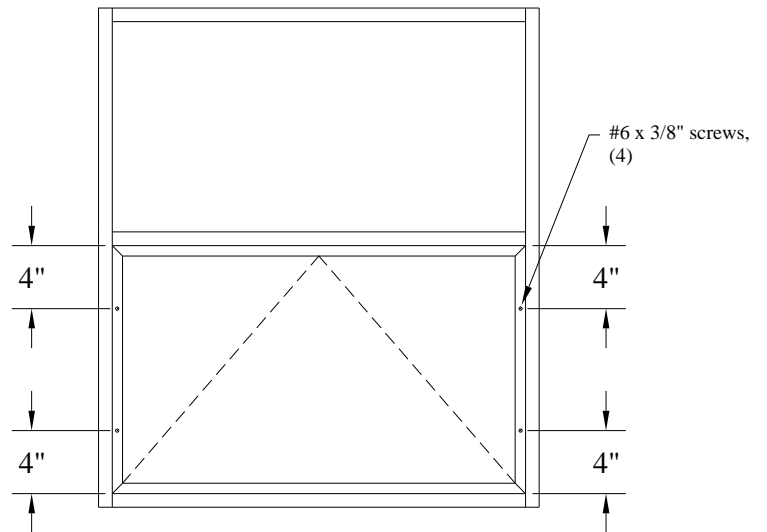


Figure 40-3

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

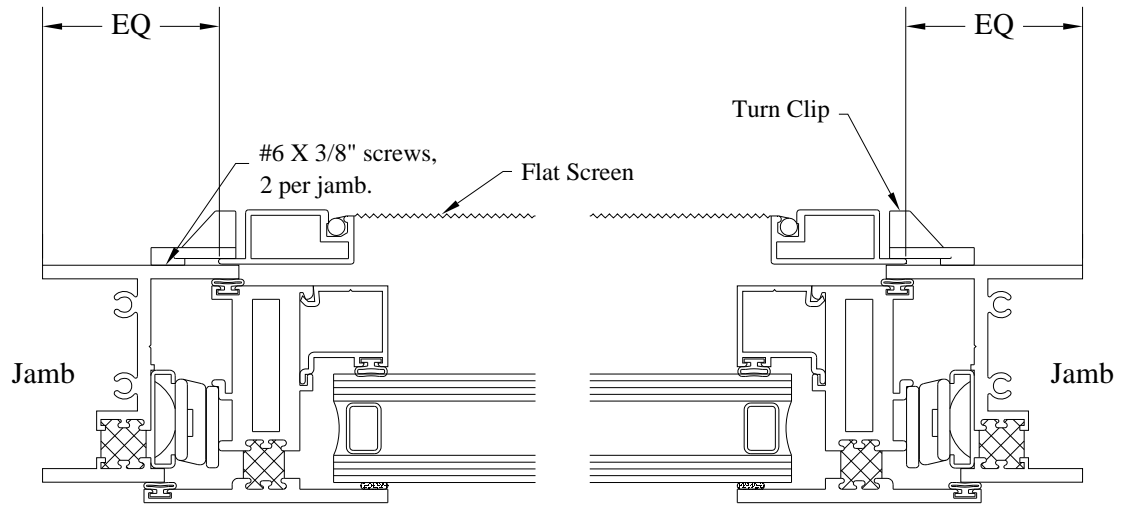


Figure 40A-1

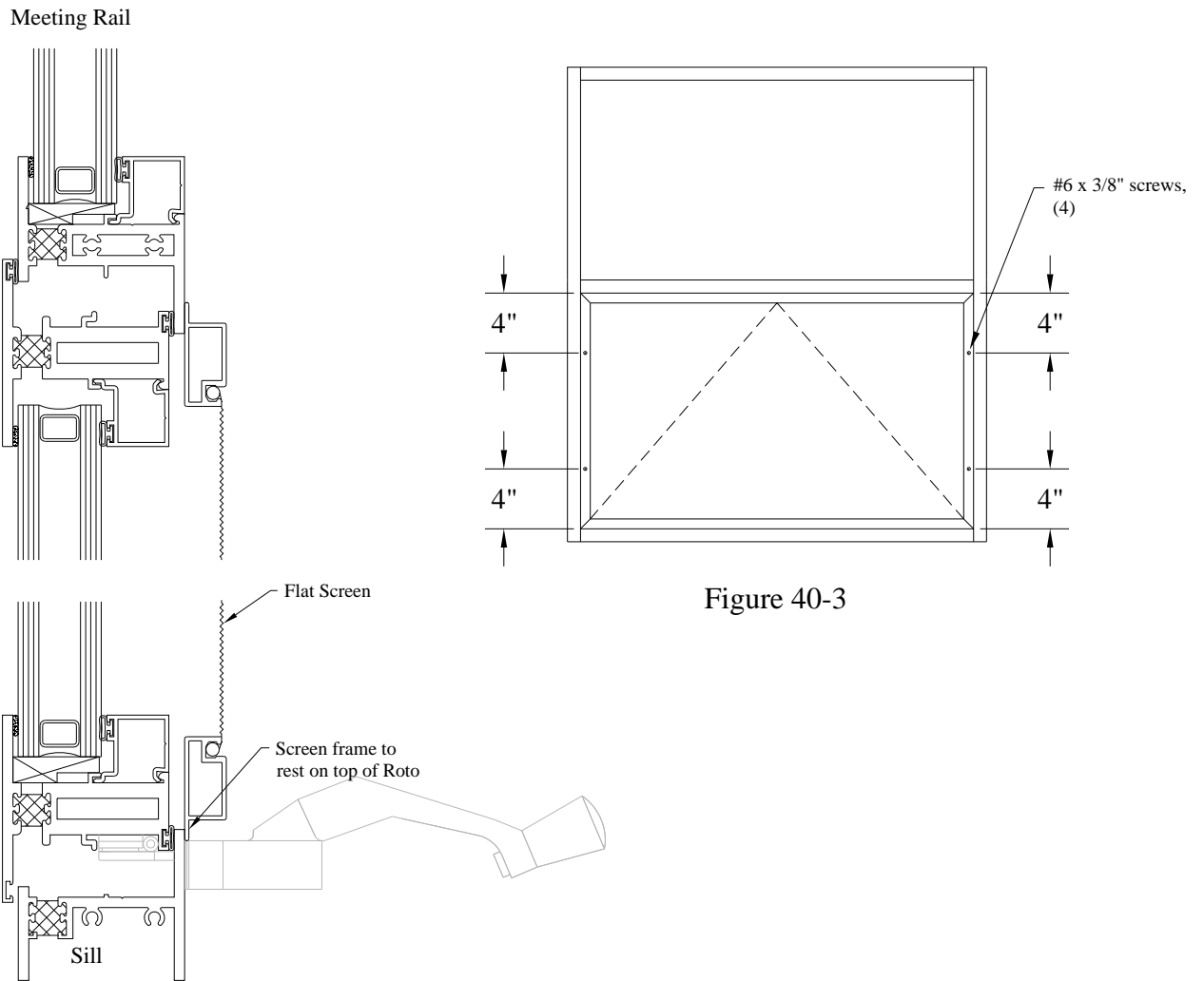


Figure 40-3

Figure 40A-2

