

GRACE VYCOR[®]

Self-Adhered Flashing

Contractor's Guide

WINDOWS, DOORS AND DETAIL AREAS



Flash it right.[™]

**Install Grace Vycor[®]
Self-Adhered Flashing under,
and call-backs are over.**

FROM THE MAKERS OF GRACE Ice & Water Shield[®]

What Self-Adhered Flashings Does Grace Offer?



There are three key products offered by Grace to meet your flashing needs.



Grace Vycor® Plus Flexible Flashing

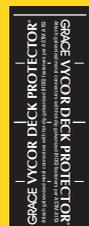
For Windows and Doors

- Available in 4, 6, 9 and 12 inch widths
- 25 mil thick
- **RIPCORD®** – featured in 6, 9 and 12 inch widths
Split Release on Demand, Grace's unique, patented technology for ease of installation
- Measurement markings at 6 and 12 inches
- Now ICBO approved (Report ER-6141)

Grace Vycor® V40 Self-Adhered Flashing

For Windows and Doors

- Convenient pre-cut sizes of 6, 9, 12, 18 and 36 inches
- 40 mil thick
- Now ICBO approved (Report ER-6141)



Grace Vycor Deck Protector®

For Decks

- Available in 4 and 9 inch widths

www.graceconstruction.com
www.graceathome.com

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Why Use Grace Flashings on Windows, Doors and Other Critical Detail Areas



Water damage is one of the most common causes of building repairs. Not only are such repairs costly, but in many cases damage is impossible to correct. Further, water intrusion in building structures creates a favorable environment for the development of other serious problems – such as mold, dry rot and decay. Proper water management is the essential first step in controlling mold, dry rot and decay.

The easiest way for water to get into structures is through windows, doors and other detail areas where no water protective building components are installed. To minimize the possibility of water entry, all critical detail areas should be flashed using the appropriate flashing materials and following the proper installation techniques.



Why Use Self-Adhered Flashing on Windows and Doors?

- To protect windows, doors and other critical areas from water intrusion
- To control water and moisture – the first step in controlling mold
- To comply with new codes and standards
- To ensure high quality work
- To minimize costly call-backs for repairs
- To lower energy costs by eliminating air infiltration and exfiltration

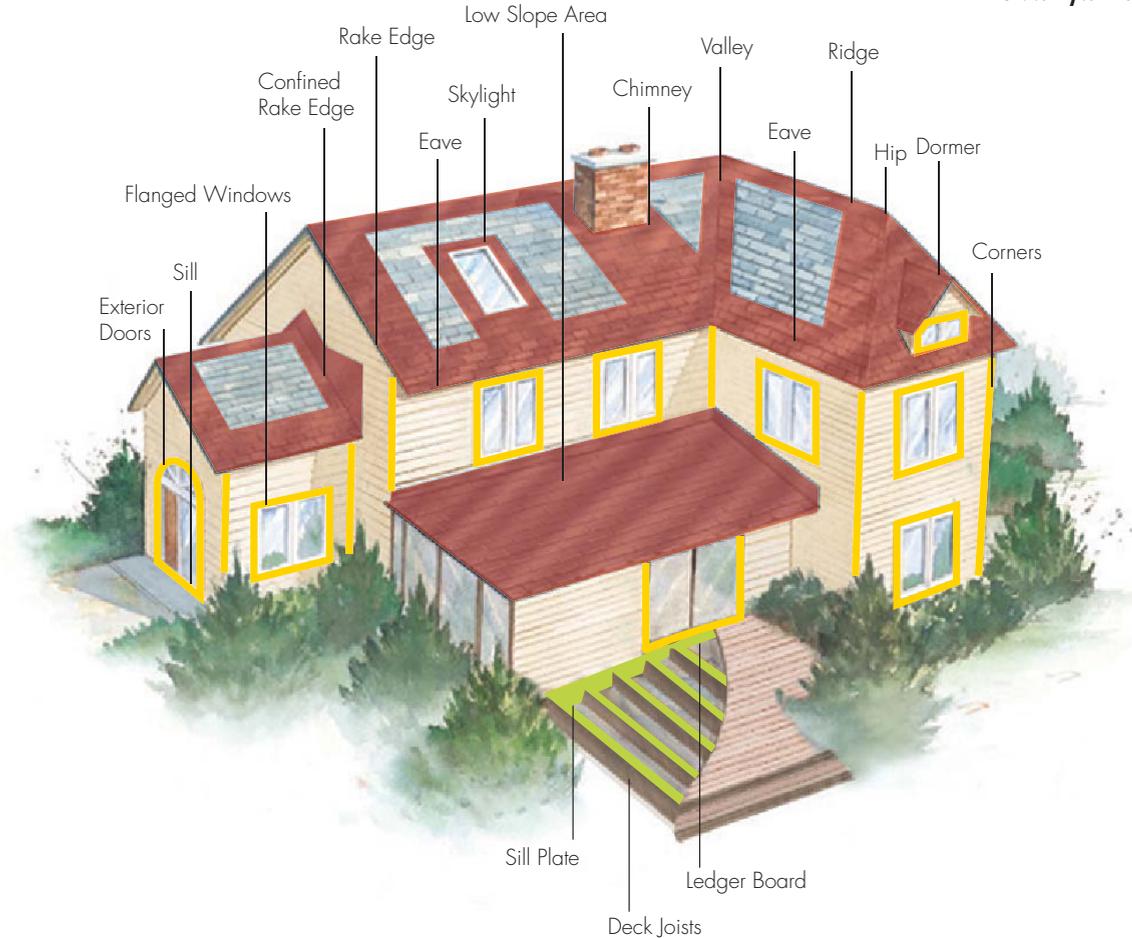
CRITICAL FLASHING AREAS

All of the shaded areas below can benefit from the application of Grace Vycor Self-Adhered Flashings (beneath the finished siding and decking) and Grace Underlayments (like Grace Ice & Water Shield) for the roof. Consider Grace Vycor Self-Adhered Flashings for your critical non-roof flashing details (windows, doors, decks).

n Grace Ice & Water Shield®

n Grace Vycor® Plus

n Grace Vycor Deck Protector®





Flash it right.™

WHY GRACE VYCOR PLUS?

There are a number of flashing materials available on the market today. The major difference between them is the level of waterproofing performance they provide. Grace Vycor Self-Adhered Flashings are comprised of

a high-density, polyethylene carrier film and a pressure-sensitive adhesive layer, both of which have unique performance advantages.

Grace Vycor Plus is the product of choice of well-respected construction professionals because of its superior waterproofing properties and ease of application.



What Are the Unique Performance Advantages of Grace Vycor Plus?

- Fast and easy to install – simply peel off the release paper and adhere the membrane



- **RIPCORD** – a Split Release on Demand feature, is a thin cord embedded in the rubberized asphalt, which allows for ease of installation and proper integration with house-wrap/building paper

- Exceptional adhesion capabilities and sealability to most common substrates
- Seals around fasteners ensuring no water infiltration at penetrations
- Forms watertight laps, even at the seams in the flashing
- Easy to use, with clear measurement markings on the membrane surface facilitating the installation procedure
- ICBO approved. Meets the performance requirements for adhesive flashing materials (Report ER-6141)
- Grace Vycor Plus is based on the same proven 25+ year technology as Grace Ice & Water Shield – the industry leader in roofing underlayments



PRE-INSTALLATION NOTES

- ASTM E2112-01* and AAMA 2400-02* recommend the use of a minimum 9 inch wide flashing membrane beyond the rough opening.
- Grace recommends a 12 inch wide flashing membrane for proper waterproofing of the window sill, providing a drainage plane in the rough opening.
- Remove any weather-resistive barrier from sill area prior to membrane installation for full adhesion of the membrane to the structural sill.
- Refer to “Table I – Flashing Lengths and Cut Formulas,” (page 8), to determine appropriate flashing lengths.

- After the membrane has been installed, roll firmly into place.
- Install membrane such that all laps shed water (following the shingle principle). Always work from the low point to the high point.
- Mechanically fasten the membrane at vertical terminations, as necessary.
- Weather-resistive barrier refers to housewrap, building paper/felt, Perm-A-Barrier®, etc.
- Windows/siding should be installed according to the standards set by the window/siding manufacturers and/or respective organizations.
- Apply Grace Vycor Self-Adhered Flashings only in fair weather when the air, surface and membrane temperatures are at a minimum of -4°C (25°F). For temperatures below 5°C (40°F), keep material warm until use. (Refer to Technical Letter 3.)

