



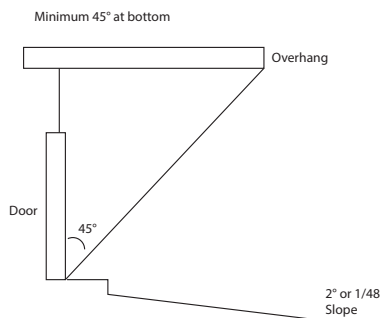
# PELLA® SCENESCAPE™ BI-FOLD DOOR INSTALLATION INSTRUCTIONS

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Before purchasing and installing, verify performance of product meets the requirements of the application and region. Not all products or sill types are rated for water performance. To reduce the likelihood of water infiltration where application exceeds product performance, install doors under an overhang that extends to meet a 45 degree line from the door sill and slope the exterior 2 degrees away from the door or use a step-down.

**FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE INTERIOR OF THE STRUCTURE.**



### Installation Instructions for Typical Wood Frame Construction.

These instructions were developed and tested for use with typical wood frame wall construction in a wall system designed to manage water. **These instructions are not to be used with any other construction method.**

Installation instructions for use with other construction methods may be obtained from Pella Corporation, a local Pella retailer, or by visiting <http://www.pella.com>. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional.



Always read the Pella® Limited Warranty before purchasing or installing Pella products. By installing this product, you are acknowledging that this Limited Warranty is part of the terms of the sale.



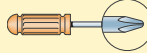



Failure to comply with all Pella installation and maintenance instructions may void your Pella product warranty. See written Limited Warranty for details, including exceptions and limitations at [pella.com/warranty](http://pella.com/warranty), or contact Pella Customer Service at 877-473-5527.

# SCENESCAPE BI-FOLD DOOR SYSTEMS – General Information

Questions? – Call, Customer Service at 1-877-473-5527

Bifold panels are top-hung. Header must be designed to bear the weight of each door panel (240 lbs. max per panel) AND all building (roofing) and construction loads. Verification by a Structural Engineer is recommended.


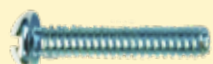


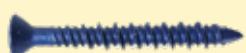





## TOOLS REQUIRED:

- Drill 
- Concrete Drill 
- Drill Bit Kit 
- Extension Bit Holder 
- Countersink Bit (82 Deg.) 
- #2 Square Bit Screwdriver 
- #2 Square Drive Bit 
- Straight Blade Screwdriver 
- Phillips Head Screwdriver 
- #2 Phillips Head Bit 
- Standard and Metric Allen Wrench Set 1/8", 3/16", 5/32", #3 
- 90° support Block 
- 1/8" shims 
- Plumb Bob 
- 6' Level 
- Laser Level 
- Tape Measure 
- Sealant Gun & Sealant 
- Pella Window and Door Installation Sealant or equivalent high quality, multi-purpose sealant (Clear or black at sill recommended) 
- Pella® SmartFlash™ foil backed butyl window and door flashing tape or equivalent 
- Framing Square 
- Rubber Mallet 
- 6' Step Ladder 
- Safety Glasses 
- Hearing Protection 
- Heavy Duty Gloves 
- Hard Toe Shoes 
- First Aid Kit 
- Flashlight 

## PARTS LIST:

- Head, 2 jambs, sill, astragal (per configuration)
- Hardware boxes based on configuration (see drawing provided on door panels and Hardware Guide for required hinges and carrier sets)

### Screws:

- Side Jamb Assembly Screws #8x2-1/2" (Jamb/Head Corner joining Screws) 
- Side Jamb Assembly Screws #10-32x1-1/4" (Jamb/Sill Corner joining Screws) 
- Astragal Attachment Screws #8 X 2" 
- Sill Installation Screws #10 X 2" (into Wood) 
- Sill Installation Screws 3/16"x1.75" (into Concrete) 
- Head/Jamb Installation Screws #8x3" 
- Pivot Hinge Mounting Screw #8 x 1-1/4" 
- Nail Fin Corner Joining Screws #8x2" 
- Hinge Installation Screws #10x2" 
- Washers (.490 OD, .1875 ID) 

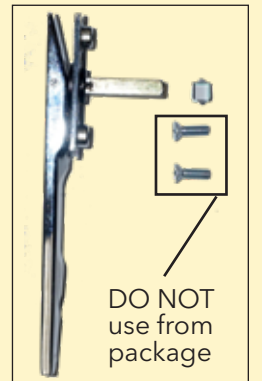
### Door Screw Used

	Out-Swing	In-Swing
Side Jamb Assembly Screws #8x2-1/2" (Jamb/Head Corner joining Screws)	X	X
Side Jamb Assembly Screws #10-32x1-1/4" (Jamb/Sill Corner joining Screws)	X	
Astragal Attachment Screws #8 X 2"	X	X
Sill Installation Screws #10 X 2" (into Wood)	X	X
Sill Installation Screws 3/16"x1.75" (into Concrete)	X	X
Head/Jamb Installation Screws #8x3"	X	X
Pivot Hinge Mounting Screw #8 x 1-1/4"	X	X
Nail Fin Corner Joining Screws #8x2"	X	
Hinge Installation Screws #10x2"	X	X
Washers (.490 OD, .1875 ID)		X

- Neoprene strips for hinges with barrel toward interior.



- Passage door hardware (per configuration)
- Dualpoint Lock handle package(s)

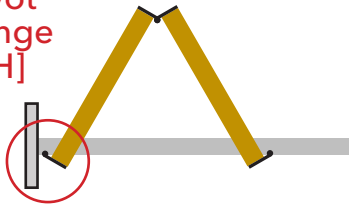


# HARDWARE COMPONENTS GENERAL USAGE GUIDE:

**NOTE:** Only the necessary hinge sets are included with your door configuration.

See drawing on the door panels to identify correct panel configuration.

Pivot Hinge [PH]

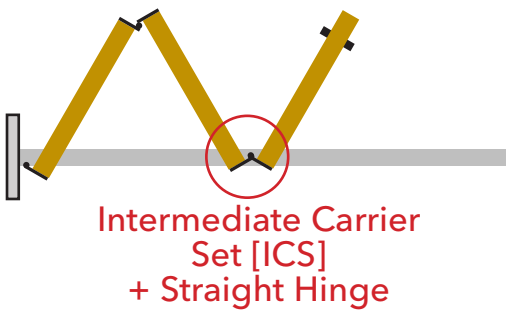


## Wall Pivot Hinge Set [PH]:

Attaches the first panel at the jamb. Includes a Top, Middle and Bottom hinges.



PH

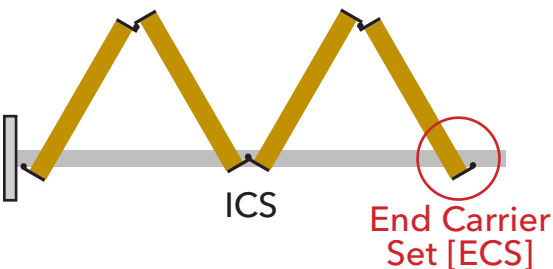


## Intermediate Carrier Set [ICS]:

Connects and "carries" two moving panels at the head (top), and inserts into track at the sill (bottom). Requires 1-2 straight hinges in the middle.



PH



## End Carrier Set [ECS]:

"Carries" the end moving panel; attached at head and sill. End carriers are handed. Do not dis-assemble to alter handing.



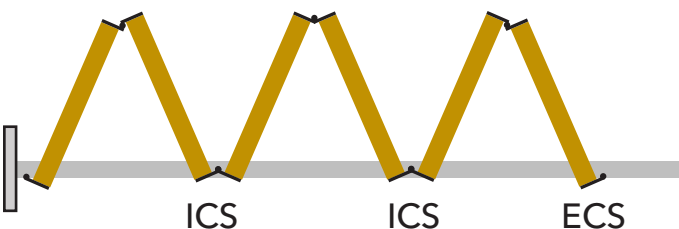
## TO CONNECT 2 PANELS EXTENDING OUTWARD:

Off-set Hinges

Straight Hinges

Off-set Hinges

PH



## Off-Set Hinges [OHHS]:

"Book-end" the door configuration; the leaf extends off the side of the hinge barrel.

## Straight hinges [HHS]:

Connect the middle panel sets. Leaf attaches at middle of hinge barrel.

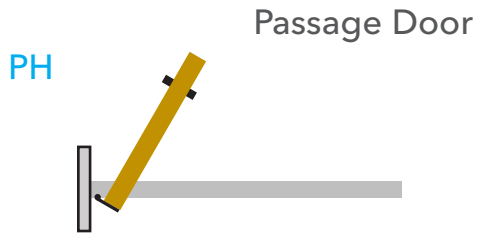


Off-Set Straight

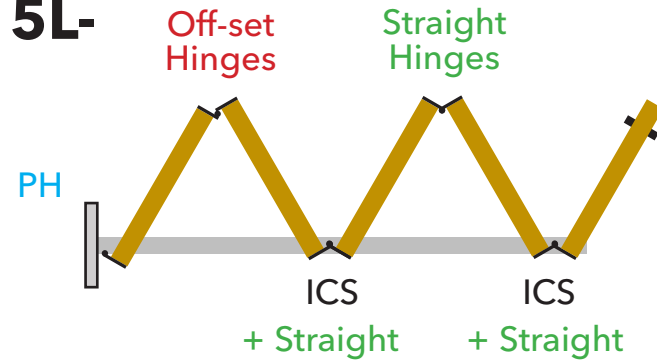
# HARDWARE PLACEMENT GUIDE TO ALL CONFIGURATIONS:

**NOTE:** Shows left-moving panels. Transpose for right-moving panels.

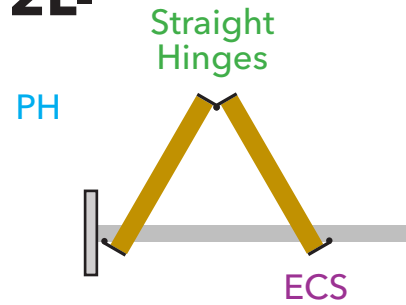
**1L-**



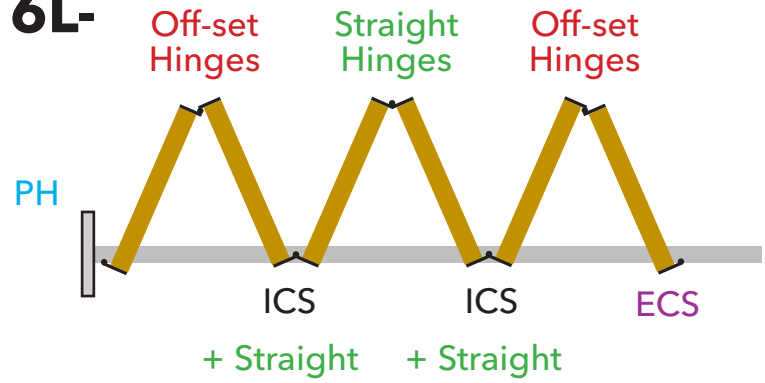
**5L-**



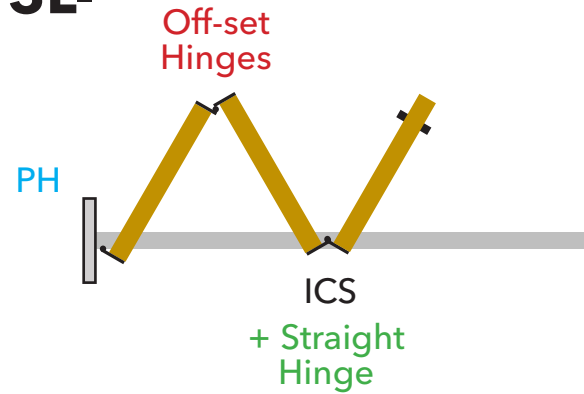
**2L-**



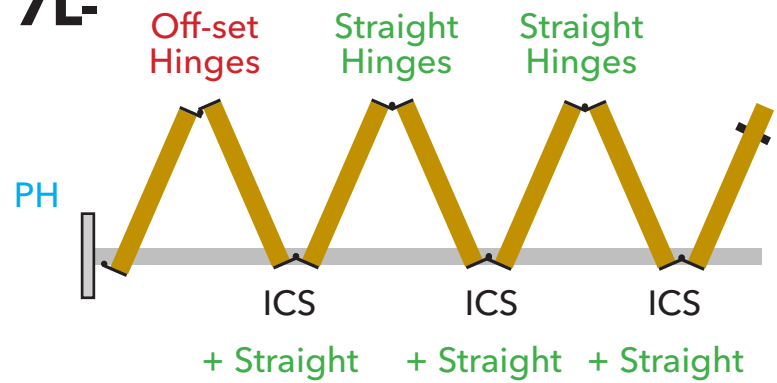
**6L-**



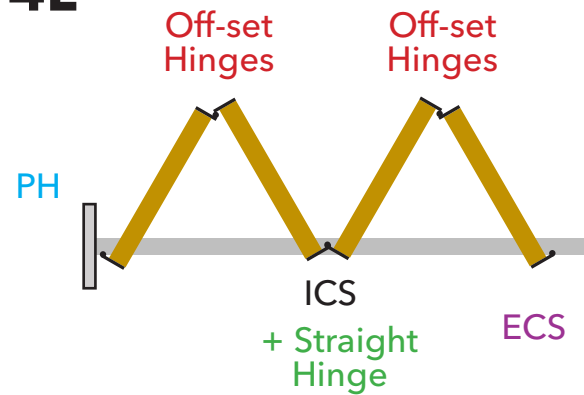
**3L-**



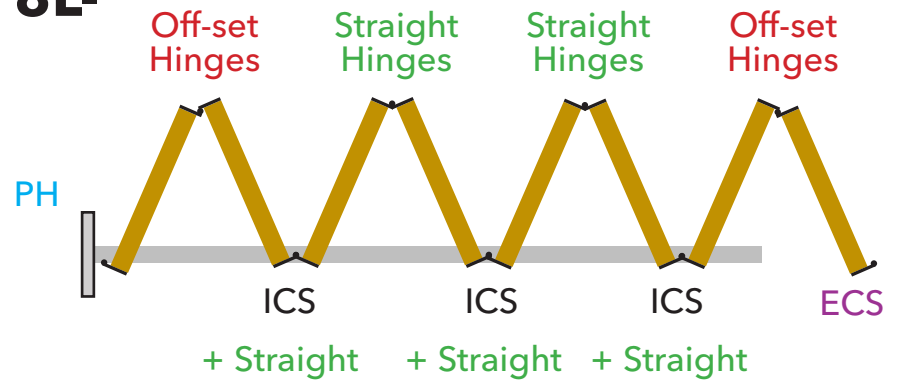
**7L-**



**4L-**



**8L-**

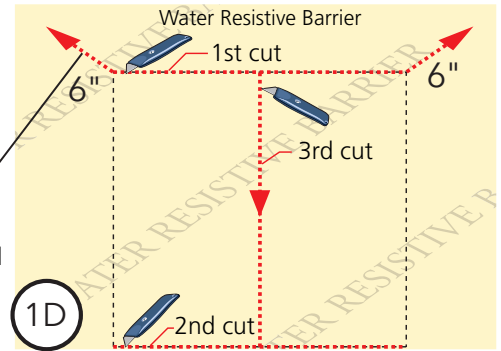


# 1 OPENING PREPARATION:

**NOTE: Header must be designed to bear the weight of each door panel (240 lbs. max per panel) AND all building (roofing) and construction loads. Verification by a Structural Engineer is recommended. Maximum allowable header deflection is 1/4" over entire opening.**

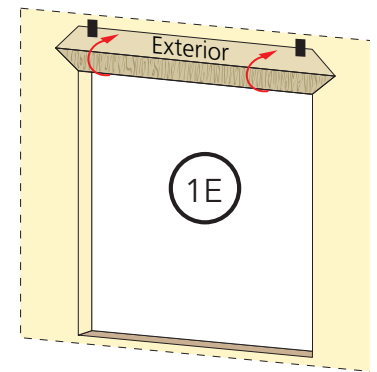
- A. **Prior to installation**, inspect the rough opening to ensure it is plumb, level and square. Verify sill subfloor is level, using shims as needed.
- B. **Measure opening to confirm all existing measurements** agree with those appearing on the elevation drawings provided. Measurements should be within + 3/4" from side to side. Measurements from top to bottom should match the provided drawing.
- C. **NO SAGGING HEADER.** The maximum final deflection across the top door frame should not exceed 1/8" max after the roof is loaded.

