

# Henry. **BlueskinVP<sup>®</sup>100**

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## INSTALLATION GUIDELINES



# **INSTALLATION GUIDELINES for BLUESKINVP® 100**

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## I. INTRODUCTION

This installation guideline includes materials and installation procedures for Henry BlueskinVP® 100 a self-adhering sheet water resistive air barrier membrane meeting the air barrier requirements of both the IRC and IECC as referenced in ICC ESR-2975 for the building envelope. Henry BlueskinVP® 100 is used in exterior wall construction to provide an air and rain barrier membrane yet allows for the passage of water vapor avoiding the risk of condensation build-up in exterior wall assemblies.

Proper placement of Henry BlueskinVP® 100 self-adhered water resistive air barrier membrane within the exterior wall assembly will provide protection against the intrusion of water, uncontrolled air leakage and allow the exterior wall assembly to breathe.

***Important Note:***

*The information in this application guideline should be adapted to suit the requirements of individual projects. It is recommended to consult with design professionals to determine acceptance with applicable codes and regulations.*

Penetrations, transitions between substrates and connections around window & door flashings are an essential and critical element in exterior wall construction to manage water, air, vapor and drainage to the exterior. The installation of Henry BlueskinVP® 100 self-adhered water resistive air barrier membrane system shall be completed so as to bridge and seal the following air leakage pathways and gaps:

- Connections of the walls to the roof air barrier
- Connections of the walls to the foundations
- Seismic and expansion joints
- Openings and penetrations of window and door frames, store front, curtain wall
- Piping, conduit, duct and similar penetrations
- Masonry ties, screws, bolts and similar penetrations
- All other air leakage pathways in the building envelope

The installation guidelines are based upon current industry standards recognized by window manufacturers, window suppliers, installers, code officials and design professionals alike and include but not limited to:

- ASTM E-2112
- AAMA 711

## **II. SITE PREPARATION and EXECUTION**

### **II.01 SAFETY**

Job site safety is of prime consideration. Coordinate in advance with jobsite supervision to understand and follow all site-specific safety requirements and guidelines. Follow all OSHA guidelines for use of tools, scaffolding, harnesses, cutting knives, personal protective equipment and ladders. Be aware of your surroundings and interaction with other trades – particularly working overhead. If in doubt: stop all work, remove yourself from site and schedule a meeting with jobsite supervisor or safety official/representative before proceeding.

### **II.02 WEATHER / INSTALLATION CONDITIONS & LIMITATIONS**

Refer to current Product MSDS and Technical Data Sheets for proper storage and handling of Henry BlueskinVP® 100 self-adhered water resistive air barrier membrane, primers, mastics and ancillary products. Deliver materials to the job site in undamaged and original packaging indicating the name of the manufacturer and product. Materials should be stored in original packaging. Protect rolls from direct sunlight and weather until ready for use. Air barrier membranes, adhesives and primers should be stored at temperatures of 40°F (4°C) and above. Keep solvent away from open flame or excessive heat. It is recommended Henry BlueskinVP® 100 self-adhered water resistive air barrier membrane to be installed at minimum of 25°F (-7°C) and rising. In cold weather store rolls in warm area to enhance adhesion and workability. Please refer to the Henry Tech-Talk on BlueskinVP®100 cold weather applications and the latest Technical Data Sheet for more information before installing BlueskinVP®100.

### **II.03 SITE CONDITIONS AND PREPARATION**

Verify that surfaces and conditions are ready to accept the Work of this section. Notify [engineer] [architect] [consultant] in writing of any discrepancies. Commencement of the Work or any parts thereof shall mean acceptance of the prepared substrates.

Installer is to verify compliance with all federal, state and local regulations controlling use of volatile organic compounds (VOC's).

All surfaces must be sound, dry, clean and free of oil, grease, dirt, excess mortar or other contaminants detrimental to the adhesion of the membranes. Mechanical fasteners used to secure sheathing boards or penetrate sheathing boards shall be set flush with sheathing and fastened into solid backing. Rough wall openings for windows, doors and mechanical / electrical penetrations need be finished and ready to accept flashing membrane system before proceeding. Installed pipe penetrations need to be secured solid and extend minimum 3 inches (8 cm) past face of penetrated substrate to allow for the proper placement of sealing materials. Adjacent or multiple pipe penetrations should be spaced apart sufficiently to allow proper detailing of individual pipes (typically 4-6").

Fill voids, gaps and spalled areas in substrate to provide an even plane. Strike masonry joints full-flush.

Curing compounds or release agents used in concrete construction must be resin based without oil, wax or pigments. New concrete should be cured for a minimum of 14 days and must be dry before primer for air barrier membranes are applied. Pre-cast and concrete block substrates are required to be primed prior to application of self-adhered water resistive air barrier membrane. Where applicable, grout injection of CMU walls must occur prior to installation of Henry membrane.