- Install directly onto a clean, dry and frost-free surface. Remove dust, dirt and debris. Surfaces shall be smooth and continuous without voids, damaged or unsupported areas.
- Priming is generally not required for most substrates provided they are clean and dry. However, on concrete, masonry and DensGlass Gold®, apply Perm-A-Barrier WB Primer at a coverage rate of 6-8 m²/L (250-350 ft²/gal). If adhesion is found to be marginal, also prime wood composition and gypsum sheathing with Perm-A-Barrier WB Primer at the same coverage rate.

**Standard Practice for Installations of Exterior Windows, Doors and Skylights.*

***Standard Practice for Installations of Windows with a Mounting Flange in Stud Frame Construction.*

Refer to our web sites for further product information.
www.graceconstruction.com and www.graceathome.com

TABLE I – Flashing Lengths and Cut Formulas

This table will assist in determining the pre-cut flashing lengths required to properly install window flashing (as per ASTM E2112-01).

Flashing Location	Flashing Lengths and Cut Formulas
Sill Flashing	Rough opening width + (2 x flashing width)
Jamb Flashing	Rough opening height + (2 x flashing width) – 1 inch
Head Flashing	Rough opening width + (2 x flashing width) + 2 inch

Example for 9 inch wide flashing

If rough opening width = 30 inches
 If rough opening height = 50 inches

For Sill: 30 inches + (2 x 9 inches) = 48 inches
For Jamb: 50 inches + (2 x 9 inches) – 1 inch = 67 inches
For Head: 30 inches + (2 x 9 inches) + 2 inches = 50 inches

WINDOW INSTALLATION

METHOD A: BEFORE WEATHER-RESISTIVE BARRIER

Based on the climatic conditions and the exposure of the window, there are a number of different flashing options. The method below is **only one** of the recommended options (see Detail VCRDET-102) which meets AAMA criteria. Refer to the subsequent details (VCRDET-100 to 106) for additional flashing options located on pages 27-33.

1



Step One:
Pre-cut the Grace Vycor Plus flashing using the measurement markings.



The length of the flashing should extend beyond the sill equal to the width of the jamb flashing (see Table I, page 8).

2



Step Two:
Before installing flashing on sill and jambs, locate the RIPCORD.



Split the release paper in half allowing for easy installation.

3



Step Three:
Rewind the pre-cut flashing. Position inside rough opening on the vertical jamb 9 inches up on each side. Apply to window sill, removing half the release paper and exposing the adhesive.



Roll firmly into position.



Make vertical relief cuts starting from corner of window sill upward. Roll firmly into place as necessary.
Note: Do not remove the release paper on the bottom half of the flashing until future tie-in with the weather-resistive barrier.

Install window as per manufacturer's recommendation. If sealant is used, ensure all excess sealant is removed from nailing flange and surrounding area to provide a smooth continuous substrate. (ASTM does not require a sealant on top of window flange when using self-adhered flashing.)

Flashing Application Instructions for Windows

WINDOW INSTALLATION: METHOD A

BEFORE WEATHER-RESISTIVE BARRIER (continued)

4



Step Four:

Apply the pre-cut jamb flashing onto the nailing flange. Position above the head flange.



Unroll flashing and expose adhesive by removing the release paper. Roll firmly into place as necessary.



Repeat on the other side.

5



Step Five:

Install the pre-cut flashing over window head flange by removing release paper. Roll firmly into place. Mechanically fasten head flashing at top outermost corners, as necessary.

6



Step Six:

Install weather-resistant barrier as per manufacturer's recommendations. Position weather-resistant barrier under sill flashing.

Remove remaining half of the release paper from the sill flashing. Adhere to weather-resistant barrier to ensure a water shedding tie-in.

WINDOW INSTALLATION

METHOD B: AFTER WEATHER-RESISTIVE BARRIER

In this option (see Detail VCRDET-100) the weather-resistive barrier has already been installed before the window and flashing.

1



Step One:

Cut and remove weather-resistive barrier from rough opening of window sill. Secure, if necessary, to face of sill.



Score and fold weather-resistive barrier above header. Temporarily secure to allow for flashing installation.

2



Step Two:

Pre-cut the Grace Vycor Plus flashing using the measurement markings.



Use caution when cutting the membrane.

3



Step Three:

Before installing sill flashing, locate the RIPCORD.



Split the release paper in half allowing for easy installation.

Flashing Application Instructions for Windows

WINDOW INSTALLATION: METHOD B

AFTER WEATHER-RESISTIVE BARRIER (continued)

4



Step Four:
Reroll the pre-cut flashing. Position inside of rough opening on the vertical jamb.



Apply flashing to window sill by removing half of the release paper and exposing the adhesive. Roll firmly into position.



Make vertical relief cuts starting from corner of window sill upward. Roll firmly into place as necessary.

Note: Do not extend sill flashing beyond outside edges of jamb flashings.

Install window as per manufacturer's recommendation. If sealant is used, ensure all excess sealant is removed from nailing flange and surrounding area to provide a smooth continuous substrate.

5



Step Five:
Apply the pre-cut flashing onto the nailing flange after window has been installed. Position jamb flashing above the head flange.
Note: Do not remove the release paper on the other half of the flashing if future tie-in with top of vinyl siding is required by others (see Detail VCRDET-107).



Unroll flashing by removing the release paper exposing the adhesive. Roll firmly into place as necessary.



Repeat on other side.

Flashing Application Instructions for Windows

WINDOW INSTALLATION: METHOD B

AFTER WEATHER-RESISTIVE BARRIER (continued)

6

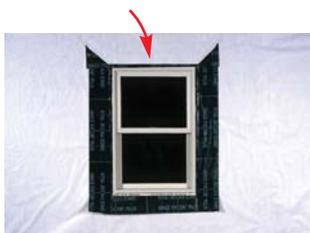


Step Six:
Install pre-cut flashing over the window head flange by removing release paper, exposing the adhesive. Roll firmly into place.



Mechanically fasten head flashing at top outermost corners, as necessary.

7



Step Seven:
Remove temporary securement of weather-resistive barrier above header. Fold over head flashing. Seal with weather-resistive barrier seam tape.

Install siding and flashing below window as per siding manufacturer's or Vinyl Siding Institute recommendations.

8



Step Eight:
Flashing should be long enough to direct water over the nailing flange of the last course of siding (see Detail VCRDET-107).



Trim excess flashing that hangs below the nailing flange.



Discard in appropriate manner.
Note: These same steps can be used for other accessory openings (i.e. under doors, electrical outlets).

DOOR INSTALLATION

Like flashing windows, **Grace Vycor Plus** is also the product of choice for flashing around doors.

1



Step One:
Using the measurement markings, pre-cut a 12 inch piece of Grace Vycor Plus.



Install onto ledger board.

2



Step Two:
Install the weather-resistant barrier as per manufacturer's recommendation. Cut out the weather-resistant barrier from rough door opening. Remove also from inside bottom of sill.

3



Step Three:
Install corner patch underneath the weather-resistant barrier as per Detail VCRDET-201.



Repeat on other side.
Note: Bowtie corner patch option is shown in photo.

For door installation detail refer to page 35 (VCRDET-200).

For deck installation detail refer to page 37 (Detail VCRDET-300). For complete deck installation guidelines consult the deck section of this book.



PRECAUTIONS AND LIMITATIONS

Grace Vycor Self-Adhered Flashings are designed for critical non-roof flashing details. **DO NOT** install on the roof.

Grace Vycor Plus and Grace Vycor V40 are slippery – **DO NOT** walk on their surface. The surface of Grace Vycor Deck Protector, although treated with a skid-resistant coating, could also be slippery. Use special care and take all necessary fall protection precautions when walking on the membrane.

Release liners are slippery. Remove from work area immediately after membrane application.

Do not leave Grace Vycor Self-Adhered Flashings permanently exposed to direct sunlight. Maximum recommended exposure time is 30 days.

Due to its slight asphaltic odor, **DO NOT** apply this product where the membrane is exposed to interior living space.

Grace Vycor Self-Adhered Flashings should not be used in hot desert areas in the Southwestern United States.

Grace Vycor Self-Adhered Flashings are not compatible with plasticized polyvinyl chloride (flexible PVC). Certain metal window applications with integral nail fin may have specific limitations. Contact window manufacturer for specific application instructions required when using a bituminous-based flashing.

