

## Iron Woods® Vanish™ Rain Screen and Cladding System

### “Pushing the Envelope”©

The perfect complement to the natural beauty of our Iron Woods™ premium grade exterior building products and our existing line of siding profiles and standard rain screen offerings, the Vanish Rain Screen™ brings a newfound elegance to the art of both commercial and residential building envelope design and construction.



Iron Woods® rain screen was selected for the “Smart Home...Green and Wired” project located at the Chicago Museum of Science and Industry.

The concept of rain screen or breathable wall and soffit systems is not new. The impact of moisture condensation behind exterior wall cladding or siding on material performance and finishes is well understood and the importance of allowing siding and soffit systems to ventilate is not new. 15th century Vikings constructed buildings using wooden rain screen techniques which are still standing today. Rain Screen Systems allow moisture to evaporate more rapidly than closed cladding systems which significantly improves the service life of a building envelope and coating performance.

*“Moisture accumulation and extreme fluctuations in moisture levels can adversely affect the service life of components, such as wood siding and windows. Adverse moisture conditions can induce checking, warping, paint failure, and in severe cases rotting of the wood. Proper building design and construction can help prevent moisture accumulation or excessive moisture fluctuation within building components”*

*U.S. Dept. of Agriculture Forest Products Laboratory:  
Before You Install Exterior Wood Based Siding*



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Architects and designers recognize that the Vanish™ Rain Screen cladding profile, material offerings and unique clip system represents a significant improvement in the technology for both residential and commercial rain screen and soffit applications.

## The 'Vanish™ System' ... The State Of The Art in Rain Screen and Soffit Design.

### Features and Benefits

- Elimination of face fasteners, z clips and other non-hidden clip designs = clean aesthetic appearance
- Elimination of penetrating fasteners as points of water penetration = reduced durability impact on wood fiber
- Elimination of predrilling = reduced installation costs
- Elimination of top grooves for clip attachment in cladding profile = elimination of damaging gutter effect associated with decking style clip designs
- Elimination of battens = reduction in moisture holding points of contact with both envelope and cladding
- Elimination of battens = vertical and horizontal air flow improving moisture dissipation from the envelope and connection points.
- Elimination of Battens = reduction in installation costs
- Floating system design = cladding adjusts naturally to changes in environmental conditions eliminating stress at connection points
- Low Profile and High Profile clip options = new and retrofit design flexibility
- Unique cladding profile = improved water shedding and decreased risk of cladding to clip separation
- Unique three hole clip design = clip to batten, stud or sheathing fastening options.
- Unique double wide clip design = superior connections and smooth transitions at butt joints
- Use of 1" nominal vs 5/4" nominal siding thickness required by other clip systems = lower cost per square foot of cladding
- Random Butt Joint Location up to 24" vs fixed 16" batten locations = reduced siding trim waste and lower material costs
- Direct sheathing attachment = use of random length cladding and reduced cladding trim waste and lower material cost
- Direct sheeting attachment = horizontal, diagonal and vertical design and application options
- System design = incorporation of 4", 6" and 8" nominal cladding profile widths and associated design flexibility
- Specialized screw thread design = superior clip to sheathing connection and performance
- Marine Grade Aluminum Clip and Stainless Steel Fasteners = reduced galvanic reaction
- Wood Species Options = Aesthetic Options
- USGBC/LEED/FSC Compliant Species Options = LEED Certification

