

Modern Direct Glaze Corner Window Installation Instruction



ABSTRACT: Please read these instructions in their entirety before beginning to install your Marvin window product. These installation instructions demonstrate the installation of a Marvin Modern Direct Glaze Corner window in new wood frame construction using an industry approved water management system. For installation using other construction methods, such as remodeling, replacement, and recessed openings refer to ASTM E2112, Standard Practice for Installation of Exterior Windows, Doors, and Skylights." Information for ASTM E2112 can be found on the ASTM website, www.astm.org

Regional standard practices, environmental conditions, and codes may vary and supersede the procedures contained within. The responsibility for compliance is yours: the installer, inspector, and owner(s).

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Installer and Builder Information

IMPORTANT

Marvin Modern Direct Glaze Corner window is not load bearing and should not be installed in any manner that places the unit under load from the wall system. Care must be taken with the design of the structure surrounding these units.

- Always provide a copy of these instructions for the current or future building owner.
- Plan sizing of rough opening and clearance from exterior finishing systems to allow for normal materials shrinkage or shifting (e.g. wood structure with brick veneer; allow adequate clearance at the sill). Failure to do so can void the Marvin warranty coverage.
- It is the responsibility of the builder, installer and subcontractors to protect the interior and exterior of windows or doors from contact with harsh chemical washes, construction material contamination and moisture. Damage to glazing, hardware, weatherstrip and cladding/wood can occur. Protect with painters tape and/or protective sheathing as required. Follow all guidelines regarding material use, preparation, personal safety and disposal.
- Contact your Marvin supplier if you have any questions regarding product and materials used in manufacturing or questions on replacement parts.

Protective Film

Some products feature a clear protective film adhered to the glass surfaces to protect them from construction debris, dust, dirt, stucco, etc. When construction is complete, simply peel the film off and dispose of it with other construction debris.

IMPORTANT

Do not use a razor blade to remove the protective film. Do not use a pressure washer to clean debris from the film. The film should be removed within nine months (typical) of application.

The use of high absorption coatings and tints, Neat+® coated glass, LoE-189® and other exposed Low-E coatings could affect adhesion and reduce the amount of time allowed to remove the film. Please refer to the [manufacturer's website](#) and [bulletin](#) for more information on the physical properties and usage of the protective film.

IMPORTANT

DO NOT place suction cups over seams in the protective film.

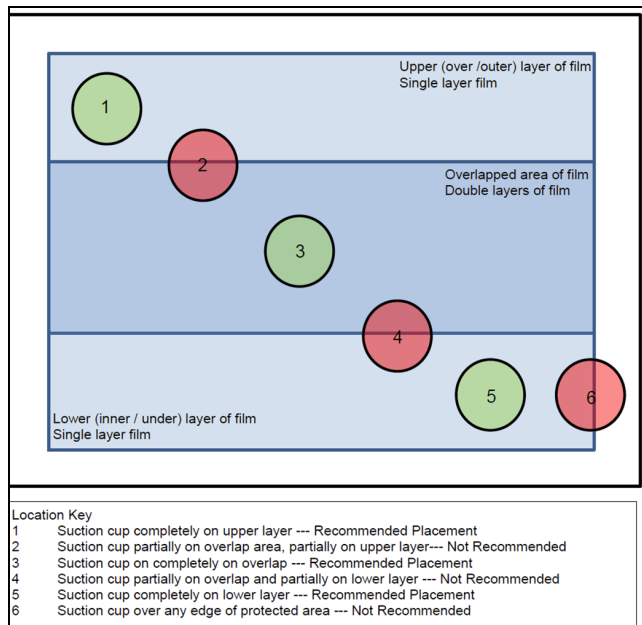


Figure 1 Do not put suction cups on seams or edges

After Market Products

Alterations to Marvin products including window films, insulating or reflective interior window treatments or additional glazings can cause excessive heat buildup and/or condensation. They may lead to premature failures not covered under warranty by Marvin Windows and Doors.

Before purchasing or applying any product that may affect the installation or performance of Marvin windows contact the manufacturer or after market product/glazings that are not supplied by Marvin and request written product use, associated warranties and damage coverage. Provide this information and warranties to the end user and/or building owner for future reference.

IMPORTANT

Please consult with local authorities to properly dispose and/or recycle all packaging, materials, and waste.

Hazard Warnings

NOTE: Numbers listed in parentheses () are metric equivalents in millimeters rounded to the nearest whole number.

WARNING!

This product can expose you to chemicals including titanium oxide, which is known to the state of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

WARNING!

This product can expose you to chemicals including methanol, which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

WARNING!

Older homes may contain lead-based paint which may be disturbed when replacing windows or performing renovations. Consult state or local authorities for safe handling, disposal or abatement requirements. For more information, go to www.epa.gov/lead

WARNING!

Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

WARNING!

Always practice safety! Wear the appropriate eye, ear and hand protection, especially when working with power tools.

Seek Assistance

Some large windows and/or assemblies are heavy. Avoid injury by getting help to lift and position the window into the rough opening. Having assistance from another person will be necessary when adjusting and fastening.

Standard Parts Shipped

Follow installation instructions included with part if applicable. The corner window installation kit includes head jamb and jamb nail fin, window assemblies, corner bracketry including fasteners, exterior and interior corner covers. For more details [refer to Installing the Corner Window on page 18](#)

Materials Needed

- Insulation
- Perimeter sealant
- Sill pan flashing
- Backing material (foam backer rod)
- Flashing materials
- Weather resistive barrier
- Framer's square
- Composite shims
- 2" (51) Roofing nails
- Fasteners for interior corner cap
- Phillips bit
- #8 through jamb installation screws (trim head preferred).

Tools Recommended

- Safety glasses
- Hearing protection
- Level
- Hammer
- Tape Measure
- Framing Square
- Drill
- Combination square and/or speed square

Before You Begin

Rough and Masonry Opening Requirements

The following measurements were used to obtain WDMA performance certification during testing.

1. Rough opening (RO) width may be up to 1 1/8" (29) wider (3/4" maximum on each side) than the outside measurement (OM) of the frame. The RO height may be a maximum of 3/4" taller than the OM of the frame. See [Figure 2](#).

IMPORTANT

Rough openings are tested and certified at 3/4" on each side, and at the head jamb. Marvin Order Management System (OMS) will add 1 1/8" to the frame width **but only** 3/4" to the frame height when calculating the rough opening.

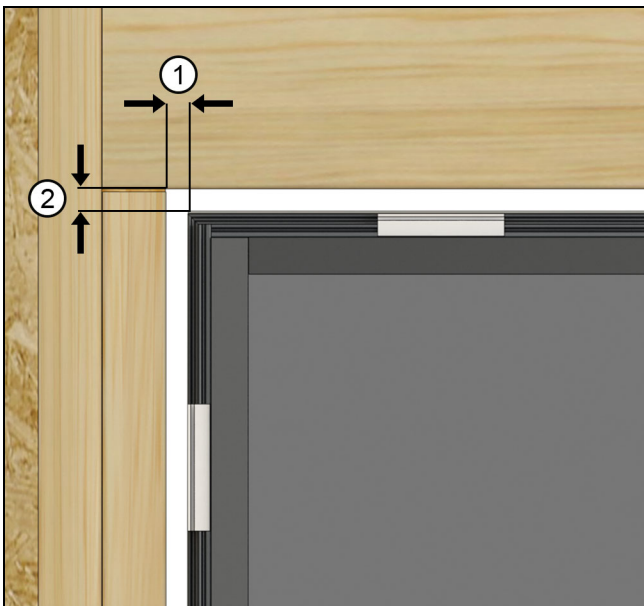


Figure 2 RO Width and Height clearance

1	RO Width (3/4" on each side)
2	RO Height (3/4" taller than OM of frame)

IMPORTANT

When using drywall return (or equivalent) at the sill greater than 1/2" thickness, you will need to shim beneath the sill to avoid interference with interior covers.

Prepare the Opening

1. Remove protective packaging from the window and dispose/recycle properly. Inspect the window for any hidden damage and report it immediately to your Marvin representative.
2. Apply air barrier. Trim the air barrier across the entire top of the head jamb. [See Figure 3.](#)

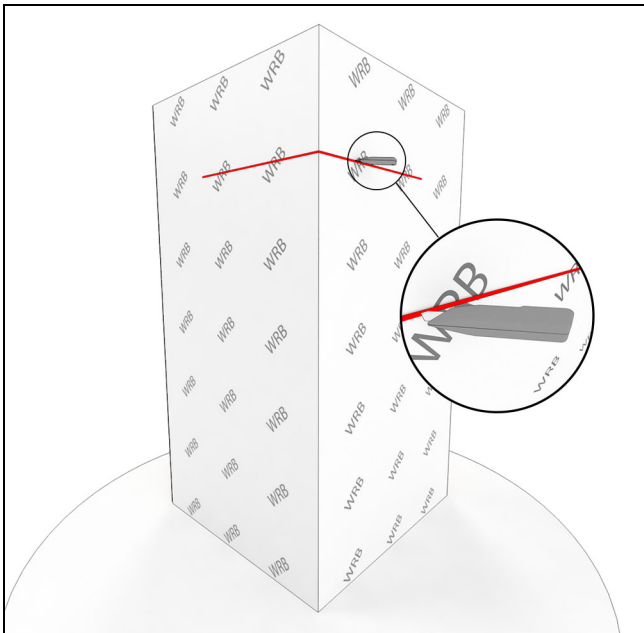


Figure 3

3. Make one 6" (152) vertical cut on the corner. [See Figure 4.](#)

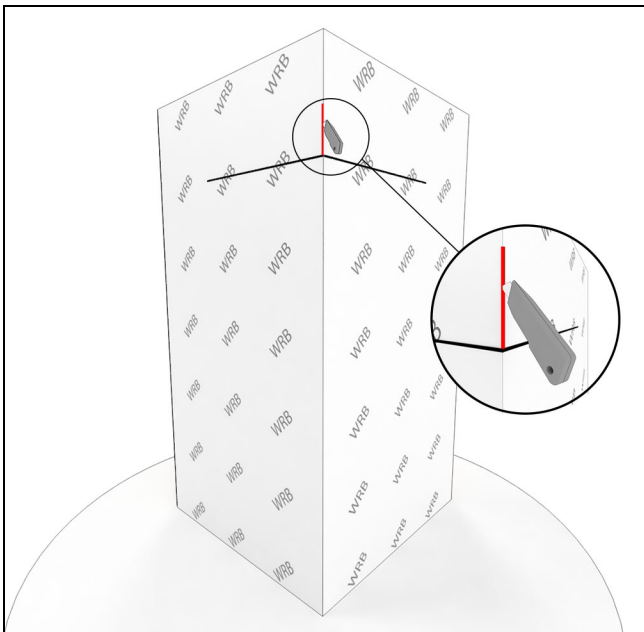


Figure 4

4. At the top corners, make a 45 degree cut away from the corner. [See Figure 5.](#)

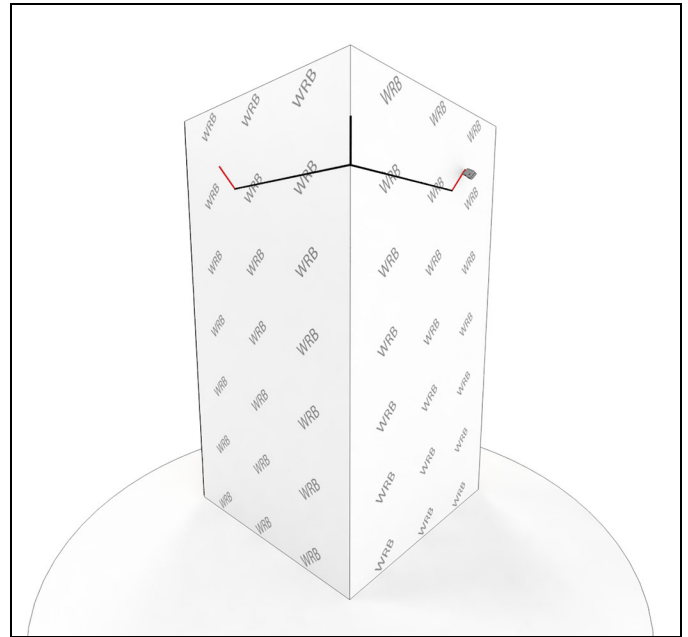


Figure 5

5. Flip the top flaps up and tack in place temporarily. [See Figure 6.](#)

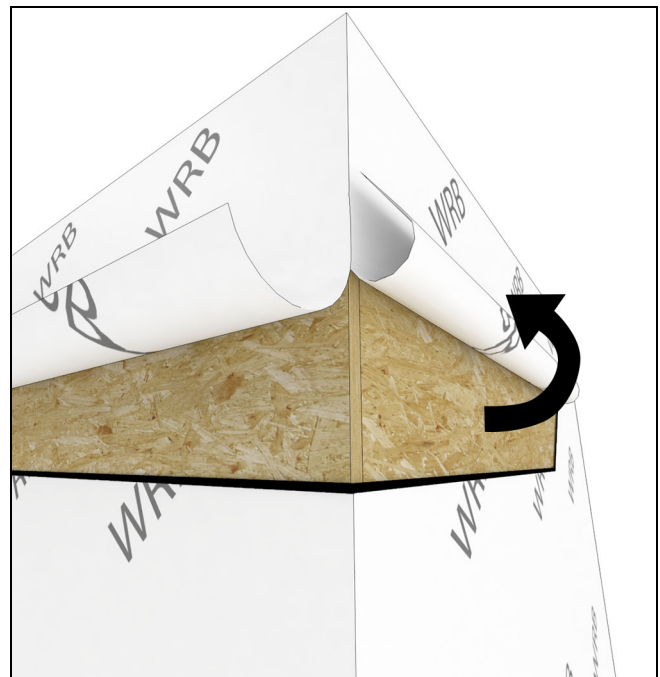


Figure 6

6. Cut the air barrier across the sill. [See Figure 7](#)

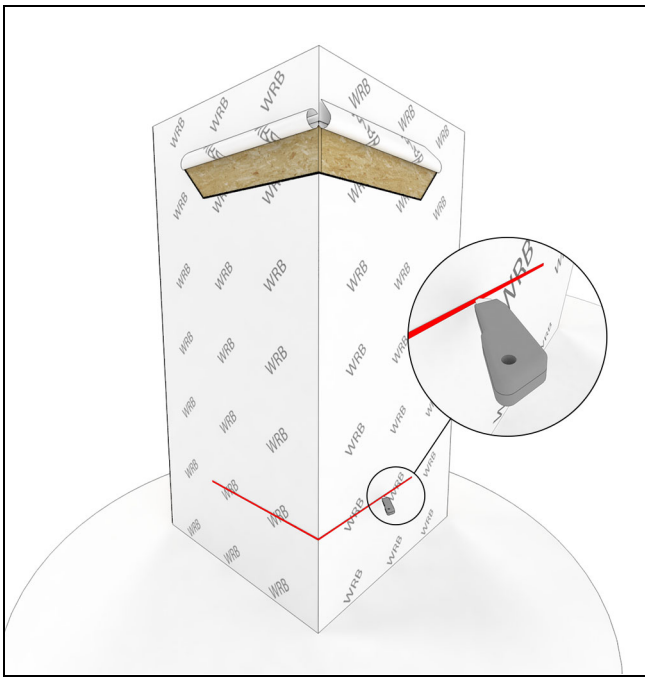


Figure 7

7. Make a vertical cut about 6" (152) from the sides of the rough opening running from the top to the bottom of the opening. See Figure 8