4th cut: Make a 6" cut up from each top corner at a 45° angle to allow the water resistive barrier to be lapped over the fin at the head of the door.

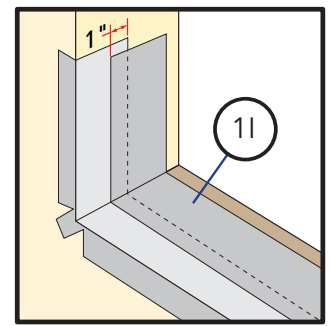
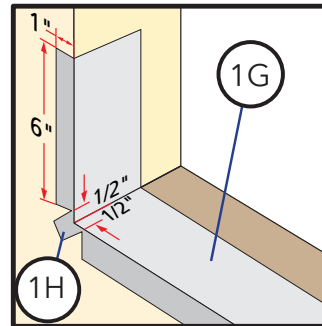


- D. **Cut the water resistive barrier.**

- E. **Fold the water resistive barrier.** Fold side flaps into the opening and staple to inside wall. Fold top flap up and temporarily fasten with flashing tape.



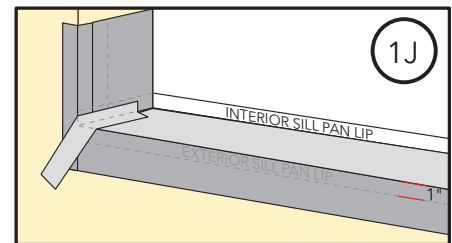
- F. **Cut 2 pieces of flashing tape 12" longer than opening width.**
- G. **Apply sill flashing tape #1** at the sill extending 1" to the exterior and 6" up each jamb.
- H. **Cut 1" wide tabs at each corner** by tearing the foil 1/2" each way from corner.
- I. **Apply sill flashing tape #2** overlapping tape #1 by at least 1" by 1" minimum.



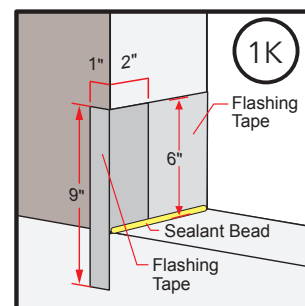
**NOTE: Press all tape down firmly.**

- J. **Alternate sill flashing method.** A sill pan could be used as sill flashing. Reference sill pan instructions on page 39.

**NOTE: The moisture barrier/sill flashing must be compliant with local building codes.**



- K. **For Installing on a concrete slab**, see instruction on page 39.

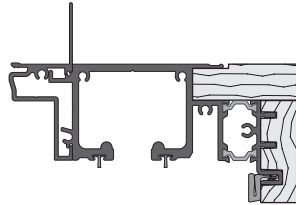


# 2 FRAME ASSEMBLY:

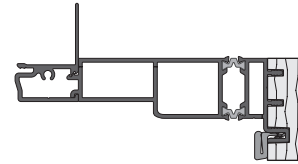
- A. Remove Side Jamb and Astragal (if required by configuration) from one shipping tube, and Head Track and Sill Track from second shipping tube. Remove from packaging by gently cutting through plastic wrap, avoiding any exterior or interior finished surfaces.

## Frame Parts Identification and Sill Options

### OUT-SWING

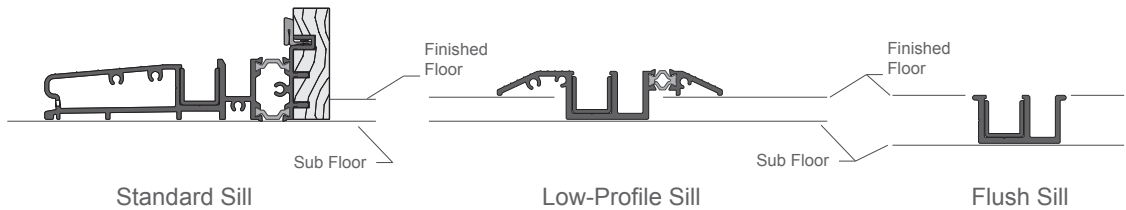


Head Track

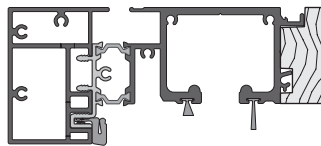


Left Jamb and Right Jamb

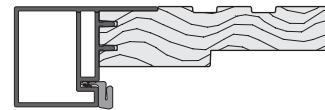
### Exterior Side



### IN-SWING

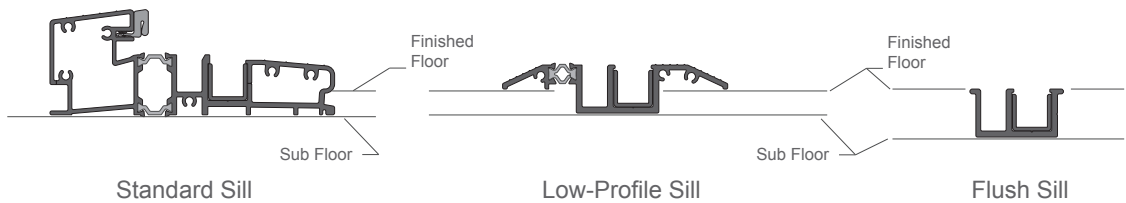


Head Track



Left Jamb and Right Jamb

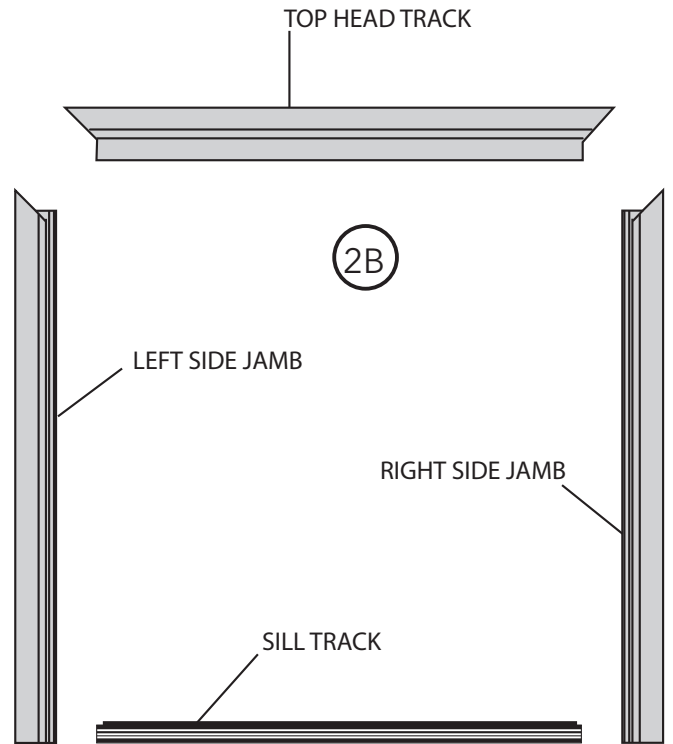
### Exterior Side



**Out-Swing door frame process shown in following photos. See page 16 for In-Swing corner assembly screw locations.**

## 2 FRAME ASSEMBLY (CONTINUED):

- B. Lay the Head Track, Sill Track and Side Jamb exterior side up on a clean flat surface in square orientation, protecting the frame from debris. Insert wood blocks under each corner to support and level the corners on an uneven surface. The sequence in which to assemble the frame will begin with the two Jamb and Sill corners, then the two Jamb and Head corners.



**NOTE: Be sure to protect the wood and painted surfaces when aligning and assembling frame components.**



- C. Verify the base of the top Jamb Pivot Hinge/s and Carrier Set rollers are already factory-installed in the Head Track, according to door configuration.

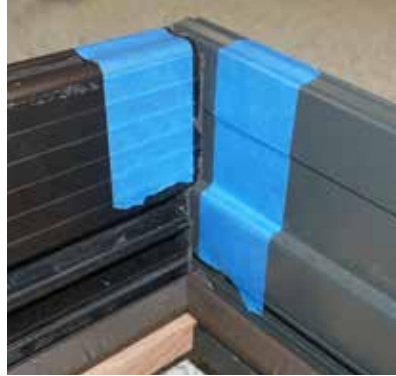
Top Jamb Pivot Hinge

Carrier Rollers

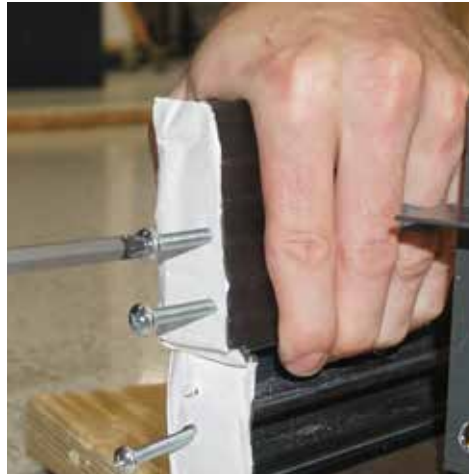


## 2 FRAME ASSEMBLY (CONTINUED):

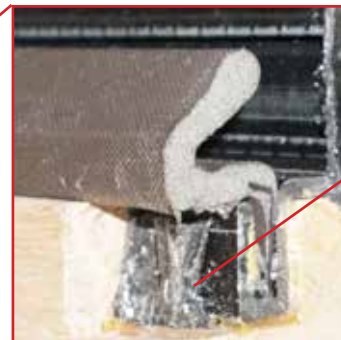
**Tip:** For better aesthetic results, apply painters tape on the sill and jamb to help with sealant squeeze-out clean up after frame assembly.



**Tip:** Before applying sealant and placing sill and jamb together, locate the screw bosses using a hand screwdriver and then drive the machine screws in and back out. This can aid in assembling the corner joint in the steps to follow.



D. **Begin at one end of the sill.** Gently peel release paper from the two foam pads at the end of the sill, careful not to pull the foam pad apart from the sill. If present, remove any other tape from the sill.



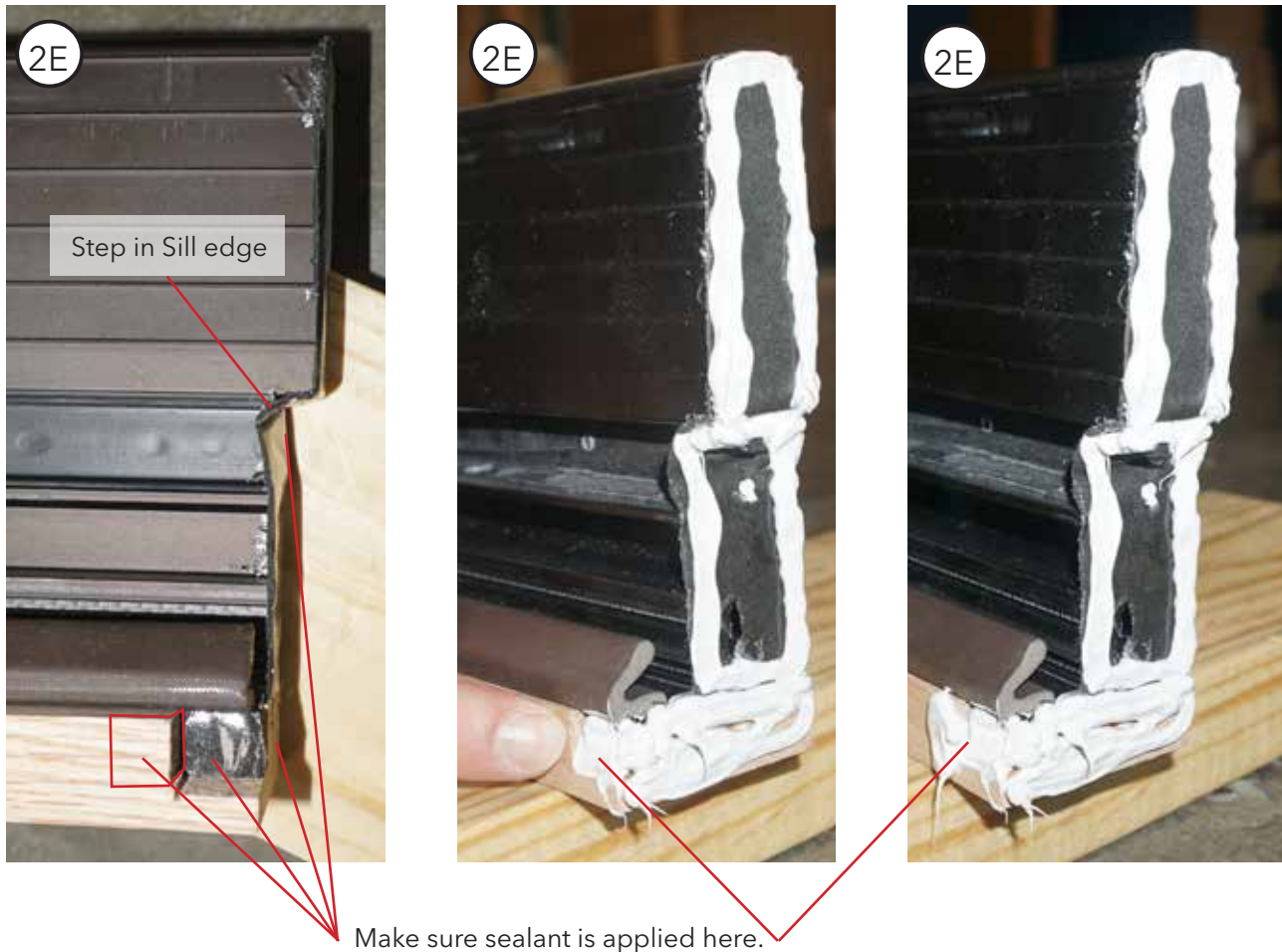
Be sure to remove the release paper from this pad.

**NOTE:** Assembly steps will be similar for low profile sill. See page 16 for low profile sill corner assembly screws and locations.



## 2 FRAME ASSEMBLY (CONTINUED):

- E. Apply a high quality, multi-purpose exterior sealant (clear or color-matched recommended) such as Pella Window and Door Installation sealant around the perimeter of the foam pad, in the step of the sill edge and all wood components that form the corner joint.

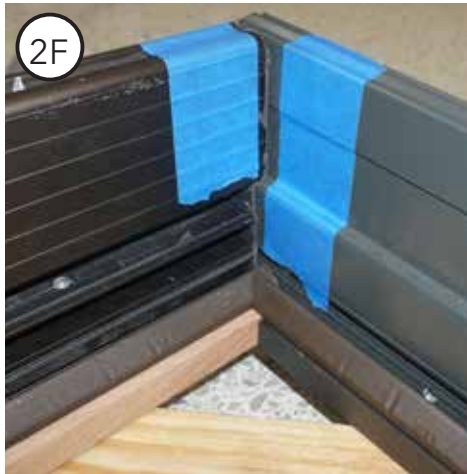


**NOTE: Make sure entire perimeter of joint has sealant where the sill meets the jamb and (if present) the screw pilot holes are filled with sealant.**

**NOTE: A color-matched or translucent sealant is recommended for better aesthetic results.**

# 2 FRAME ASSEMBLY (CONTINUED):

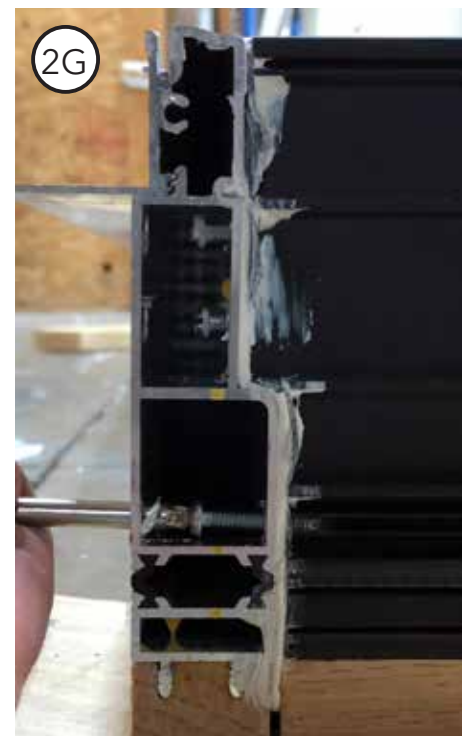
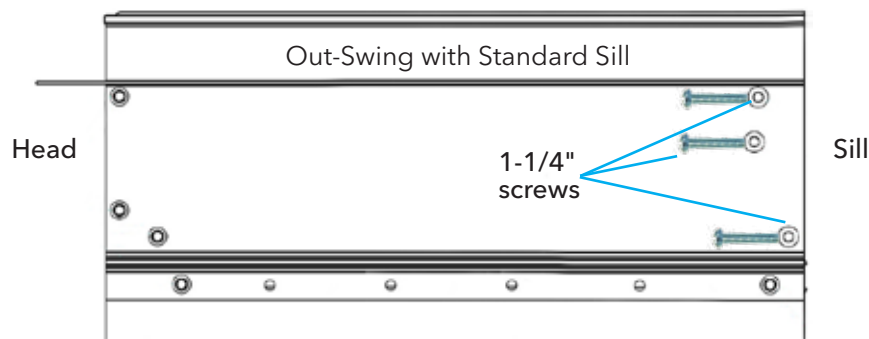
F. Align and fit Sill Track end to Side Jamb end assuring corners are flush.