### **III. INSTALLATION BLUESKINVP® AIR BARRIER SYSTEM**

#### **III.01 PRIMER FOR BLUESKINVP® 100 WATER RESISTIVE AIR BARRIER MEMBRANE**

Prime concrete, masonry surfaces, GP Dens-Glass® products, exterior grade gypsum board, and metal surfaces with HE571 Henry Blueskin Adhesive, HE574 Blueskin LVC Adhesive or Henry Aquatac™ Primer as per Technical Data & MSD Sheets. Priming at end and side laps of BlueskinVP® 100 is allowed as required. When end and side laps are to be primed it should be done so as the membrane is applied to the substrate per Technical Data & MSD Sheets. It is important to avoid over-application of primer and allow drying for at least 30 minutes prior to covering. Not allowing the primer/adhesive to dry fully prior to covering may result in failed laps and/or failed adhesion to the substrate.

OSB and plywood typically do not require the surface to be primed to achieve appropriate membrane to surface adhesion. However, in some cases the ability to adhere to the substrate may be compromised by irregular surface texture, chemical release agents, high moisture content (in excess of [reference U.S.D.A. Forest Service "Moisture Content of Wood" research note FPL – 0226 1973 table 1](#)), dirt and debris or even high wind conditions. In applications where BlueskinVP® 100 adhesion is found to be marginal or when the jobsite may experience high winds it is recommended to prime the surface with HE571 Henry Blueskin Adhesive, HE574 Blueskin LVC Adhesive or Henry Aquatac™ Primer as per Technical Data & MSD Sheets prior to the application of BlueskinVP®100.

Prior to application of primer, the surfaces must be dry and free from dust, dirt, grease, oil or other foreign matter. Primer/adhesive should be applied at the rate recommended by manufacturer's Technical Data Sheet in an intermittent pattern at (200-250 ft<sup>2</sup>/gal) or (5-6 m<sup>2</sup>/L) to all areas to receive Henry BlueskinVP® 100 self-adhered membrane. Primer may be applied with a roller or sprayed. Allow adhesive to dry for a minimum of 30 minutes. Review appropriate Technical Data & MSD Sheets prior to use. Excessive primer use can result in additional drying time, increased cost and adhesion failures if not allowed to dry fully prior to covering. Primed surfaces not covered by BlueskinVP®100 during the same working day must be re-primed.

### **III.02 PRIMER FOR BLUESKIN® WB & TWF SBS MODIFIED MEMBRANE**

For the application of Henry Blueskin® WB self-adhering membrane at window sill pan flashings, Henry Blueskin® TWF through-wall flashings and other applications of Henry Blueskin® WB self-adhering membrane at transitions, the substrate needs to be conditioned with Henry Blueskin® Adhesive, Henry Blueskin LVC Adhesive Primer, Henry Aquatac™ Primer or Henry Spray Prep as per Technical Data & MSD Sheets. Primed surfaces not covered by self-adhering membrane or self-adhering through-wall flashing membrane during the same working day must be re-primed.

### **III.03 INSIDE AND OUTSIDE CORNERS**

Seal inside and outside corners of sheathing boards with a strip of Henry BlueskinVP® 100 membrane extending a minimum of 5 inches (13 cm) on either side of the corner detail. Prime surfaces where appropriate to achieve surface adhesion as per manufacturer's instructions and allow to dry. Align and

position Henry BlueskinVP® 100 membrane, remove protective film and press firmly into place. Ensure minimum 2 inches (5cm) overlap at all horizontal laps and minimum 5 inches (13cm) overlap at all vertical laps of membrane. Roll all laps and membrane with a non-metallic counter top roller to ensure seal.

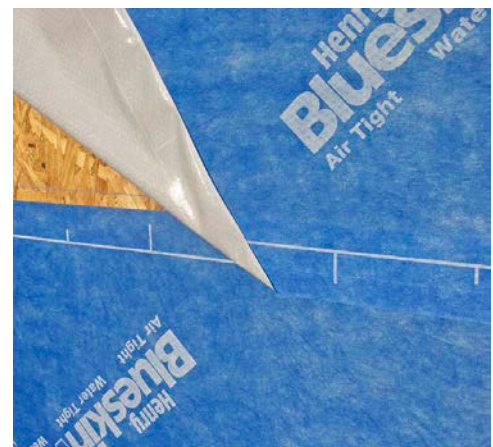
### **III.04 TRANSITION AREAS**

Tie-in to structural beams, columns, floor slabs and intermittent floors, parapet curbs, top of foundation wall waterproofing, roofing systems and at the interface of dissimilar materials with Henry BlueskinVP® 100 Membrane. Prime surfaces where appropriate to achieve surface adhesion as per manufacturer's instructions and allow to dry. Align and position Henry BlueskinVP® 100 membrane, remove protective film and press firmly into place.

Provide minimum 5 inch (13cm) lap to all adjoining substrates. Ensure minimum 2 inches (5cm) overlap at all side laps (horizontal) and minimum 5 inches (13cm) overlap at all end laps (vertical) of membrane. Roll all laps and membrane with a non-metallic counter top roller to ensure adequate adhesion and seal.