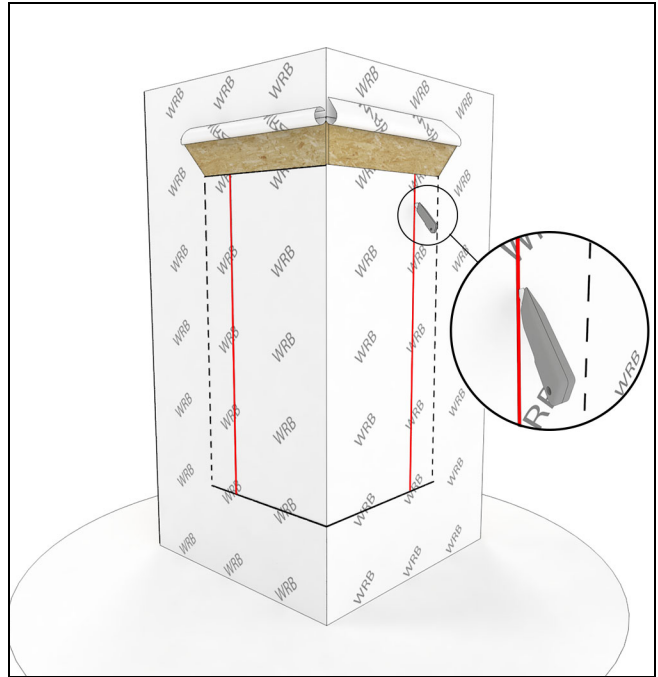


Figure 8

8. At the sill, trim the bottom corners about 3 1/2" (89) wide on each side and then make an additional 2" (51) vertical cut. See Figure 9.

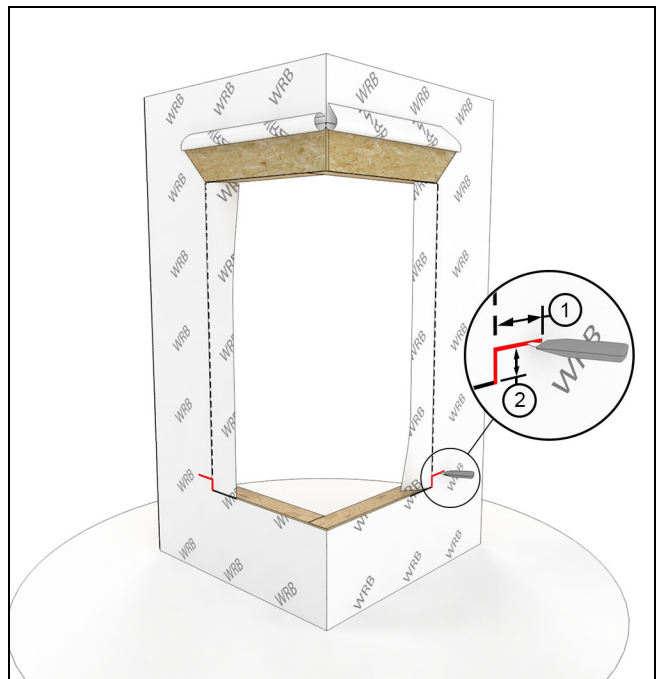


Figure 9

1	3 1/2" (89)
2	2" (51)

9. Tack the side jamb air barrier away from the opening temporarily. See Figure 10.

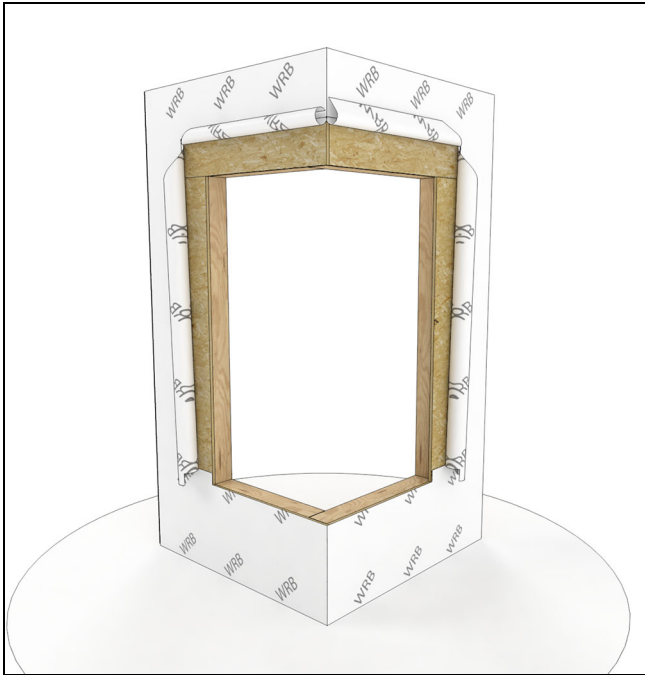


Figure 10

10. Check the rough opening for level, plumb, and square. See Figure 11 and Figure 12 and Figure 13.

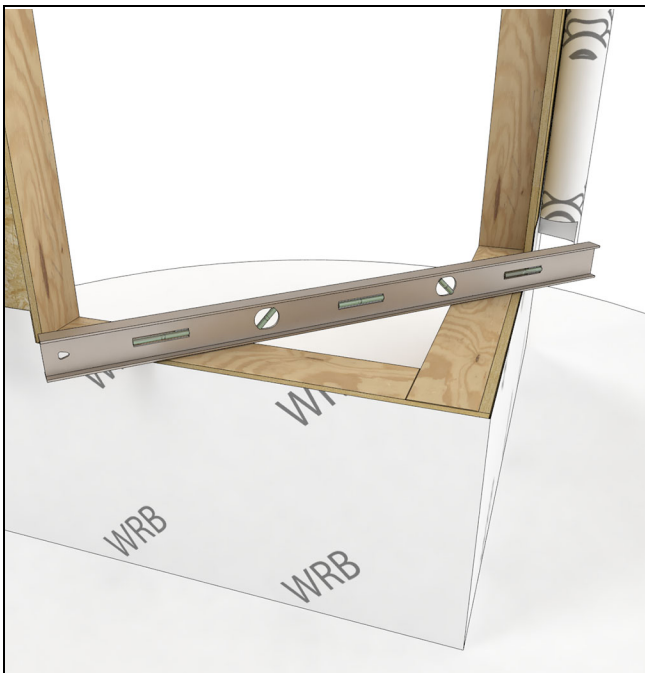


Figure 11 Check the sill for level



Figure 12 Check the jambs for plumb

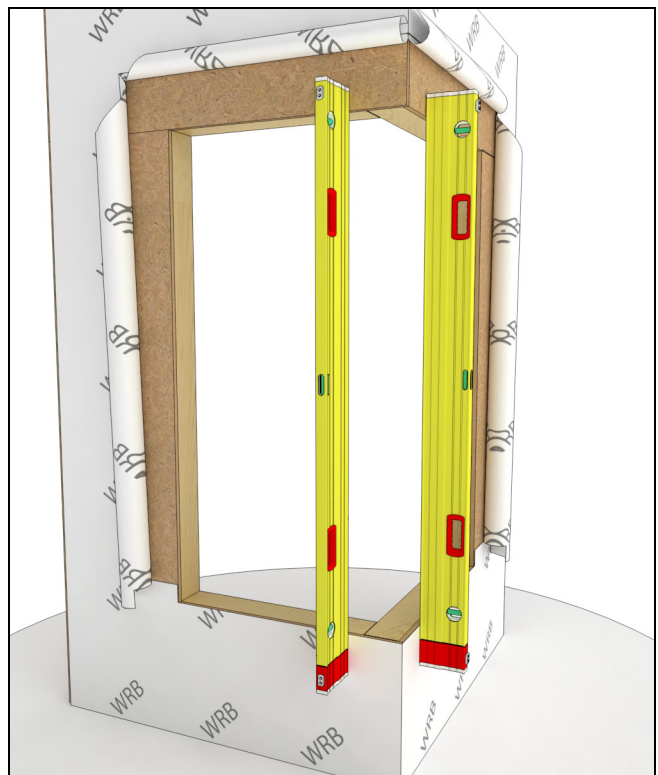


Figure 13 Check the corner for plumb

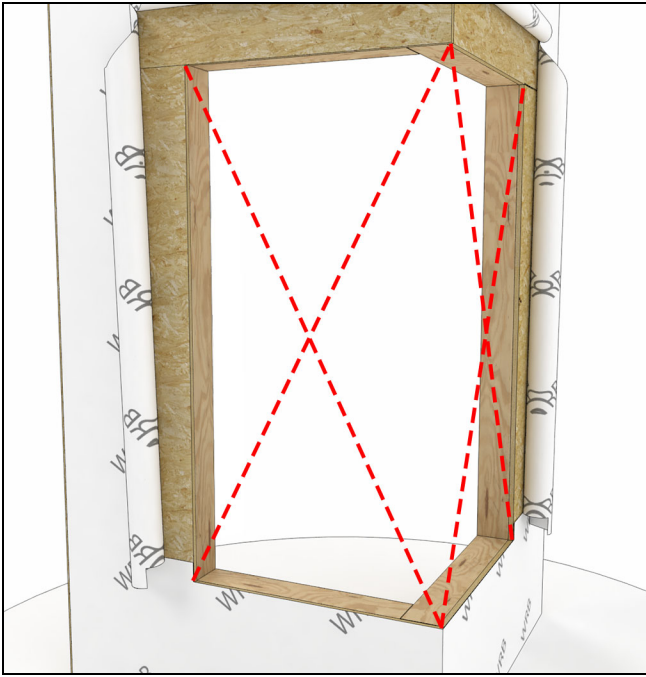


Figure 14 Check the opening for square at each side.

Install the Sill Pan Flashing

⚠ CAUTION!

Be aware that the use of sill pans and other barriers will decrease the rough opening height clearance. Adjust opening dimensions accordingly.

IMPORTANT

Wall depth will determine width of panning material. The panning must overlap the exterior at least 2".

1. Cut one 18" (457) strip of Type III flexible self adhered pan flashing material. See [Figure 15](#).

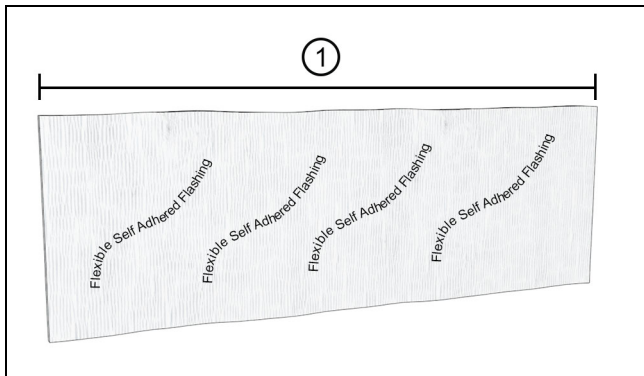


Figure 15

1	18" (457) Strip of flexible self adhered flashing
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2. Fold material in half to crease. See [Figure 16](#).

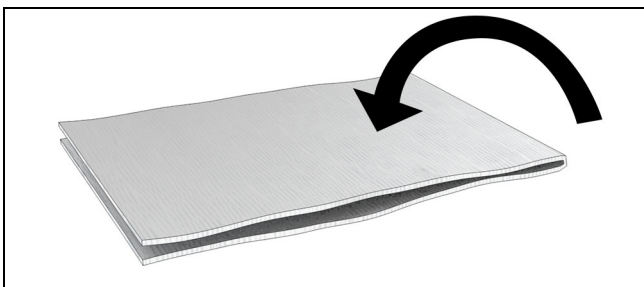


Figure 16 Fold sill pan flashing in half.