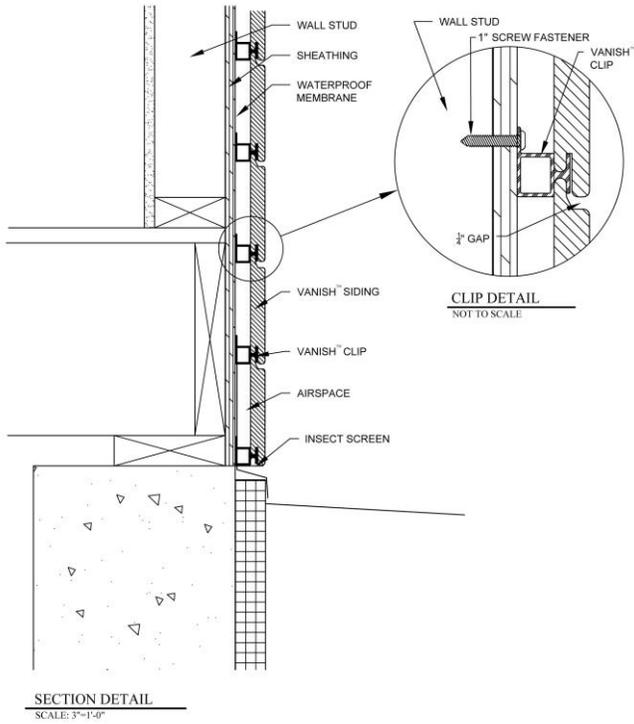
### Design Basics

Consult your local building code and architect/designer for specific requirements.

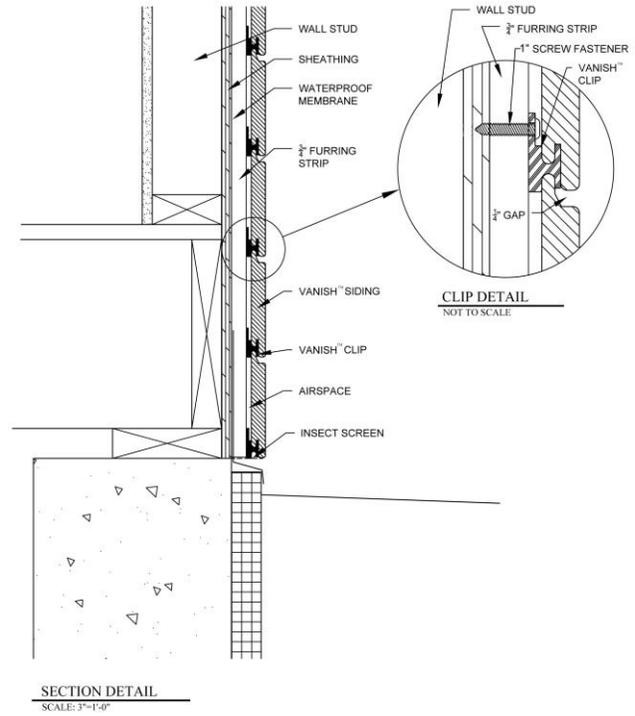
- Consult/Review Vanish Rain Screen CSI Specification Language for more detailed specification information.
- Rain Screen siding assumes the use of structural frame and wall sheathing construction.
- Some type of moisture barrier or membrane is required.
- It is imperative that you consider the combined depth of rain screen siding, clip, and or batten when designing window, door and trim specifications.
- Ventilation; proper ventilation is essential for long term stability and to minimize cupping. Rain screen systems must be allowed to drain and dissipate moisture.
- Allow a minimum of  $\frac{3}{4}$ " clearance between the roofing and the bottom edges of rain screen and trim to allow for ventilation. Flashing and counter flashing should be installed at the intersection of the roof and vertical surfaces as recommended by the roofing manufacturer.
- Vanish Rain Screen should not be installed in contact with the ground at grade, concrete slab, deck materials or standing water.
- Rain Screen Systems are designed to breath and as such will allow some level of insect nesting behind the cladding.
- Vanish Rain Screen can be applied vertically or diagonally by installing a ventilated base board on which the cladding can rest.
- Vanish Rain Screen is ideal for use in soffits.