### **III.05 WALL APPLICATIONS**

Apply BlueskinVP® 100 self-adhered water resistive air barrier membrane complete and continuous to substrate in a sequential overlapping weatherboard method starting at bottom or base of wall and working up. Stagger all vertical joints. Prime surfaces where appropriate to achieve membrane to surface adhesion at (200-250 ft<sup>2</sup>/gal) or (5-6 m<sup>2</sup>/L) and allow to dry. Cut into manageable lengths, align and position BlueskinVP® 100 self-adhered water resistive air barrier membrane to substrate, remove top panel of protective release film and press firmly into place. Ensure alignment, hold membrane in place to avoid wrinkles and sequentially remove remaining panels of protective film and press firmly into place. Ensure minimum 5 inch (13cm) overlap at all ends (vertical) and 2 inch (5cm) side laps (horizontal) of subsequent membrane applications.



Vertical application of BlueskinVP® 100 is acceptable as long as the appropriate lap dimensions are maintained and the laps are installed in a sequential overlapping weatherboard method where applicable. Pressure-roll all membrane surfaces, laps and flashings with a non-metallic counter top roller or 'J-roller' to ensure appropriate surface adhesion. Trowel-apply a feathered edge to seal termination and shed water.

### III.06 WINDOW, DOOR & WALL OPENINGS

Subject to the size of the window, door and/or wall opening, extend BlueskinVP® 100 self-adhered water resistive air barrier membrane complete and continuous over openings and adhere to adjacent surfaces. Roll all laps and membrane with a non-metallic counter top roller to ensure adequate adhesion and seal. Complete the opening by making a horizontal cut into the installed membrane along the base and top of the opening using the framing members as a guide. Make a vertical cut into the membrane through the center of the opening (figure 1) and wrap each half of the BlueskinVP® 100 membrane into the wall opening to cover the full extent of the jamb (figure 2). Cut and remove excess materials accordingly.



Figure 1



Figure 2

***Important Note:***

*Subject to the hygrothermic region of the project a vapor retarder may be incorporated into the wall design. At wall openings for doors and windows best construction practice requires the air barrier and vapor retarder be connected to limit uncontrolled air or moisture.*

### III.07 WINDOW SILL PAN FLASHINGS

***Important Note:***

*Window manufacturer's instructions over-ride Henry specifications for window openings. The installer is responsible to resolve any conflicts in the specifications, sequencing, materials or techniques between window manufacturer's instructions and Henry specifications BEFORE CONSTRUCTION.*



*ASTM E 2112 recommends that pan flashings be used under all windows and doors, except where wall construction details incorporating fenestration drainage systems are provided by the building designer, or where wall construction details are specifically provided by fenestration manufacturers' installation instructions.*

*Best construction practice requires window sill details to be waterproofed and flashed prior to the placement of the window assembly. SBS modified self-adhering membranes provide the flexibility to wrap around the configurations of wall openings and provide the self-sealing properties to guard against leaks by mechanical fastener attachment.*

*Liquid applied window flashing (Air-Bloc® LF) may be considered in lieu of self-adhered flashings when installed per Henry requirements and pending approval of the project designer of record.*

There are two basic types of window sill pan flashings which function in a similar manner to provide a catchment method in event of window leak, evacuate water to the outside of building envelope and provide secondary protection for the window sill.

#### **PRE-FABRICATED SILL PAN FLASHINGS**

Pre-fabricated sill pans may be specified by window manufacturer or other design professionals. Follow sill pan manufacturers' instructions, window manufacturer's instructions and ASTM E 2112 recommendations.

#### **FIELD FABRICATED SILL PAN FLASHINGS (As Shown)**

Use Henry Blueskin® WB self-adhering flashing membrane to field-fabricate a sloped sill pan flashing over a beveled slope-to-drain sill plate or over sill with wood block back-dam. See Henry standard detail HC-WF101.



Figure 3



Figure 4

Prime surfaces and allow to dry (figure 3); place Henry Blueskin® WB self-adhering flashing membrane across window sills (figure 4).

Cut and fit installed Henry Blueskin<sup>®</sup> WB window sill pan membrane to suit, “end-dam” terminations by extending membrane up vertical surface of jambs minimum 6 inches. Extend Blueskin<sup>®</sup> WB self-adhering flashing onto the face of the sheathing board (figure 5) beside and below the window opening. Seal cuts and terminations with Henry HE925 BES termination sealant (figure 6). Install corner patch (nominal 3 in x 3 in size) to complete the sill flashing (figure 7). This patch is commonly referred to as a bowtie patch.



Figure 5



Figure 6



Figure 7

### III.08 WINDOW JAMBS AND HEAD COUNTER FLASHING

**Important Note:**

Best construction practice for wood frame construction is to protect the jamb of rough openings with the self-adhering water resistive vapor permeable air barrier membrane to reduce the risk of wood deterioration. Also, seal the backside of the window with a compatible sealant. If using a draining sill, it is important to seal in an intermittent fashion (figure 8) at the sill.