3. Center the material on the corner and adhere to the outside face of the building at the sill. The flashing must come down over the exterior at least 2". See [Figure 17](#).

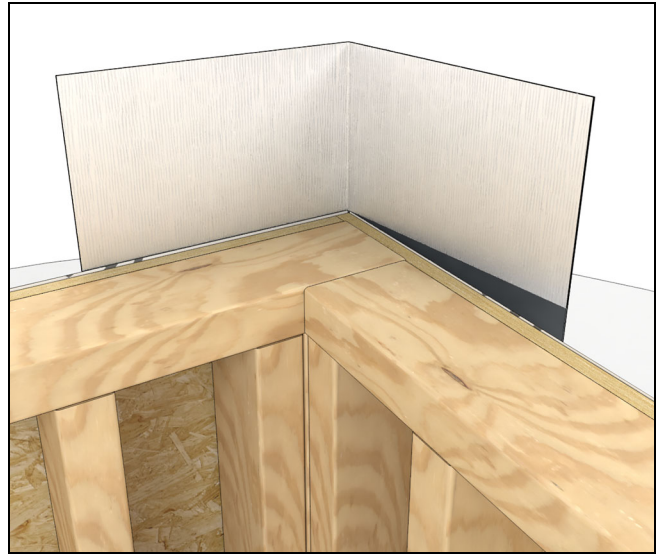


Figure 17

4. Cut the flashing at the crease in the corner. Stop about 1/4" from the sill. See Figure 18.

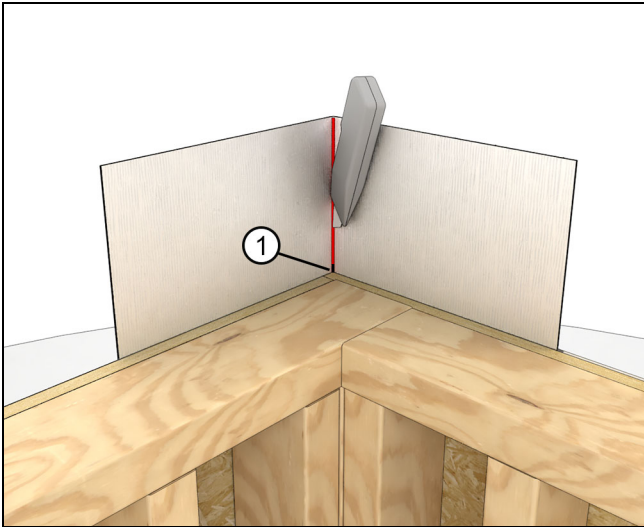


Figure 18

1	Vertical cut stops 1/4" from the sill
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5. Remove the backing from the top section on one side and adhere to the opening. Then repeat on the opposite side. See Figure 19, Figure 20, and Figure 21.

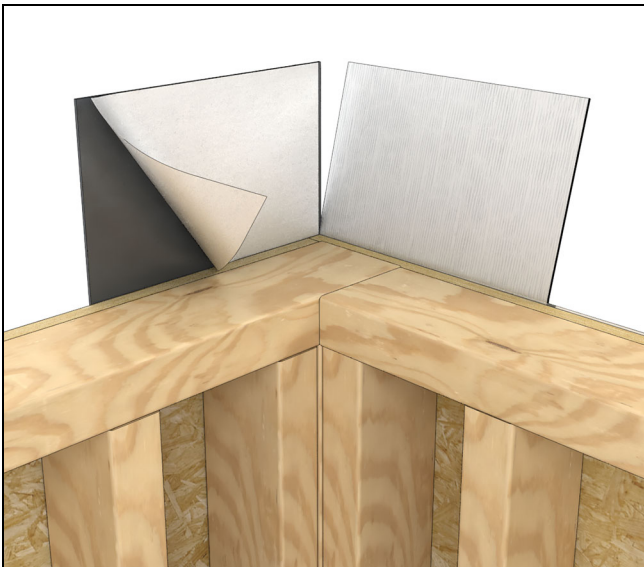


Figure 19

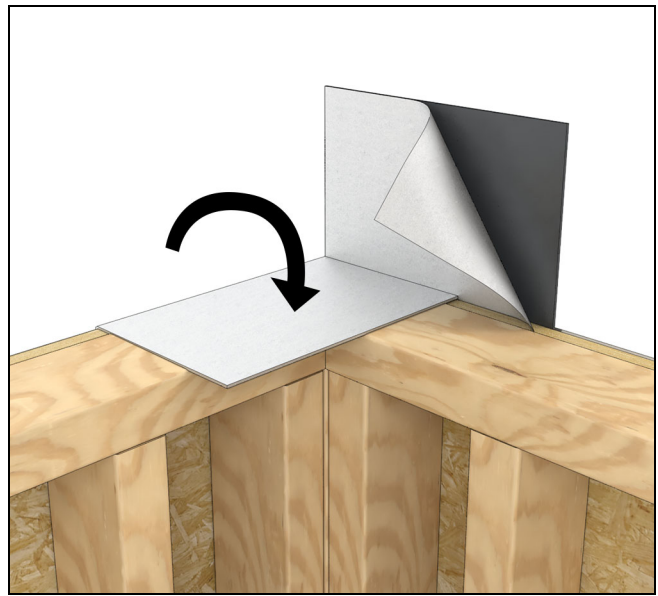


Figure 20

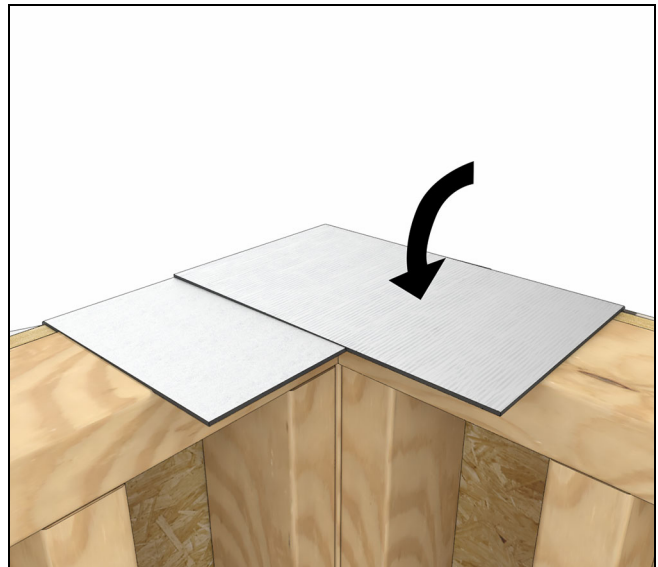


Figure 21

6. Cut another strip of flashing equal to the full length of one rough opening leg. Make the same folds as earlier. See Figure 22.

NOTE: This length will allow you to wrap the flashing up the side jamb about 6".

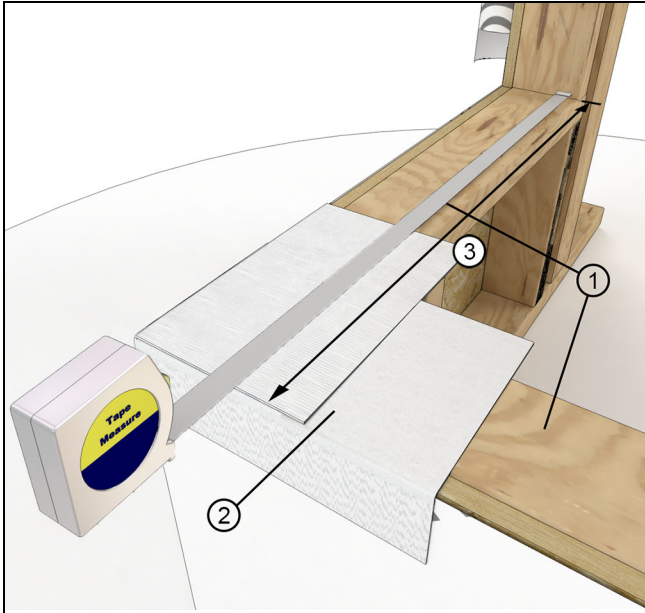


Figure 22

1	Sill legs
2	Corner flashing
3	Leg flashing equal to one full length of leg

7. Apply the flexible flashing to the sill leg starting about 6" (152) from the corner. Lap the flashing up the side jamb. Repeat on the opposite side. See Figure 23.

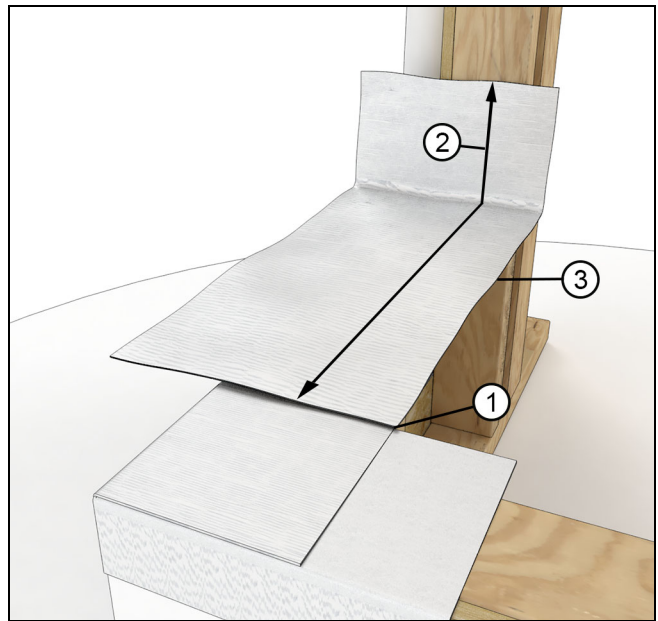


Figure 23

1	Leg flashing only overlaps one layer
2	Leg flashing rides up jamb 6"
3	Leg flashing is equal to one full length of leg

IMPORTANT

Do not layer the leg flashing at the corner so that it overlaps more than one other layer. This could cause difficulties in flashing and leveling the assembly later.

8. Fold the flexible flashing down over the outside. Smooth out the flashing with the edge of a speed square or other tool to ensure there are no bubbles or voids. See Figure 24.

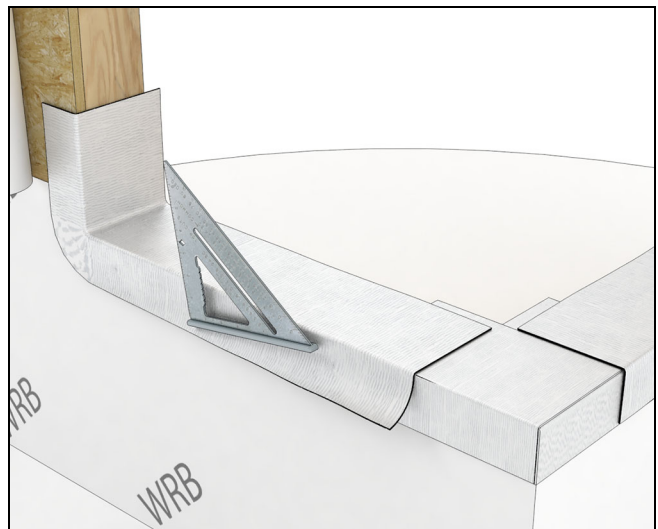


Figure 24

9. Apply seam seal tape at the corners of the flexible flashing. See Figure 25.

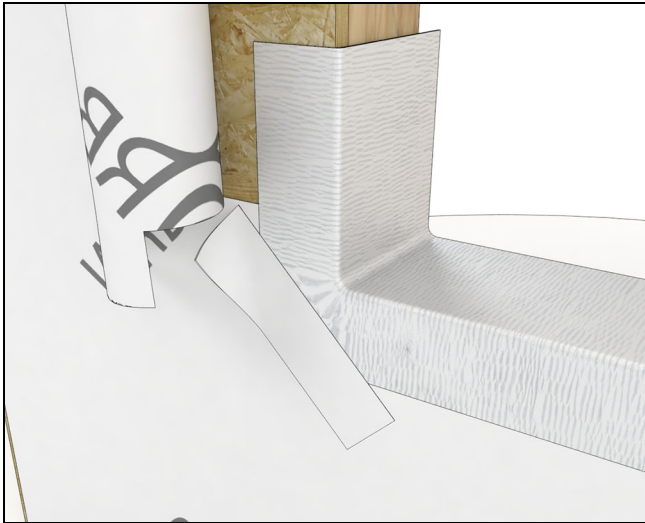


Figure 25

10. Where applicable, trim excess sill flashing material flush with the interior framing. See Figure 26.

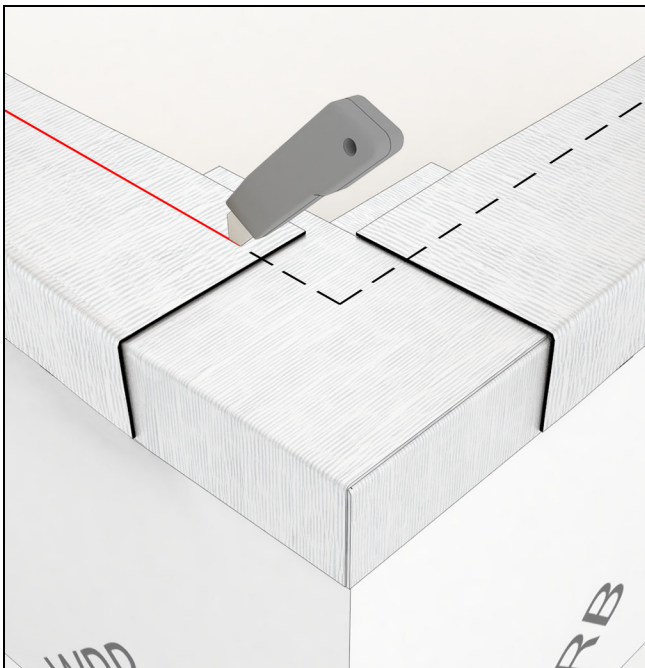


Figure 26

11. Wrap the air barrier into the rough opening. Staple, and cut excessive material from each jamb and cover with seam seal tape. See Figure 27 and Figure 28.



