



WEB BASED CORE APPLICATION SPECIFIC INSTALLATION INFORMATION AND METHODS



Method 'A' Method 'B'

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Installing Vinyl Windows in New Construction



Most manufacturers of vinyl windows supply an optional nailing fin that can be easily attached to the perimeter of the window on all four sides. There are also integral nailing fins that are permanently part of the frame of the vinyl window. These integral fins are most commonly available on single-hung and single-slider windows.

Vinyl Windows with nailing fin allow them to be installed in a conventional manner for new construction applications.

Instructions for New Construction

These instructions are meant as a guide only. Code compliance and architectural design may create situations that differ from the illustrations. Some modification may be required, but these instructions will cover the basic elements of most installations.

If there is no existing rough opening, construct an opening like Figure 1, 1/2" larger in height and width than the window to be used. If there is an existing rough opening, order a window 1/2" smaller in height and width. The rough opening should look similar to Figure 1. No window should be installed without a proper header and sill support. All framing should be in compliance with local codes.

Figure 2 shows the completed rough opening. Sheathing can be plywood, or structural insulation board. The important consideration is that the window can be nailed through the sheathing material to solid framing - the header, rough sill, and jack studs.

Method "A" and "B"

There are two basic methods of flashing: Method A where the Weather Resistive Barrier is applied **after** the window is mounted, and Method B where it is applied **before** window mounting. These instructions focus on method "B" with brief reference to the "A" method. Either way the bottom line is divert the environmental water, drain any that makes its way inside, and dry whatever is left. Proper flashing and sill pan is the key.

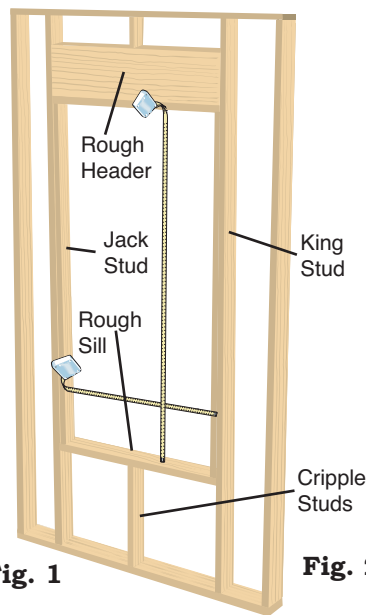


Fig. 1

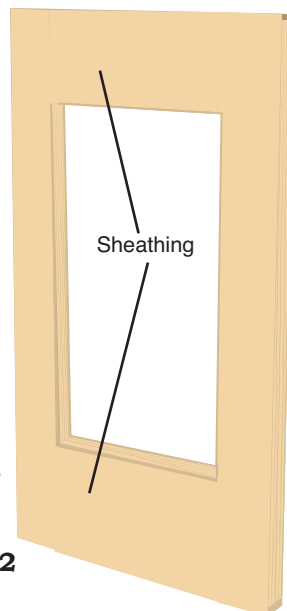
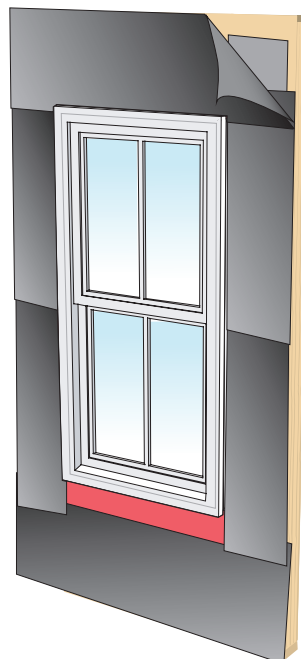
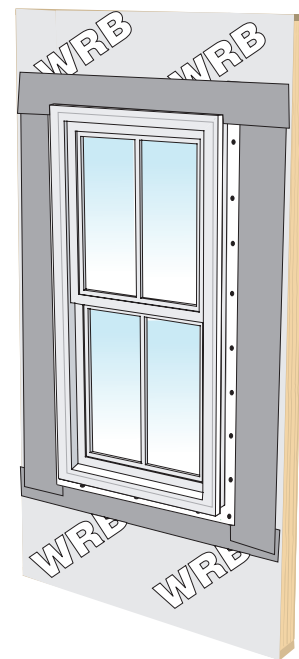