Figure 8

Prepare window for installation, set and fasten window in the rough opening plumb, level and square; follow manufacturer's installation instructions. Secure window ready for placement of water resistive air barrier flashing membrane.



Figure 9

Measure and cut Henry BlueskinVP® 100 Window and Door Flashing Membrane to length for placement to counter flash over jambs and head nailing flange. Align, position and install window jamb counter flashing beginning 1 inch below the expected top edge of the head counter flashing

extending across the nail flange and onto the face to the sheathing, extend down and onto the window sill

plan flashing (figure 9) entirely. Align, position and install the window head counter flashing across the head flange and extending over the face of the sheathing above the opening covering the jamb flashing entirely. Seal the top edge of the flashing membrane where it meets the substrate using Henry HE925 BES termination sealant (figure 10). Roll all laps and membrane to ensure seal.



Figure 10

### III.09 THROUGH WALL FLASHING

Install Henry Blueskin<sup>®</sup> TWF through-wall flashings along the base of masonry veneer walls, over shelf angles and other wall openings as detailed. Prime surfaces with Henry Blueskin<sup>®</sup> Adhesive, Henry Blueskin<sup>®</sup> LVC or Henry Aquatac<sup>™</sup> Primer as per Technical Data & MSD Sheets and allow to dry, press membrane firmly into place, overlap minimum 2" inches (5cm) at side laps and end laps. Promptly roll all laps and membrane to ensure the seal. Applications of Henry Blueskin<sup>®</sup> TWF through-wall flashings shall form a continuous flashing membrane and shall extend up a minimum of 8 inches (20cm) up the back-up wall. Seal the top edge of the Henry Blueskin<sup>®</sup> TWF through-wall flashing membrane where it meets the substrate using Henry HE925 BES termination sealant. Trowel-apply a feathered edge to Henry HE925 BES termination sealant to shed water. Install Blueskin<sup>®</sup> TWF through-wall flashing membrane and extend 1/2 inch (13mm) from outside edge of veneer. Provide "end-dam" flashing as detailed.

### III.10 TERMINATIONS AND PENETRATIONS

Seal backwards lapped membrane terminations, heads of mechanical fasteners, masonry tie fasteners, around penetrations, duct work, electrical and other apparatus extending through the primary water resistive air barrier membrane and around the perimeter edge of membrane terminations at window and door frames with Henry HE925 BES termination sealant. Pipe penetrations can be countered flashed with an additional piece of BlueskinVP 100 that has been cut to fit (figure 11). Seal both the pipe and counter-flashing with Henry HE925 BES termination sealant (figure 12). Tool the Henry HE925 BES sealant to ensure adhesion.



Figure 11



Figure 12

### III.11 REPAIR INPLACE MEMBRANE

Repair all holes, tears and damage to membrane with rounded patch of BlueskinVP 100 (figure 13) extending beyond the damaged area 5 in. in all directions (figure 14). Seal the patch with Henry HE925 BES termination sealant and tool (figure 15). Repair fishmouths and removed or damaged fasteners with Henry HE925 BES sealant and tool.



Figure 13



Figure 14



Figure 15

### **III.12 PROTECTION**

- Damp substrates must not be inhibited from drying out.
- Do not expose the backside of the substrate to moisture or rain.
- Cap and protect exposed back-up walls against wet weather conditions during and after application of membrane, including wall openings and construction activity above completed air barrier installations.
- Water resistive air barrier membrane is not designed for permanent exposure.
- Good practice calls for covering as soon as possible, not to exceed 150 days.
- Regional weather conditions and daytime sunlight temperatures may require the membrane to be protected prior to the 150 day exposure limit.