Figure 27

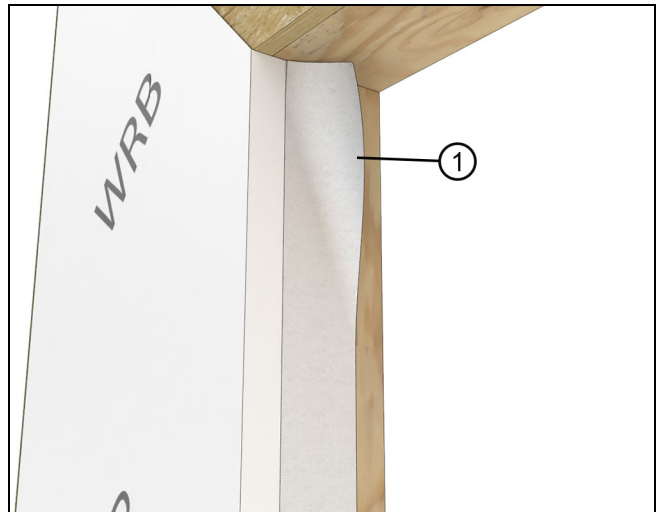


Figure 28

1	Seam seal tape
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12. Draw a 45 degree angle onto the sill of the rough opening to reference the meeting line for Leg Assembly 1 and Leg Assembly 2. See Figure 29.

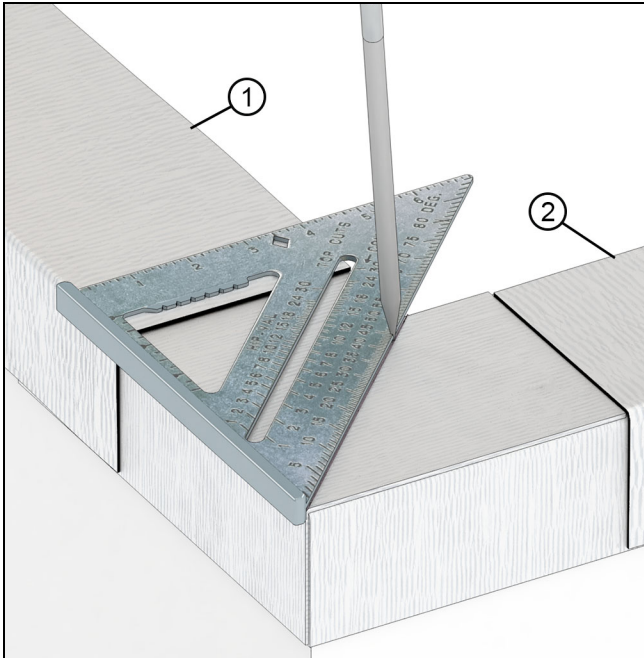


Figure 29

1	Leg Assembly 1
2	Leg Assembly 2

13. Apply sealant at the seam between the corner flashing and the flashing at the legs. See Figure 30.

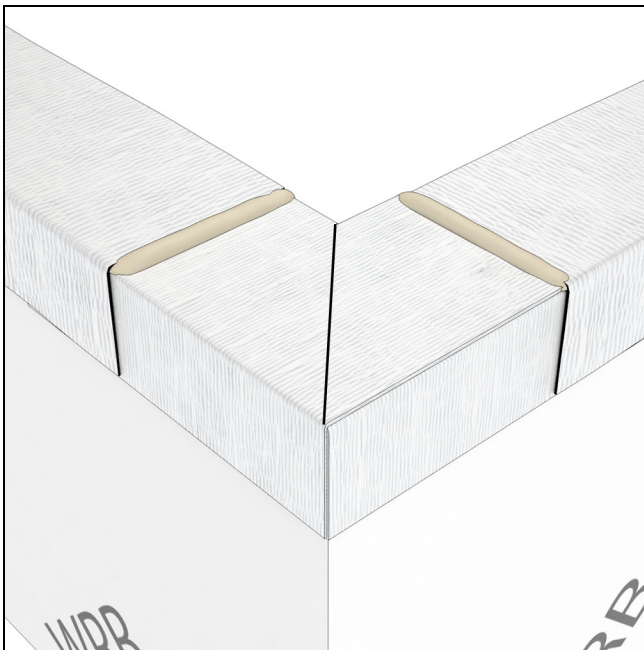


Figure 30

Installing the Corner Window



Figure 31 Exploded view of corner window assembly. Handing as seen from exterior.

1	Left window
2	Corner bracket
3	Right window
4	Exterior corner cover (caps and screws attached prior to installation)
5	Interior miter clip
6	Left hand jamb cover
7	Left hand sill cover
8	Left hand head jamb cover
9	Interior corner cover

Frame Prep

IMPORTANT

Be sure to use the proper safety equipment. Wear gloves when working with the window parts and be aware of any sharp edges and corners.

Tip

The following steps and illustrations demonstrate installing the window in the opening starting with the left side. You may install the corner bracket on the right hand window and work from right to left.

1. Starting with the left window, remove and discard the screws fastening the top and bottom shipping clips to the frame (3 screws per clip). Then remove the false jamb by pulling the bottom out and rotating to the interior.

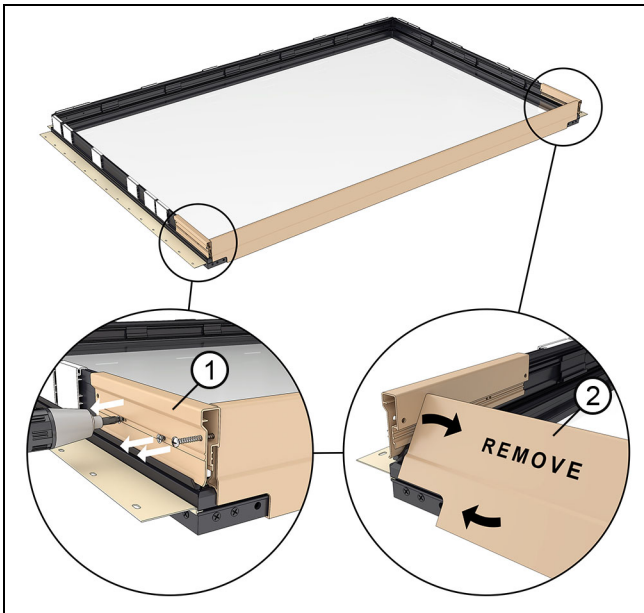


Figure 32

1	Shipping clip
2	False jamb

2. Remove the shipping clips by sliding them off the frame. Slide the shim blocks down over the installation holes where the shipping clip was located.

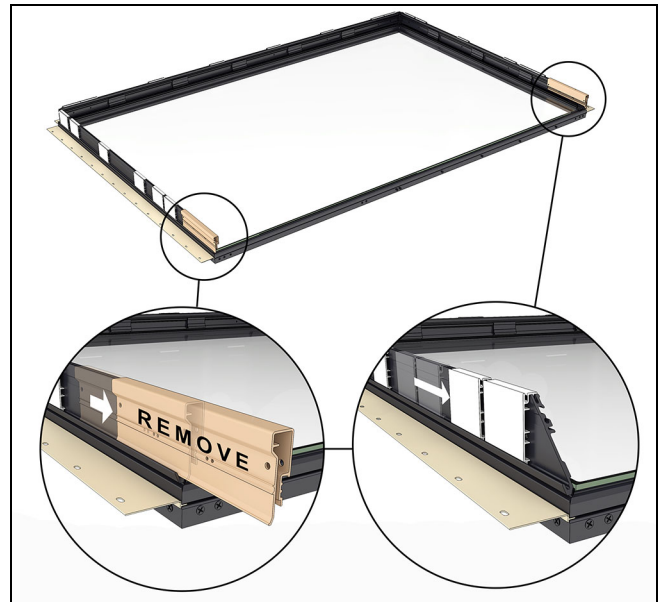


Figure 33

3. Clean the corner jamb with isopropyl alcohol. Continue to [step 4 on page 20](#).

4. Install the corner bracket on the left hand window. Add a 1/8" (3) bead of sealant along the raised lip of the corner bracket. See Figure 34. Measure up 5 5/8" (143) from the sill. Place the bracket so that the lip fits into the kerf on the window. Fasten with 1/2" self drilling screws provided. Be careful not to over-torque the screws.

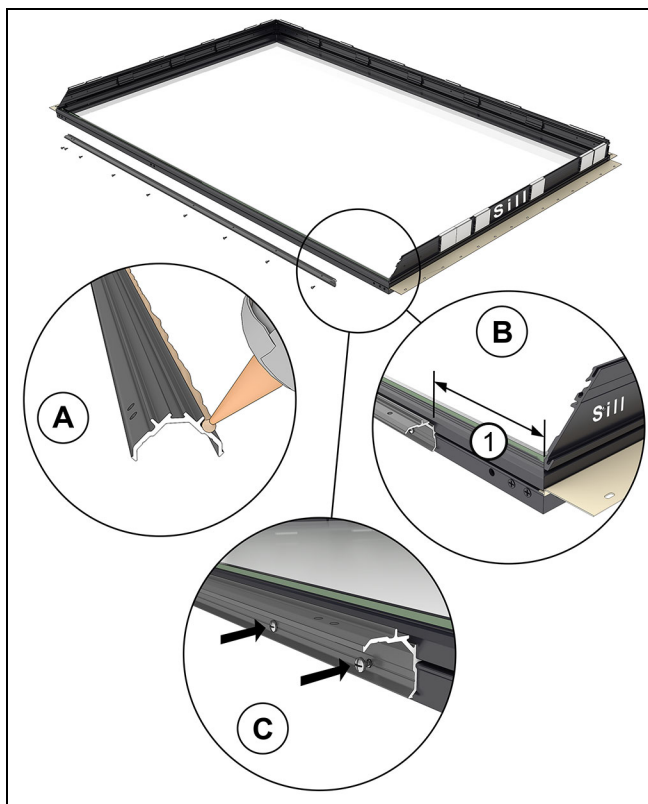


Figure 34 Interior side up shown

1	Place the bracket 5 5/8" from the sill
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Shim the Sill

IMPORTANT

Proper shimming is **extremely important**. Under shimming or over-shimming will result in bowed jambs and or head jamb. When shimming near the miter location be sure to shim each window independently and as close to the miter as possible.

1. Place shims on the sill near the corners, near the miter, at the center, and every 15" on center as needed. See [Figure 35](#).

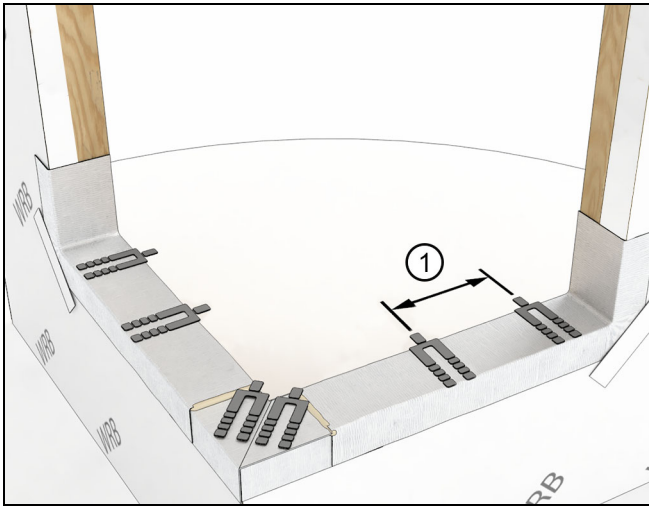


Figure 35

1	Install shims at center points and/or at 15" on center
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2. Level the shims as necessary to make sure both legs are level. See [Figure 36](#).

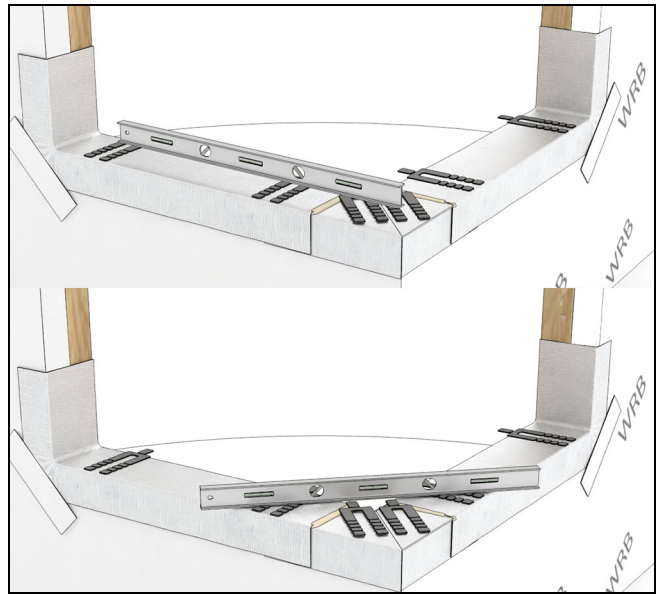


Figure 36

Installing the Windows in the Rough Opening

1. If you are mulling windows to the sides of a corner window, install the corner window first.

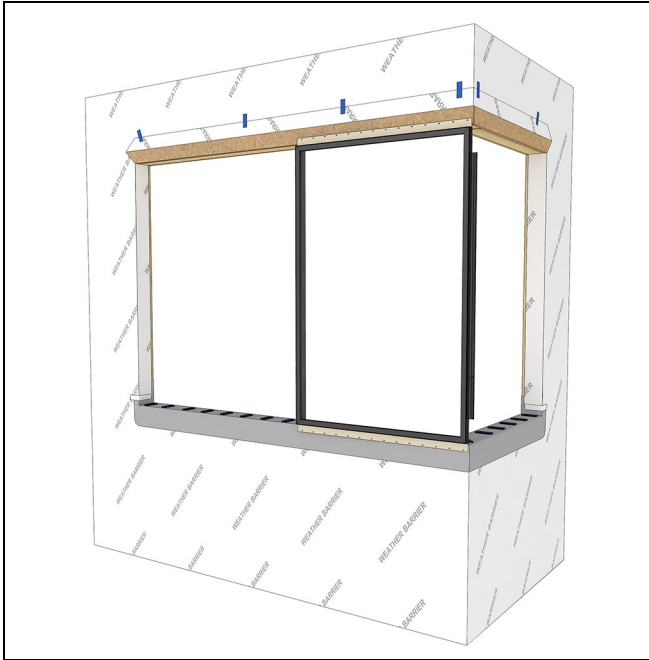


Figure 37

2. Place the left window with the center bracket into the RO. Align the center jamb closely to the center-line drawn on the RO. See Figure 38.