## The System



High Profile NB Clip



Low Profile OB Clip

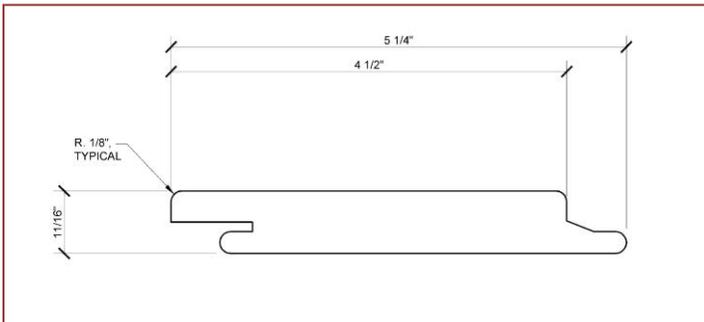
## System Installed Relief

### Siding installed thickness

- NB Clip On Sheathing = 1-7/16"; clip is 3/4" to siding back, plus the 11/16" thick siding
- OB Clip On Sheathing = 15/16"; clip is 1/4" to siding back, plus 11/16" thick siding
- OB Clip On Batten = 1-7/16"; clip is 1/4" to siding back, plus 11/16" thick siding plus 3/4" thick batten

## The Cladding

The Vanish Rain Screen System utilizes a proprietary “clip-eclipsing” wood profile that conceals the fastener system while allowing maximum air flow and water evaporation. The unique profile also facilitates ease of handling and installation. With no nail or screw heads to detract from the rich, natural beauty of the Vanish Rain Screen System, it is clear that no rain screen or cladding solution on the market today is more appealing to the eye than our unique Vanish Rain Screen System.



- Standard Thickness - Nominal 1 inch (net 11/16" thick)
- Standard Profile Reveal is 1/4".

## Standard Widths and Coverage Estimates

- Nominal 8 inch (6.5" Coverage) 1.92 linear feet per square foot approx.  
1.6 clips/SF, installed 16"o.c.  
1.1 clips/SF, installed 24"o.c
- Nominal 6 inch (4.75" Coverage) 2.52 linear feet per square foot approx.  
2.1 clips/SF, installed 16"o.c.  
1.5 clips/SF, installed 24"o.c
- Nominal 4 inch (2.75" Coverage) 4.36 linear feet per square foot approx.  
3.6 clips/SF, installed 16"o.c.  
2.5 clips/SF, installed 24"o.c.

*Note: Estimates are approximate. Actual usage will vary depending on run lengths, window openings, doors, butt joints, etc.*



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## Species Options

Vanish Rain Screen can be special ordered in a wide range of kiln dried lumber species. It is the responsibility of the specifier to determine the suitability of any given species for their application.

Cladding is generally supplied random in random lengths 6' and longer. It is important to note that shorter lengths with typically be straighter, less prone to bow and easier to handle than longer lengths. Bow in longer boards can easily be removed by cutting the longer boards to shorter lengths.

Species stability impacts the suitability of cladding width and length specifications. The Vanish cladding profile can be run from virtually any wood species available in the market. The following list will give you some indication of possible species, width and length options. USGBC/LEED compliance will significantly limit available species options. Please contact us to discuss species options, LEED compatibility (if required) and supply lead times prior to specification or selection.

- Ipe (Iron Woods®)** - Premium Select Mixed Grain (1x4, 1x6, 1x8) (6ft to15ft Random Length)
- Garapa (Iron Woods®)** - Premium Select Mixed Grain (1x4, 1x6) (6ft to15ft Random Length)
- Genuine Mahogany** - First Export Quality Mixed Grain (1x4, 1x6) (6ft to15ft Random Length)
- Cumaru** – First Export Quality Mixed Grain (1x6) (6ft to15ft Random Length)
- Massaranduba** – First Export Quality Mixed Grain (1x6) (6ft to15ft Random Length)
- Cedar** – Clear Vertical Grain (1x4, 1x6, 1x8) (6ft to15ft Random Length)
- Cedar** - Clear Mixed Grain (1x4, 1x6, 1x8) (6ft to15ft Random Length)
- Thermally Modified Poplar (Cambia™)** – Clear Mixed Grain (1x6)
- Thermally Modified White Ash (Thermory™)** – Clear Mixed Grain (1x6)
- Strand Laminated Bamboo (Dasso™)** - (1x4, 1x6,1x8)

