



Exterior Cladding Installation Guidelines



PLACING YOUR CLADDING ORDER

Proposals

Your salesperson will provide you with a written proposal based on the product selections you have made and the quantities you have provided. Upon receipt of your signed proposal and deposit, the stated lead time will begin, and the order will be entered into production in our shop.

Samples & Reference Photos

Because wood originates from trees and no two trees are exactly alike, each piece of material will vary from the next. These natural variations in the material can result in differences in texture, color, and finish throughout an order, even when the same processes are applied to each piece. Pioneer Millworks provides product photos and samples as a reference for our products; however, it is impossible to show every possible variation that could be seen across an order. Therefore, variations beyond these references are to be expected. If you have a single sample piece of your chosen material, please request a range sample (consisting of multiple pieces) of your final selection(s) prior to ordering.



It is the **responsibility of the purchaser** to confirm the accuracy of **all information** outlined on the proposal including the details of each product, quantity ordered, billing and delivery address, and delivery contact information **BEFORE ORDERING.**

By placing the order, you acknowledge that you have read and understand the recommended installation and maintenance procedures outlined on the following pages.

Overages

Cutting waste (overage) is an inherent part of any wood installation, and the percentage of additional material should not be minimized. We suggest ordering a minimum of 15% overage for prefinished exterior cladding. A higher waste percentage of 20%-25% is recommended for reclaimed and weathered materials.

Please note the overage percentage should consider not only cuts related to installation but also the discretionary cuts and defecting that may be done on site to accommodate job-specific appearance requirements. We suggest ordering enough overage to have a few bundles of material left over for long-term repairs and maintenance. Doing so will be far less costly than additional small orders with shipping charges.

SUGGESTION

Order a minimum of 15% overage for exterior cladding installations.

Shipping & Handling

Our in-house Logistics Team makes transportation recommendations for each proposal based on the material ordered, delivery location, order volume, and scheduling needs of the project. If your project location has any challenges such as a steep/long driveway, or delivery in a congested metro area or a tight residential neighborhood, it is your responsibility to inform your salesperson before placing your order. This information will help us to provide accurate shipping costs which will be indicated as a line item on your proposal.

Additional charges resulting from unforeseen conditions at delivery are the responsibility of the receiver.

If you have any questions about your delivery once your order is placed, please contact us at 800-951-9663.



YOUR RESPONSIBILITY

Additional Charges resulting from unforeseen conditions at delivery are the responsibility of the receiver.

RECEIVING YOUR CLADDING

Your order will arrive on skids with the product banded to the skid, and each skid covered by breathable lumber wrap and the ends shrink-wrapped. Before unloading, inspect the skids for any visible damage to the skid and the product. If any damage is found, please notify the driver and take photos for record, as well as noting the damage on the bill of lading **before** it is signed. Then notify Pioneer Millworks logistics team immediately. **Unless specific arrangements are made otherwise, the receiver is responsible for all equipment and labor to unload the order from the truck.**



Your cladding will come wrapped in breathable lumber wrap.



Please remove wrap within 3 days to inspect materials. Leave wrap off for storage.

Inspection

All materials have been graded per the specification sheets for the product purchased. During transit and unloading, and due to changes in the surrounding environment, it is possible for minor defects beyond these specifications to appear. These may include loose/missing knots, scratches or finish damage, as well as inherent cupping, bowing, twisting, or crowning. In addition, our efforts to preserve the length of the boards often leave visible cracks or splits in planks, particularly at the ends. In most cases of proper installation, these defects will not affect the finished project or the performance of the product. Because of the natural variations in wood, boards that lie slightly higher or



YOUR RESPONSIBILITY

After unloading, please unpack and further inspect your material, and inform us within 3 business days of any discrepancies.

Otherwise, it will be assumed that the correct product and quantity was received and after this time, no claims for material shortage or damaged materials will be accepted.



YOUR RESPONSIBILITY

Proceeding with the installation of any material constitutes acceptance of the materials as delivered.

Pioneer Millworks is not liable for any costs for labor, materials, or replacement related to any products that have been installed with defects, damage, or discrepancies.

lower than these specifications may be found in any order. Please refer to the grade specifications for your product and contact the team at Pioneer Millworks with any questions. Grade specifications can be found at www.pionermillworks.com/product-spec-sheets.