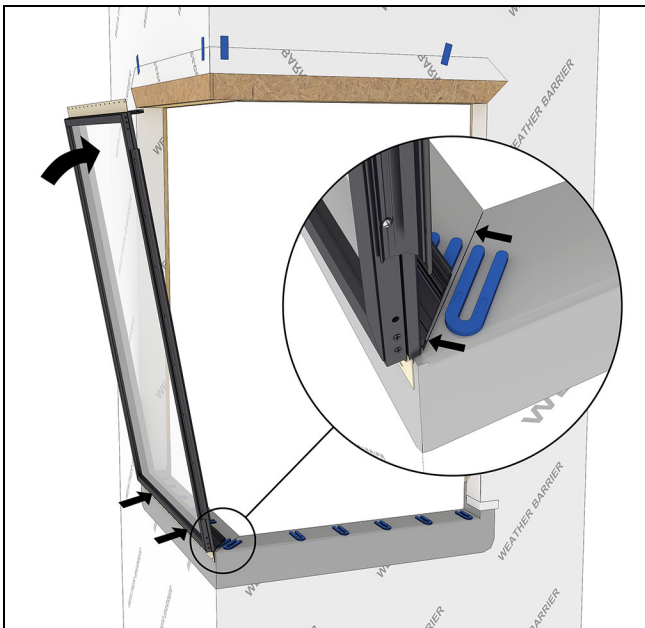


Figure 38



Tip

Each frame miter is cut at 46 degrees. A slight gap is normal, however frames must be installed at 90 degrees to each other.

IMPORTANT

Proper shimming is **extremely important**. Under shimming or over-shimming will result in bowed jambs and or head jamb. When shimming near the miter location be sure to shim each window independently and as close to the miter as possible.

3. Level at the sill and plumb the unit. Adjust shims under the sill to level if necessary. See Figure 39.

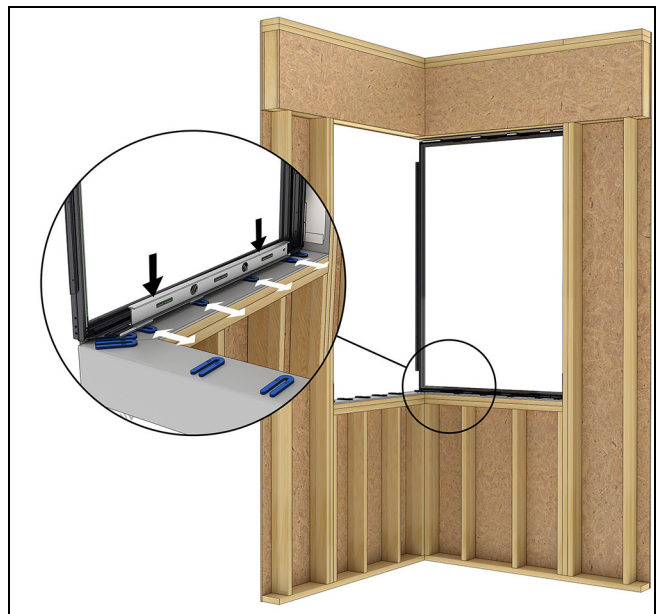


Figure 39

4. Temporarily fasten the unit into the RO by tacking the nailing fin with a 2" roofing nail. See Figure 40.

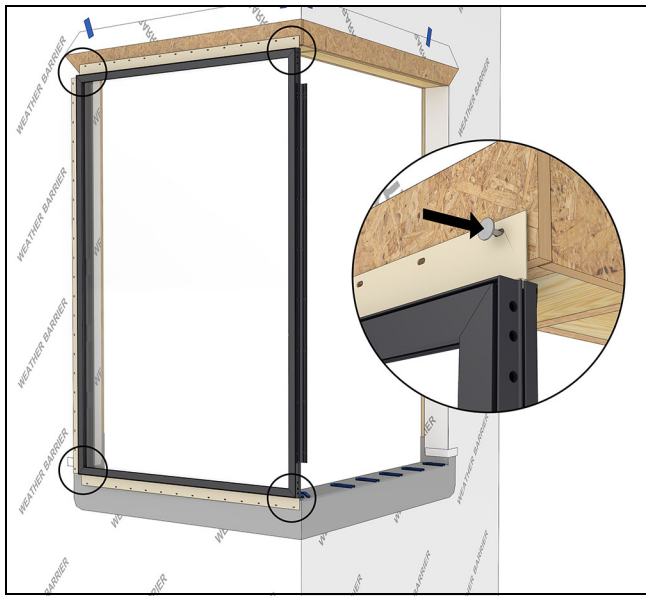


Figure 40

1	2" Roofing nail
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5. Place a 1/8" (3) bead of adhesive along the exterior side of the leg on the corner bracket. See Figure 41.

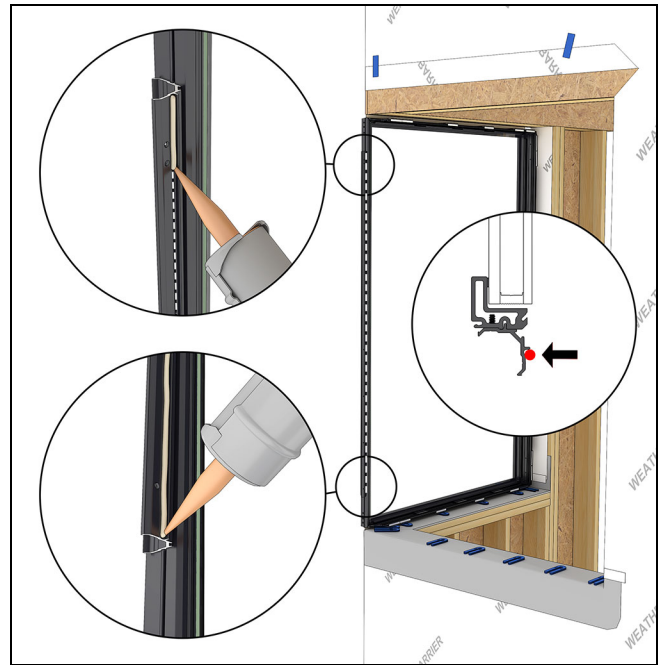


Figure 41

6. Set the right window into the RO and align the location feature on the bracket into the nail fin kerf of the other unit. See Figure 42.

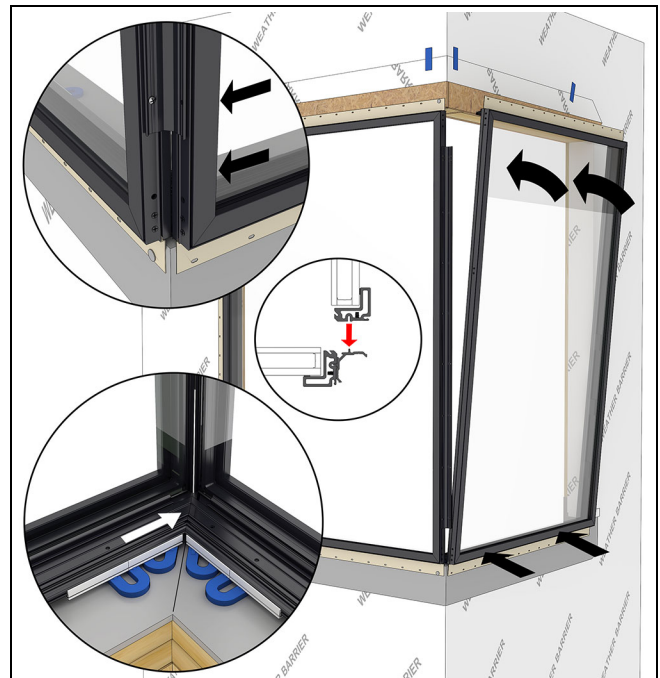


Figure 42

NOTE: Gap at the interior miter is normal as long as the two legs are positioned at 90 degrees to each other.

7. Check that the units are level to one another. Shim as necessary. See Figure 43.



Figure 43

8. Using the supplied #8 x 5/8" pan head self tapping screws, fasten the bracket to the right window. See Figure 44.

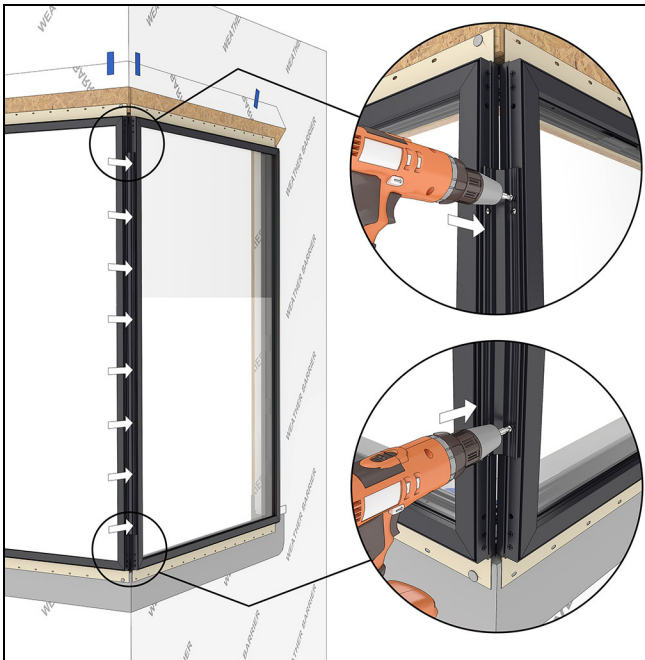


Figure 44

9. Temporarily fasten the unit into the RO by tacking the nailing fin near the top corner with a 2" roofing nail. See Figure 45.

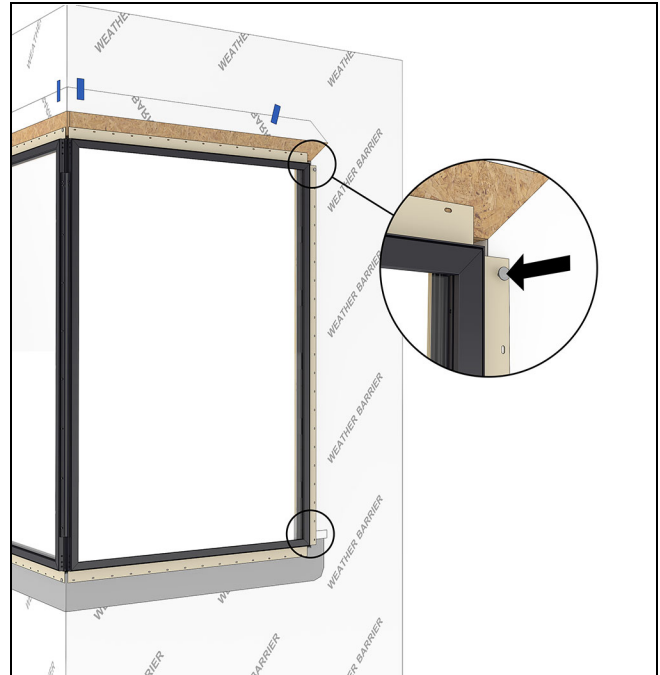


Figure 45

10. On the interior check that both the head jamb and sill are square. See Figure 46.



Figure 46

NOTE: Make adjustments as needed to make sure the frames are square to each other.

11. Insert backer rod along the jamb and head jamb against the back side of the nail fin.



Figure 47

12. Fasten the unit through the sill, jambs, and head jamb at all fastener locations using the #10 x 3" T20 Torx head installation screws provided. See Figure 48, Figure 49 and Figure 50.