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

3. OUTSWING CASEMENT SCREENS

A. Screens come from factory attached to windows.

B. If screens are ordered separate, locate screens at dimensions shown. Field drill holes for clip screws as req'd.

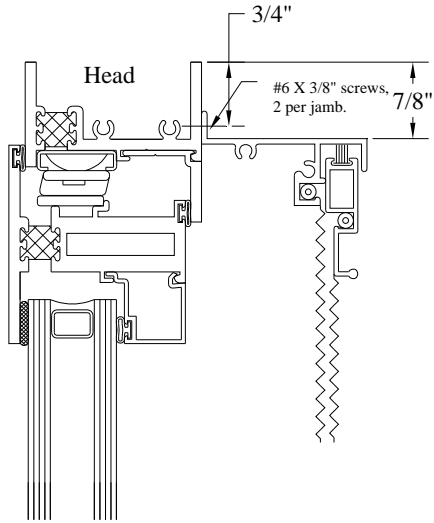
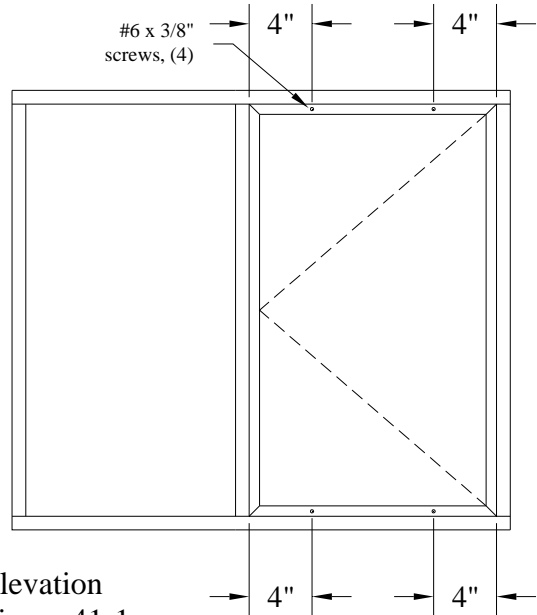


Figure 41-2



Elevation
Figure 41-1

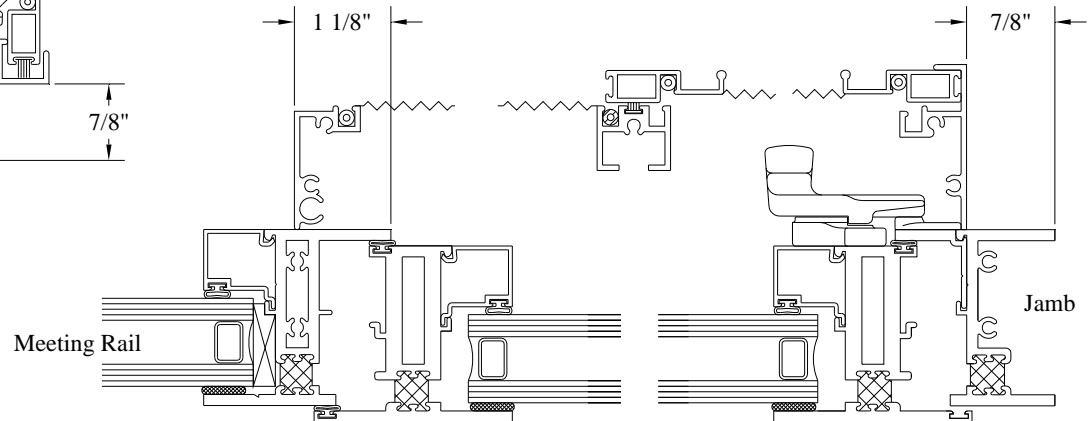
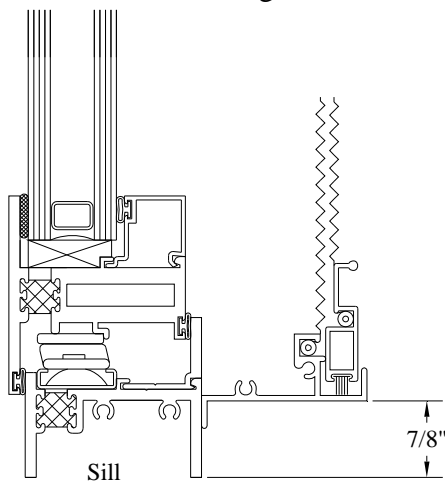
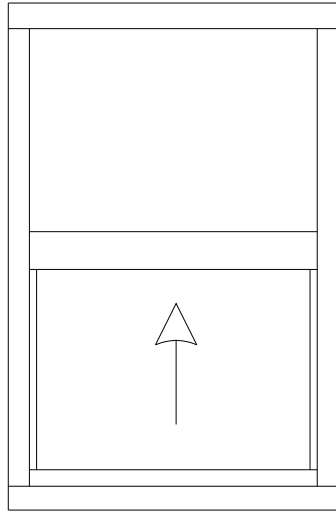