G. Insert and start only by hand, three #10-32 x 1-1/4" (machine) screws from the labeled "Side Jamb Assembly" package through the pre-drilled jamb end into the sill. DO NOT completely tighten screws at this time.

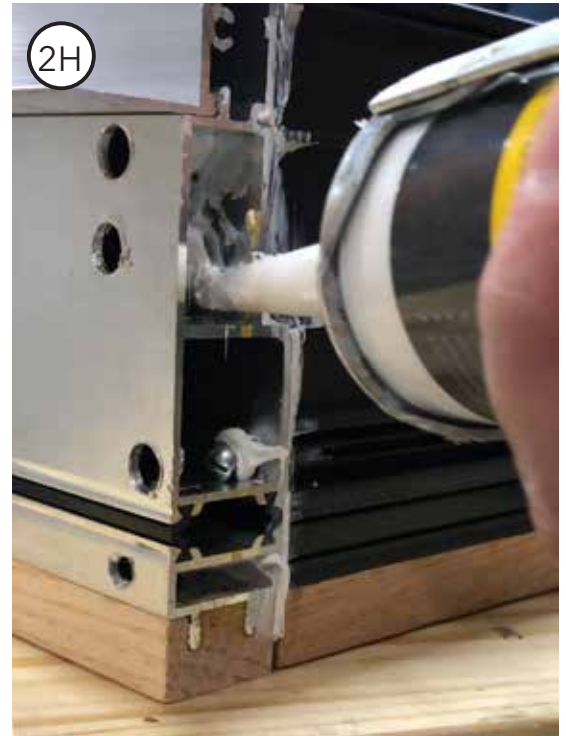
**NOTE: Start screws by hand-tightening.**

#10-32x1-1/4"  
(Jamb/Sill Corner  
joining Screws)



## 2 FRAME ASSEMBLY (CONTINUED):

H. **After starting the three machine screws by hand**, apply sealant at base of screw at pilot holes in Jamb by inserting tube nozzle in through the end of the jamb extrusion to reach the interior surface.



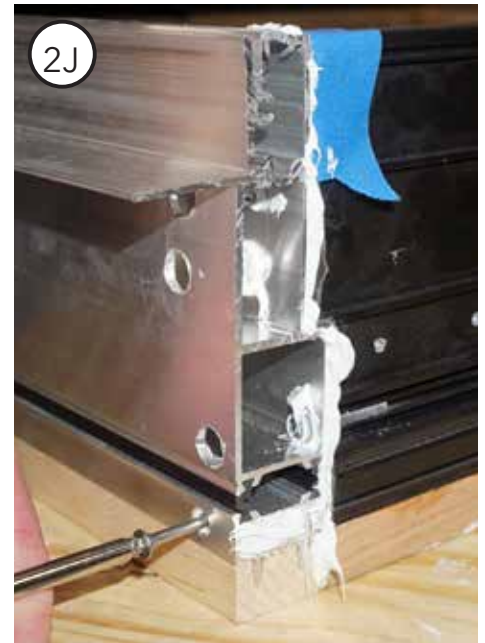
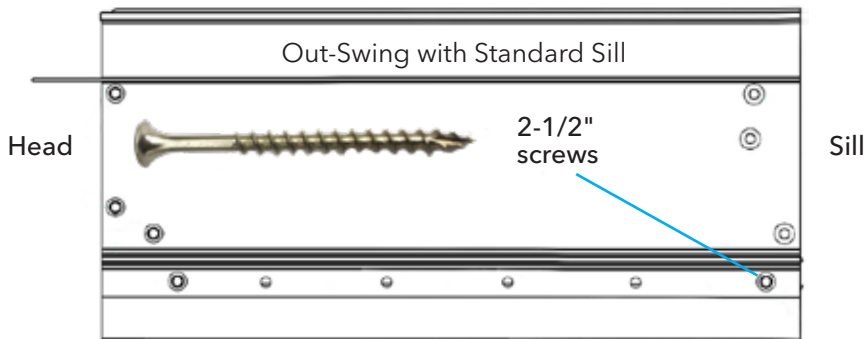
I. **Insert the tip of the sealant tube into the interior-most cavity of the jamb extrusion** and inject sealant until sealant is seen in the screw hole on the jamb.



Sealant at screw hole indicates correct amount of sealant has been injected.

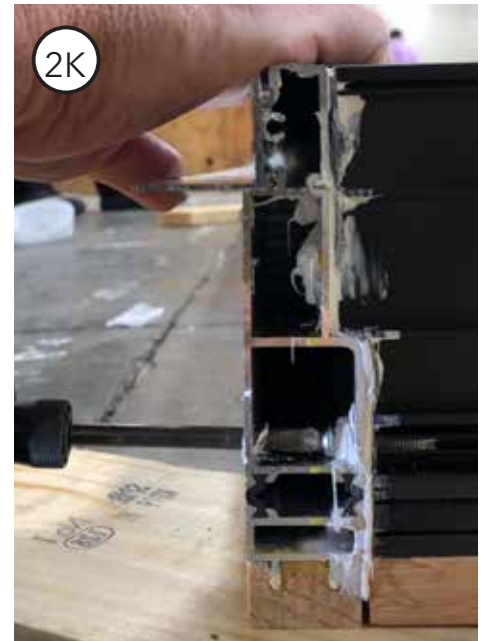
## 2 FRAME ASSEMBLY (CONTINUED):

- J. Insert and hand tighten the #8 x 2-1/2" jamb assembly screw until it engages the screw boss.



- K. Complete driving the jamb assembly screw and the three machine screws until securely fastened.

Confirm there are no gaps between the sill and jamb.



- L. Apply sealant to all the screw heads inside the jamb extrusion.



## 2 FRAME ASSEMBLY (CONTINUED):

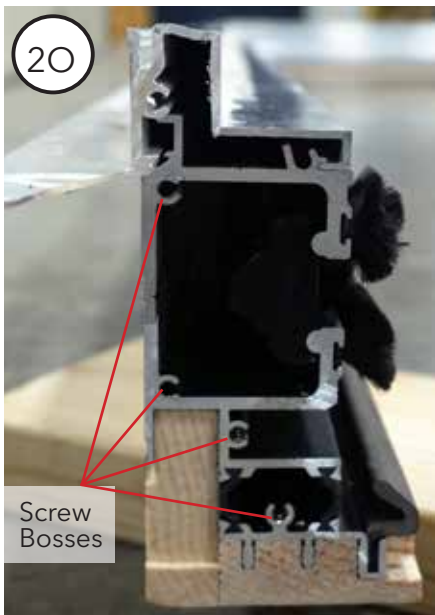
M. Pull the sill frame and jamb weatherstrip out at the corner where the jamb and sill meet. Apply sealant to the corner and reinstall the weatherstrip.



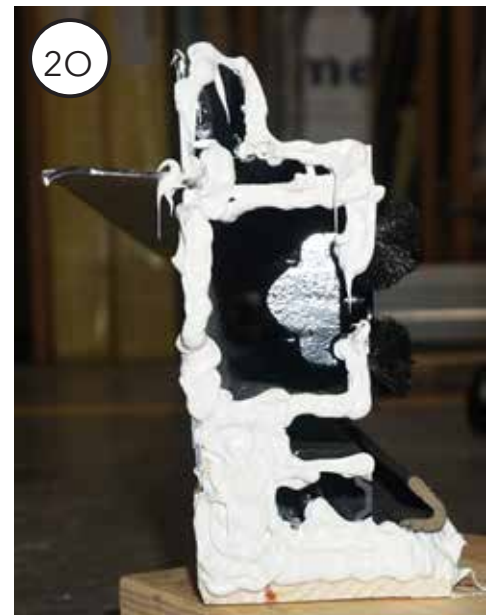
N. Clean off excess sealant and remove painter's tape.

Repeat 2A-2N on the other end of the sill.

O. To one end of the Head Track, apply sealant around the exterior perimeter of the extrusion. Apply sealant to cover all wood joint components, assuring sealant is applied to all surfaces that will meet. Be sure to inject sealant in the screw bosses.

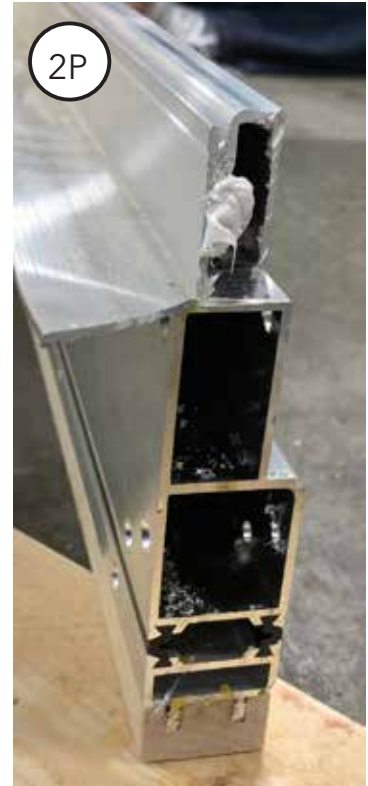


**NOTE: Make sure entire perimeter of joint has sealant where the head will meet the jamb.**



## 2 FRAME ASSEMBLY (CONTINUED):

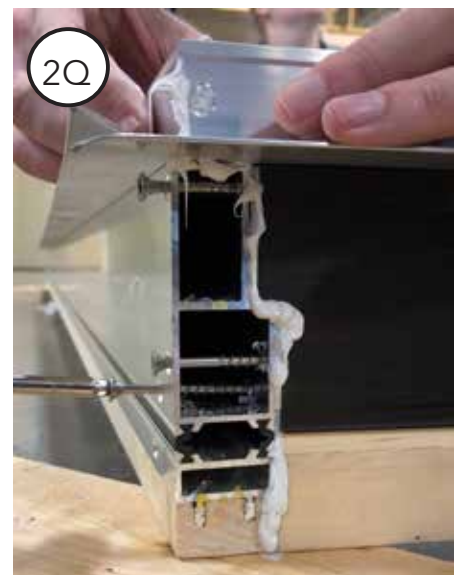
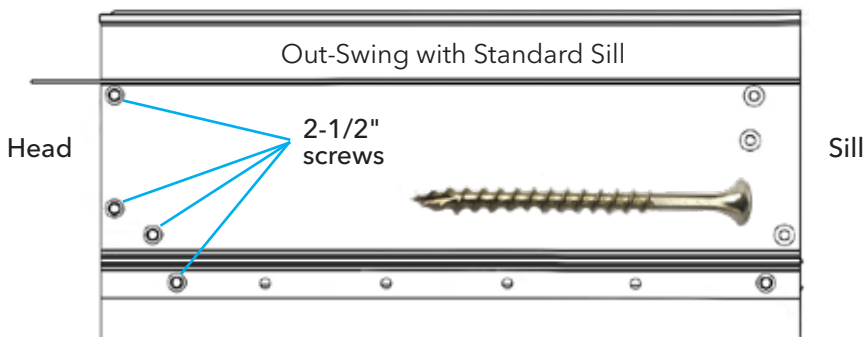
P. Inject sealant into the Jamb screw boss.



Q. Align and join the Head Track and Side Jambs so the outside surfaces are flush.

Insert and start by hand 2-1/2" screws from the labeled "Side Jamb Assembly" package through pre-drilled jamb end into head until it engages with the screw boss. Check if corner joint is square using a 90-degree square.

#8x2-1/2" Jamb/Head  
Corner Joining Screws

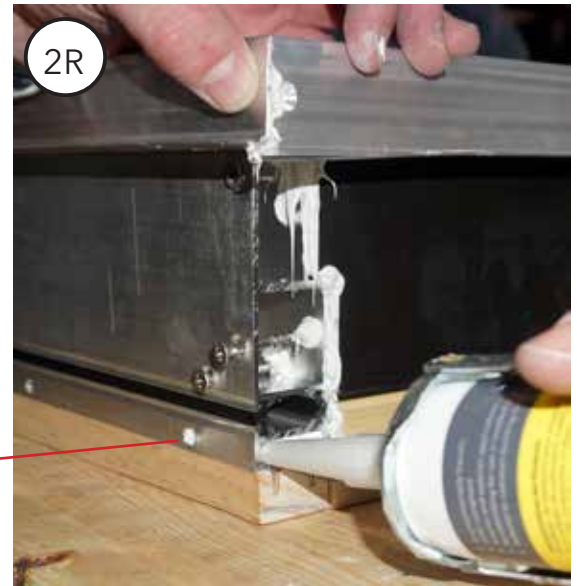


## 2 FRAME ASSEMBLY (CONTINUED):

- R. **Apply sealant to base of screw at pilot hole location**, inserting tube nozzle in through the end of the jamb extrusion to reach the interior surface.

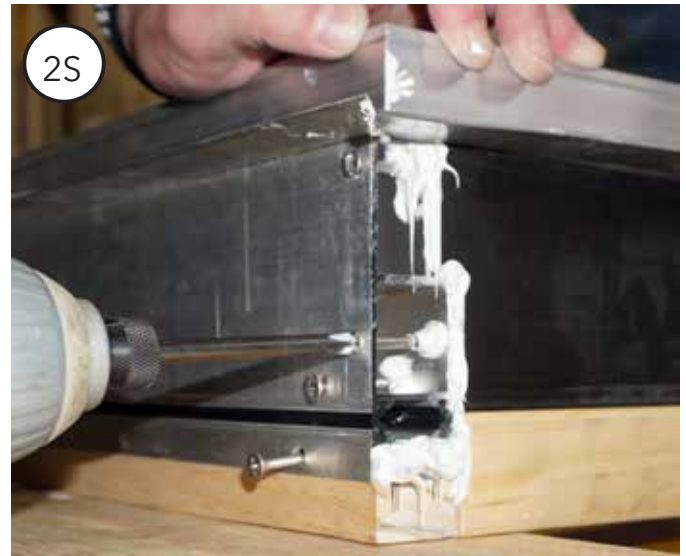
Insert the tip of the sealant tube into the interior-most cavity of the jamb extrusion and inject sealant until sealant is seen in the screw hole on the jamb.

Sealant at screw hole indicates correct amount of sealant has been injected.



- S. **Insert screw into interior-most cavity** and tighten by hand until it engages the screw boss. Complete driving all four screws until securely fastened.

Confirm there are no gaps between the head and jamb.