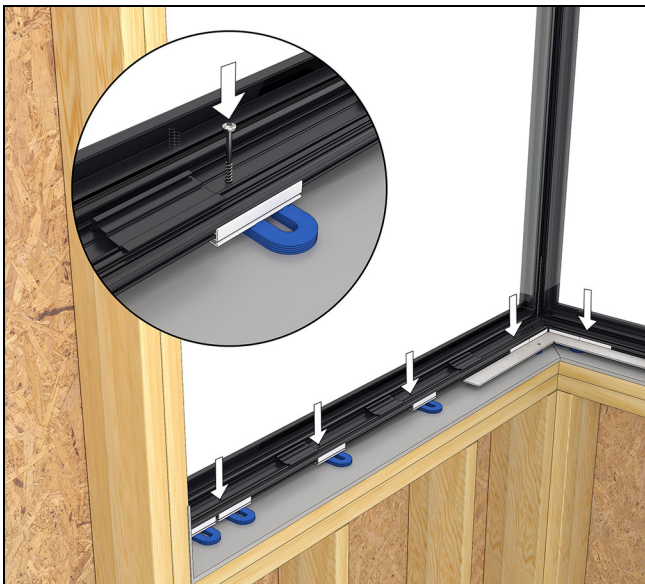


Figure 48

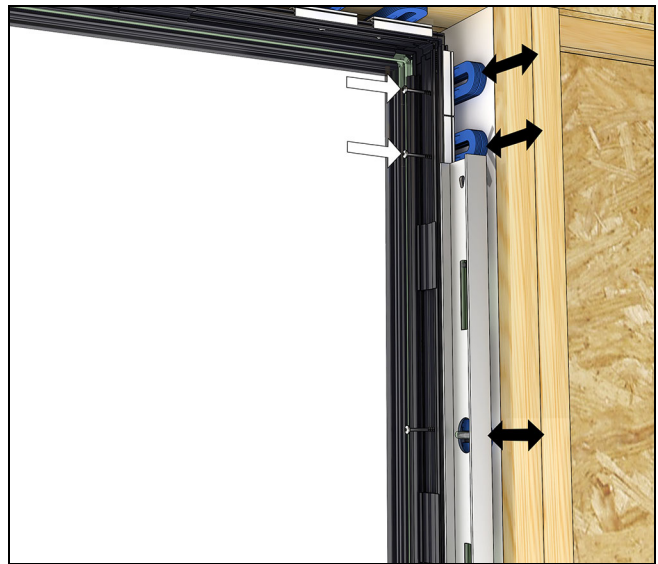


Figure 49



Figure 50

IMPORTANT

Do not add sealant in the next step until you are ready to install the interior miter clip.

13. Place a 1/4" bead of sealant along the entire length of the inside miter. **Avoid getting any sealant in the kerfs on either side of the joint.**



Figure 51

14. Install the interior miter clip. Place the clip about 1 1/2" off the bottom of the frame. See Figure 52.

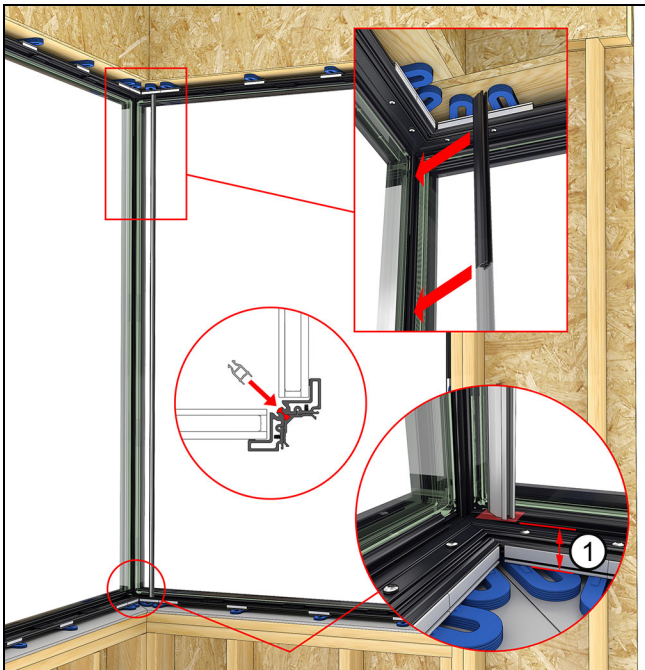


Figure 52

1	1 1/2" from bottom
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15. Place a bead of sealant along the top and bottom corner of the bracket and down the center of the mull. See Figure 53.

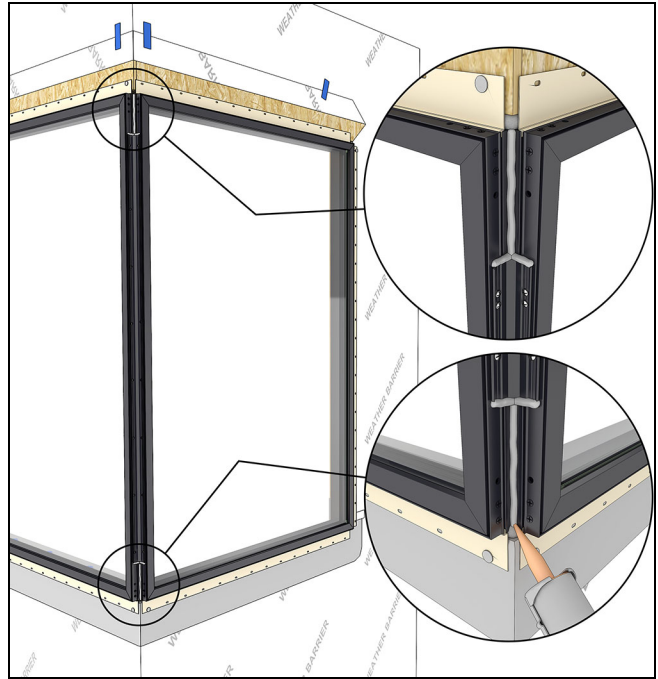


Figure 53

16. Knock out the bottom plug weeps on the exterior corner cover end cap with an awl or similar tool. See Figure 54.

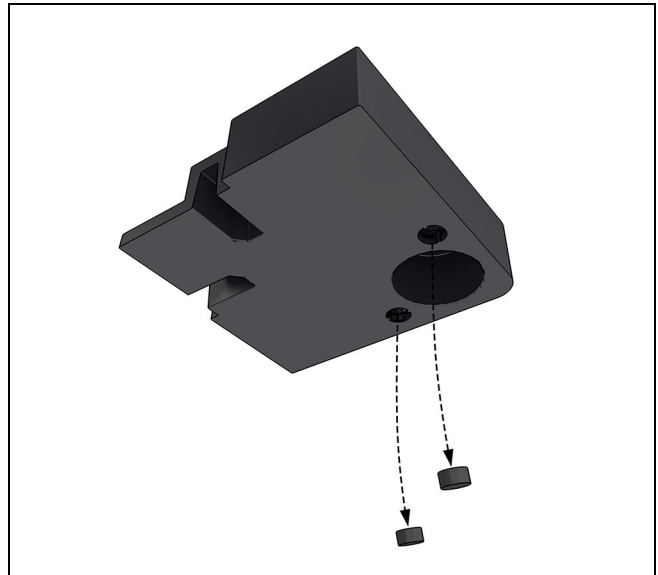


Figure 54

17. Apply a 1/16" bead of sealant at the top of the corner cap. Apply a small amount of sealant to the underside of the top end cap at the knockout holes. Fasten the end caps with #8 x 1" screws into the screw boss on the corner cap. See Figure 55.

IMPORTANT

Do not apply sealant to the sill end of the corner cap.

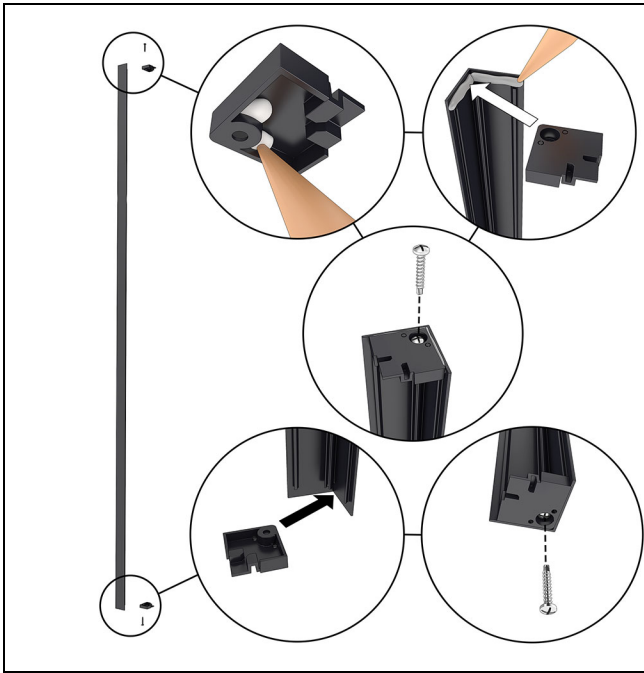


Figure 55 Install end caps on corner cover

18. Apply a bead of sealant at the top edges of the corner, then install the exterior corner cover. Seat with a rubber mallet. See Figure 56 and Figure 57.

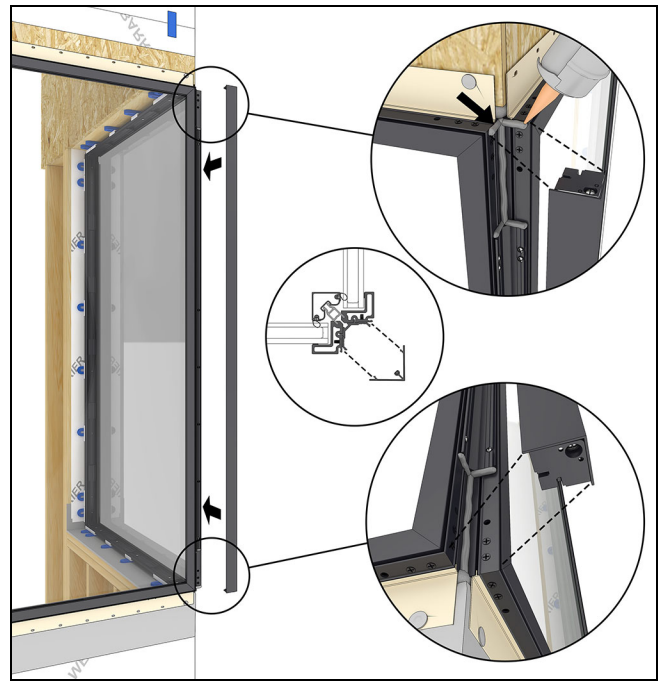


Figure 56

NOTE: The barbed leg on the interior side of the cover engages with the corner bracket. See inset on Figure 57.



Figure 57

Install the Interior Covers

As seen from the **exterior**, first install covers on the left side, then covers on the right side, then finally the center cover.

1. Install the left hand jamb cover. The left hand window covers are longer and have a clip already installed from the factory. See [Figure 61](#) and [Figure 58](#).



Figure 58 Left jamb cover

2. Install the left hand sill cover. Insert a sheet of paper or thin plastic to protect the jamb cover from getting damaged. See [Figure 59](#).



Figure 59 Left sill cover

3. Install the left hand head jamb cover. Insert a sheet of paper or thin plastic to protect the jamb cover from getting damaged. See [Figure 60](#).



Figure 60 Left head jamb cover

4. Install the right hand jamb cover. See [Figure 61](#).



Figure 61 Right hand jamb cover

5. Install the right hand sill cover. Insert a sheet of paper or thin plastic to protect the jamb cover and left hand sill cover from getting damaged. See Figure 62.

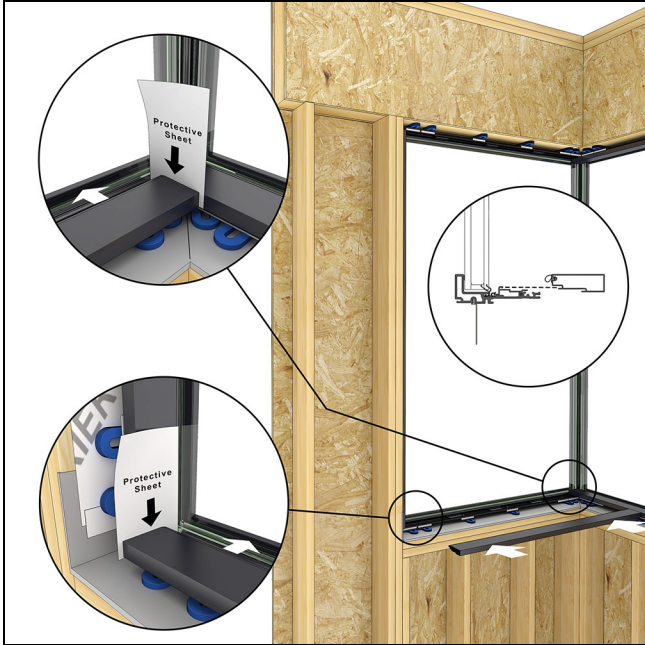


Figure 62 Right hand sill cover

6. Install the right hand head jamb covers. Insert a sheet of paper or thin plastic to protect the jamb cover and left hand head jamb cover from getting damaged. See Figure 63.



Figure 63 Right hand head jamb cover

7. Install the corner cover. Insert a sheet of paper or thin plastic to protect the head jamb and sill covers. See Figure 64.