Figure 41-3

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

4. SINGLE HUNG WITH HALF SCREENS

- A. Screens come installed from the factory.
- B. To remove screen, first raise the lower sash 1" to 2" above the sill leg. Tilt the sash to 45°; disengage the plunger pins and lift out (See Figure 42-2).



Elevation
Figure 42-1

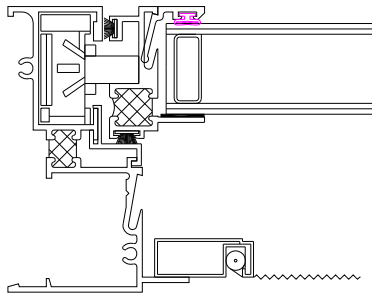


Figure 42-2

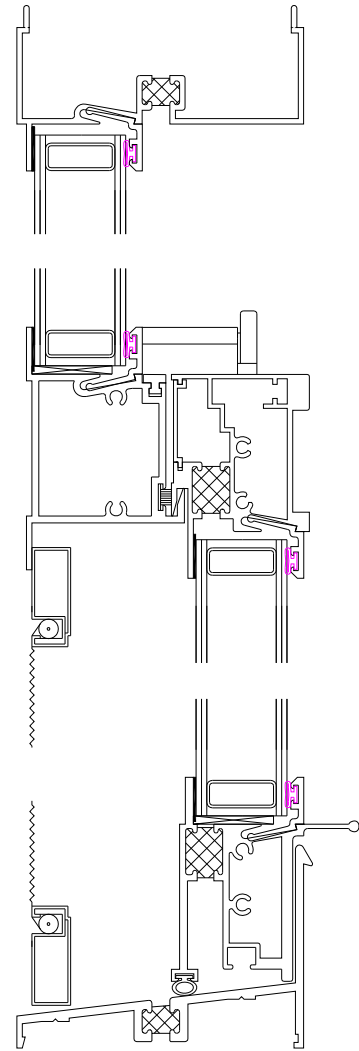
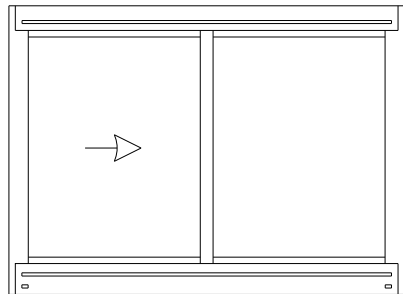


Figure 42-3

5. HORIZONTAL SLIDER WITH FULL SCREENS

- A. Screen frames come from the factory installed on the windows.
- B. To remove the screen, first raise the screen into the head track and then swing the frame out from the bottom.