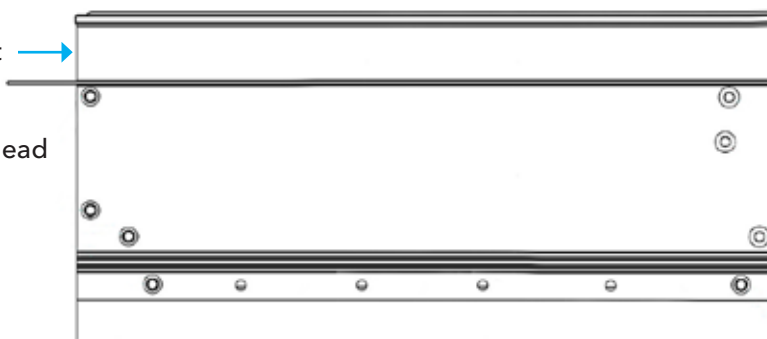


- T. **Insert a #8 x 2 joining screw** into the top of the flashing fin and tighten by hand until it engages the screw boss. Then drive the fastener. Ensure the exterior accessory grooves are aligned.

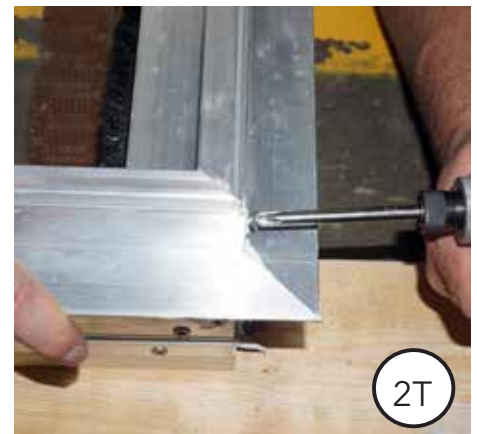


Flashing Fin  
Corner Joint

Head



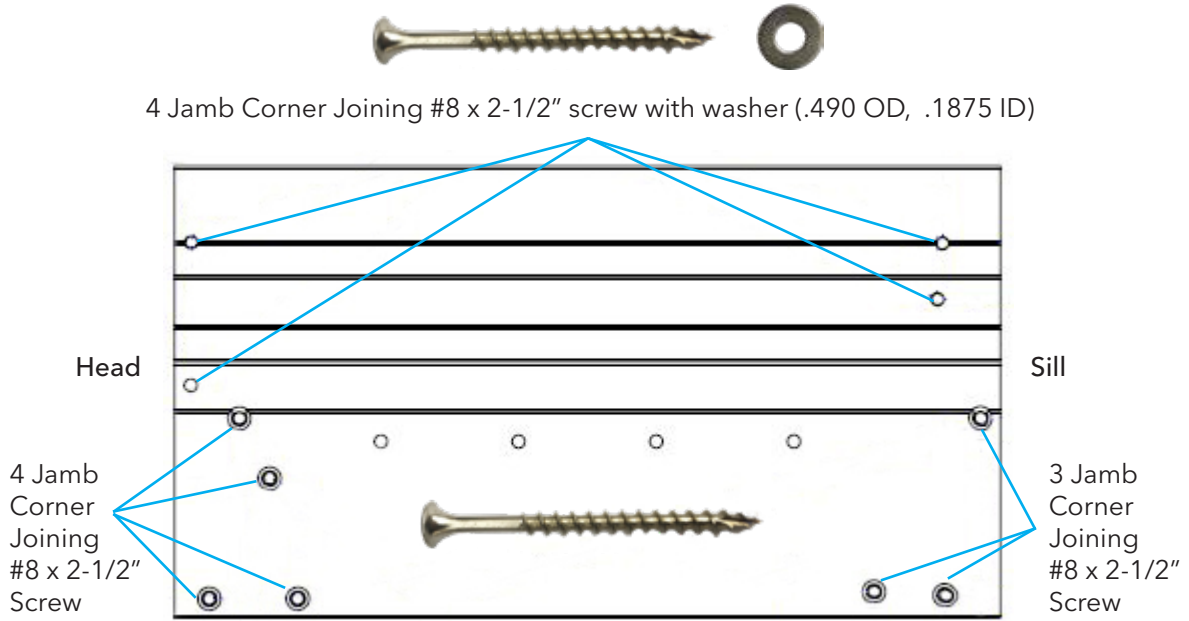
Sill



Repeat Steps 2O-2T for second Head and Jamb corner joint.

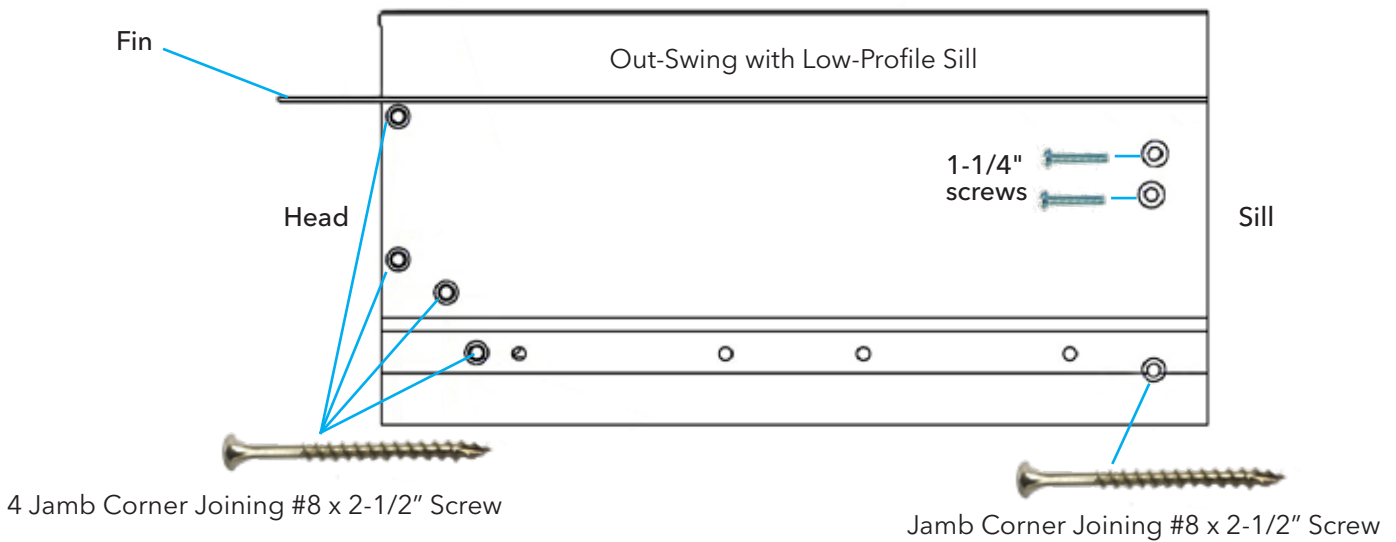
# 2 FRAME ASSEMBLY (CONTINUED):

## In-Swing Door Screw Details:



**Note: In-Swing doors do NOT have a fin.**

## Out-Swing Door Low-Profile Sill Screw Details:



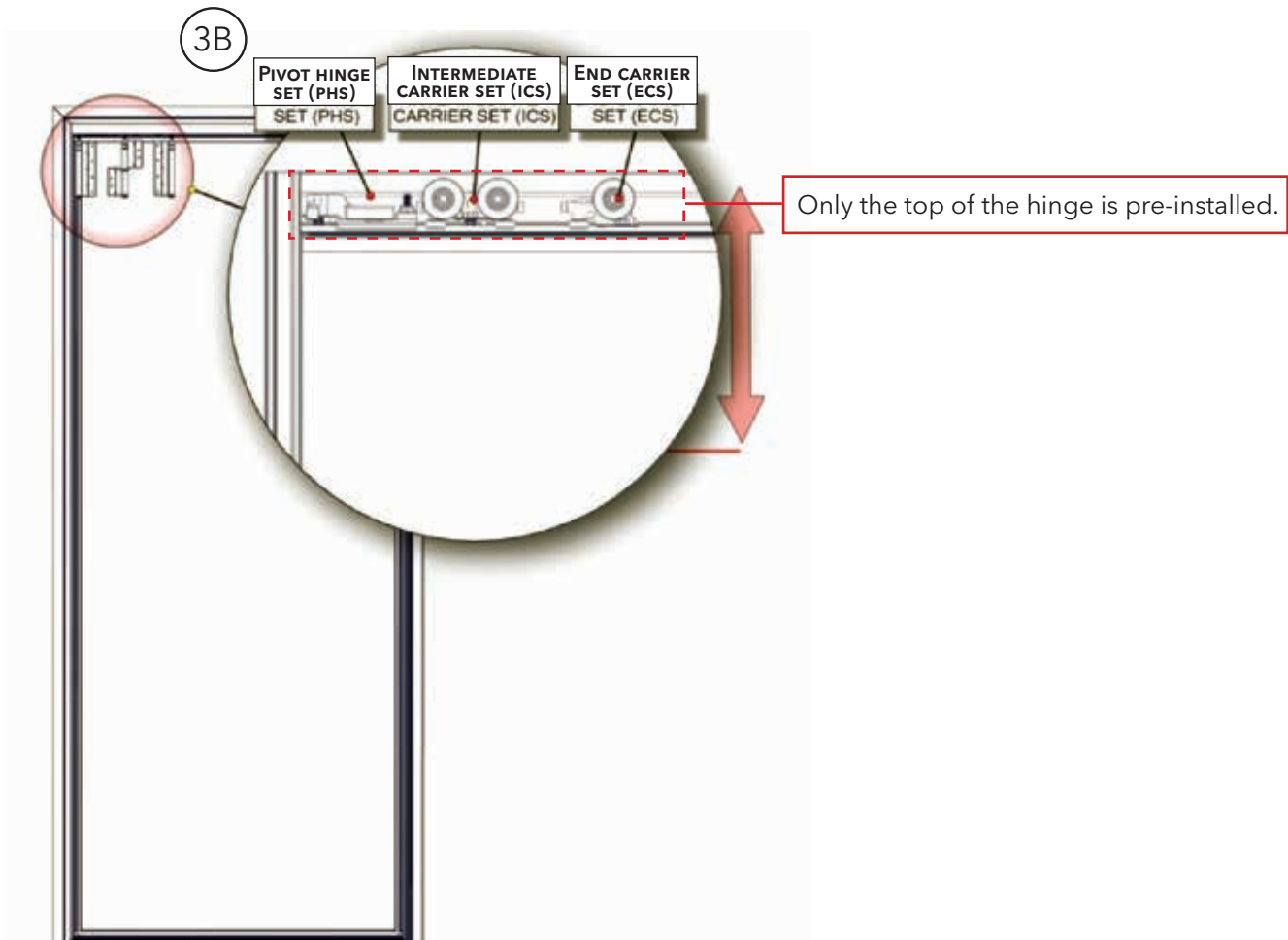
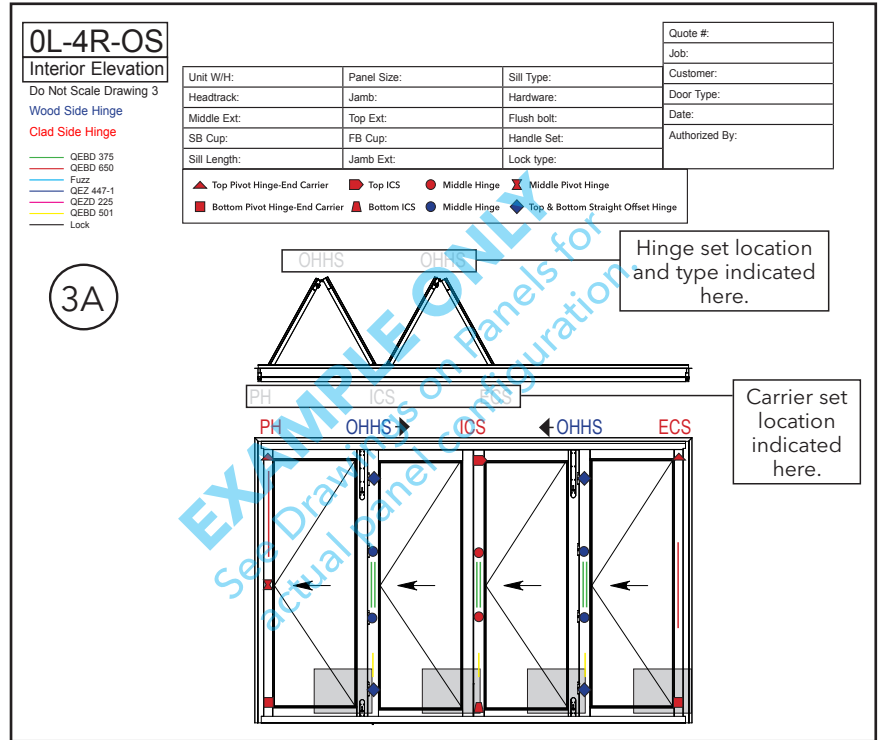


# 3 HEAD TRACK HARDWARE ASSEMBLY:

A. Before beginning any hardware installation, lay out the labeled hardware boxes in their correct positions according to the Hardware Placement Guide located on each panel, or in the beginning of these installation instructions. Understand the Plan.

See drawing on the door panels to identify correct panel configuration.

B. Identify the boxes for Pivot Hinge Sets, Intermediate Carrier Sets, and End Carrier Sets as applicable to the configuration. Locate the "top" hinge leaf and pin from each box matching the pre-installed "top" pivot base and rollers installed in head track, paying attention to correct handing of the hinge.

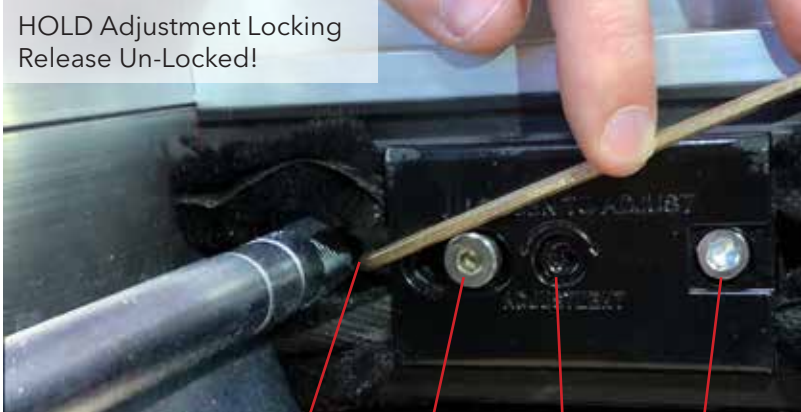


# 3 HEAD TRACK HARDWARE ASSEMBLY (CONTINUED):

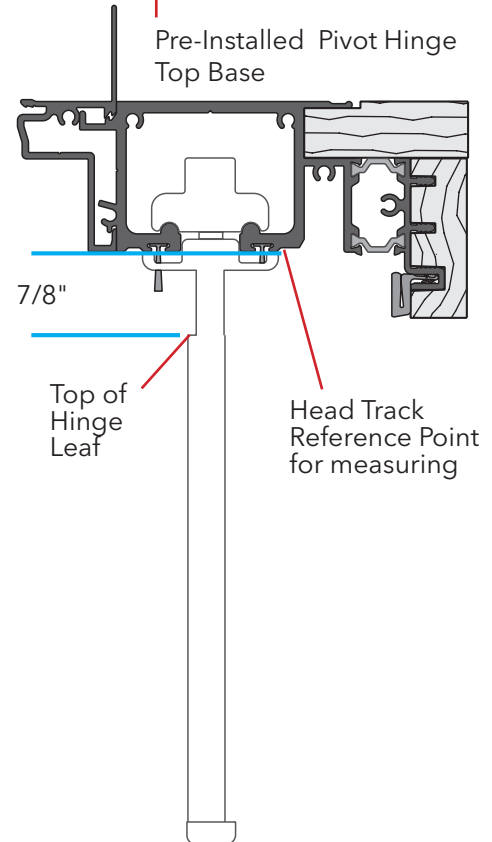
C. Using a 1/8" Allen wrench; rotate and HOLD the Adjustment Locking Release with an Allen wrench to the unlocked position on the Top Pivot Hinge Base and head track (Not the pre-installed pivot hinge base). Insert the Hinge Pin into the base and thread to approximately 7/8" gap between the top of the hinge leaf and the head track EQUALLY on all hardware installed into the head.