Some solvents in certain caulking may be incompatible with the adhesive in Grace Vycor Self-Adhered Flashings. Refer to Technical Letter 1, “Chemical Compatibility with Other Building Materials and Sealants,” page 51.

If fasteners are removed, leaving holes in the membrane, it must be patched with another piece of membrane.

Consistent with good construction practices, install the membrane such that all laps shed water (following the shingle principle). The top membrane layer should go over the bottom layer. Always work from the low point to the high point.

Apply Grace Vycor Self-Adhered Flashings only in fair weather when the air, surface and membrane are at temperatures of -4°C (25°F) or higher.

SAFETY, STORAGE AND HANDLING

Grace Vycor Self-Adhered Flashing and accessory products must be handled properly. Read all product labels and Material Safety Data Sheets (MSDS) – see our web site at www.graceconstruction.com for proper handling and disposal. Deliver all materials in manufacturer's unopened packages and store all materials under cover. Do not double stack palletized material.

WHAT THE PROS SAY



John Kurowski, Owner
Kurowski Development

"When it comes to installing flashing tapes around windows and doors, it is important to use quality materials installed properly. Grace's instructional CD clearly supports the old saying 'a picture is worth a thousand words.' That kind of field support helps me instruct our trade contractors better, and helps me be a better builder. So, when it comes to door and window flashing tapes, flash it, flash it right, wrap it tight, with Grace Vycor Plus flashing tapes."



Bill Fox, Senior VP of Construction
Davis Homes, LLC

"It's critical in constructing homes in the Midwest that the integrity of the building envelope is preserved and protected against water infiltration. Installing Grace Vycor Plus Self-Adhered Flashings at all vulnerable points, including around doors and windows, has made our job a lot easier at Davis – no more costly call-backs due to unwanted water and moisture damage. Thanks to Grace, we now have a product with ultimate sealing performance."



Jim Standish, Managing Director
The Finishing Touch Inc.

"Grace Vycor Plus is the best self-adhered flashing tape material on the market. We use Grace Vycor Plus Tape for all of our flashing needs. Using Grace Vycor Plus Tape eliminates your call-back problems."



Bill Gallagher, Owner
The Boston Building Company

"Grace Vycor Plus is the best window and door flashing membrane in the market. Why? It's the only material that sticks at colder temperatures and it is bullet proof against wind-driven rain and snow. With Grace Vycor Plus you can rest assure there won't be any water intrusion."

WHAT THE PROS SAY



Joe Lstiburek, Ph.D, P. Eng.
Principal, *Building Science Corp.*

“Mold problems cannot exist without water problems. No water problems, no mold problems. The sooner the water is directed out of the building structure, the better. The best expression of this concept is a flashing. Flashings are the most underrated building enclosure component and arguably the most important.

Window and door components within the opening can leak, especially if installed improperly or if they are of poor quality. Even the best made windows and doors can leak as they age. Therefore, all windows and doors, as well as all other critical detail areas, have to be properly flashed. Self-adhered flashing membranes, such as Grace Vycor Plus Tapes, are the first line of defense against water damage of building structures.”



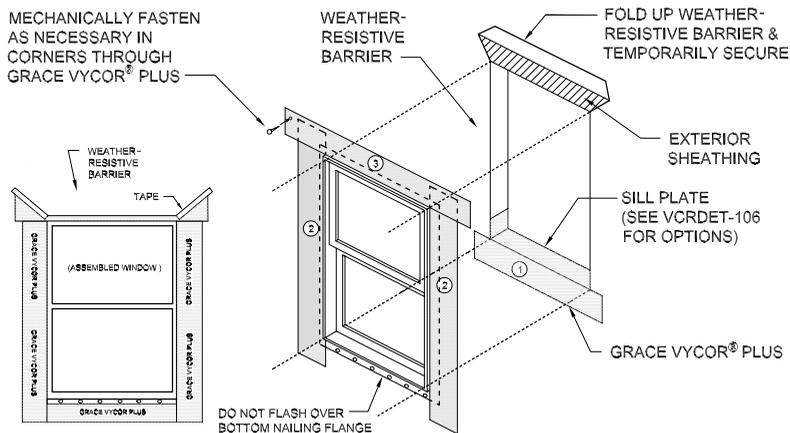
Barry G. Hardman, Chairman
ASTM Fenestration Installation Task Group (developed ASTM E 2112 - Standard Practice for Installation of Exterior Windows, Doors, and Skylights), National Institute of Building Science, Vice Chairman, BETEC National Building Science Corp., Partner

“Without question, the most important materials that can be used in modern home construction are properly selected housewraps/membranes that, when used together with a flashing system, can stop damage that occurs from liquid water breaching the claddings. Installation methods of these materials are critical, as improper installation can render the materials useless.

The key is to have one building envelope, integrated and protecting the structure from water damage, from the roof to below the foundations.”

Flanged Window VCRDET-100

Flashing Installation After Weather-Resistive Barrier



Head flashing tie-in instructions:

1. Cut, fold up and temporarily secure weather-resistive barrier above header to allow for flashing installation
2. Install Grace Vycor® Plus head flashing under weather-resistive barrier
3. Fold weather-resistive barrier back over head flashing and seal with tape

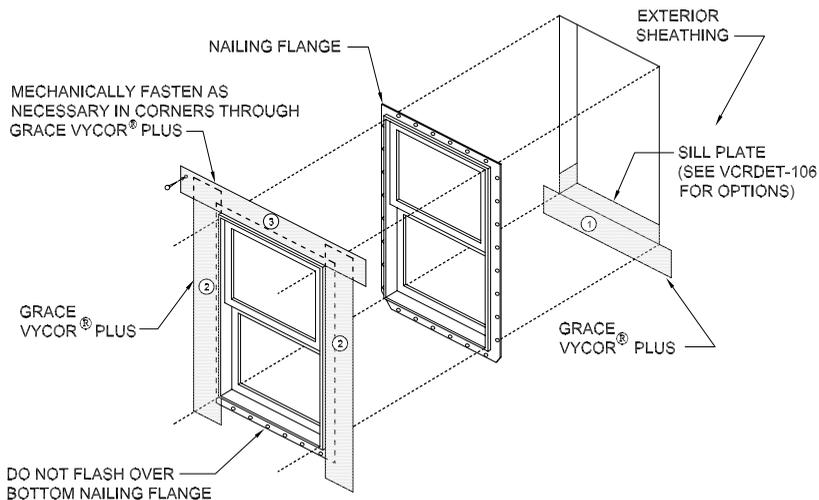
Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor Plus for ease of installation
3. Remove weather-resistive barrier from top of window sill plate
4. Install Grace Vycor Plus in order shown by numbers
5. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
6. Detail also relevant for Grace Vycor V40



Flanged Window VCRDET-101

Option 1 - Low Exposure

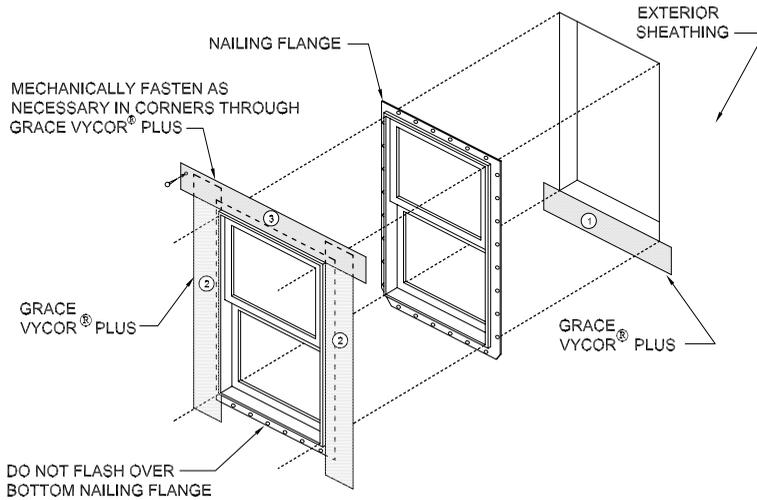


Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order as shown by numbers
4. If applicable, leave release paper on lower half of sill flashing until future tie-in
5. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
6. Detail also relevant for Grace Vycor V40