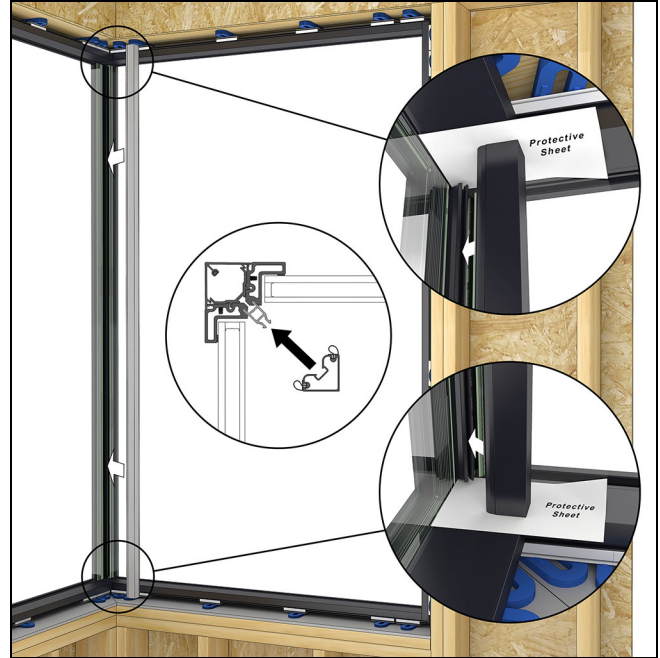


Figure 64 Corner cover

8. To facilitate ease of applying an interior air seal later, rotate horseshoe type shims around the fastener to provide clearance away from the interior edge of the frame, refer to Insulating and Sealing the Installation on page 35.



Figure 65 Rotate shims for interior seal

Flashing the Installation

IMPORTANT

Nailing fin is not designed to be a weatherproof flashing.

IMPORTANT

Follow the flashing tape manufacturer's recommended instructions for attaching to the building materials under the WRB. For example, priming wet or frozen wood, application temperature, etc.

1. Install an **optional** "high pressure skirt". Use flashing material or a strip of weather resistive barrier and attach it to the sill of the window with seam seal tape or flashing tape. See Figure 66.

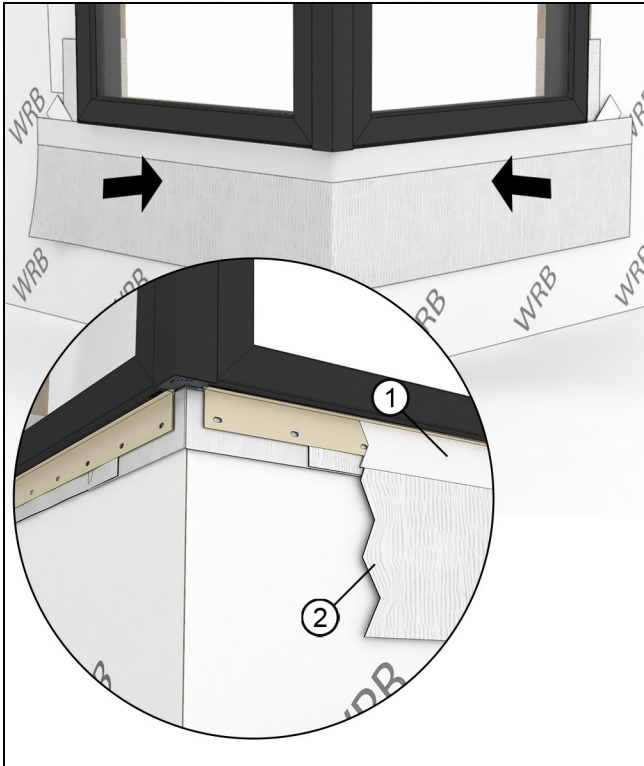


Figure 66 Inset of high pressure skirt cut away for illustrative purposes.

1	Seam seal tape or flashing tape attached to nail fin
2	WRB paper or flashing material (with backing left on)

IMPORTANT

When installing the high pressure skirt, do not plug the weep holes in the end cap.

2. Lap vertical strips of self adhered flashing membrane onto the unit or casing and out over the air barrier. Make small cuts at the head jamb to allow the membrane to fold back onto the sheathing. See Figure 67.

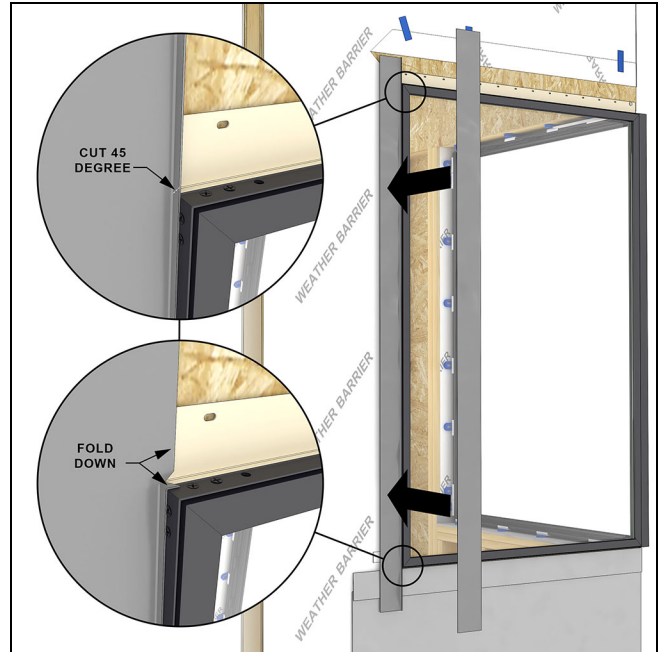


Figure 67

3. Apply pieces of adhesive flashing at the outside corners to cover the nailing fin and at the corner as shown. Lap the flashing onto the frame by at least 1/4". See Figure 75.

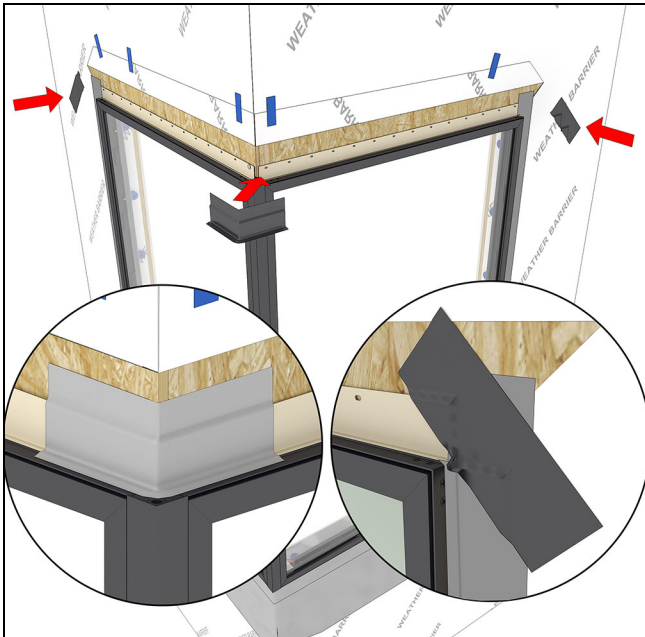


Figure 68

4. Make a one piece corner drip cap out of rigid flashing material. The flashing may be continuous from corner to each end or spliced over the middle of a window. Start by measuring and marking the location of the corner and transferring the measurement of the horizontal projection to both sides of the corner center line. See Figure 69.

NOTE: The ends of the drip cap should extend about 1/8" past edge of the window. An optional detail for downturned end dams is shown in step 9 on page 32. Size drip cap accordingly in both cases.

NOTE: The drip cap may be spliced. Splice toward the middle of the window and not at mulls.

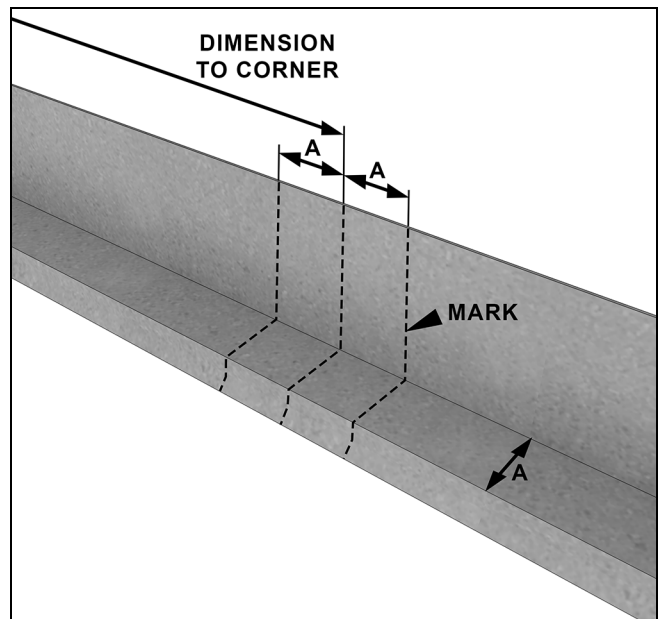


Figure 69

5. Cut the drip cap at the lines shown in Figure 70

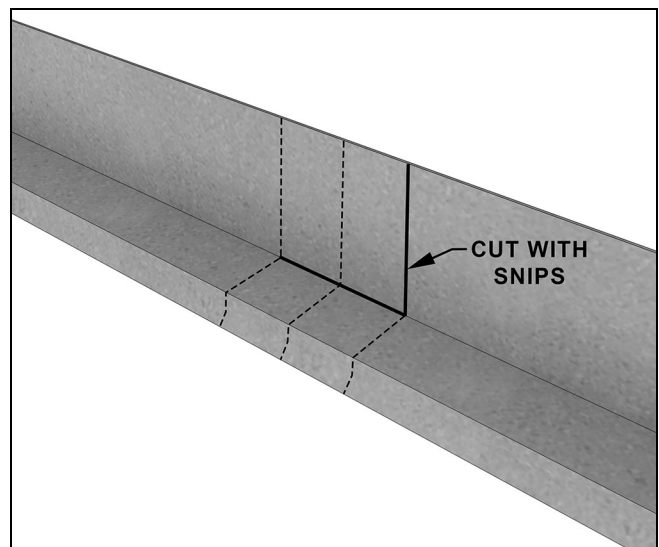


Figure 70

6. Cut out a 45 degree piece out of the horizontal surface as shown in See Figure 71. Cut the front edge of the drip, then fold the opposite vertical surface forward.

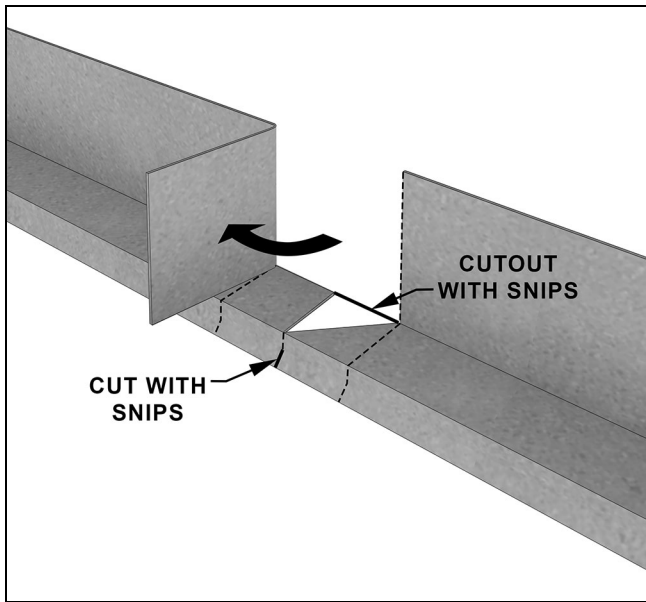


Figure 71

7. Bend the entire drip at the corner. The 45 cut should slide over the opposite side.

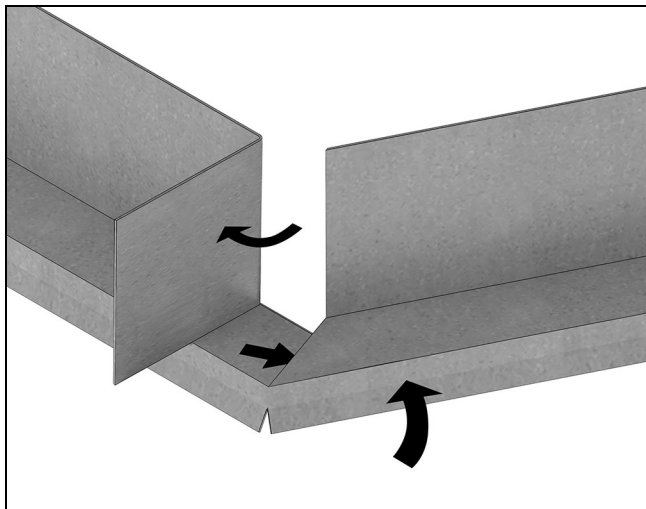


Figure 72

8. Bend the vertical leg over the opposite side. Add a bead of sealant behind overlapped pieces.

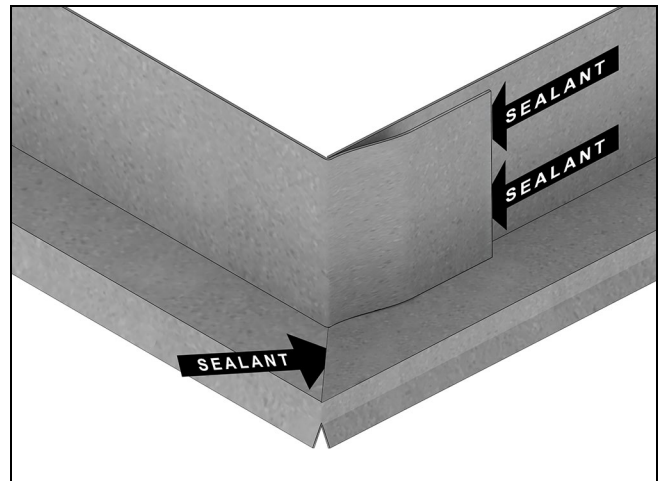


Figure 73

9. **Optional Step:** for extra protection, you may want to create down-turned end dams at the ends of the drip cap (you will have to size the drip cap accordingly to account for the extra length needed). Dry fit the drip cap to ensure proper placement and fit.