## **V. WARRANTY**

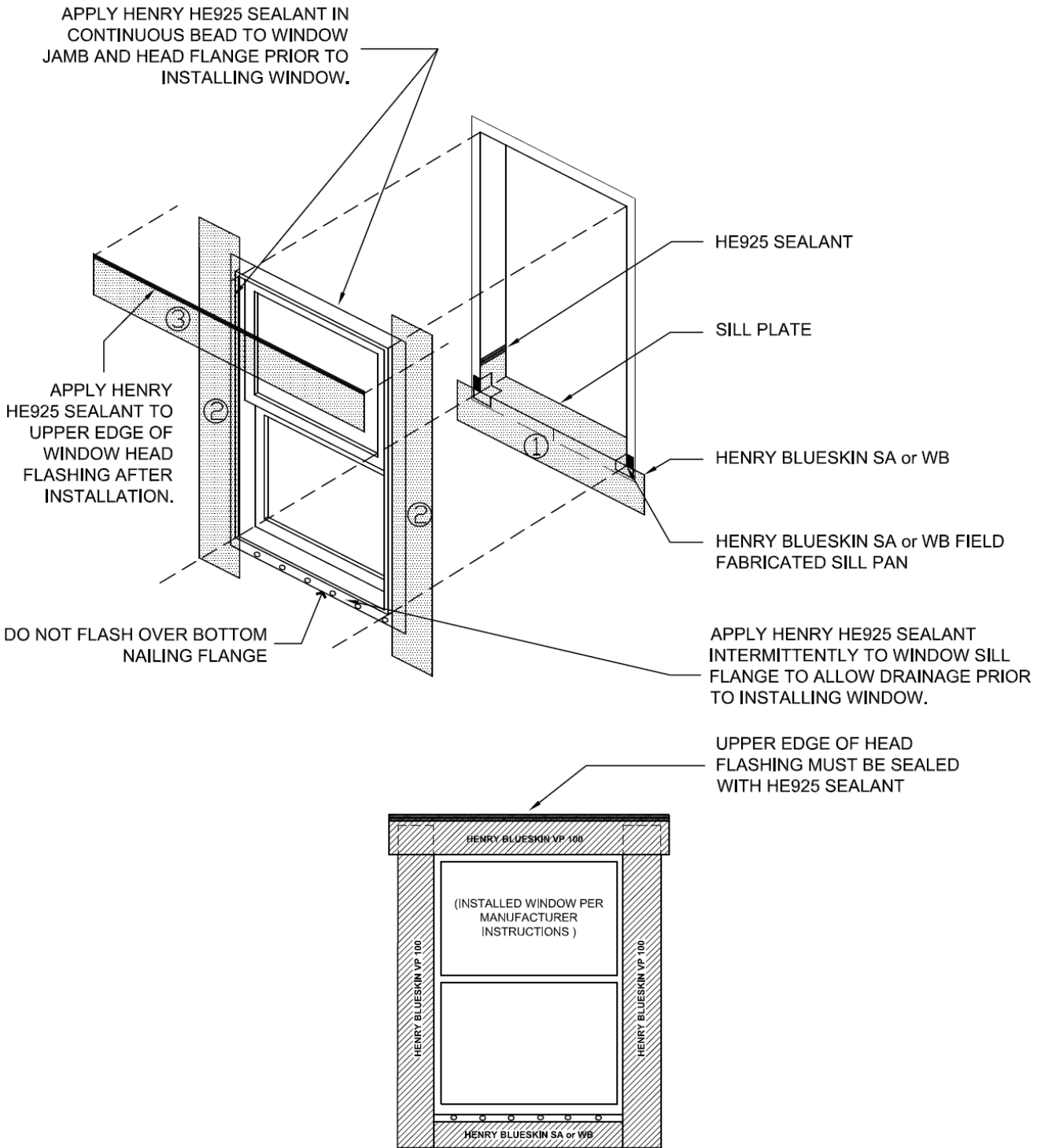
### **Product Warranty:**

We, the manufacturer, warranty only that this product is free of defects, since many factors which affect the results obtained from this product - such as weather, workmanship, equipment utilized and prior condition of the substrate - are all beyond our control. We will replace at no charge any product proved to be defective within 12 months of purchase, provided it has been applied in accordance with our written directions for uses we recommended as suitable for this product. Proof of purchase must be provided. **DISCLAIMER OF WARRANTIES: THE LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**, and we, the manufacturer, shall have no further liability of any kind including liability for consequential or incidental damages resulting from any defects or any delays caused by replacement or otherwise.