Flanged Window VCRDET-102

Option 2 - AAMA Recommendation

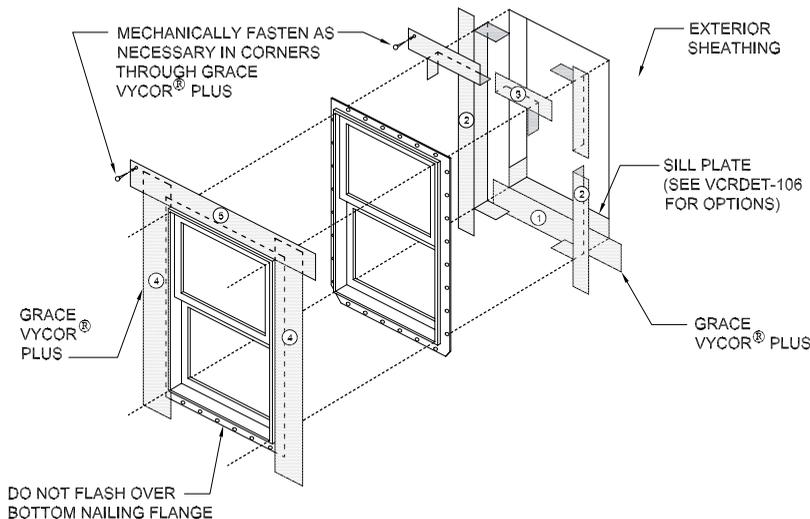


Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order shown by numbers
4. If applicable, leave release paper on lower half of sill flashing until future tie-in
5. Install Grace Vycor Plus and weather-resistant barrier to form water-shedding laps
6. Detail also relevant for Grace Vycor V40

Flanged Window VCRDET-103

Option 3 - Severe Exposure

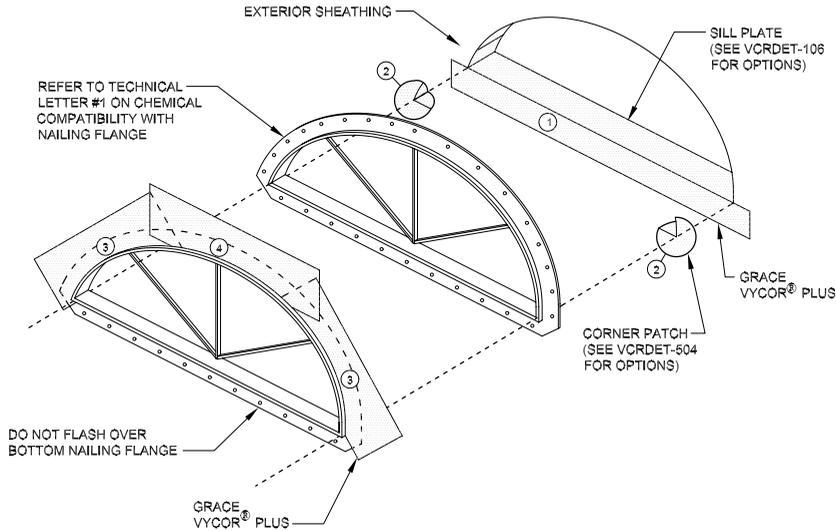


Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order shown by numbers
4. If applicable, leave release paper on lower half of sill flashing until future tie-in
5. Install Grace Vycor Plus and weather-resistant barrier to form water-shedding laps
6. Detail also relevant for Grace Vycor V40

Half Round Window VCRDET-104

Option 1 - Low to Moderate Exposure

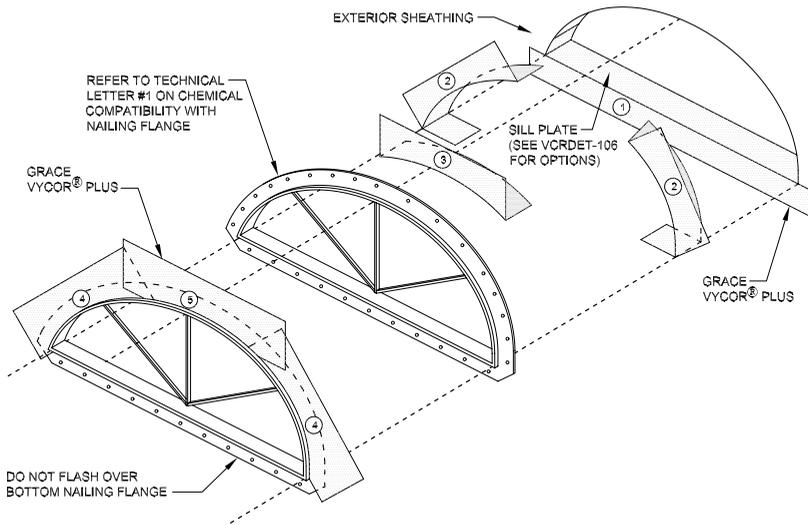


Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order as shown by numbers
4. Mechanically fasten as necessary
5. If applicable, leave release paper on lower half of sill flashing until future tie-in
6. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
7. Detail also relevant for Grace Vycor V40

Half Round Window VCRDET-105

Option 2 - Severe Exposure

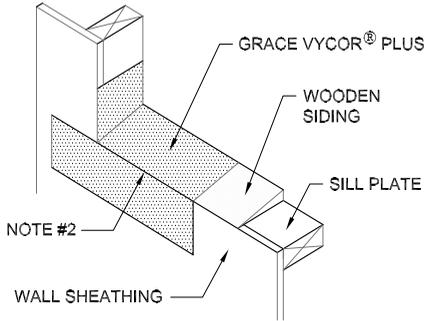


Notes:

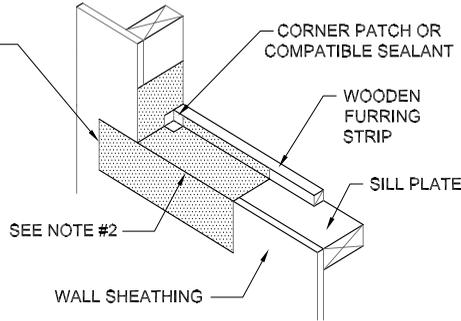
1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order shown by numbers
4. Mechanically fasten as necessary
5. If applicable, leave release paper on lower half of sill flashing until future tie-in
6. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
7. Detail also relevant for Grace Vycor V40

Sill Plate Options VCRDET-106

OPTION - A



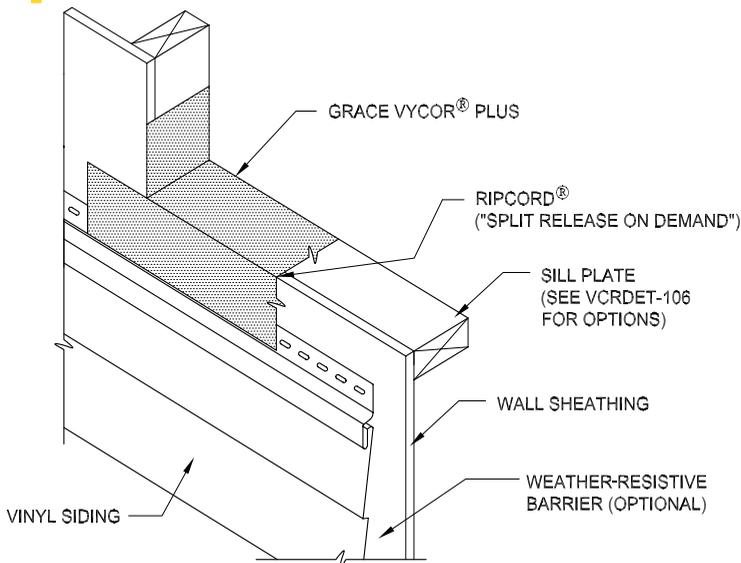
OPTION - B



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Remove weather-resistive barrier from top of window sill plate
4. Install sill flashing as shown at left
5. Install Grace Vycor Plus around remaining window unit per Grace Window Details (VCRDET-100 to 105)
6. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. Option C: Install wooden furring strip on top of wooden siding prior to Grace Vycor Plus
6. Detail also relevant for Grace Vycor V40