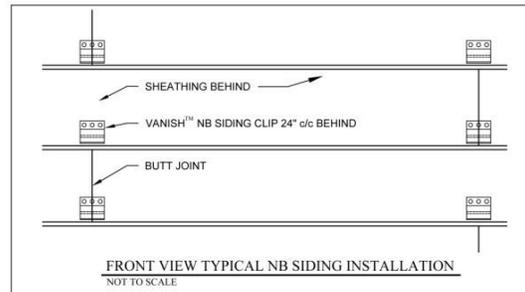
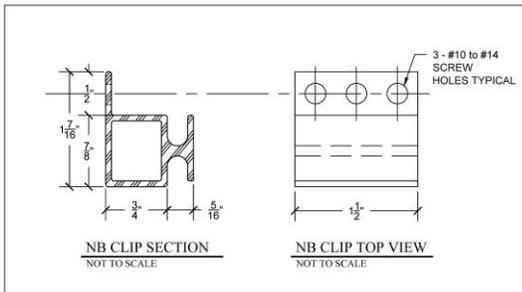
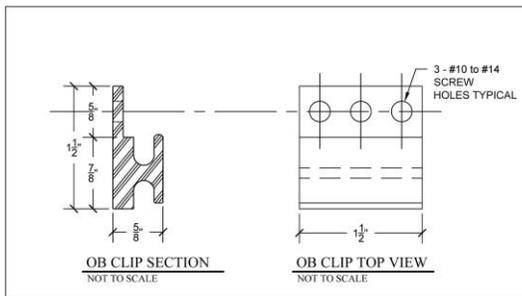
*Note: Use these materials in combination with conventional wood corner and widow trim treatments or create unique designs utilizing alternative materials. Stainless steel finish screws with colored heads or matching stainless steel deck screws plugs are available for attaching wooden trim.*

## The Clips

Vanish™ Rain Screen Clips are available in 2 models:

Model # VRSC OB (Low Profile)

Model # VRSC NB (High Profile)



## The Fasteners

Fasteners are available in a variety of sizes and lengths. Requirements will be project and application specific. For “On Sheathing” and “On Batten” applications we offer a specially threaded marine grade, T316 stainless steel, 1” long, #12 pan head screw. For ‘On Stud’ application we offer a T305 Stainless, #12 pan head wood screw, (length to be determined by application requirement).

Use one fastener per clip for ‘On Stud’ or “On Batten” application and two fasteners per clip for “On Sheathing” application.



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### **Installation**

Important: Read and understand these instructions before installing rain screen. These installation instructions are based on manufactures experience with normal applications. They are not intended to cover every installation or building code requirement, detail or variation. If questions arise concerning the product or its suitability for a particular use, contact your architect or engineer. Any unapproved deviation from these procedures shall be solely at the risk of the installer. The project architect or engineer or designer has the responsibility to design a proper building envelope for moisture control. Our wood is properly milled and inspected to meet the material requirements. These building materials are grown in nature and will vary in color, grain, weight and density. Expansion/contraction, checking, dimensional variance and movement are normal when exposed to the elements and moisture in the air. Always use proper safety equipment when installing the rain screen. Follow all local building codes and obtain permits as required in your community.

### **Storage and Handling**

Vanish Rain Screen must be stored out of direct sunlight and must be allowed to acclimate and stabilize to installation area moisture levels before installation. Keep siding loosely covered with tarps and protected from water, flat, well off the ground and banded until ready to install. Allow for air flow around the unit to assist in drying. Siding should be kept dry before and during installation.

### **Cutting**

Use carbide tipped finish cut saw blades. Seal all ends immediately after cutting with a wax based end grain sealer, similar to "Anchorseal".

### **Trim**

Windows and doors should be properly installed before starting the installation of the clips and siding profile. Leave a minimum 1/8" gap at all abutment points to allow for expansion/contraction of the siding.