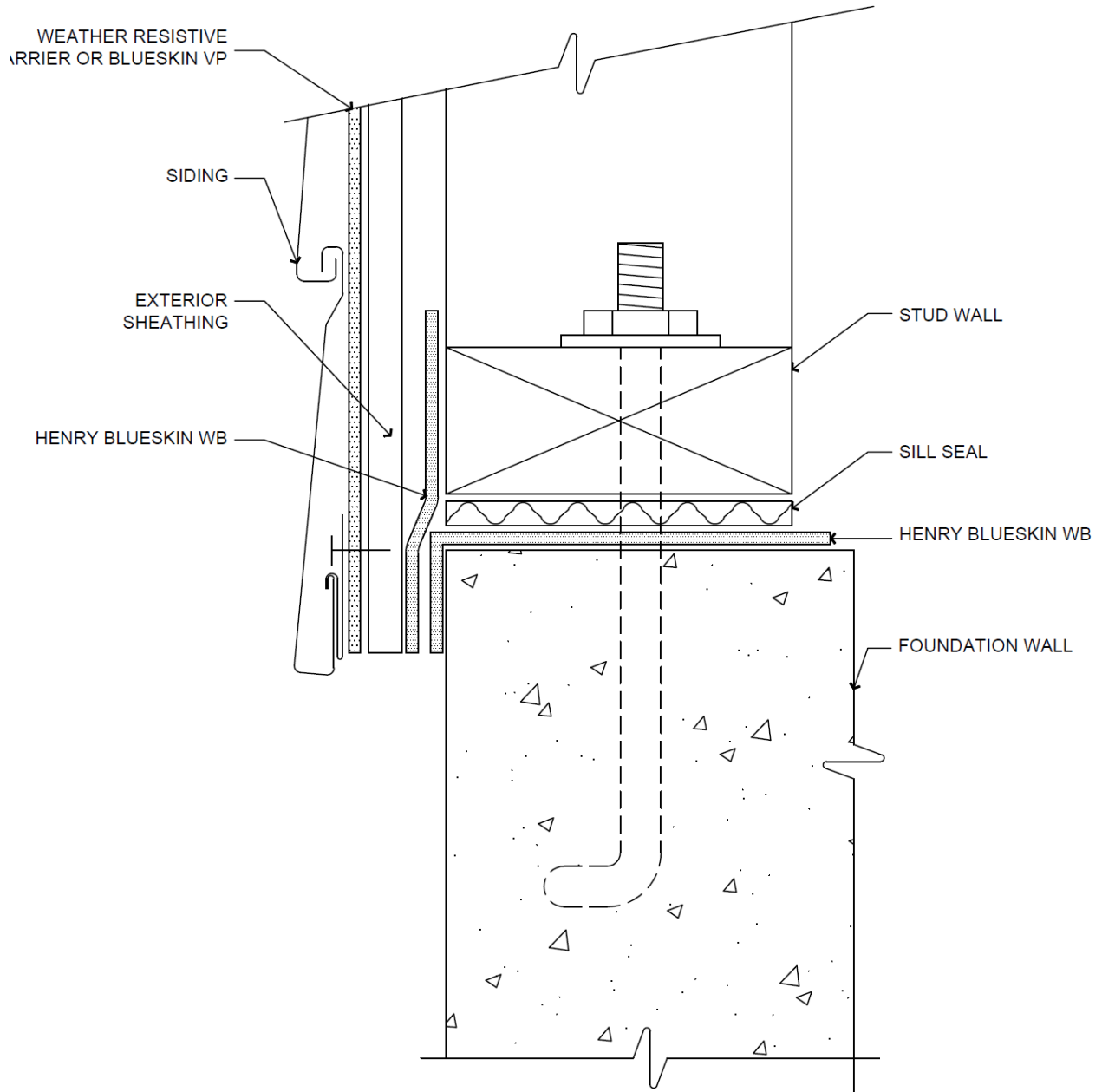
### **Assembly Warranty:**

Assembly warranties are available for job specific applications when applied per Henry published systems guidelines found on [www.henry.com](http://www.henry.com). For more information, contact Henry Warranty Administration Department at [WarrantyAdmin@henry.com](mailto:WarrantyAdmin@henry.com)