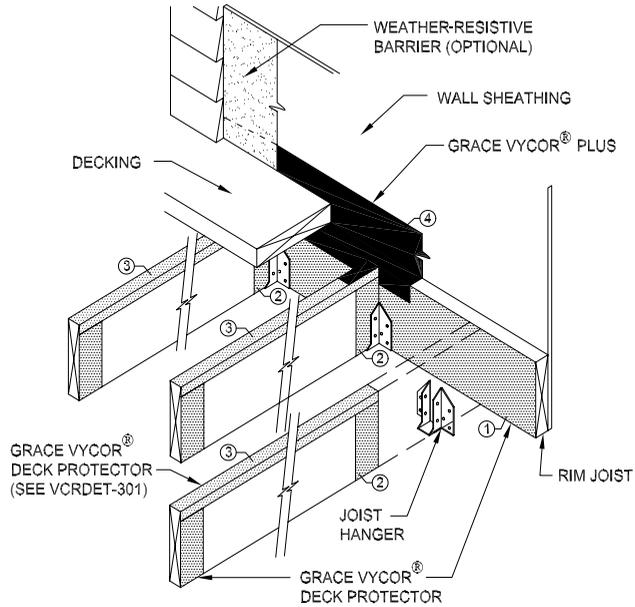
Tie-in with Vinyl Siding at Window Sill VCRDET-107



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
4. Remove weather-resistive barrier from top of window sill plate
5. Leave release paper on lower half of Grace Vycor Plus Sill Flashing until future tie-in
6. Extend Grace Vycor Plus over nailing flange of the last complete course of siding panel and trim Grace Vycor Plus to protect from permanent exposure to UV
7. Install Grace Vycor Plus around remaining window unit per Grace Window Details (VCRDET-100 to 105)
8. Detail also relevant for Grace Vycor V40
9. Leave release paper on or other bond breaker between Grace Vycor Plus and vinyl

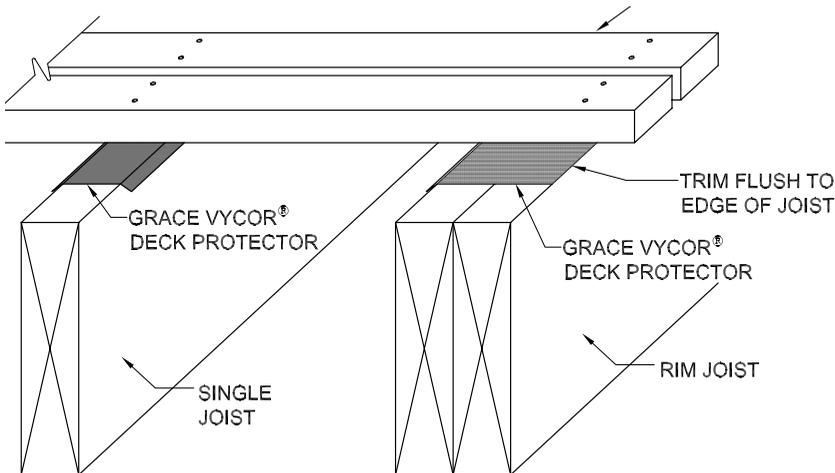
Joist Hanger VCRDET-300



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus and weather-resistant barrier to form water-shedding laps
4. Ensure that the Grace Vycor Flashings are not permanently exposed to UV
5. Detail also relevant for Grace Vycor V40

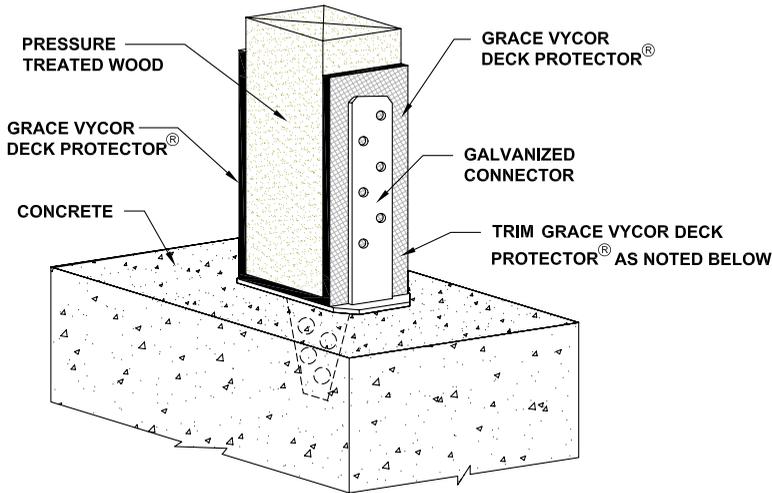
Top of Deck Joist VCRDET-301



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. All exposed (uncovered) flashing along most outer edge should be trimmed flush with joist to prevent damage from UV

Column/Post Base VCRDET-302

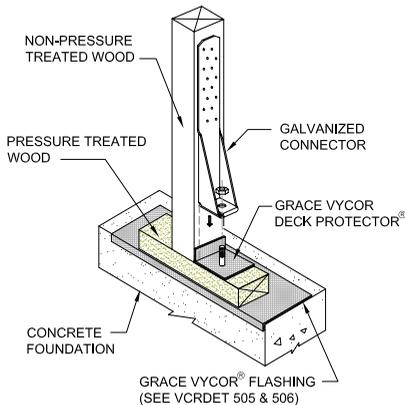


Notes:

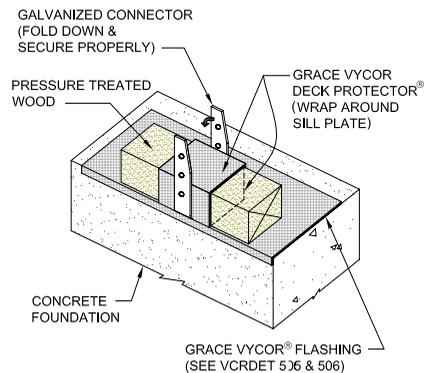
1. Visit www.graceconstruction.com for the most current details, installation video and product literature for further information
2. Apply Grace Vycor Deck Protector® onto pressure treated wood wherever galvanized connectors would come into contact with pressure treated wood
3. Fasten galvanized connector per manufacturer guidelines and use appropriate hot-dipped galvanized fasteners per ASTM A153
4. All exposed Grace Vycor Deck Protector should be trimmed flush to galvanized connector to prevent UV exposure
5. Grace Vycor Deck Protector does not need to be trimmed if covered with decorative trim or other appropriate material

Tension Tie-Downs/Sill Plate Connectors VCRDET-303

TENSION TIE-DOWNS:



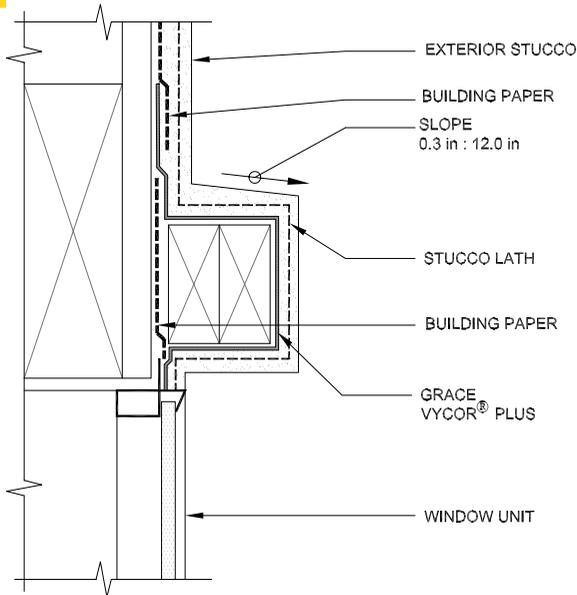
SILL PLATE CONNECTORS:



Notes:

1. Visit www.graceconstruction.com for the most current details, installation video and product literature for further information
2. Apply Grace Vycor Deck Protector® onto pressure treated wood wherever galvanized connectors would come into contact with pressure treated wood
3. Fasten galvanized connector per manufacturer guidelines and use appropriate hot-dipped galvanized fasteners per ASTM A153
4. If Grace Vycor Deck Protector is to be exposed to UV, it should be trimmed flush to galvanized connector to prevent UV exposure