Fig. 2

BASIC WINDOW FRAMING



METHOD "A"



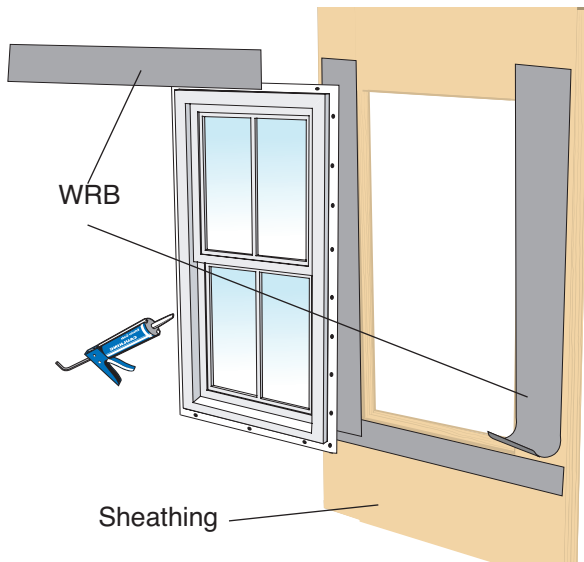
METHOD "B"

When the opening is properly flashed, moisture will make its way down the sides of the new window towards the sill, where the sill configuration should allow this moisture to exit.

The Sequence is Important.

The process is called shingling, and it describes the overlapping of each flashing layer when creating a water-tight window and door installation.

Method A: It is advisable to staple building paper over the edges of the rough opening as shown. Put the bottom strip on first, and the sides next. The top strip is mounted after the window is installed and overlaps the top nailing flange. This will direct water away from the window opening.



Once the bottom and side strips of WRB are mounted, apply bedding sealant around the inside of the nailing fin.

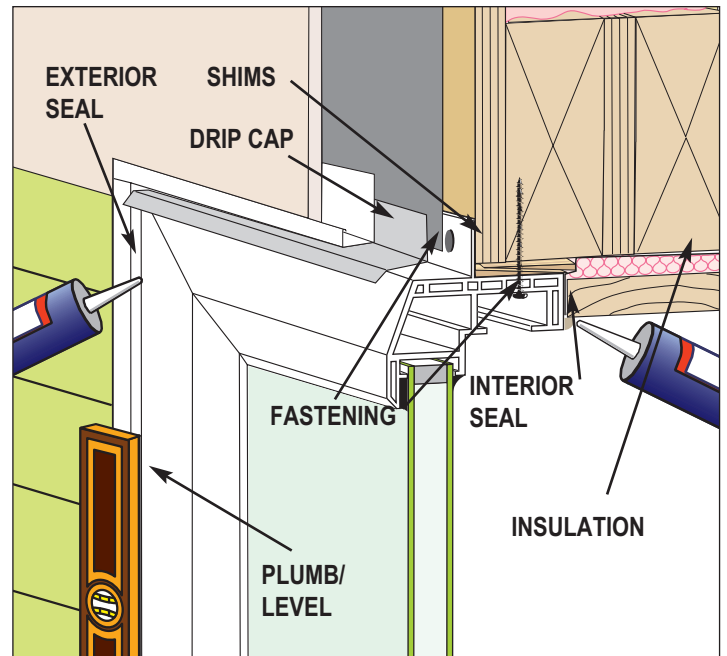
Place the window in the opening with the flanges tight against the opening. Position the window 1/8" from the top, and 3/8" from the bottom, and center the window side to side. This will allow the interior trim to be installed without impeding the operation of the window.

Nail across the top first (in every other slot), making sure the window-top is level. This procedure will in effect "hang the window" and assure that it is both level and plumb. Re-check the level and plumb, and nail the sides (in every other slot) from the top down.

Do not nail the flange tight. Like siding, nailing should be just tight enough to hold the window, but not impede movement of the structure underneath during environmentally caused expansion and contraction.

Staple the top strip of building paper in place if needed.

When siding and/or trim is installed, it should be fitted over the nailing flange using the proper drip-caps, J-channels, or other flashing materials.