VI. DETAILS

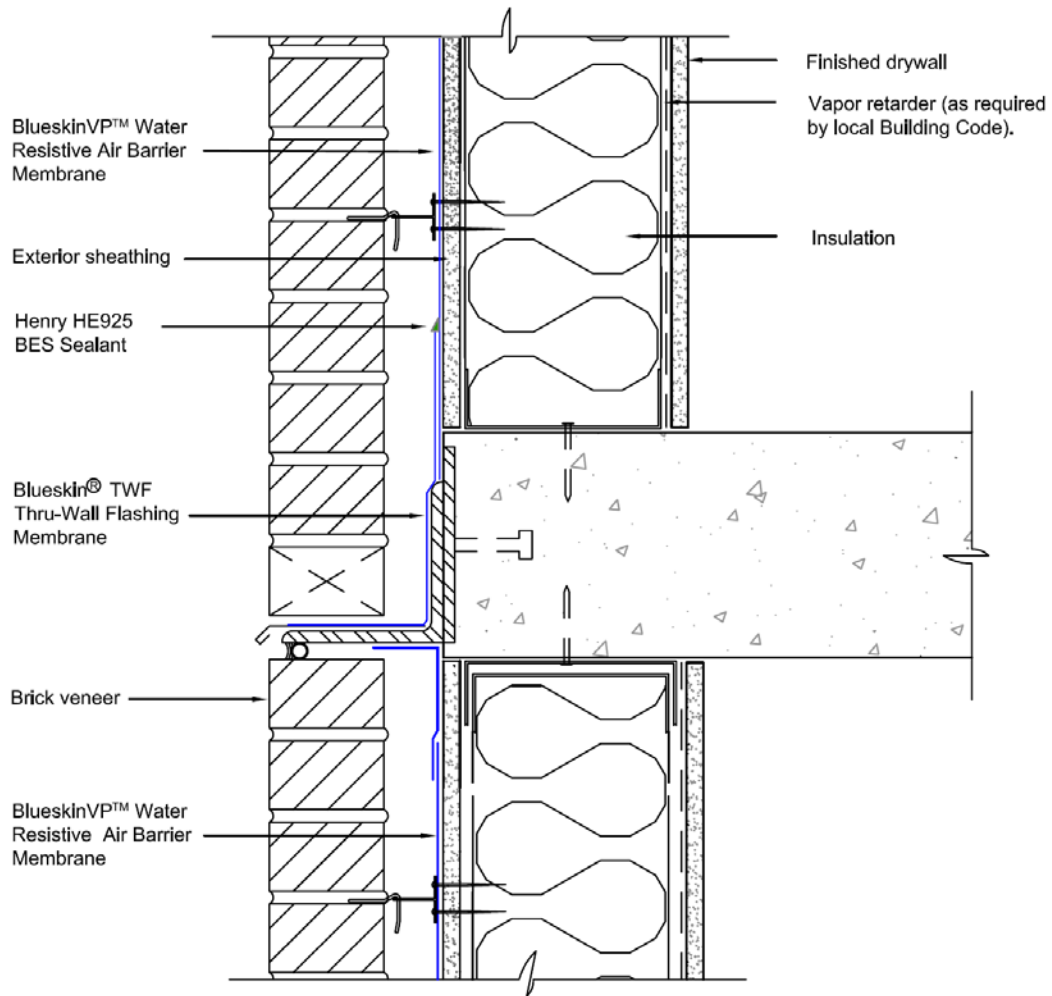


Window Detail HC-WF104



Foundation Sill Plate HC-WF102

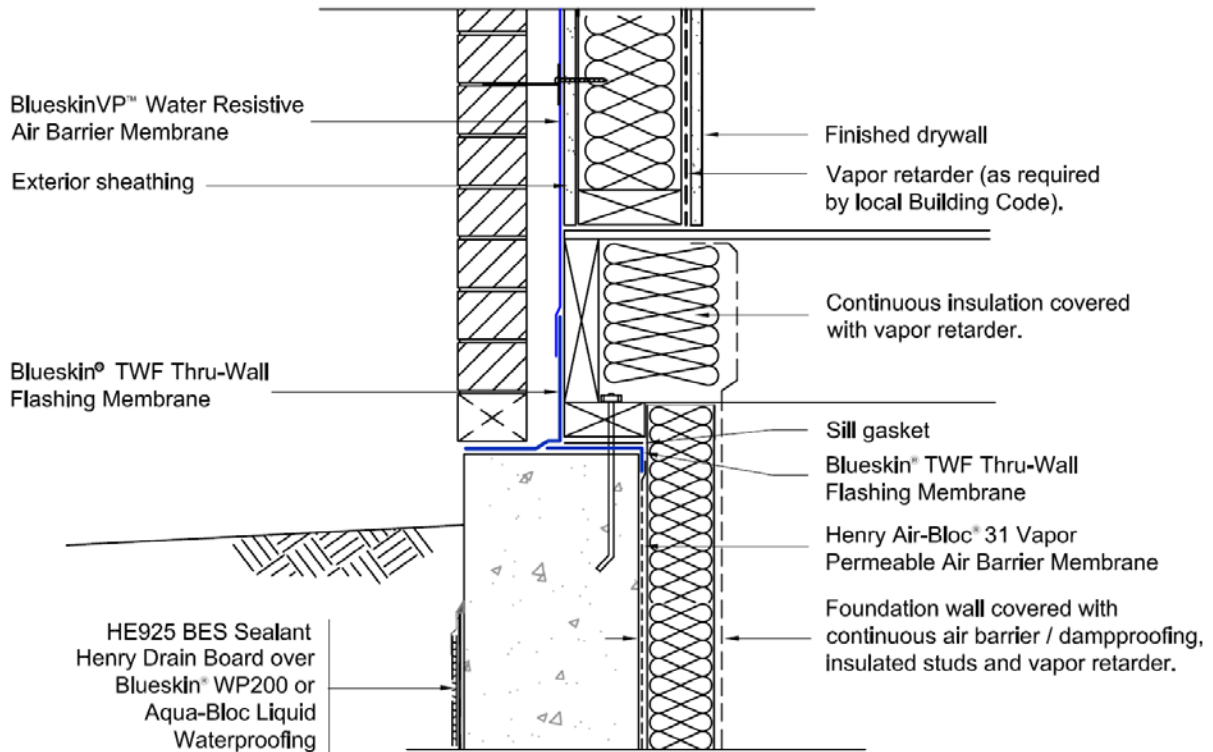




Notes:

1. Detail shows BlueskinVP™ self-adhered water resistive air barrier system installed over exterior grade sheathing. Other acceptable substrates include DensGlass Gold®, plywood, OSB, concrete and concrete block.
2. BlueskinVP™ self-adhered water resistive air barrier system shall be installed so as to provide a continuous barrier to prevent air and water intrusion.
3. Penetrations of the air barrier system shall be sealed with Henry HE925 BES Sealant to maintain the integrity of the air barrier system over the entire surface.
4. Refer to Henry BlueskinVP™ Installation Guidelines for recommended installation procedures.