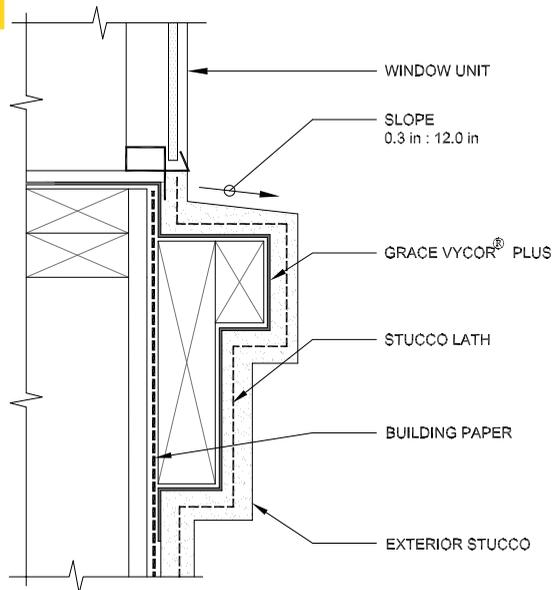
Stucco Window Head VCRDET-400



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation.
3. Grace Vycor Plus can be substituted for building paper
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. Detail also relevant for Grace Vycor V40

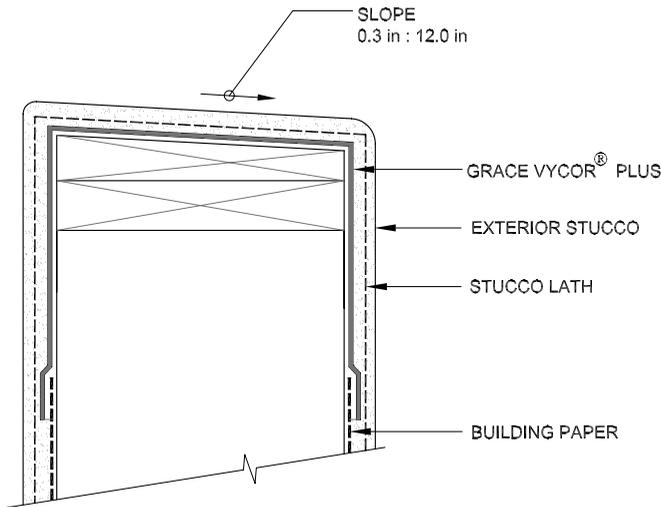
Stucco Window Sill VCRDET-401



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Grace Vycor Plus can be substituted for building paper
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. Detail also relevant for Grace Vycor V40

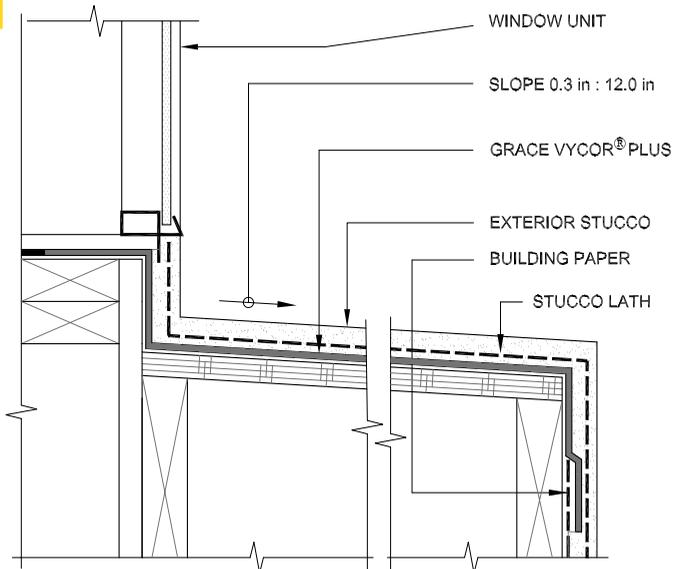
Stucco Parapet Wall VCRDET-402



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Grace Vycor Plus can be substituted for building paper
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. Detail also relevant for Grace Vycor V40

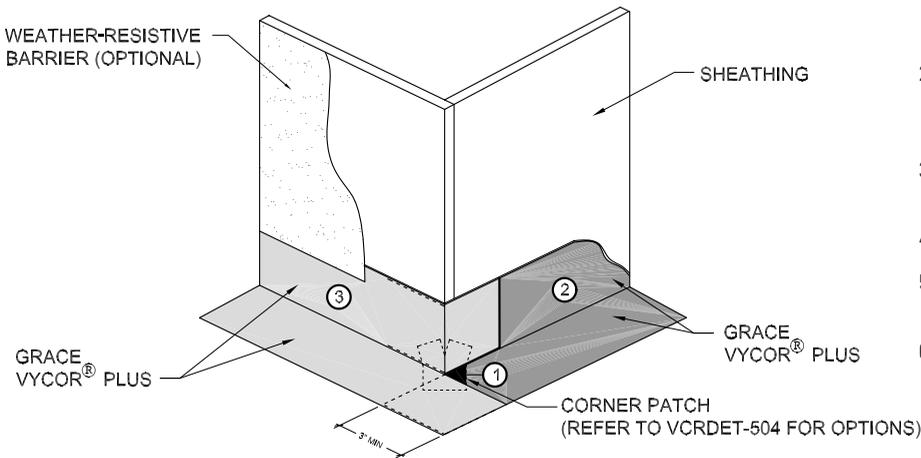
Stucco Sill / Potshelf / Chimney Shoulder VCRDET-403



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Grace Vycor Plus can be substituted for building paper
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. Detail also relevant for Grace Vycor V40

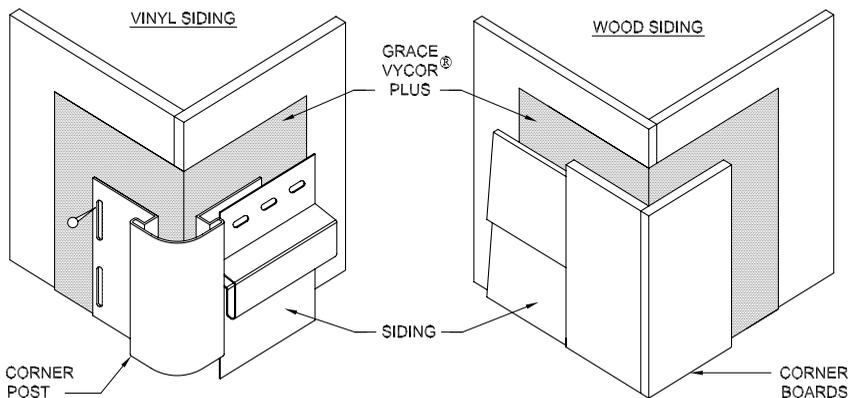
Outside Corner VCRDET-500



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order as shown by numbers
4. Mechanically fasten as necessary
5. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
6. Detail also relevant for Grace Vycor V40

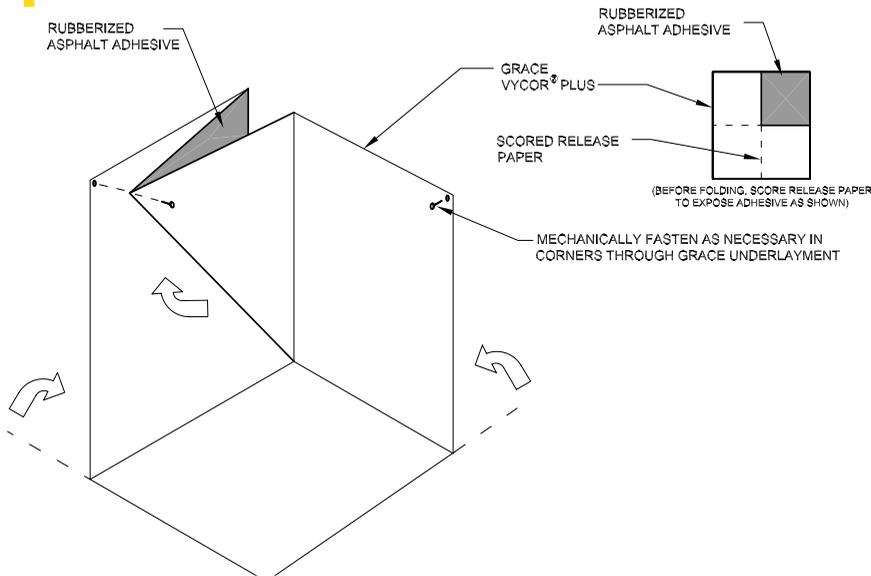
Wall-to-Wall Outside Corner VCRDET-501



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
4. Extend Grace Vycor Plus beyond joint between siding and corner post/boards
5. Install Grace Vycor Plus on outside corner for the height of the wall
6. Detail also relevant for Grace Vycor V40