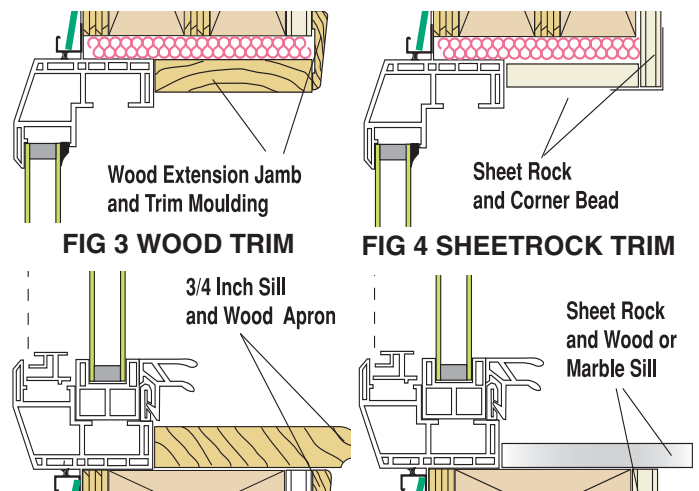
Interior Trim

Though there are many ways to trim-out the interior of the new Vinyl Window, the two most popular ways are Wood Jamb/Trim, & Casing; and Full Sheetrock Return on all 4 sides. Even with the sheetrock return, a wood stool is recommended to facilitate cleaning, and minimize marks.

Figure 3 details typical, conventional wood trim - including wood jambs, wood stool, and clamshell or colonial casing and apron. Using standard 3/4" or 5/4" wood stock, butt the stool and jamb to the window, and then the sheetrock can be butted to the jamb and stool and covered as shown.

Figure 4 details a typical sheetrock return. Be careful to trim the sheetrock square as it will butt against the window. If possible use the outside, wrapped, edges of the sheet to keep the joint neat. Using metal corner bead, cover the wall and jamb/sill joints and spackle as necessary.

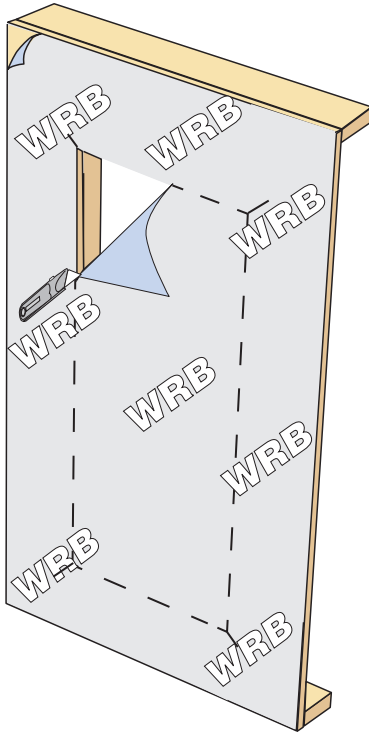
It is also desirable to install a 3/4" wood stool over the sheetrock sill and use casing for an apron below.



Flashing (Method B)

Step 1:

If WRB has been applied to the wall prior to beginning of the window installation, cut the house wrap in such a way to be able to fold it back, and tape it out of the way. Using Adhesive-backed Flashing Material place flashing over rough sill extending 5 inches down the front, and 4 inches up each side. Roll it secure.

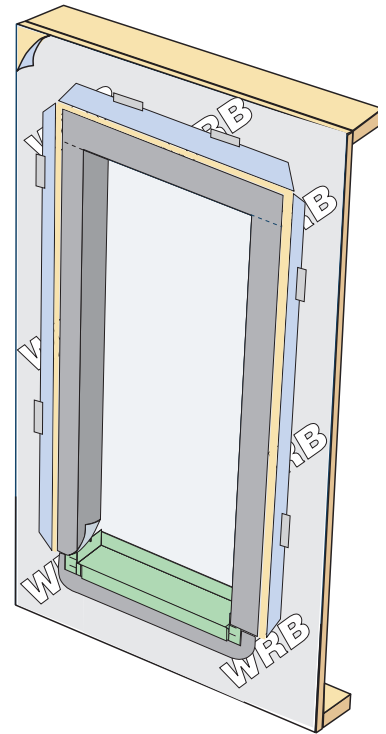


Be careful not to tear or buckle the membrane.

Step 3:

Using adhesive-backed flashing material. Place flashing around each jamb, overlapping the sill flashing.