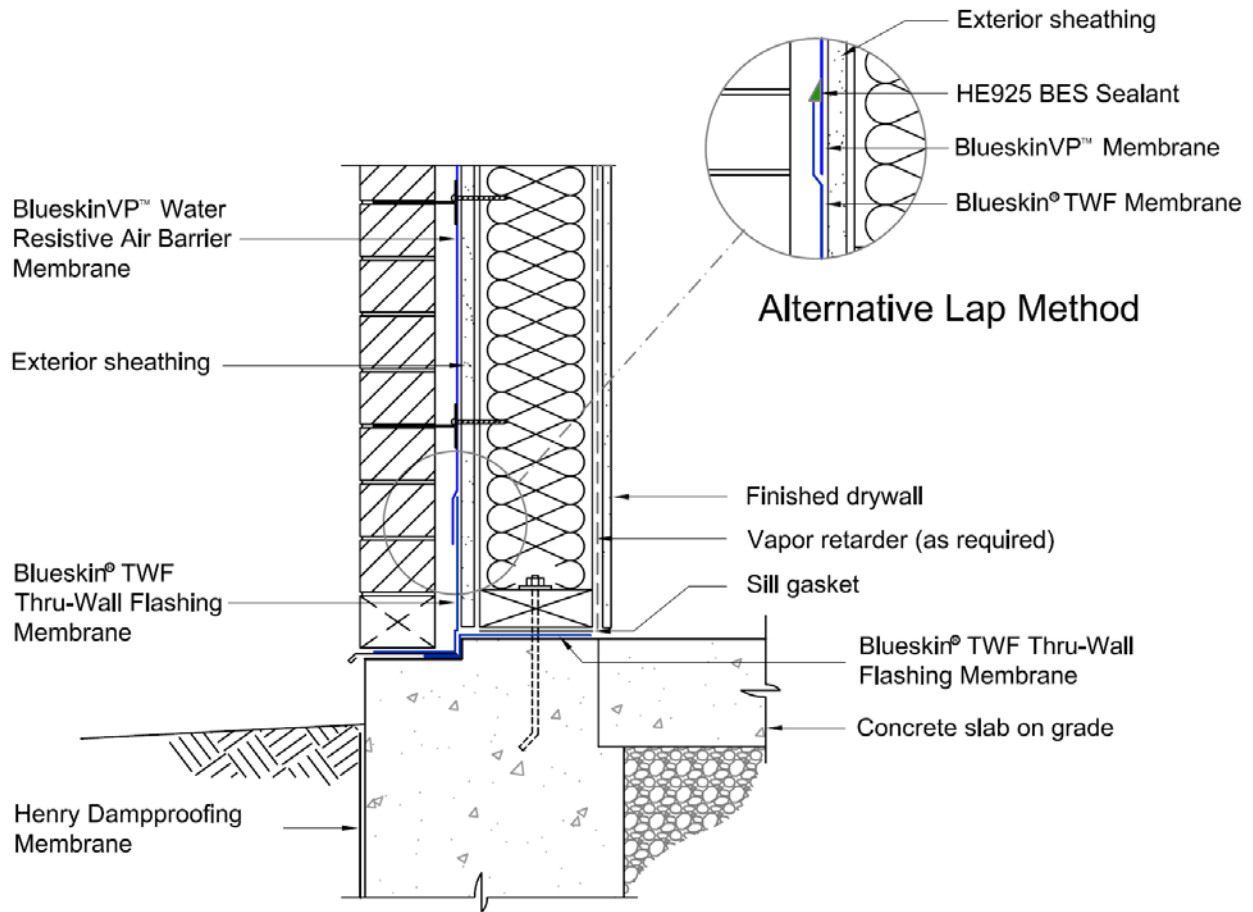
Shelf Angle Detail AB-H215



Notes:

1. Detail shows BlueskinVP™ self-adhered water resistive air barrier system installed over exterior grade sheathing. Other acceptable substrates include DensGlass Gold®, plywood, OSB, concrete and concrete block.
2. BlueskinVP™ self-adhered weather resistive air barrier system shall be installed so as to provide a continuous barrier to prevent air and water intrusion.
3. Penetrations of the air barrier system shall be sealed with Henry HE925 BES Sealant to maintain the integrity of the air barrier system over the entire surface.
4. Refer to Henry BlueskinVP™ Installation Guidelines for recommended installation procedures.

Wall/Foundation Detail AB-H211



Notes:

1. Detail shows BlueskinVP™ self-adhered water resistive air barrier system installed over exterior grade sheathing. Other acceptable substrates include DensGlass Gold®, plywood, OSB, concrete and concrete block.
2. BlueskinVP™ self-adhered water resistive air barrier system shall be installed so as to provide a continuous barrier to prevent air and water intrusion.
3. Penetrations of the air barrier system shall be sealed with Henry HE925 BES Sealant to maintain the integrity of the air barrier system over the entire surface.
4. Refer to Henry BlueskinVP™ Installation Guidelines for recommended installation procedures.

Wall/Foundation Detail AB-H212

Henry Company Installation Guidelines are updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this installation guide may change without notice. Please refer to [www.henry.com](http://www.henry.com) for the most current and up to date details.

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