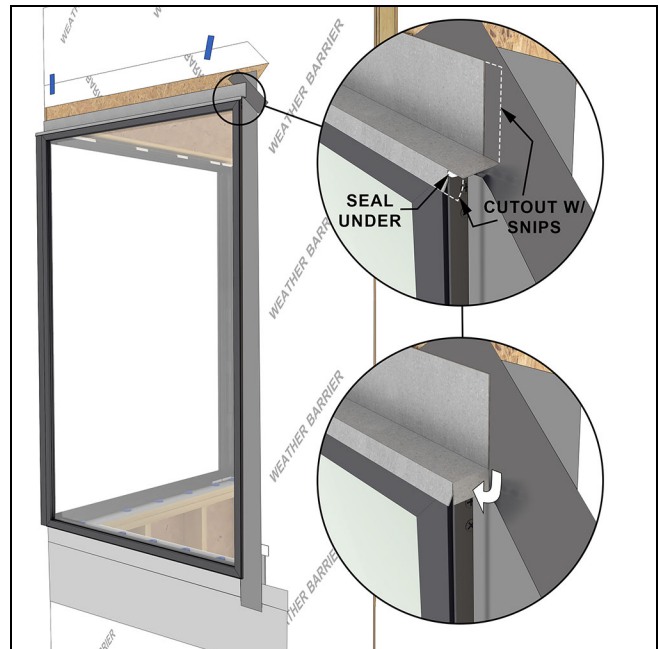


Figure 74 Drip cap shown dry fit before installation.

10. Apply a continuous bead of sealant to the vertical surface above the head jamb (located behind where the head jamb flashing will be applied). Apply another bead on top of the head jamb as shown. See Figure 75.

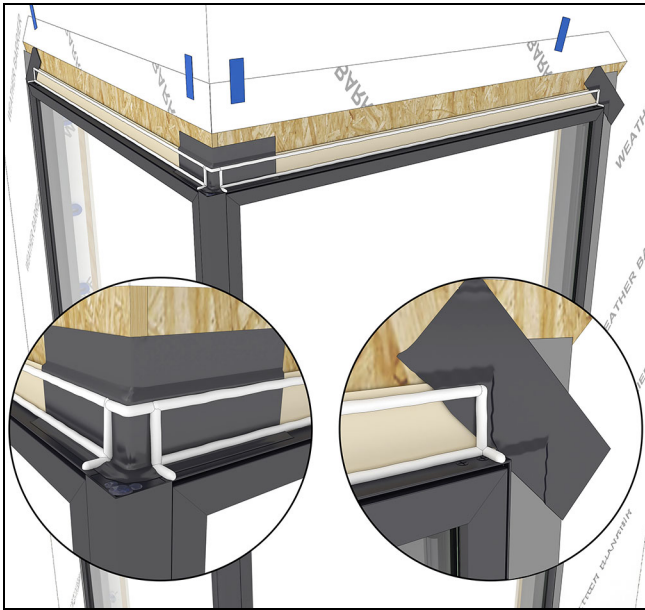


Figure 75

11. Install the drip cap. Fasten in place in as few spots as necessary to minimize penetrations.

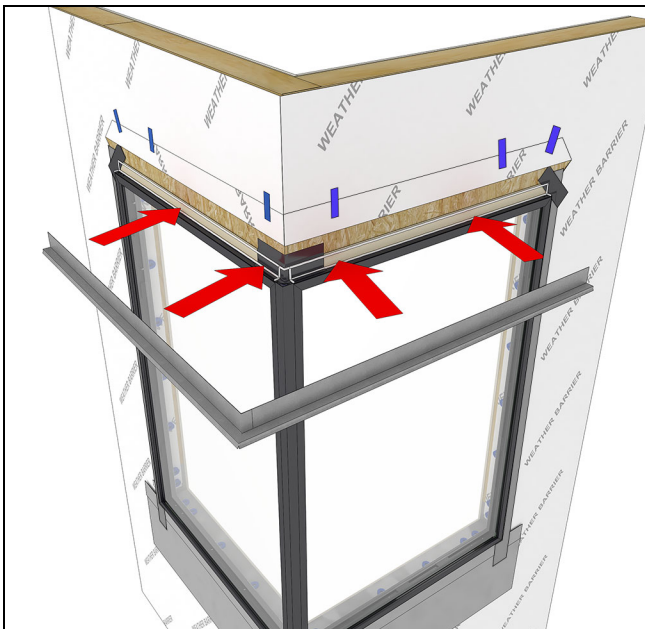


Figure 76

12. Install another layer of adhesive membrane lapping onto the head jamb of unit. Membrane flashing should extend and cover the flashing previously installed at the jambs. See Figure 77.

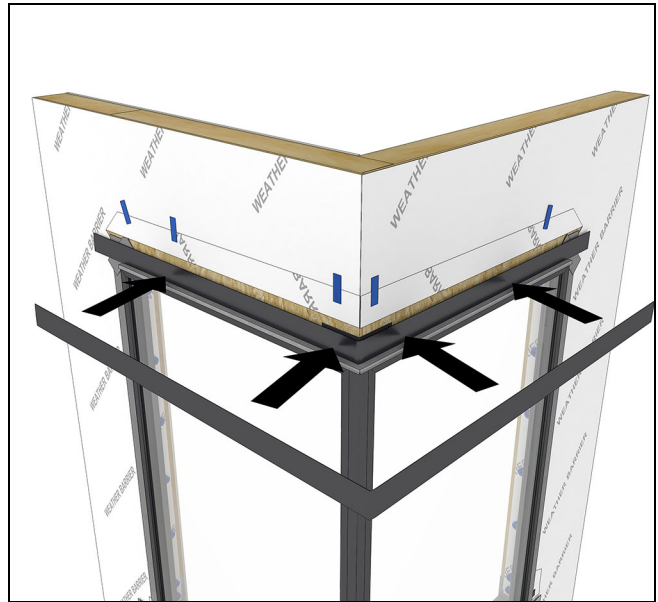


Figure 77

13. Fold the head jamb air barrier down over the flashing. Tape and seal the top corner. See Figure 78

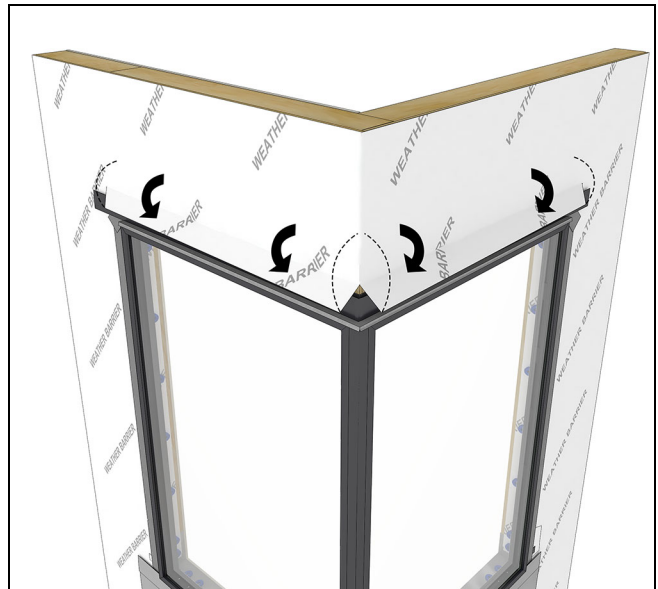


Figure 78

1	Seam seal tape
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14. Apply seam seal tape over the diagonal cut in the air barrier at the top corners. Make sure the tape laps onto the unit or casing. Tape and seal any seams and fasteners directly above the unit. See Figure 79.



Figure 79

Insulating and Sealing the Installation

1. Apply insulation in the rough opening, against the backer rod installed earlier. See Figure 80.
2. Apply a continuous bead of sealant around the interior perimeter. Seal all joints where drywall returns to the window frame. See Figure 80.

IMPORTANT

Do not install drywall over the interior frame cover. This will hinder the ability to remove the cover later. When applying sealant between the cover and drywall, use a paintable caulk.

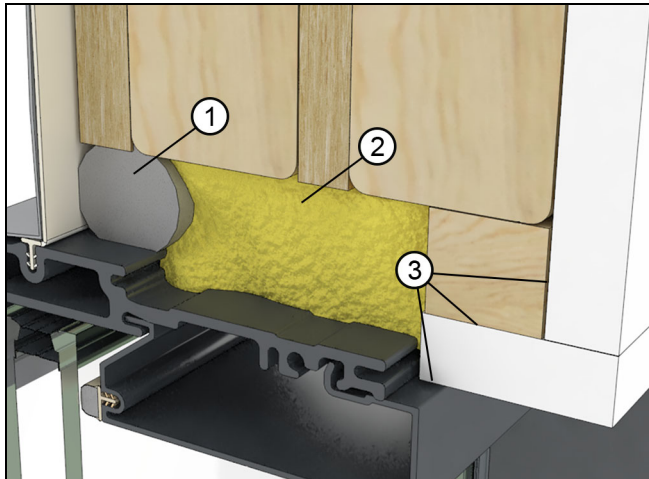


Figure 80

1	Exterior backer rod
2	Insulation
3	Sealant

3. At the exterior, once the exterior finish such as siding or brick veneer is installed, apply a bead of sealant between the finish and the frame exterior along the sides. Apply additional beads approximately 1"-2" (25-51) at the ends on top of the head jamb flashing. Use a backer rod when necessary. See Figure 81 and Figure 82.

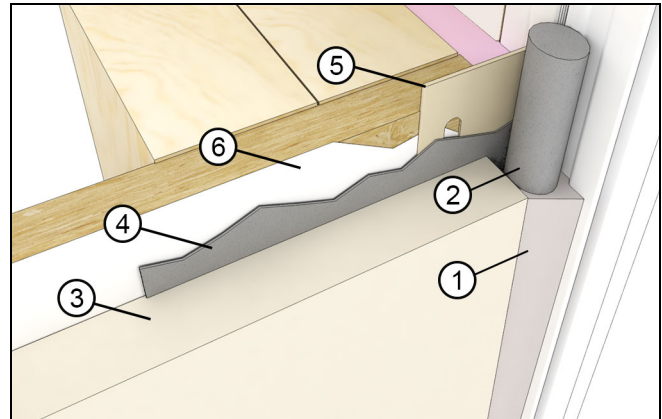


Figure 81

1	Sealant
2	Backer rod
3	Sheathing
4	Adhesive flashing
5	Nail fin
6	Weather resistive barrier

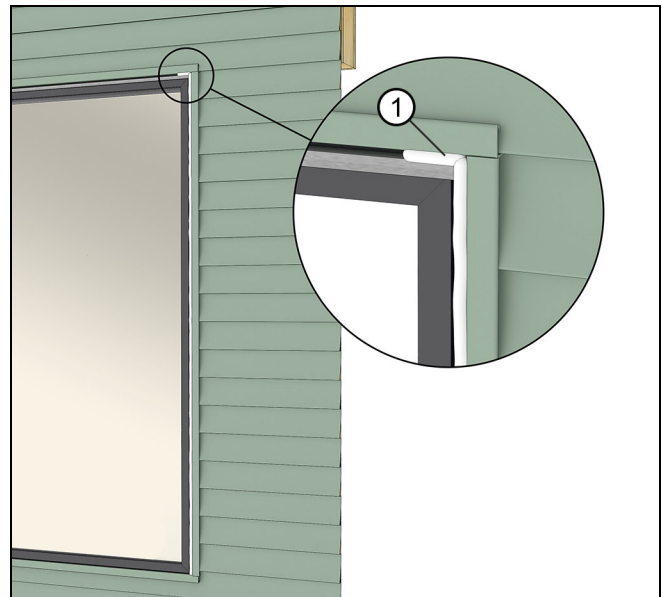


Figure 82

1	Sealant
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! CAUTION!

Perimeter sealant must be Grade NS Class 25 per ASTM C920 and compatible with the window product and the finished exterior(s) of the building. Using improper sealant could result in sealant failure causing air and water infiltration.

Technical Installation Specifications

See [Measuring Instructions](#) for rough opening details specified for proper installation and for the unit to meet the advertised design pressure (DP) rating.

- The panning must drain water to the exterior of the cladding OR the exterior surface of a concealed weather resistive barrier.

CAUTION!

Be aware that the use of sill pans and other barriers will decrease the rough opening height clearance. Adjust opening dimensions accordingly.

- The panning system used in these instructions is one component in a structure's overall water management system. It should be used in conjunction with an appropriate drainage plane compatible with the exterior cladding.
- Flashing materials must comply with ASTM E2112-01, section 5.13 and be compatible with all materials used in installation including panning systems, air barriers and building papers, sheathing, and the window unit.
- Properly flash and/or seal all windows at the exterior, perimeter.

IMPORTANT

Flashing material must not contain asphalt and must be compatible with flexible PVC (vinyl).

- Sealants used for installation must be Grade NS Class 25 per ASTM C920 and compatible with the building exterior, window exterior surface, and flashing/water management materials.
- Optional foams used for installation must be low expansion only. Foam and foam application must comply with ASTM E2112-01, SEC 5.9.2
- For units with flat casing install with installation brackets, structural masonry brackets, or jamb screws.
- Shims 4" - 6" (102-152) from each corner on jambs and head jambs. Install additional shims at 15" (381) on center and at all locking points. always shim at the check rails and meeting stiles.
- Do not use chemically treated products for shim material.

- Fasteners penetrating chemically treated lumber must be a minimum of 0.90 oz/ft² zinc hot dipped galvanized or stainless steel type 304 or 316.
- The window frame must not come into direct contact with chemically treated wood products.