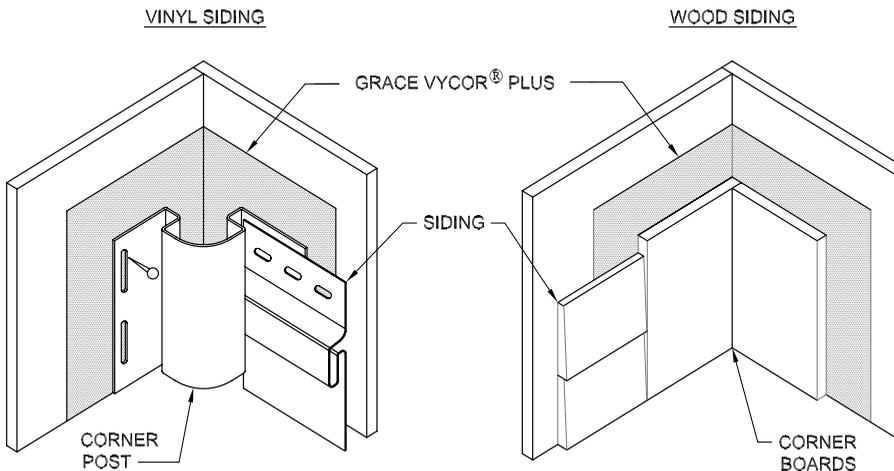
Inside Corner VCRDET-502



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER[®] (Split Release on Demand) can be removed from Grace Vycor[®] Plus for ease of installation
3. Use a square piece of membrane (3 inches x 3 inches minimum) for inside corner
4. Use RIPCORDER (Split Release on Demand) for ease of installation and to minimize scoring release paper
5. Fold as shown by arrows
6. Angle of corner may vary, adjust folding of the membrane accordingly to fit tightly to corner
7. Install Grace Vycor Plus and weather-resistant barrier to form water-shedding laps
8. Detail also relevant for Grace Vycor V40

Wall-to-Wall Inside Corner VCRDET-503



Notes:

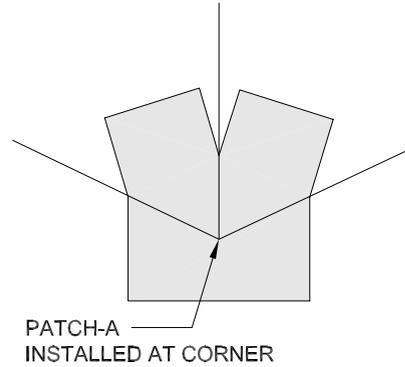
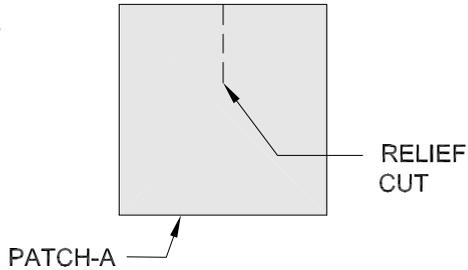
1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORDER[®] (Split Release on Demand) can be removed from Grace Vycor[®] Plus for ease of installation
3. Install Grace Vycor Plus and weather-resistant barrier to form water-shedding laps
4. Extend Grace Vycor Plus beyond joint between siding and corner post/boards
5. Install Grace Vycor Plus on inside corner for the height of the wall
6. Detail also relevant for Grace Vycor V40

Corner Detailing Patch Options VCRDET-504

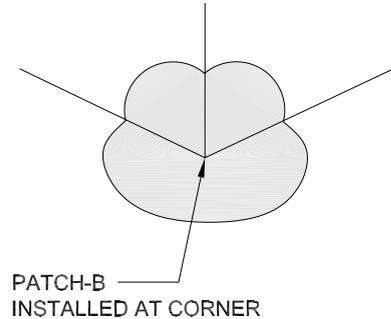
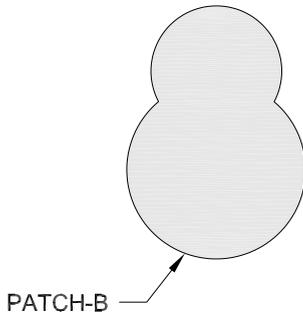
Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Remove release paper at time of installation of corner patch
4. Nominal patch size is 3 inches x 3 inches
5. Detail also relevant for Grace Vycor V40

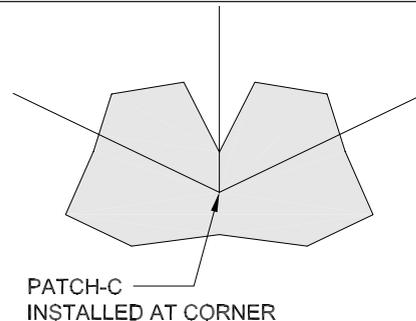
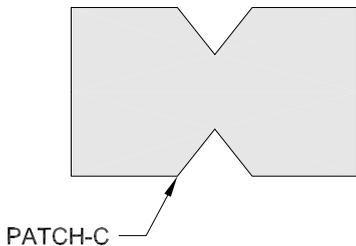
Option-A



Option-B

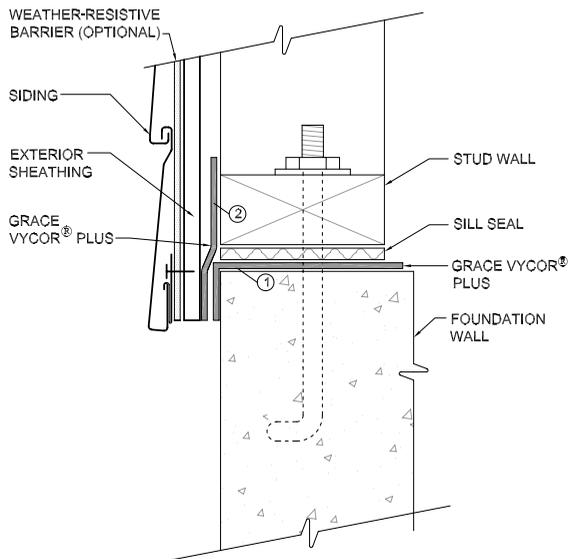


Option-C



Foundation Sill Plate VCRDET-505

Option 1

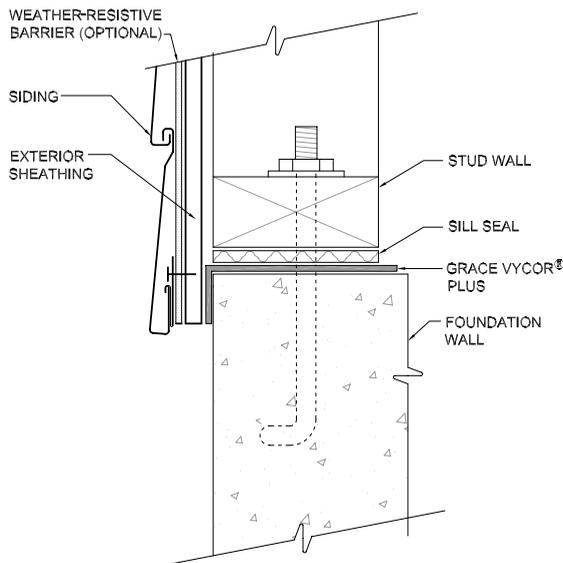


Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order shown by numbers
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. If priming is necessary, use Perm-A-Barrier® WB Primer to promote adhesion to concrete
6. Detail also relevant for Grace Vycor V40

Foundation Sill Plate VCRDET-506

Option 2



Notes:

1. For the most current details, installation video and product information, see our web site at www.graceconstruction.com
2. RIPCORD® (Split Release on Demand) can be removed from Grace Vycor® Plus for ease of installation
3. Install Grace Vycor Plus in order shown by numbers
4. Install Grace Vycor Plus and weather-resistive barrier to form water-shedding laps
5. If priming is necessary, use Perm-A-Barrier® WB Primer to promote adhesion to concrete
6. Detail also relevant for Grace Vycor V40

Technical Letter 1

Chemical Compatibility with Other Building Materials and Sealants

Frequently during the design of an assembly, the designer will question the chemical compatibility of self-adhered flexible flashings with other materials.

Grace Vycor® Self-Adhered Flashings (Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector) are chemically compatible with most substances and products that are normally present in common application environments. Grace Vycor Self-Adhered Flashings are compatible with acids, bases, and salts.