### **Fastening**

Set elevation lines across the wall surface to assure that required level is maintained during installation. When installing start at the base moving upward in complete rows. Check your alignment and level siding after installation of each row. The final/top siding board may need to be ripped to the proper width, pre-drilled, and face screwed for fastening the top of the siding.

- Position Vanish Clips so that fasteners are placed 16" On Center over studs for stud attachment or at a maximum of 24" on center for Panel attachment.
- The fastener should be driven perpendicular to the board surface and must be long enough to penetrate at least 3/4" into solid wood.
- Always begin Clip application at one end and proceed to the other end. If a board is bowed it is recommended that you cut the board in half to eliminate the bow, re-square the ends and install.
- Use 1 clip at butt joints.
- Utilize marine grade stainless steel fasteners designed for use with wood only. Most clip applications can use a 1" long, #12 pan head, T305 or T316 grade stainless steel screw. Use 2 screws per clip when installing on sheathing, one screw per clip when fastening directly to a solid wood batten or stud. Install screws so they lie flat to the clip and the screw head does not interfere with the insertion of cladding into the clip.

### Finishing

It is recommended that wood rain screen siding be sealed on all four sides prior to installation. To maintain the natural wood color: apply a transparent penetrating oil based sealer or stain with UV inhibitors in a trans-oxide pigmented tint and reapply annually or as needed. Consider brands similar to:

*Penofin* / [www.penofin.com](http://www.penofin.com)

*Superdeck* / [www.superdeck.com](http://www.superdeck.com)

*Messmers* / [www.messmer.com](http://www.messmer.com)

*Cabot's Timber Oil* / [www.cabotstain.com](http://www.cabotstain.com)

If a natural weathering to a silvery gray is desired: apply clear water based sealers similar to:

*Seasonite* / [www.flood.com](http://www.flood.com)

*Olympic Clear Wood Preservative* / [www.olympic.com](http://www.olympic.com)

*Sealer selection is the responsibility of the architect.*

- Before application of sealers, brush and clean the surface to remove dirt and dust.
- Periodic cleaning with simple soap and water will enhance the appearance of your siding.
- To return silver gray wood to the original color, use a "wood brightener". Careful power washing and/or sanding can help to remove the grayed wood. Allow to dry and apply a UV inhibitive sealer.
- Other types of oil and water based coatings have been used. However, fully test samples from several boards to determine their compatibility your siding.
- Follow all coating manufactures application recommendations.
- Pre finishing services are available



**Cost Estimating**

**Material Usage Comparison Iron Woods Vanish VS Competition**

**Basis:**

**Cladding Specification - 1x6 Iron Woods**

**Vanish Cladding - Ipe**

**Wall Dimension - 10' high x 18' long**

	<b>Vanish</b>	<b>Z Cip</b>	<b>Ipe Clip</b>
Rain Screen Dimension	1x6	5/4x6	5/4x6
Lineal feet required to cover	414	437	437
Clips required to cover	216	382	382
Screws required to cover	432	382	382
Lineal feet battens required	0	140	140
Approximate cost per sq. ft. of materials	\$15.37	\$16.74	\$ \$16.74

**Estimating Labor Costs**

Labor costs are of course variable project to project. What we know from past projects is as follows...

Two experienced carpenters should be able to install and average of approximately 1500 square feet of 1x6 Vanish Rain Screen in a forty hour work week.

This calculates as follows...

**Example: 40 hrs. x 2 men = 80 man hrs. x \$20 per man hr. = \$1600 ÷ 1500 sq. ft. = \$1.07/sq. ft. installation cost.**

*Note: Estimates are approximate and do not include finishing or pre-finishing. Actual usage and costs will vary depending on species selection siding width, run lengths, window openings, doors, butt joints, etc.*

*The above estimates are based upon pricing information provided by others. Cost analysis and material selection are ultimately the responsibility of the designer and contractor.*

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