Elevation
Figure 43-1

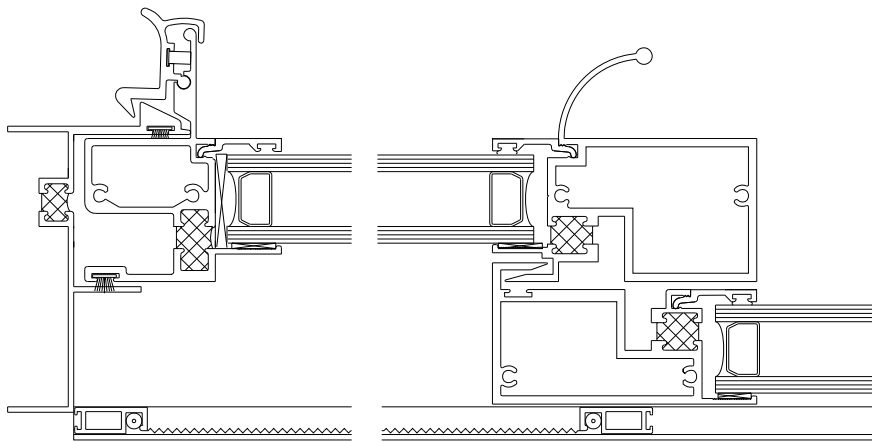


Figure 43-2

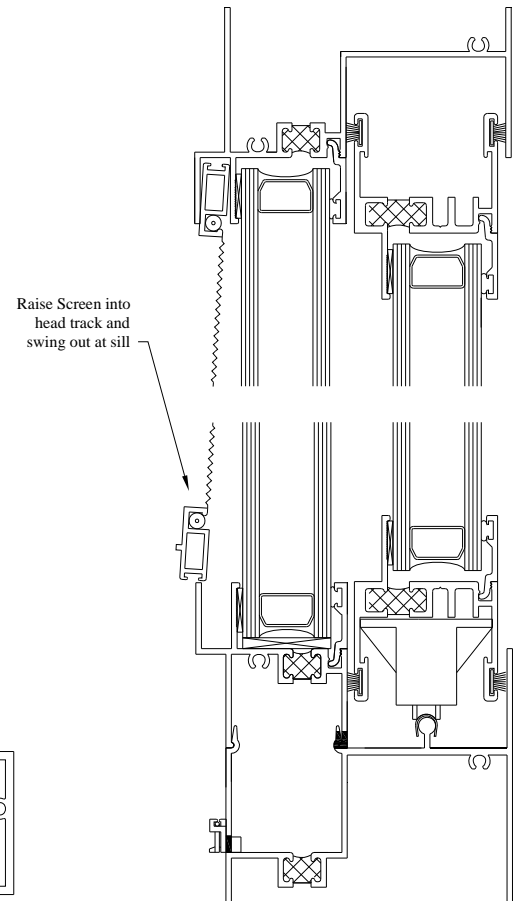


Figure 43-3

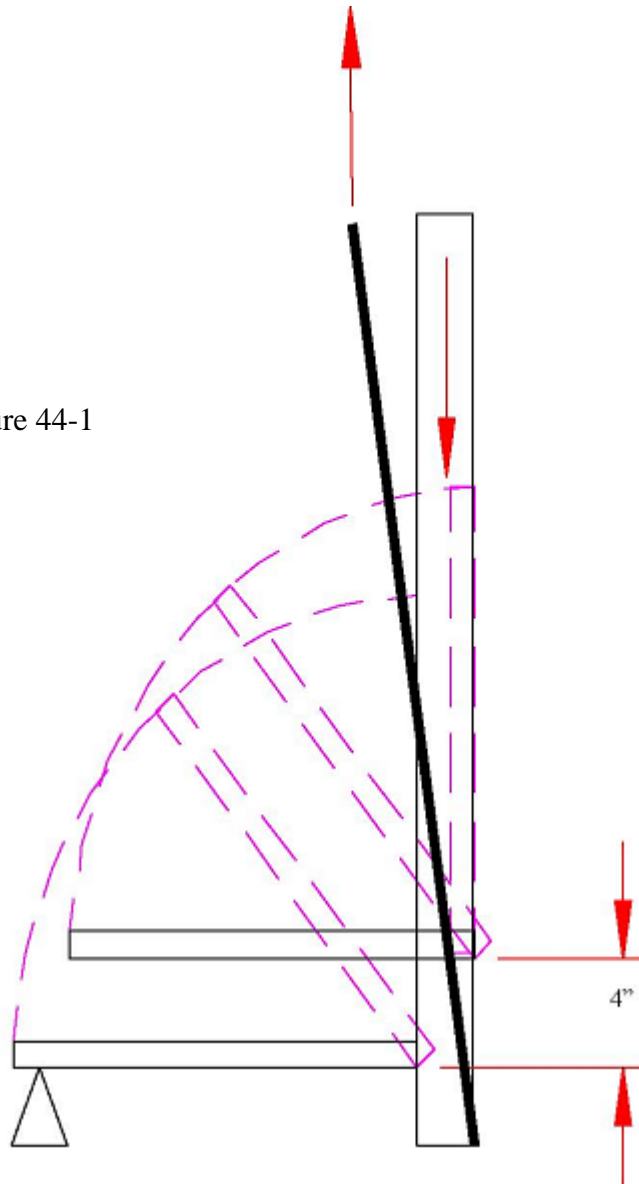
6. TILT WINDOW SCREEN REMOVAL INSTRUCTIONS