**NOTE:** The Adjustment Locking Release must be held in unlocked position to prevent the hinge threads from stripping the locking release nut.

**TIP:** To minimize adjustments required later (after panels are installed), measure the length of EACH pin to ensure each pin is threaded as EQUALLY as possible. Adjust if necessary prior to setting the frame.



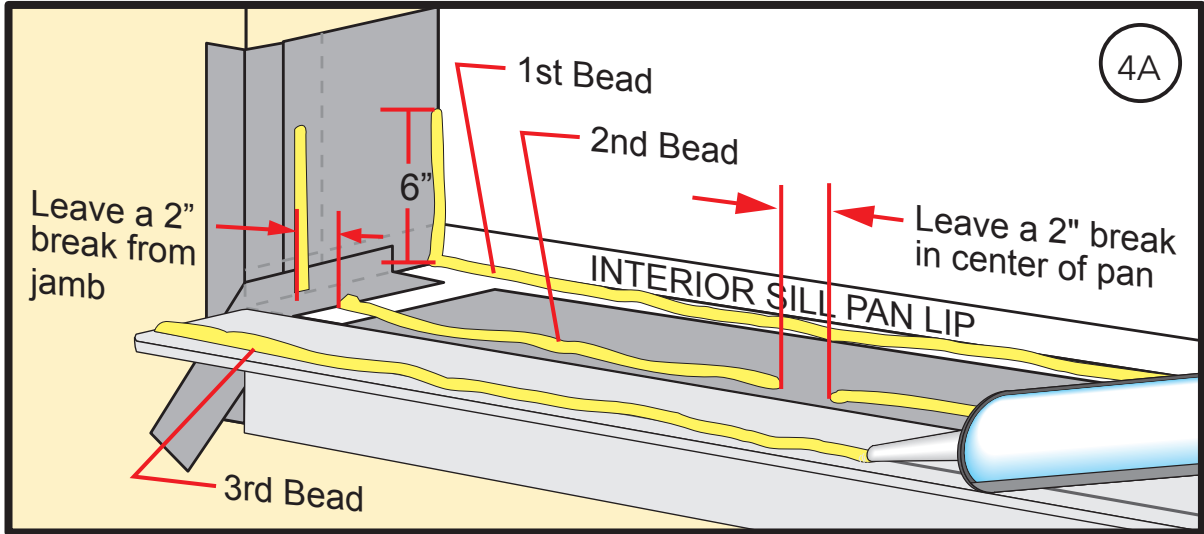
Allen Wrench Sizes: 1/8" 5/32" 3/16" 3/16"



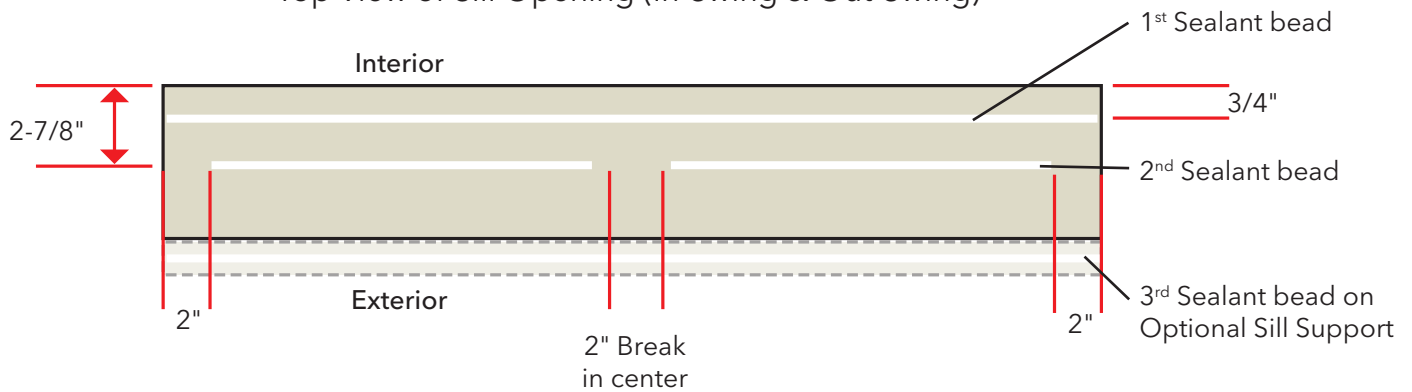
# 4 SETTING AND FASTENING THE FRAME:

## A. Confirm Sill Opening is level. Place three 3/8" beads of sealant across the sill opening.

Place the interior-most bead 3/4" from where the plane of the interior part of the jamb will remain after installation. Continue this bead 6" up each jamb. Place a second bead 2-7/8" from the interior, leaving a 2" gap on each end and at the center of the bead. Continue this bead 6" up each jamb. If using a sill support, place a 3rd bead in the groove of the sill support or 1/4" from the exterior edge of the wood blocking support.



Top View of Sill Opening (In-Swing & Out-Swing)

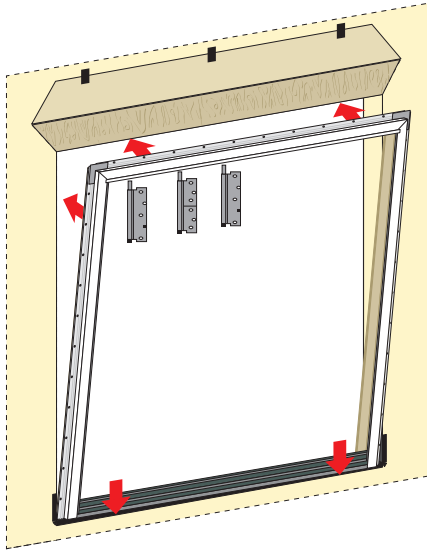


## B. Tack or tape a 3/8" shim on the upper corner of one side of the opening to assist in placement of the frame.



# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

C. Place the sill of the assembled frame centered on the rough opening. Tilt the frame up into the opening being careful not to smear the sealant lines applied in step 4A.



D. Plumb, level and square the frame and insert two provided 3" screws, one in each jamb near the head corner, to temporarily hold frame in place.

Pull the weatherstrip leaf back when driving screws to prevent weatherstrip damage.

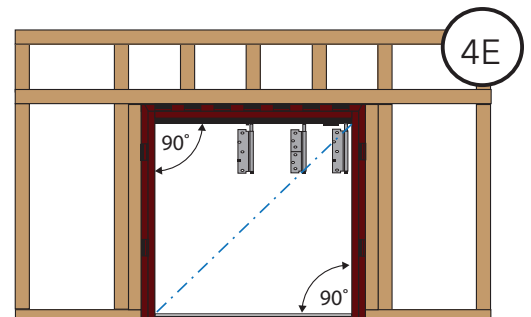
Do not drive all the way in.



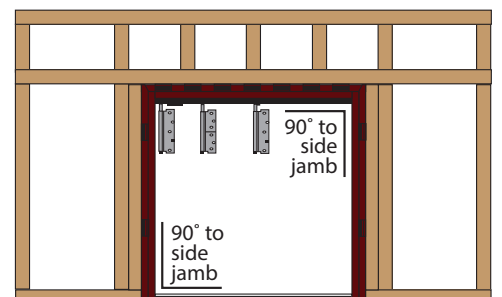
**Note: It is critical the door frame is straight and plumb to function correctly.**

E. Verify sill is level, and door frame is plumb, level and square with the reveal between the frame and rough opening is equal on each side prior to installing rest of fasteners. Make necessary adjustments prior to continuing.

Interior view of a squared frame, with shimming around the perimeter; Confirm frame is plumb and square. Diagonal measurements should not vary more than 1/8".



Exterior view of a squared frame; The nailing fin should sit flush on the outside perimeter with no gaps between the frame.



# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

## Secure Sill:

- F. Inject sealant into pre-drilled attachment holes in sill track with color-matched or clear sealant.

4F

**NOTE: DO NOT yet apply sealant to the two small holes at the end's of sill where Jamb Pivot Hinge will attach. Sealant will be applied in these two holes later.**



- G. Fasten the sill track using the provided screws in the pre-drilled sill track holes.

4G

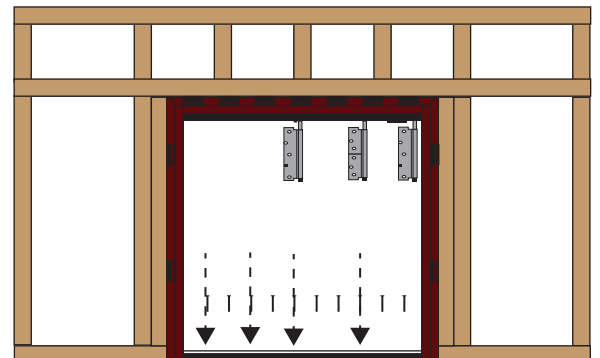
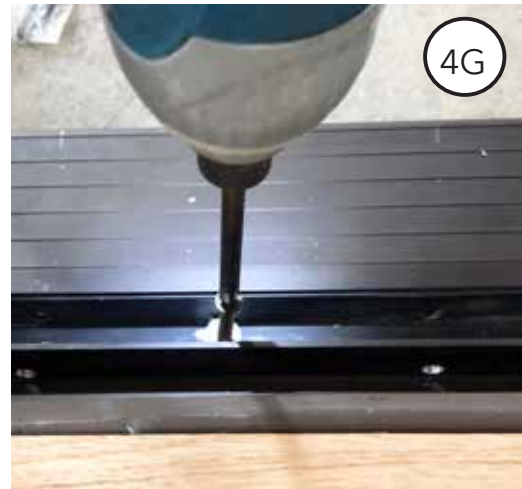
Use the 2" screws to anchor into wood subfloor.



Use #10 x 1-3/4" tapered concrete screws to anchor into concrete.



Clean off any excess sealant squeeze-out from top of each installed sill installation screw head.



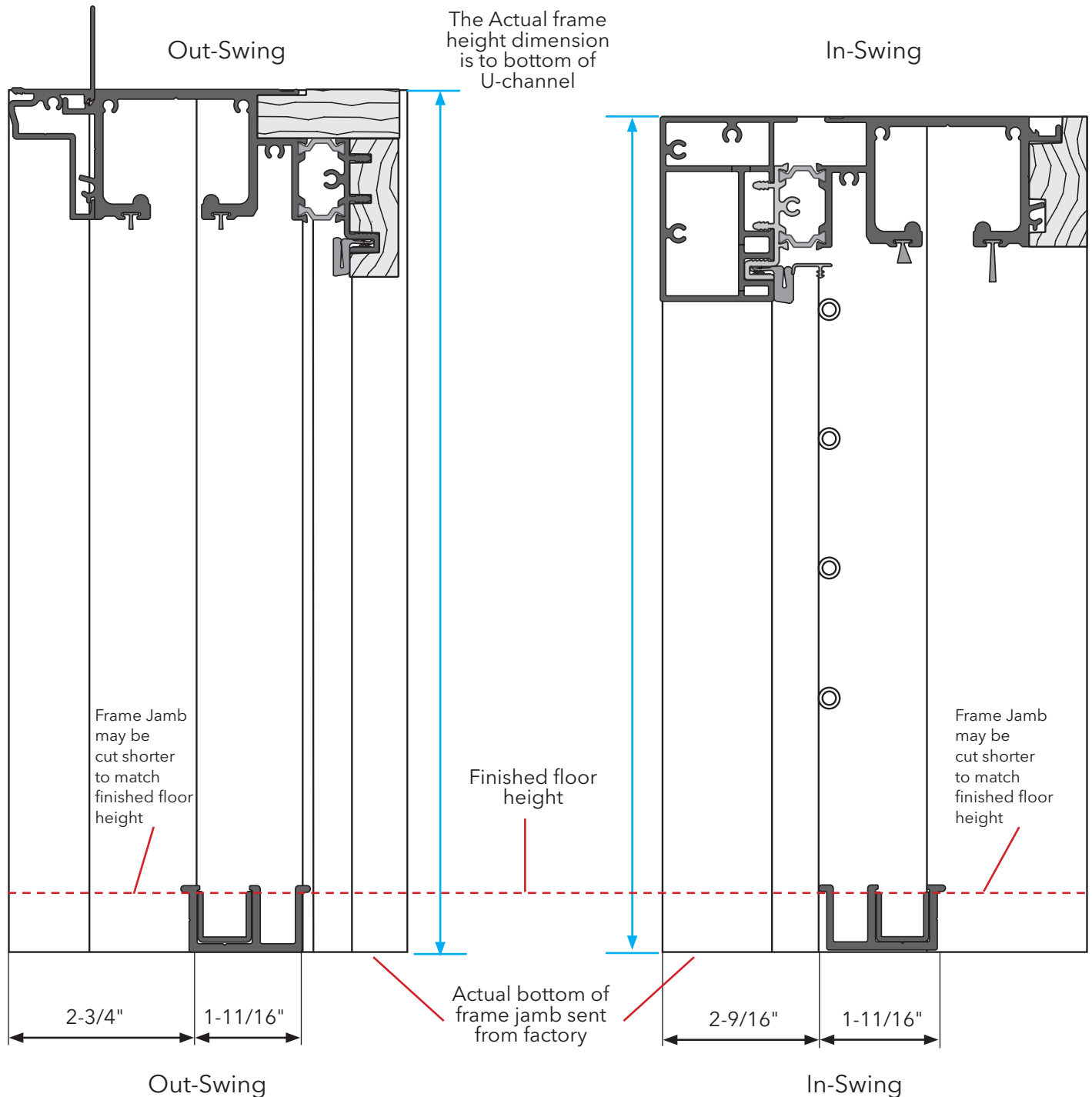
**Note: It is critical the door frame is straight and plumb to function correctly.**

# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

## Flush Sill:

For a flush sill system, the bottom of the frame side jambs are intended to install on the same plane as the bottom of the flush sill. Finished flooring is then installed even with the top of the flush sill and around the jambs. If installing the frame side jambs on top of the finished flooring, field-cut the jambs from the bottom approximately 1" to accommodate the off-set, and place a groove 1" deep into the finished flooring.

To properly set the track, measure 2-3/4" from the exterior head for an out-swing door and 2-9/16" for an in-swing door. Use a plumb bob from exterior edge of head to mark exterior edge on the floor, and then measure from that location to determine correct flush floor track location. The head track and flush sill do not directly align vertically.



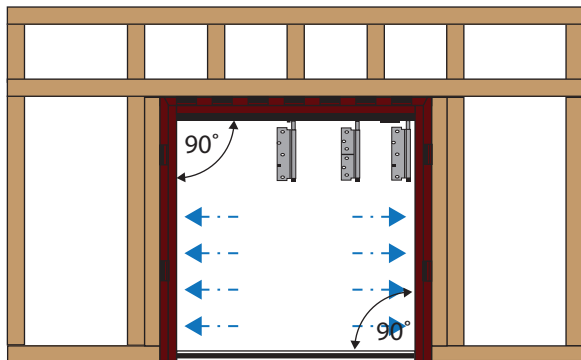
# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

**Note:** It is critical the door frame be straight and plumb to function correctly.

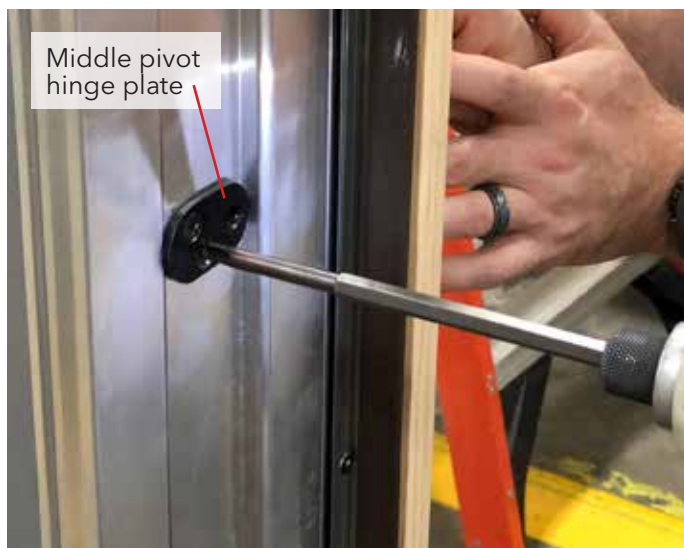
## Secure Jamb:

H. On one jamb, set the reveal to ~ 3/8" between the frame and rough opening using the level, inserting shims at each pre-drilled screw location. Fasten the jamb by inserting provided #8 x 3" screws into the pre-drilled screw holes under the fold of jamb weatherstrip. For best results, pull the weatherstrip back to prevent damaging the weatherstrip. Use level to verify jamb for plumb after installing each screw.