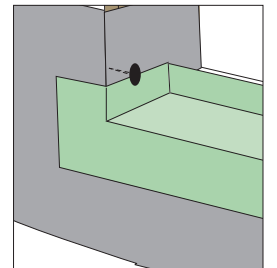
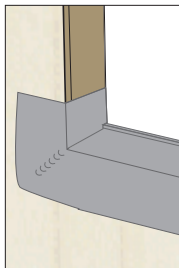
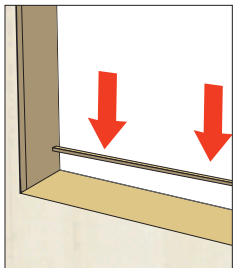
Place adhesive-backed flashing across the header extending up and over the jamb flashing.



Sill Pans

If you're not using a pre-formed sill pan, you can create the effect by installing a 1 x 2 to create a backdam before applying the flashing.

If you choose a preformed sill pan, do not nail through the materials as it will create a water path. Mount it to the jamb with nails sheetrock nails so the head of the nail secures the pan without needing to puncture it, as shown. You can level the sill under the pan with plastic shims.

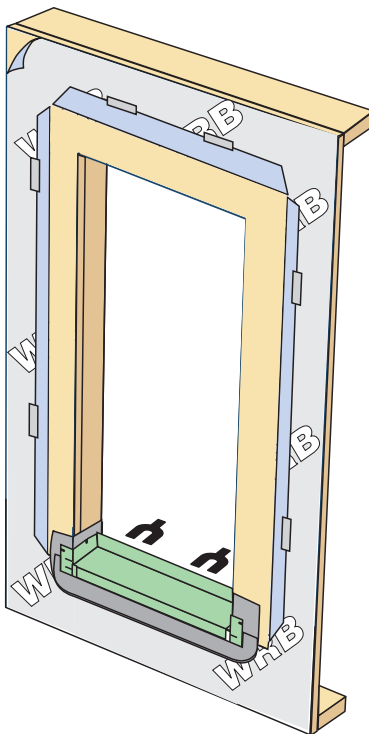
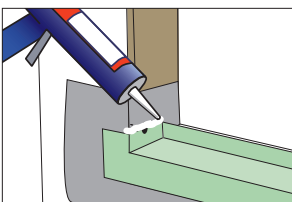


Step 2:

Assemble or fabricate a Sill Pan to fit between the jambs and set on top of the sill. We will illustrate a fabricated pan, but the steps apply to a pre-formed pan.

Do not anchor with fasteners through the pan to avoid a leak path.

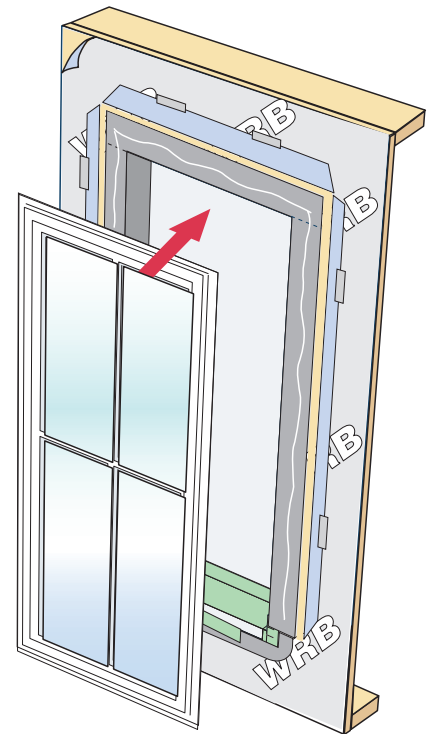
Fix the sill pan to each jamb using the head of a roofing nail, as shown below. Seal with caulk



Step 4:

Place a bead of caulk on the flashing or the backside of the mounting flange.

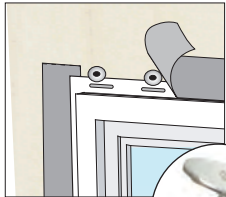
Next set the window into the opening. Using a framing square, to plumb and square the window carefully. If you need to shim before anchoring (Step 5) use plastic, flat, stackable shims. Never use tapered wood shims.