- A. Lower sash:

These instructions are recommended installation instruction procedures.
Please refer to project specific shop drawings (if applicable).

- 1 Unlock lower sash and raise approx. 4" - 6".
 - 2 Disengage tilt locks at each end of the top rail of the sash.
 - 3 Tilt the sash in to the horizontal position (See Figure 44-1).
- B. Upper sash:
- 1 Lower the upper sash to about 4".
 - 2 Disengage tilt locks at each end of the top rail of the sash.
 - 3 Tilt the sash in to the horizontal position (See Figure 44-1).
- C. To remove the screen, grab the pull-tabs and pull inward. Then pull upward once the screen passes the frame.

Figure 44-1



APPENDIX A MASONRY CLEANING

These instructions are recommended installation instruction procedures. Please refer to project specific shop drawings (if applicable).

Over the past quarter century the fenestration industry has created a niche for high performance windows, only to have these windows, immediately after installation, show signs of decay and destruction. The culprit, the misuse of cleaning solutions and inadequate technical training by builders and subcontractors concerning masonry cleaning.

For decades muriatic acid and other proprietary solvents have been used by builders and subcontractors to clean masonry and other materials following construction. But recently, due to cost and time pressures, the concentration of muriatic acid has increased and is deteriorating glass and window components alike.

According to Greg Carney, technical director for the Glass Association of North America, “From the moment they arrive on a construction site, windows, doors and skylights are frequently exposed to harmful chemicals, construction debris, and damage from other construction trades-with muriatic acid exposure certainly being a critical problem.”

These new high performance windows frequently contain glass with low-emissivity coatings. These coatings are the usually the first thing to show deterioration. As soon as within 24 hours the glass can turn black and spread from the perimeter inward. The acid runoff will eventually collect on the windowsill staining the frame. After seeping inside the window-insulating unit, the acid will ruin the interior low-emissivity coating as well as other individual components. The anodized aluminum and painted surfaces will develop blisters, holes as well as other damage shortly after exposure.

To combat this situation, the fenestration industry and the construction industry have been discussing guidelines and alternatives to the current practices. First and foremost the Brick Institute of America recommends using only a 10% concentration of muriatic acid. Greater concentrations of muriatic acid cause damage not only to glass but also to brick and mortar. Furthermore, BIA also recommends saturating any brickwork with water immediately before and immediately after using chemical solvents. The next step, according to BIA’s recommendations, is to discontinue the use of muriatic acid for cleaning masonry altogether. “Muriatic acid is an industrial chemical that is not well-suited for masonry cleaning,” explains Gregg Borchelt, vice president of research and engineering for BIA.

“Our organization recommends a proprietary cleaning solution that includes buffering agents to increase the effectiveness of the acid content, while also protecting bricks, mortar, and ancillary materials from corrosion.” The advantage to these solutions is that they are specially formulated for masonry cleaning and are backed by free technical support.

This problem has the potential to grow as high performance, energy-efficient windows continuously become more popular. The key to solving this problem is education and collaboration between the two industries. By communicating and developing new ideas and alternatives this problem will soon be a thing of the past.