**Option:** Pull the frame weatherstrip completely out to provide screw clearance. If pulling the weatherstrip out, make sure it is completely re-installed into the frame weatherstrip kerf and the weatherstrip contacts both the head and sill weatherstrip.



I. If Middle Pivot Hinge plate is present on the jamb, remove the innermost screw (pre-installed screw towards the interior), drill an 1/8" pilot hole, and replace with a #8 x 3" installation screw, with shims underneath.



Repeat 4H-4I for second jamb.

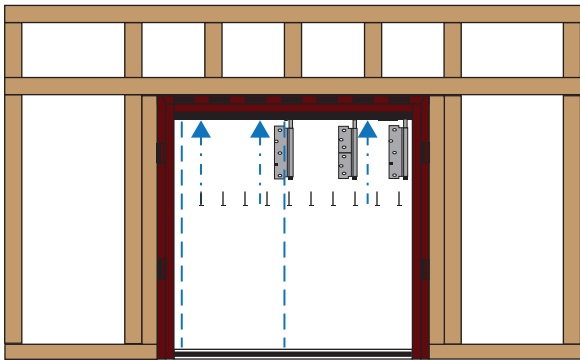
# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

- J. **At one jamb, measure the frame opening height.** Hook one end of the tape measure to the top of the frame and measure down to the top of the threshold. Use this measurement to set the height of the middle of the head track using shims. Fasten the middle of the head track using a provided #8 x 3" screw into the pre-drilled holes.



**Tip:** Use a flashlight to help locate screw holes.

Once middle is secure, begin moving toward each end, shimming and fastening at each pre-drilled screw location using the same interior frame height opening measurement. Check with a level on 3 to 4 sections along the head to confirm it is level prior to fastening. When complete, height measurement should be identical at all points along the width of the opening.



- K. **Toe bead at the sill corners with clear or color-matched sealant** where the sill meets the jamb from interior to exterior. Make sure sealant is placed in the bottom and along the side of each track channel in the sill.

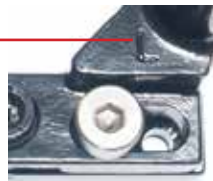




# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

- L. Locate the Pivot Hinge Hardware box, paying attention to the handing required for each jamb. Identify the bottom Pivot Hinge.

Reference top of hinge base to identify handing.



Using a 5/32" Allen wrench, remove the two silver locking screws to disassemble the bottom plate of hinge.

Left-handed dis-assembled Bottom Plate has "L" facing up.



Right-handed dis-assembled Bottom Plate has "R" facing up.

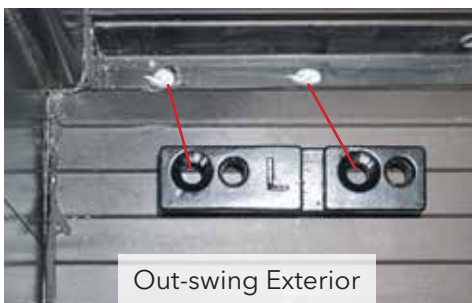


- M. Inject sealant into the two pivot hinge pre-drilled holes in sill track.

- N. Insert the pivot hinge bottom plate into the sill track with the L or R facing up, aligning the bottom plate non-threaded counter-sunk holes with the sealant-filled pre-drilled holes in sill track.

Place **L** in an Out-swing Left Jamb or In-swing Right-Jamb, as viewed from the Exterior.

Place **R** in an Out-swing Right Jamb or In-swing Left Jamb, as viewed from the Exterior.



4N

Align counter-sunk holes in bottom plate with the sealant filled holes in the sill



# 4 SETTING AND FASTENING THE FRAME (CONTINUED):

O. Attach bottom plate to sill track with two 1-1/4" screws.

NOTE: INSTALL THE SCREW CLOSEST TO THE FRAME FIRST.



P. Place cam adjuster into groove on bottom plate. Position upper leaf assembly on top of bottom plate so leaf extends over U-channels in the track. Install silver locking screws. Adjust the plate so set screws are centered across the adjustment holes.



**NOTE: Panels will be aligned over the U-channels in the track. If hinge leaf extends exterior or interior of the U-channels, verify handing is correct for each end of the jamb as specified by the configuration.**



**NOTE: For inswing configurations, the Left-handed Pivot Hinge is used on the Right Jamb as viewed from the exterior, and the Right-handed Pivot Hinge is used on the Left Jamb as viewed from the exterior.**

# 5 DOOR PANEL INSTALLATION:

**NOTE: Each panel will have a door configuration drawing attached. The drawing indicates the panel installation order and a hinge location identification.**

## 3L-1R-OS

### Interior Elevation

Do Not Scale Drawing 3

Wood Side Hinge

Clad Side Hinge

- QESD 375
- QESD 650
- FUZZ
- QEZ 447-1
- QEZD 225
- QESD 501
- Lock

Unit WH:	Panel Size: 34 15/16 x 91 3/4	Sill Type: STD	Quote #:
Headtrack:	Jamb: 4 9/16 x 95 1/2	Hardware: SHIP NONE	Job:
Middle Ext:	Top Ext:	Flush bolt: NA	Customer:
SB Cup:	FB Cup:	Handle Set: NA	Door Type: Contemporary
Sill Length:	Jamb Ext: NA	Lock type: NA	Date: 8/17/18
			Authorized By:

▲ Top Pivot Hinge-End Carrier

■ Bottom Pivot Hinge-End Carrier

● Top ICS

● Middle Hinge

● Middle Hinge

● Middle Hinge

● Bottom ICS

◆ Top & Bottom Straight/Offset Hinge

# 5 DOOR PANEL INSTALLATION (CONTINUED):

**NOTE: Must have Two or more people to handle and install door panels!**

**NOTE: All screws are packaged and in the appropriate hardware boxes. Panels come pre-drilled. No piloting or new holes should be drilled in door panels. Check for correct hardware placement if holes are not aligning. Do not drill additional holes.**

A. Start with panel that hinges from the jamb. Support the panel in the open position with a wood support blocks or shims until the pre-drilled holes align with the top Pivot Hinge already installed in the Head Track. Fasten the top Pivot Hinge, then fasten bottom Pivot Hinge Set using #8 x 2" screws provided in hardware box. Be careful not to pinch stile weather strip behind the hinge.

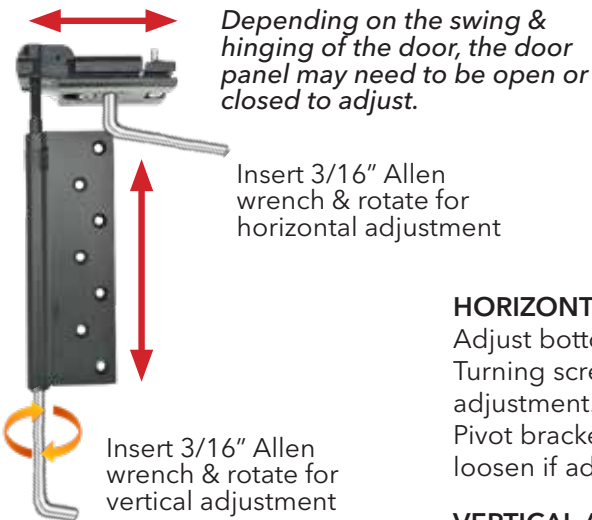
The middle pivot hinge is installed later in the proceed, Steps 5P-5S.

2" Hinge Screws



B. Swing the door panel #1 closed and check alignment. Visually check for even panel to frame reveal and the panel hinge to the frame reveal. The gap between the jamb and panel should be 1/4" (up to 3/8"). Adjust bottom first horizontally as needed. The gap between the top of the panel and the head should be about 1/4". Adjust vertically as needed. Always support weight of panels when adjusting vertically to prevent damage to the adjustment screws.

**NOTE: Adjust as needed so the panel is square and plumb within the opening when closed. Do NOT proceed with additional panels until this panel operates. (After each panel is installed, adjust for plumb and square before continuing.)**



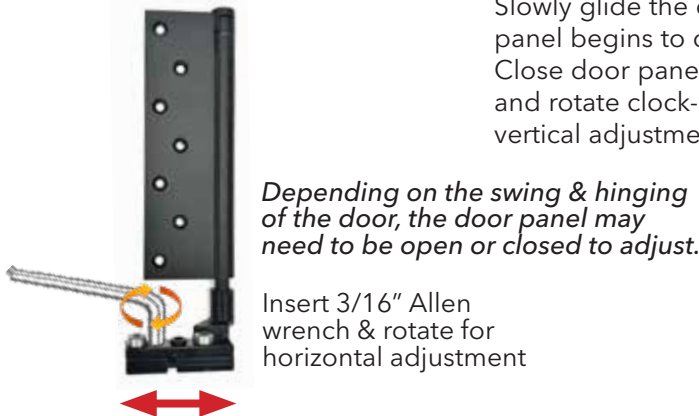
**NOTE: Top adjustments are the same for the Intermediate Carrier and End Carrier. If your door system has multiple panels, then each carrier will need to be adjusted to the jamb pivot set.**

### HORIZONTAL ADJUSTMENTS:

Adjust bottom first. Open door(s) to gain access to socket adjustment screw. Turning screw will adjust system to the right or left. Maximum 3/8" horizontal adjustment. After bottom is adjusted, close door(s) to loosen and adjust the Top Pivot bracket to match the bottom. Tighten after adjustments are complete. Do not loosen if adjusting Up or Down.

### VERTICAL ADJUSTMENTS:

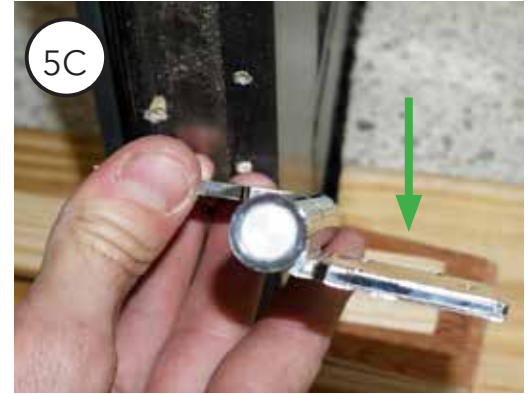
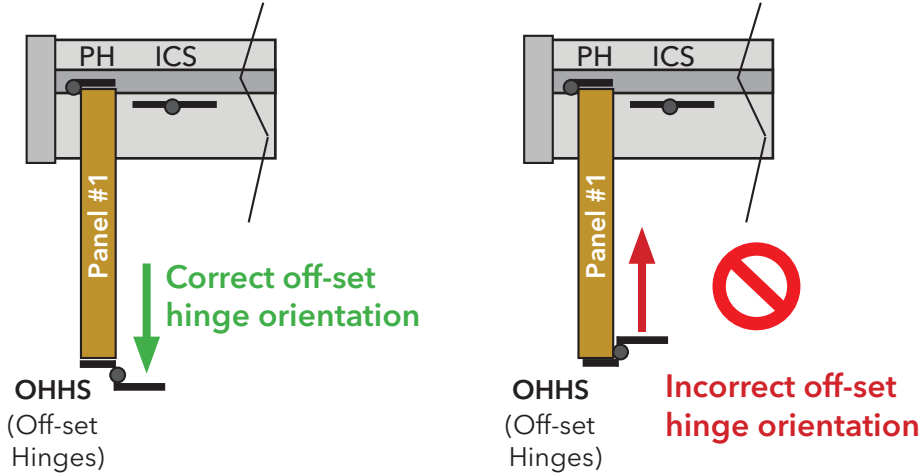
Slowly glide the door to a fully closed position. Do not force the door system. If a panel begins to drag or scrape the bottom sill, vertical adjustment may be needed. Close door panel prior to vertical adjustment. Insert Allen wrench into end of hinge and rotate clock-wise to raise, and counter-clockwise to lower. Maximum 1/4" vertical adjustment.



# 5 DOOR PANEL INSTALLATION (CONTINUED):

## C. Identify the off-set hinges to be installed between Panels #1 and #2.

To attach the hinges to Panel #1 in the correct orientation, open Panel #1. Place the off-set hinge so that the leaf that folds under the barrel is flat against Panel #1 and the leaf that folds over the barrel will extend outward to attach to panel #2. The counter-sunk holes in the hinge will align with the pilot holes in the panel.



Top View showing correct off-set hinge orientation from Left Jamb

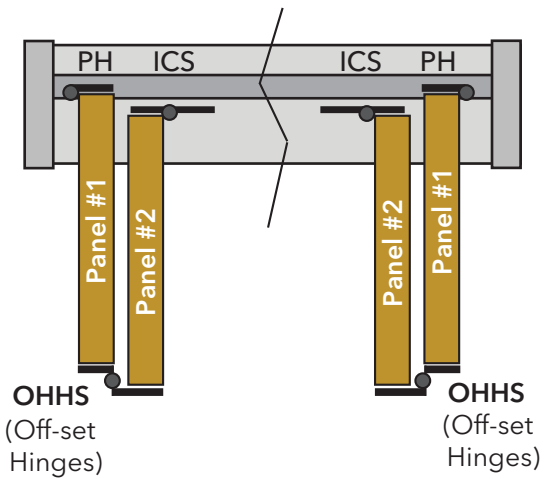
**TIP: SEE IMAGES. PANEL #2 WILL EXTEND FURTHER OUT THAN PANEL #1.**

Attach off-set hinge properly oriented on Panel #1 so when Panel #2 is brought into position to be installed, the extended leaf will properly engage Panel #2. The barrel should end up "in the fold". If not properly oriented, the panel will not fold flat. Do not force. Evaluate hinge orientation.

Correct from LEFT jamb



NOT correct from LEFT jamb



Attaching Middle hinge with Handle Pull

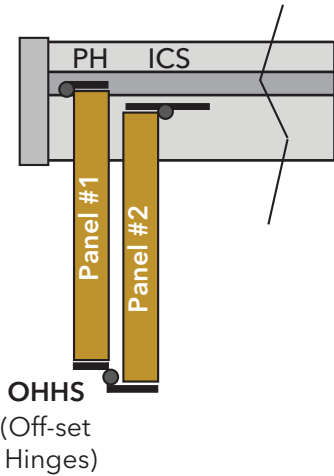
**NOTE: The hinge with the pull handle is installed in the middle. When installing the hinge with a pull handle, assure the pull handle is properly oriented in relation to the hinge leaves.**

# 5 DOOR PANEL INSTALLATION (CONTINUED):

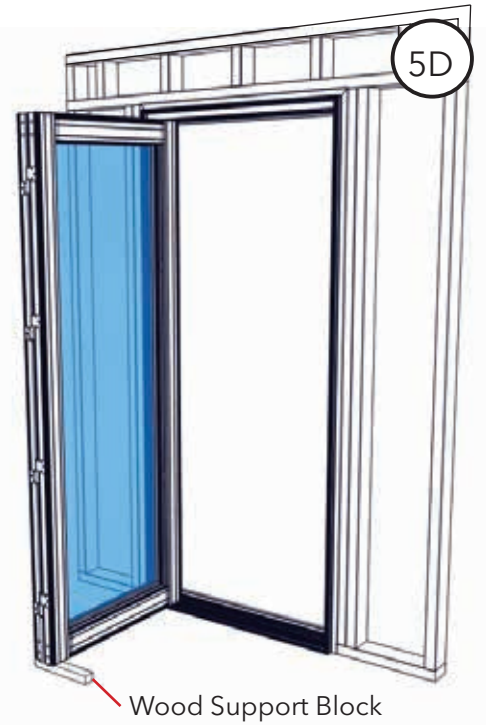
- D. Identify and support door panel #2 in place and level with panel #1. Use a wood block to assist supporting panel.