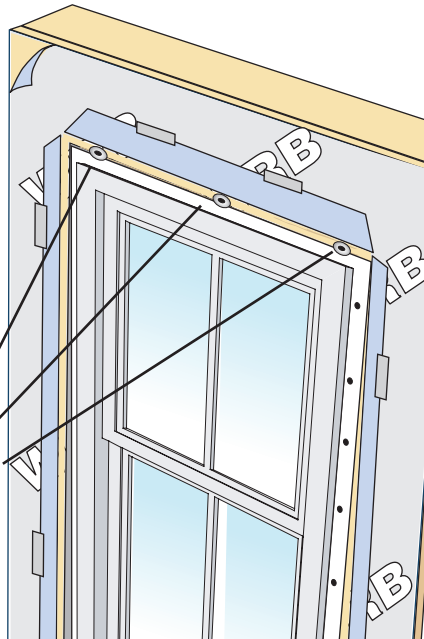
Mount the Window (Method B)

Step 5:

Anchor window through mounting flange slots on all sides. Use Simplex Cap Nails on Header. Lightly nail through slots in fin. Do not nail tightly.

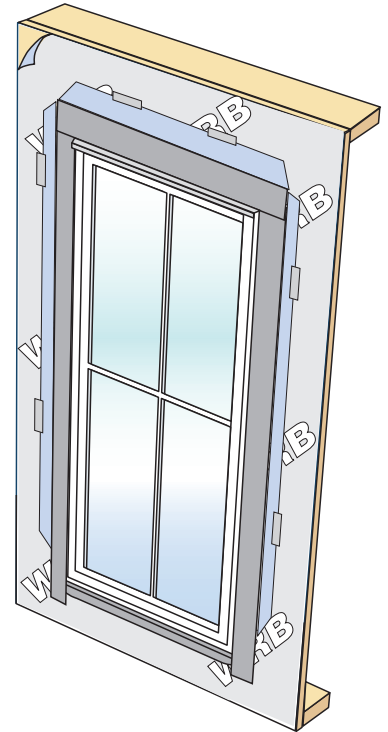


Simplex Cap Nails OVER fin allows frame to move better than nails through mounting slots



Step 7:

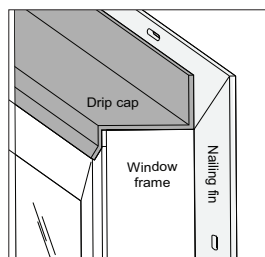
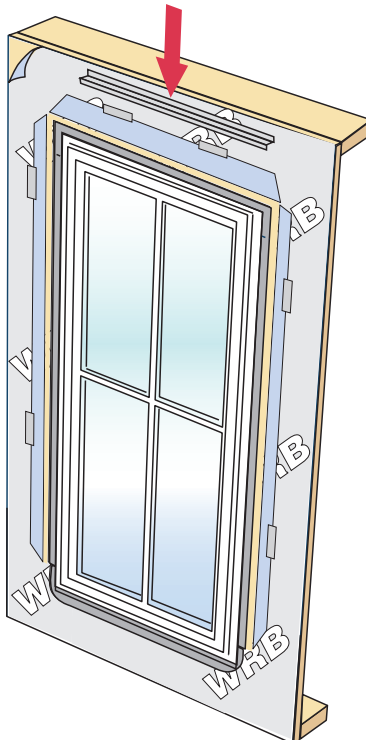
If the house wrap has been moved aside, it can now be un-taped and placed over the second layer of self-adhesive flashing to complete the installation. Again, take care to leave the bottom free for drainage into the drainage plane.



Step 6:

A drip cap should be used across the header of the of the installed window/door. Often, "J-Channel", when used with siding is thought to be a drip cap.

Do not rely on the work of others . Bend a cap or used the supplied cap and install on top of the window/door using sealant.