Generally, there is no chemical compatibility issue if a material contacts the high-density polyethylene surface of the self-adhered flashing. If the contact area is the rubberized asphalt component of the flashing, there is need to investigate further. As a general rule, the material must be sound, functional and firmly bonded to the substrate.

The design of the connection between the two materials will vary depending on the composition of the material. Some of the more common materials are detailed below.

Building Materials

Grace Vycor Self-Adhered Flashings are applied directly to exterior sheathing panels such as plywood (including fire-treated plywood), oriented strand board (OSB), exterior gypsum board, glass mat surfaced gypsum board, and extruded polystyrene. Grace flashings are compatible with chromated copper arsenate (CCA), alkaline copper quaternary (ACQ), ammoniacal copper zinc arsenate (ACZA), pressure-treated woods and pressure-treated plywoods.

Window & Doors

The rubberized asphalt of Grace Vycor Self-Adhered Flashings is compatible with rigid polyvinyl chloride (PVC), but not plasticized polyvinyl chloride (flexible PVC). Some arched/round shape windows may use a flexible PVC nailing flange. Consult with the window manufacturer to determine if the nailing flange is constructed of flexible PVC.

Note: Per ASTM E2112, "The application of sealant to the exterior face of the (window) flange is not necessary if using self-adhesive type flashing over the mounting flange."

Weather-Resistive Barriers

Grace Vycor Self-Adhered Flashings are applied to the structural substrate. They should be integrated with the weather-resistive barrier to form water-shedding laps.

Grace Vycor Self-Adhered Flashings are compatible with the following weather-resistive barriers:

- Spun-Bonded Polypropylene
- Spun-Bonded Polyethylene
- Red Rosin Paper
- Asphalt Saturated Felt
- Polyurethane Coatings
- Polyethylene Sheet/Visqueen
- Asphaltic Dampproofing
- Perm-A-Barrier® Wall Membrane

Sealant and Caulking Materials

Most sealants are chemically compatible with Grace Self-Adhered Flashings provided that the sealant is applied to the high-density polyethylene film component of the flashings.

The following sealants are chemically compatible with the adhesive side of Grace Vycor Self-Adhered Flashings if the specific formulation does not contain hydrocarbon solvents:

- Silicone
- Acrylic
- Butyl
- 1-Part Polyurethane
- 2-Part Polyurethane

Remove excess sealant prior to installing flashing.

Non-Compatible Materials

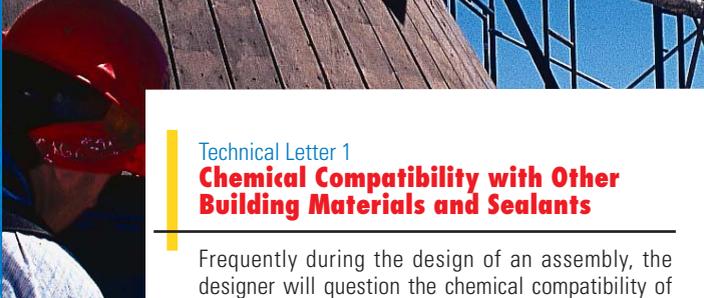
Grace Self-Adhered Flashings are not compatible with the following substances:

- Creosote
- Pentachlorophenol
- Polysulfides
- Diesel Fuel
- Gasoline/Oil
- Hydrocarbon Solvents
- EPDM
- Flexible PVC
- Uncured Neoprene
- High concentrations of pitch (resin from soft wood)

Primers

Only Grace approved primers should be used with Grace Self-Adhered Flashings. Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector are compatible with the following Grace primers:

- Perm-A-Barrier® WB Primer
- Bituthene® Primer B2



Technical Letter 3

Cold Temperature Applications

The long-term adhesion of self-adhered flashings will be unaffected by lower temperatures provided that the initial adhesion is satisfactory (such that the flashing remains adhered until the wall or deck covering is installed). The information below provides useful guidelines to promote initial adhesion at colder temperatures.

Grace Vycor Self-Adhered Flashings (Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector) can be applied when substrate, air and membrane temperatures are 25°F or above. When installing these products in cold or marginal weather conditions, the following guidelines can improve initial adhesion:

- Ensure that substrates are free from frost, dust, or other contaminants
- Keep material warm until use
- Gently warm membrane adhesive using a hot air gun
- Roll the entire membrane firmly paying special attention to seal all seams
- Mechanically fasten the membrane at all vertical terminations using only smooth shank fasteners
- Prime substrate with Perm-A-Barrier® WB Primer and allow to dry prior to installing flashing

Technical Letter 2

Exposure Guidelines

Grace Vycor® Self-Adhered Flashings (Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector) are not intended to be left permanently exposed to direct sunlight. Flashings should be covered and protected from sunlight as soon as possible. Grace Vycor Self-Adhered Flashings may be left exposed up to 30 days if necessary, to accommodate construction scheduling or weather problems. Exposure time of up to 60 days may be acceptable when Grace Vycor Deck Protector is used for corrosion protection. It is recommended that this product be trimmed around the connector to limit direct UV exposure (for instance at post bases).

During the time period the product is left exposed there are two primary factors that could affect the flashing: heat and ultraviolet (UV) radiation. Product performance should not change, but there may be some changes in appearance depending on the climate and length of exposure.

After 30 days exposure, it is possible for the membrane to appear slightly wrinkled. There may be a small amount of curling at the edges of the membrane. Before covering the membrane after such a long exposure, the flashing should be inspected to ensure that any wrinkling, curling or other movement that has taken place has not affected typical detail areas. Visit www.graceconstruction.com for a complete list of common flashing details.

If a wrinkle extends to the edge of an overlap, it must be cut, pressed down, and patched before the wall covering is installed. Extend a patch 6 inches in all directions, where applicable, past the damaged area.

If exposures longer than 30 days are anticipated, please contact your local Grace representative.

Technical Letter 4 Surface Preparation

Grace Vycor® Self-Adhered Flashings (Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector) are to be applied directly to a clean and dry surface. Some suitable substrates include wood, pressure-treated wood, plywood, wood composition, oriented strand board (OSB), metal, vinyl, concrete, masonry and gypsum sheathing. For additional information, refer to product literature and Technical Letter 1, “Chemical Compatibility with Other Building Materials,” located on our web site at www.graceconstruction.com.

Remove dust, dirt and loose nails. Protrusions must be removed. Surfaces shall have no voids, damaged or unsupported areas. Repair surfaces before installing the membrane.

Priming is generally not required for most substrates provided they are clean and dry. However, on concrete, masonry and DensGlass Gold®, apply Perm-A-Barrier® WB Primer. If adhesion is found to be marginal, also prime wood composition and gypsum sheathing with Perm-A-Barrier WB Primer. The coverage rate for Perm-A-Barrier WB Primer is 6-8 m²/L (250-350 ft²/gal).

Substrate	PAB-WB Primer
Wood	⊗
Pressure-Treated Wood	⊗
Plywood	⊗
Wood Composition	○
Oriented Strand Board (OSB)	○
Metal	⊗
Vinyl	⊗
Concrete	●
Masonry	●
Gypsum Sheathing	○
DensGlass Gold	●

- Priming substrate is recommended
- Prime substrate if adhesion is determined to be marginal
- ⊗ Priming is not likely required

For any building materials not listed, please contact your local Grace representative.

Technical Letter 5 Shelf Life

The shelf life of Grace Vycor® Self-Adhered Flashings (Grace Vycor Plus, Grace Vycor V40 and Grace Vycor Deck Protector) is highly dependent on storage conditions. In general, these products should be stored in their original, unopened packaging at ambient temperatures between 5-32°C (40-90°F) under dry conditions and from exposure to direct sunlight.

Grace Vycor Self-Adhered Flashings should be used within one year from the date of manufacture.

We have some real pros too at our Technical Support Center.

Many of our Technical Assistants have spent years in the field, just like you. If you ever need assistance or just have questions about using Grace Vycor Self-Adhered Flashings, give us a call.

For Technical Assistance call toll free at 866-333-3SBM (3726).

**For Technical Assistance
call toll free at 866-333-3SBM (3726).**

**Visit our web sites at
www.graceconstruction.com and www.graceathome.com**

W. R. Grace & Co.-Conn., 62 Whittemore Avenue, Cambridge, MA 02140

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