Attach panel #2 to the offset hinges installed in step 5C.

Use the Hardware Placement Guide to identify the next required Carrier Set. Install the top & bottom Carrier Set hinges on the panel while a helper continues to support panel #2, lining up with the pre-drilled screw holes.

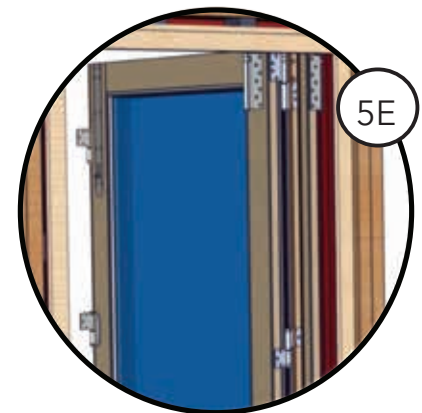


Attaching bottom carrier hinge on second panel

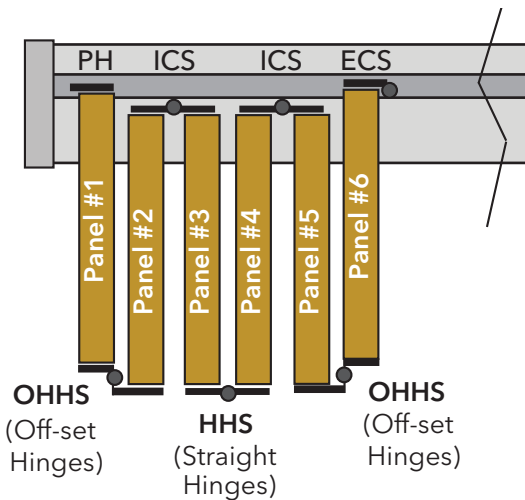


- E. Repeat 5C-5D on subsequent panel(s) making sure the door panel orientation of each subsequent panel is correct. Wood interior of door panel #2 should face wood interior of door panel #1. Clad exterior of Door panel #3 to face clad exterior of door panel #2, etc. Complete any necessary vertical adjustments to each top carrier set PRIOR to installing next panel. Attach panel(s) to the hinges while a helper supports each panel, lining up with the pre-drilled hinge screw holes.

For subsequent panels, check Hardware Placement Guide if Straight hinges or Off-Set hinges are required, per the configuration.



**NOTE: Each door panel must be supported at all times by helper. These doors should never be installed alone.**



**NOTE: Do not interchange offset and straight hinges. They must be installed in the correct location or the hinges will torque. If door panels do not fold flat or operate with difficulty, double check placement of straight and off-set hinges. Verify if hinge is upside-down and make corrections. Do not torque hinges by forcing open or closed.**

# 5 DOOR PANEL INSTALLATION (CONTINUED):

## Astragal Installation:

- F. If bifold configuration has a door astragal, locate the astragal and astragal screws. Place two (2) 3/8" sealant beads, one along the entire length of the astragal on the exterior most surface that will mate with the panel and one 6" up from the bottom of the astragal on the interior most surface.



- G. Check the edge of the panel where the astragal will be attached and note the number of pre-drilled astragal attachment holes on the panel edge. Typically will be three; one at top, middle and bottom.

**Note: the astragal will have more pre-drilled holes than the panel. Pilot holes in the panel will need to be drilled in the remaining astragal holes in step 1I.**

- H. Position the astragal on the edge of the panel and attach with the provided #8 X 2" screws in the pre-drilled screw hole locations identified

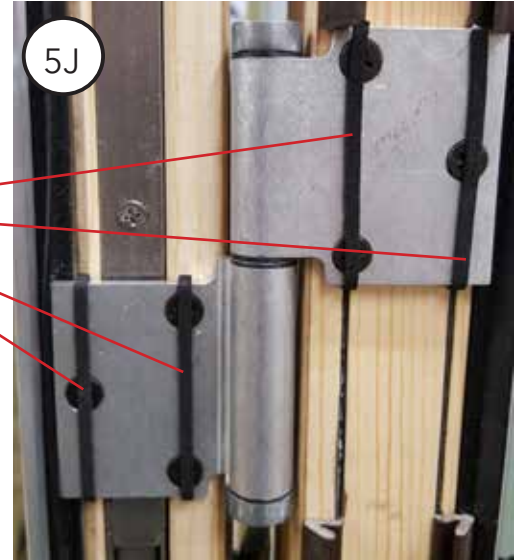


- I. Pilot drill a 1/8" hole into the edge of the panel through the remaining astragal screw locations. Install the remaining astragal attachment screws.

# 5 DOOR PANEL INSTALLATION (CONTINUED):

J. **Locate all hinges connecting 2 panels** where the hinge barrel is exposed to the interior. Apply the adhesive-backed neoprene strips centered on the screws as shown. The strips are used to continue the air seal at the hinges.

Neoprene Strips



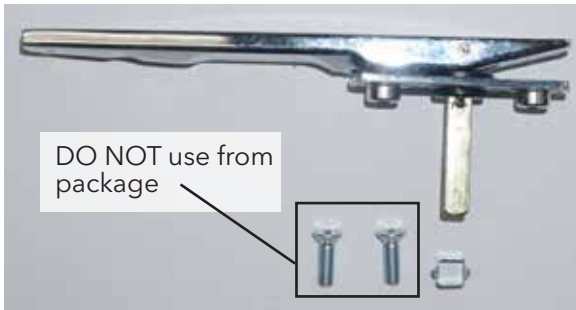
## Dualpoint Lock Handle Installation:

K. **If bifold configuration has a passage door (active door)**, install active hardware handle set on passage door per separate hardware installation instructions provided with the hardware. If a secondary swinging door adjacent to the passage door is present, it will also utilize a standard door handle set, creating an active/passive configuration.

L. **To install Dualpoint lock handles on passive panels**, Remove the 2 attachment screws from the temporary escutcheon plate and remove the plate from the panel. Set aside these screws to reuse in Dualpoint lock handle attachment.



M. **Locate the square spacer within the Dualpoint Lock handle package.** Using a needle-nose pliers, insert the square spacer into the tail-shaft cavity in the panel to decrease the size in which the tail shaft will fit.





# 5 DOOR PANEL INSTALLATION (CONTINUED):

N. With the handle positioned vertically, insert the tail-shaft into the door panel and attach using the reserved screws from the removed escutcheon plate. Repeat for all remaining passive panels with lock assemblies.



**NOTE:** If a Bi-fold door is installed in a window application, the handle will be installed closer to the sill for window operation. In window applications the handle is to be installed horizontally, with the handle parallel to the sill. The escutcheon plate will be visible when the unit is in the locked position.

O. Lock all panels and evaluate operation for additional adjustments. Once entire door operates; The Middle Jamb Pivot Hinge(s), may be installed per the configuration.

## Middle Hinge Installation:

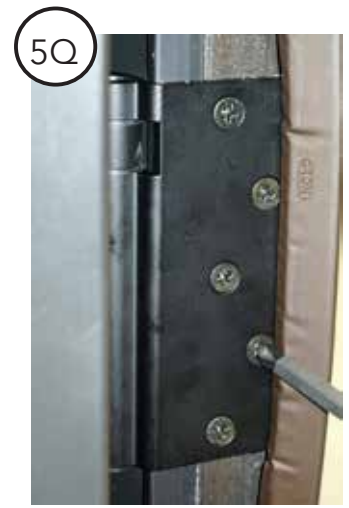
P. Disassemble middle pivot hinge; use 3/16" Allen wrench to loosen the hinge pin from the pivot bolt and remove pin from the hinge.



# 5 DOOR PANEL INSTALLATION (CONTINUED):

Q. Attach middle hinge leaf to the panel edge using the 2" hinge screws.

2" Hinge Screws



R. Insert the pivot bolt into the hinge plate on the frame and use a flat blade screwdriver to tighten it until it aligns with the hinge barrel.



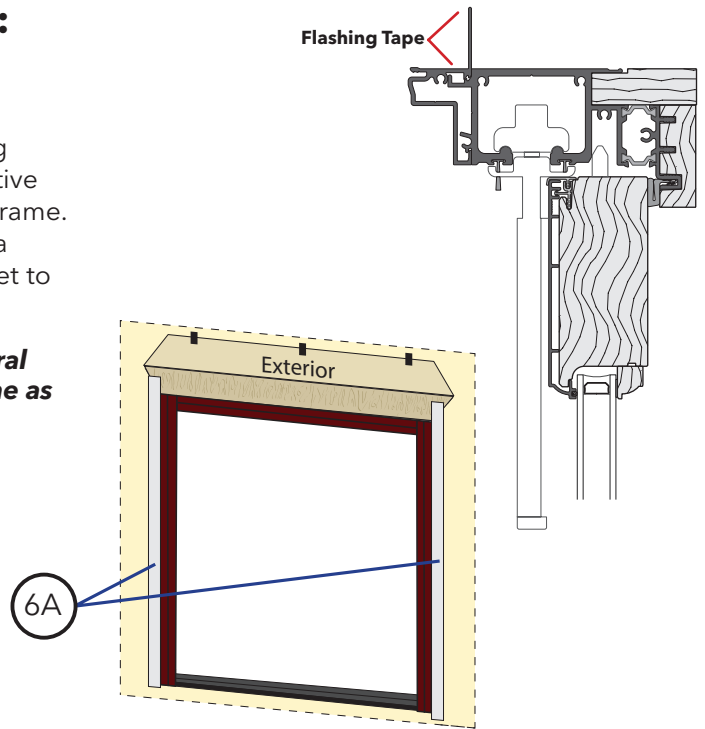
S. Insert the hinge pin and use a 3/16" Allen Wrench to tighten the pin into the pivot bolt.



# 6 INTEGRATING THE BUILDING WRAP:

- A. **Apply straight side flashing tape.** Cut two pieces of flashing tape 4" taller than straight sides. For out-swing frames, apply tape over the fin and onto weather resistive barrier. For in-swing frames, apply tape 1/2" onto the frame. Extend tape 2" above and below straight sides. Place a small amount of sealant where the jamb and head meet to create a water-resistant barrier around the entire unit.

**NOTE: The fin on the out-swing bi-fold door is an integral part of the frame. Place tape into the corner of the frame as shown in the diagram to the right.**



- B. **Apply top flashing tape.** Cut one piece of flashing tape to extend 1" past both side flashing tapes.

- C. **Fold down top flap of water resistive barrier.**

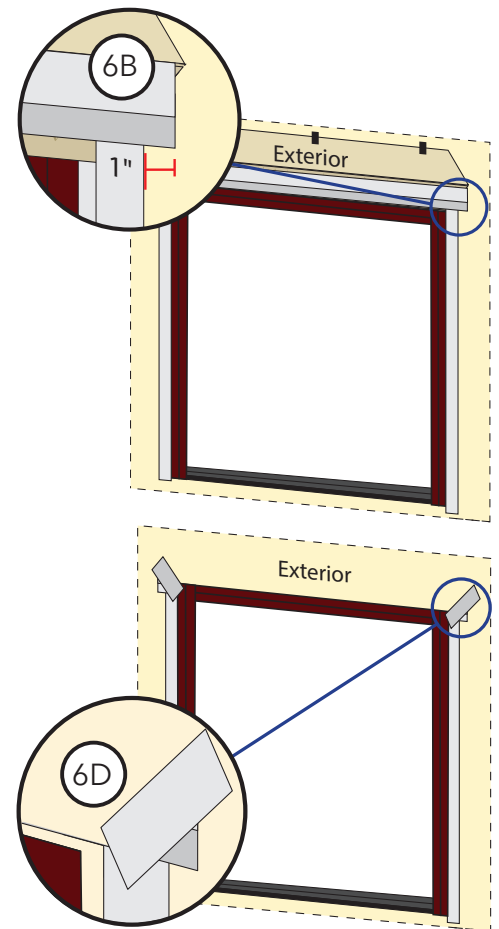
- D. **Apply flashing tape to diagonal cuts.** Cut pieces of flashing tape at least 1" longer than the diagonal cuts in the water resistive barrier. Apply the tape covering the entire diagonal cut in the water resistive barrier at both upper corners of the door.

**NOTE: PRESS ALL FLASHING TAPE DOWN FIRMLY.**

- E. **Install interior sealant.** Refer to the interior sealant instructions at the end of this booklet.

- F. **Install head flashing,** properly incorporating it with the siding and building wrap according to applicable code requirements.

- G. **Install exterior sealant.** (After wall cladding is installed.)



# 7 INTERIOR SEAL:

**CAUTION:** Ensure use of low pressure polyurethane window and door insulating foams and strictly follow the foam manufacturer's recommendations for application. Use of high pressure foams or improper application of the foam may cause the door frame to bow and hinder operation.

A. **Apply insulating foam sealant.** From the interior, insert the nozzle of the applicator into the space between the door and the rough opening approximately 1" past the edge of the frame (and past the jamb extensions) and apply a 1" deep bead of foam. This will allow room for expansion of the foam and will minimize squeeze out.

Apply sealant across interior surface of shims to create a continuous seal. For doors with jamb extensions installed, ensure the foam is placed between the door frame and the rough opening, not between the jamb extension and the rough opening. Follow foam manufacturer's instructions.

**NOTE:** It may be necessary to squeeze the end of the tube with pliers to be able to insert into the space between the door frame and the rough opening. DO NOT completely fill the space from the back of the fin to the interior face of the opening.

B. Check the door operation by opening and closing the door.

**NOTE:** If the door does not operate correctly, check to make sure it is still plumb, level, square and that the sides are not bowed. If adjustments are required, remove the foam with a serrated knife. Adjust the shims, and reapply the insulating foam sealant.

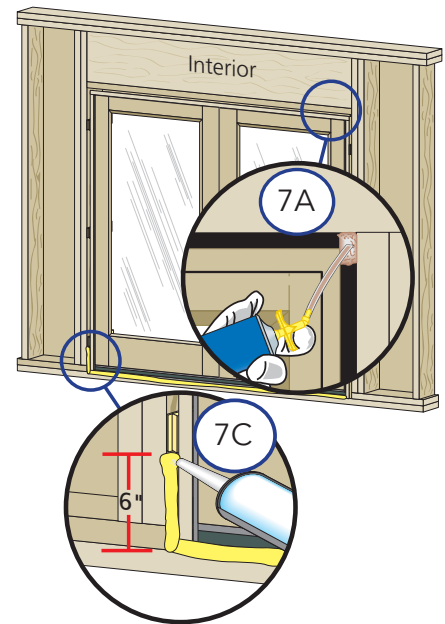
C. To ensure a continuous interior seal, apply sealant over the interior surface of any shims or clips interrupting the foam seal.

Backer rod (as necessary) and sealant can be used in place of the low expansion foam to create the interior seal. However, foam has greater insulating properties. Fiberglass batt or similar insulation is not recommended as it can absorb water and does not act as an air seal.

D. Place a continuous bead of sealant across the inner sill at the intersection of the door sill and subfloor. Continue the sealant 6" up each jamb.