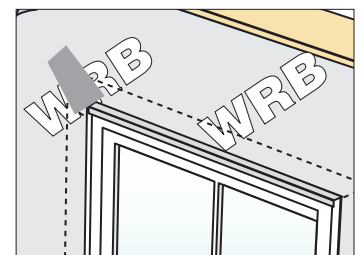
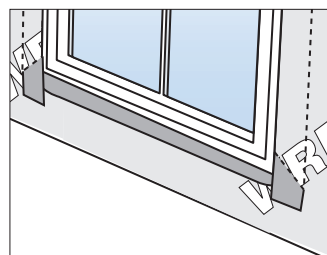
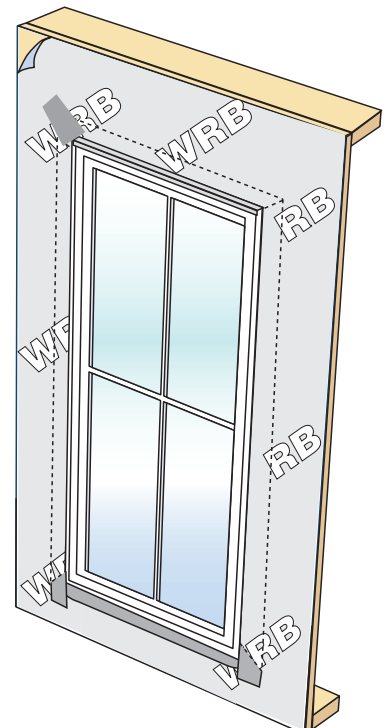
Step 8:

Once the drip cap is installed and the window is seated in the opening, plumb and square, the top layer of the adhesive-backed flashing can be applied.

The surface flashing is applied to the jamb sides first, overlapping the sill pan, weep screen and sill flashing assembly.

The header flashing is applied over the top fin/flange of the window and overlaps the jamb flashing.

The bottom is kept free to allow drainage of any water penetration into the drainage plane.



Flashing (Method A)

Step 1:

A 6-9 inch strip of flashing is first applied along the sill of the rough opening as shown.

Apply a 3/8" bead of sealant along the inside face of the nailing fin. Set the window into the rough framed opening. Set window with 2 fasteners in the corner, then adjust plumb and square. Use accepted fasteners and with a 3/8" bead of sealant on the backside of the nailing fin finish mounting to framing.

After the window is set into the opening, apply another bead of sealant along the outer edge of the nailing fin.

Do not anchor along sill.

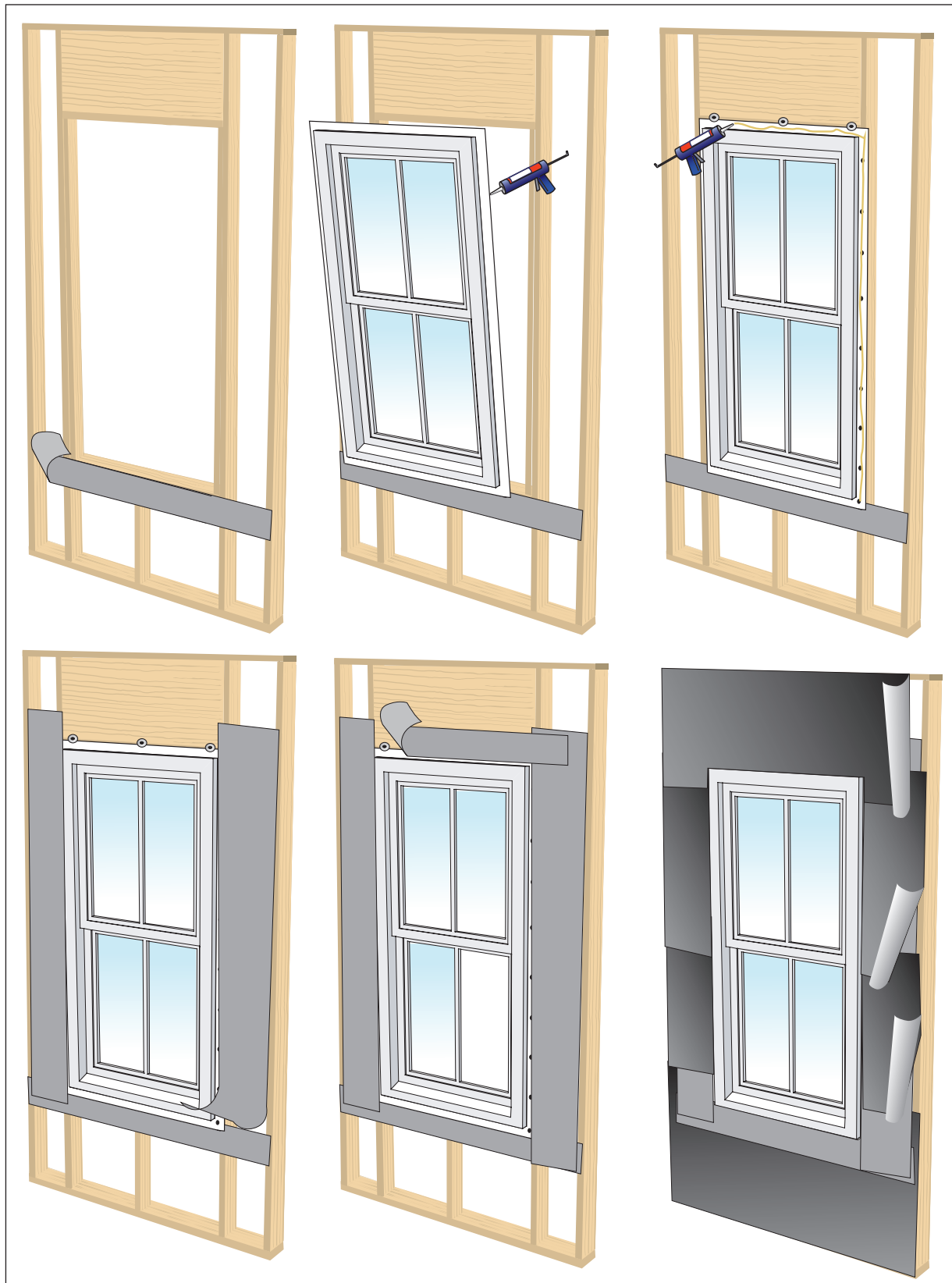
Step 2:

Place flashing down the sides, overlapping the sill strip.

Then place a flashing strip across the top overlapping the jamb flashing.

Step 3:

Once the jamb and header flashing is placed, large strips of WRB are placed in shingle style (overlapping). The bottom piece should be tucked up under the sill flashing and bottom of the jamb flashing, as shown, to complete the basic install. Remember to allow weepage from under the sill flashing, and to never over-tighten the mounting hardware.



Integral J-Channel Install

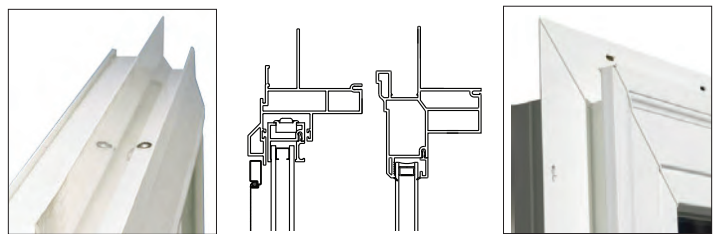
Most brands of uPvc replacement windows with mounting fins, are available with an integral J-Channel (siding return) molded into the window frame profile. These “built-in” J-Channels can be wide and decorative, others can be thinner. However, each variation serves the same purpose: to enable diversion of water from around the window without installing a separate J-Channel and/or drip cap.

Installation of a window with a built-in J Channel is straightforward and can be done with either the “Barrier Method” or Drainage Method” of flashing.

The diagrams here show “Method B” where flashing is first attached to the wall, then a second layer over the fin, and optional building paper layer installed over the total wall, overlapping the flashing.

The goal no matter which method is used is to properly overlap the flashing on the wall and finally overlap the second flashing layer over the mounting fin. In this way, water is directed around and down the sides of the new window, properly draining and preventing water intrusion.

Remember: Do not seal the bottom fin to allow water that may enter or condense inside the opening, to have a proper patch to drain and eventually dry.



There are more than one style of Integral J-Channel frame profiles.

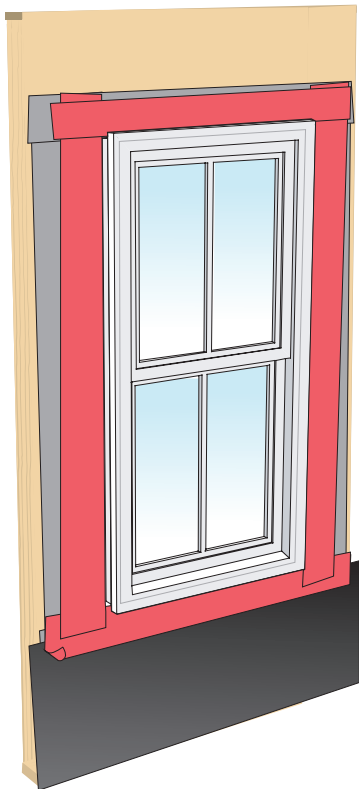
Step 1:
Apply adhesive-backed flashing along sides and bottom of opening.

Apply bead of bedding sealant on jamb flashing and along header to set the window. Do not apply along sill.

Step 2:
Mount window using nails along the jambs and Simplex-type cap nails along the top to accommodate expansion as shown.

Place horizontal flashing over top of header nailing flange, overlapping jamb flashing.

Integral J-Channel Install

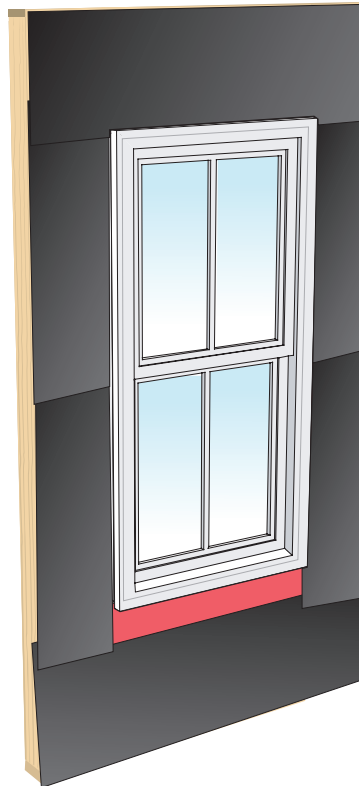


Step 3:

Using another layer of flashing, starting with the sill, overlap strips to cover the jambs and header also.

If you choose to apply building paper, start the first strip tucked under the bottom (sill) flashing.

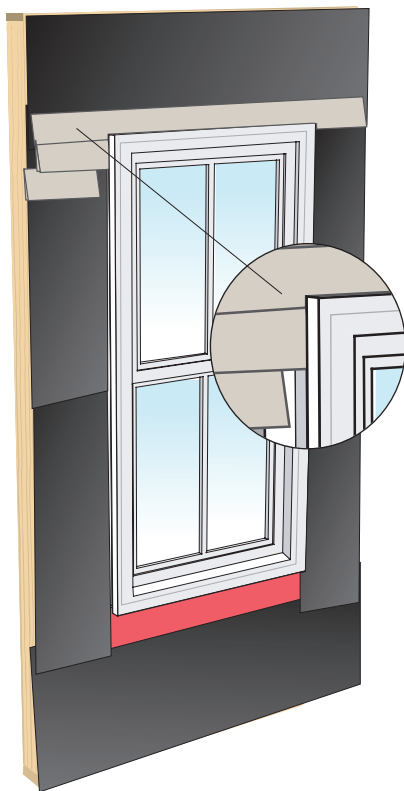
The goal is always to overlap in ship lap fashion to direct water down and away from the new window.



Step 4:

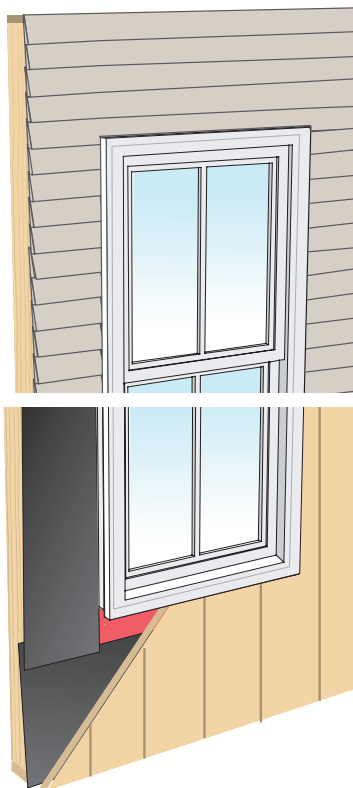
Finish installing the overlapping building paper.

Remember to leave the bottom of the window unsealed to allow drainage of any water or condensed moisture in the opening cavity.



Step 5:

Integral J-Channel frames allow installation of the siding by “tucking” it inside the space created by the j-channel and the window frame.



Step 6:

Finish applying the exterior siding or paneling - or even stucco.

Proper drainage and finish trim all in one application.