**NOTE:** Use a low odor, paintable sealant such as Pella Window and Door Installation Sealant.

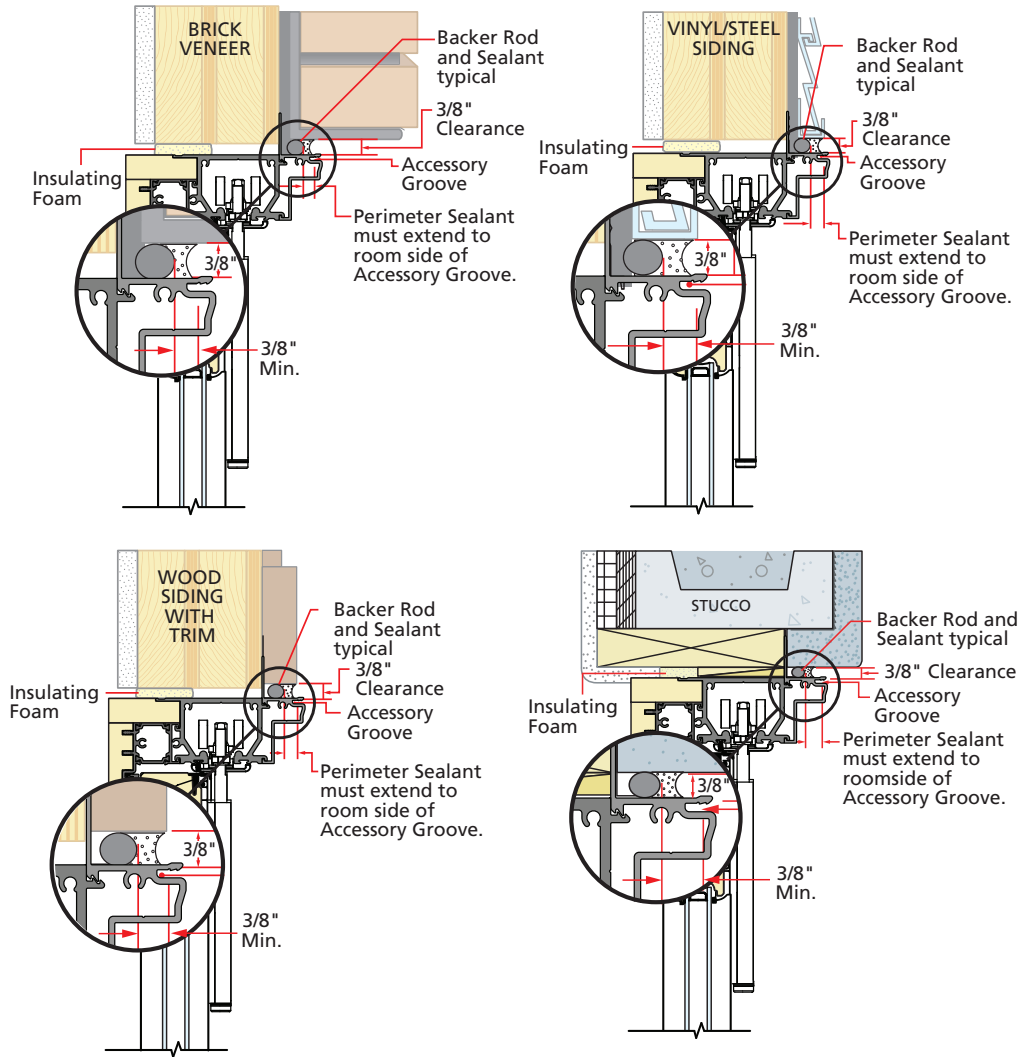
**RE-CHECK DOOR OPERATION AFTER FOAM INSTALLATION. EXCESS FOAM MAY BE REMOVED WITH A SERRATED KNIFE AFTER IT CURES.**



# 8 SEALING THE DOOR TO THE EXTERIOR WALL CLADDING:

When applying siding, brick veneer or other exterior finish material, leave adequate space between the door frame and the material for sealant. Refer to the illustration corresponding to your finish material.

**NOTE:** The sealant details shown are standard recommendations from the sealant industry. Contact your sealant supplier for recommendations and instructions for these and any other applications.



A. Insert backer rod into the space around the door so there is approximately 3/8" to 1/2" clearance between the backer rod and the exterior face of the door.

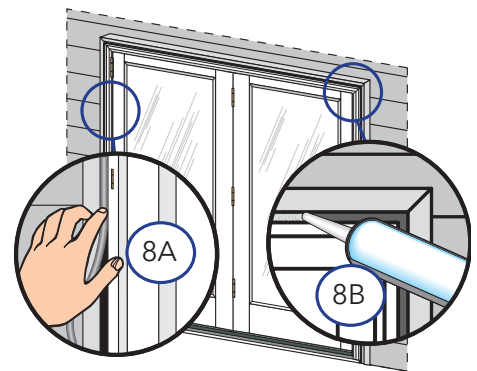
**NOTE:** Backer rod adds shape and depth for the sealant line.

B. Apply a bead of high quality exterior grade sealant to the entire perimeter of the door.

C. Shape, tool and clean excess sealant. When finished, the sealant should be the shape of an hourglass.

D. Remove plastic guards at the base of the door once construction is complete.

E. Install the hardware. Refer to the instructions included in the hardware box.



# 9 CARE AND MAINTENANCE:

Care and maintenance information is available in the Pella Owner's Manual. You can obtain an owner's manual by contacting your local Pella retailer. This information is also available at [www.pella.com](http://www.pella.com).

- A. **Construction** - Rolling heavy objects over the track can cause the track to bend. We recommend a temporary bridge be built over the track when moving heavy objects through the doorway. The track surface finish is critical to a good door system.
- B. **Dry Wall** - Loose dry wall can stain wood or clog track.
- C. **Keep drywall debris rocks, dirt, hair and other debris** which can prevent doors from sliding out of the track.
- D. **DO NOT leave door system open** and exposed in wet weather conditions.
- E. **Twice a year**, open door system and clean the roller tracks with a damp cloth.
- F. **If door system starts to open hard often**; i.e. - hard to pull and/or close panels - check the header for sagging.
- G. **DO NOT apply penetrating oil** or any similar lubricants/oils to the track.

## TROUBLESHOOTING: DOOR PANEL NOT STACKING FLAT

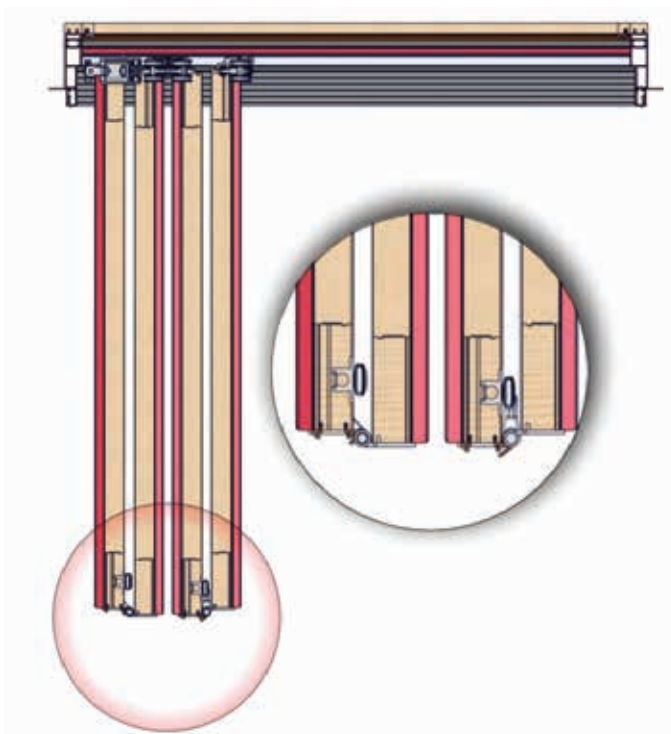
The most common issue is flipping the Offset Hinge orientation (OHS, OHHS).

**How to identify this problem:** The doors do not stack flat.

**To avoid this issue:** Refer to the provided Hardware Placement Guide or refer to the Hardware Placement Guide within these instructions, identifying the configuration of your door type location and orientation set up depending on your specific door system configuration.

**How to correct this problem:** Refer to the Hardware Placement Guide and check if straight hinges are in their correct location. Check if off-set hinges are in their correct location, and in the correct orientation. (Not flipped over, causing the off-set to extend the wrong panel).

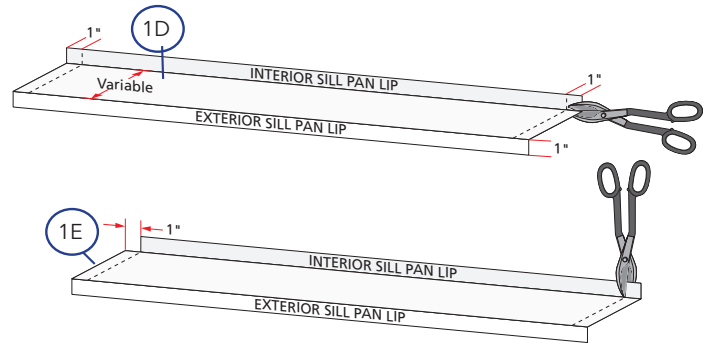
See diagram showing a TOP VIEW of a correctly assembled bi-fold door, and the importance of correct off-set hinge placement.



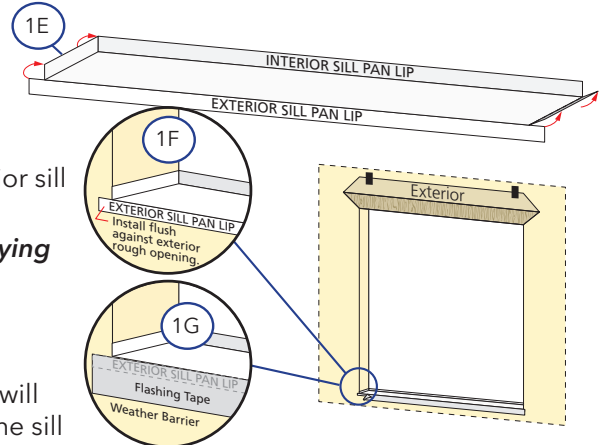
Offset Hinges

# OPTIONAL SILL PAN INSTRUCTIONS

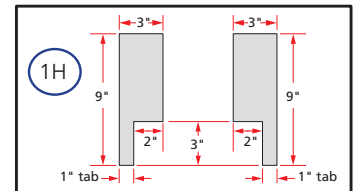
- A. Cut the sill pan to the width of the rough opening plus 2".  
**NOTE: The 2" added onto the rough opening width is for a 1" bend on each end.**
- B. Make a 1" cut in each fold at both end of the sill pan.  
**NOTE: These cuts will allow the edges of the sill pan to be bent.**
- NOTE: 4-5/8" wide for Out-Swing and In-Swing for 4-9/16" wall condition. For other wall conditions, measure wall depth and add 1/16".**



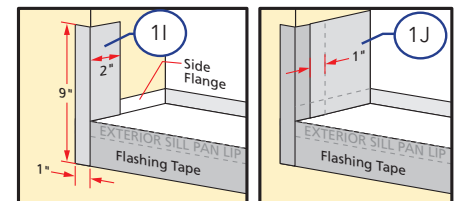
- C. Cut 1" off each end of the interior sill pan lip.
- D. Bend each end of the center panel up.
- E. Install the sill pan by sliding into place until the exterior sill pan lip is flush with the exterior of the rough opening.
- F. Apply sill flashing tape. Cut a piece of flashing tape 2" longer than the opening width. Apply at the bottom of the opening, covering the exterior sill pan lip as shown.  
**NOTE: If applicable, apply spray adhesive to building felt prior to applying the flashing tape.**



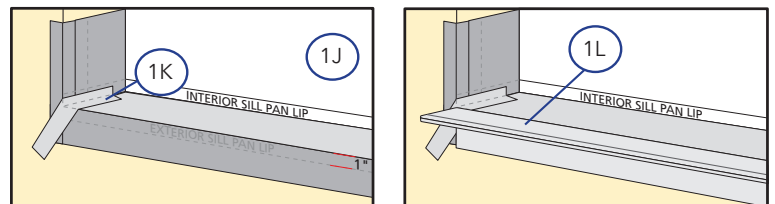
- G. Cut two 9" pieces of flashing tape with a 1" x 3" tab at the bottom, on opposite corners as shown.
- H. Apply the tabbed 9" pieces of flashing tape. The tape is applied so 2" will cover the inside of the rough opening and lap over the side flange of the sill pan. The 1" x 3" tab laps over the bottom flashing tape as shown.
- I. Cut two 6" pieces of flashing tape and apply to each side of the rough opening, overlapping the first piece by 1" and lapping the bottom over the side flange of the sill pan as shown.
- J. Cut a piece of flashing tape to the width of the opening. Install to the flanges of the sill pan and overlap the tape from step 1N by 1". If needed add a second or third piece of flashing tape until the sill pan is covered to the interior sill pan lip.



- NOTE: The purpose of this tape is to seal the sill screws when installing the door.**
- K. Cut two pieces of flashing tape 1-1/2" x 6" and apply to the bottom corners of the opening by beginning in the corner of the sill pan, with 3/4" of the tape applied to the sill pan and 3/4" of the tape applied to the side flange. The remainder of the tape is to be at a 45 degree angle onto the exterior.



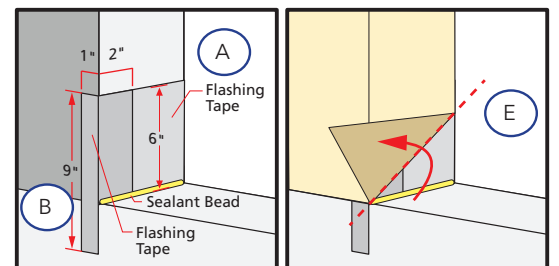
- L. Attach the aluminum sill support or wood blocking to the exterior of the box plate to support the edge of the door sill. Place the sill support flush with the subfloor.



## Concrete Slab (without sill pan) Instructions

**NOTE: Thoroughly clean the slab where sealants will be installed. Instead of installing flashing tape across the bottom of the rough opening, complete the following:**

- A. Install flashing tape at the bottom 6" of the rough opening jambs.
- B. Cut (2) 9" pieces of flashing tape as shown in step 1H above.
- C. Install them overlapping the flashing tape installed in step A by 1".
- D. Place a 3/8" bead of sealant where the bottom edge of the flashing tape meet the concrete slab.
- E. When folding building wrap in at the jambs, cut at a 30 degree angle as illustrated.



**Follow the applicable installation method pages to complete the installation except seal the door sill directly to the slab.**

## INTERIOR FINISHING:

If products cannot be finished immediately, cover with clear plastic to protect from dirt, damage and moisture. Remove any construction residue before finishing. Sand all wood surfaces lightly with 180 grit or finer sandpaper. DO NOT use steel wool. BE CAREFUL NOT TO SCRATCH THE GLASS. Remove sanding dust.

Pella products must be finished per the below instructions; failure to follow these instructions voids the Limited Warranty.

***NOTE: To maintain proper product performance do not paint, finish or remove the weather-stripping, mohair dust pads, gaskets or vinyl parts. Air and water leakage will result if these parts are removed. After finishing, allow venting windows and doors to dry completely before closing them.***

Pella Corporation is not responsible for interior paint and stain finish imperfections for any product that is not factory-applied by Pella Corporation. Use of inappropriate finishes, solvents, brickwash, or cleaning chemicals will cause adverse reactions with window and door materials and voids Limited Warranty.

For additional information on finishing see the Pella Owner's Manual or go to [www.pella.com](http://www.pella.com).

## EXTERIOR FINISHING:

The exterior panel is protected by aluminum cladding with a Pella EnduraClad® or EnduraClad Plus baked-on factory finish that needs no painting. Clean this surface with mild soap and water. Stubborn stains and deposits may be removed with mineral spirits. DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

Use of inappropriate finishes, solvents, brickwash or cleaning chemicals will cause adverse reactions with window and door materials and voids the Limited Warranty.

## IMPORTANT NOTICE:

Because all construction must anticipate some water infiltration, it is important that the wall system be designed and constructed to properly manage moisture. Pella Corporation is not responsible for claims or damages caused by anticipated and unanticipated water infiltration; deficiencies in building design, construction and maintenance; failure to install Pella® products in accordance with Pella installation instructions; or the use of Pella products in wall systems which do not allow for proper management of moisture within the wall systems. The determination of the suitability

of all building components, including the use of Pella products, as well as the design and installation of flashing and sealing systems are the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional and are not the responsibility of Pella.

Pella products should not be used in barrier wall systems which do not allow for proper management of moisture within the wall systems, such as barrier Exterior Insulation and Finish Systems, (EIFS) (also known as synthetic stucco) or other non-water managed systems. Except in the states of California, New Mexico, Arizona, Nevada, Utah, and Colorado, **Pella makes no warranty of any kind and assumes no responsibility for Pella windows and doors installed in barrier wall systems. In the states listed above, the installation of Pella products in barrier wall or similar systems must be in accordance with Pella installation instructions.**

Product modifications that are not approved by Pella Corporation will void the Limited Warranty.