Non-structural cracks and splits are permitted in our cladding materials. These may run 12" or more from the end of the plank, or be seen in multiples over the length of the plank:



Handling

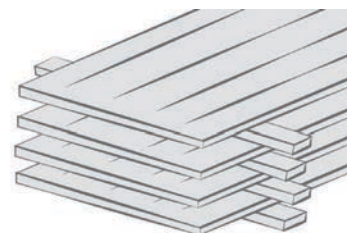
While our products are designed to be durable, natural wood products can have relatively delicate finishes which can be damaged by rough or improper handling of the planks. We recommend longer planks be lifted by one person at each end, and that care is taken to not allow other materials or objects to scrape against the surface.

Storage

The packaging on our skids is designed to protect the product in transit, but it is not intended to provide protection for long-term storage in the elements. All materials should be stored in a covered area such as a garage with a minimum of 6" of ground clearance under the skid. If a covered storage area is not available, our packaging should be removed, and the skids should be topped with a sheathing and covered with a tarp or breathable plastic that still permits air flow to the wood planks. Regardless of the covering, avoid allowing any moisture to accumulate on top of the skid.

Acclimation

Wood is hygroscopic, which means the wood will respond to changes in humidity by expanding or contracting accordingly. While Accoya and ABODO are ready for installation immediately (unless it has been exposed to water on the surface), Larch, Fir and reclaimed cladding materials may benefit from acclimation prior to installation by providing airflow around the wood. Leaving the wood stacked on the skid will only allow a portion of the outer planks to acclimate. It is more effective to use layers of planks alternated as shown here to allow for maximum acclimation. In most cases, 1 to 2 weeks is sufficient.



INSTALLING YOUR CLADDING

Fasteners

You have made a considerable investment in the materials you are about to install. For consistency and the highest quality installation for the long-term, we recommend using 304 or 316 stainless steel nails in all materials. **These stainless-steel fasteners are required when installing Accoya and ABODO materials.**

RECOMMENDED NAILS:

- 8D ring-shank nail (2 ½" long) for collated nails
- Pre-drill holes to .04" less than nail diameter when nailing at the ends of each board, minimum of 1 ½" from the end

RECOMMENDED SCREWS FOR ACCOYA:

- Refer to Accoya Siding Guidelines: www.pionermillworks.com/accoya-siding-installation
- Pre-drill holes to 80% of the screw's shank diameter

RECOMMENDED SCREWS FOR ABODO:

- Self-drilling stainless steel countersunk screws should be used at an appropriate length for the wall system



DO NOT

Use fasteners that are not specifically rated for exterior use

Use finish nails of any type

Use staples

Use screws on any material except Accoya or ABODO

Fasteners should penetrate a minimum of 1 ¼" into the substrate or framing member.

Adjust air pressure on pneumatic tools so the nail head does not crush the face of the plank. If needed, use a nail set to tap the nails flush. Should a fastener be driven too far into the face of the plank, carefully apply an appropriate exterior wood filler to the void.

Pre-painted fasteners are available from Simpson Strong-Tie and others. You may also spray-paint bare nails prior to installation using a high-quality outdoor spray paint. Additionally, a Sharpie in the appropriate color can be used to touch up nail heads after installation. This is particularly effective and efficient with black siding.

Pioneer Millworks recommends installing all exterior cladding using two face-nails across the width of each plank, at intervals dictated by the rainscreen/furring strips behind the cladding.

End and Edge Cuts

All exterior non-reclaimed cladding products from Pioneer Millworks require that end-cuts and rip cuts are properly sealed. A container of touch-up finish matching the selected material will be added to your order and sent to the shipping contact/address separately. This can be used to seal end and edge cuts, and additional finish is available for purchase from our Customer Service team at (800) 951-9663.

Edge and end cuts on Reclaimed/weathered cladding will eventually age in place. If you wish to accelerate the weathering process, we recommend using Lifetime Wood Treatment for any exposed edges. This non-toxic, powdered and ready-to-mix product is available through many hardware stores or online.

Movement Post-Install

Natural expansion and contraction of wood (which can result in subtle changes in dimension) is to be expected. If the product is installed in a location where the moisture content of the wood is lower than the surrounding environment, the wood will take on moisture until it reaches equilibrium with that environment. The opposite is true when wood is exposed to a drier environment; it will release moisture until equilibrium is achieved.

As wood expands and contracts, cupping, crowning, bowing, twisting, and checking may be observed. These natural reactions to the surrounding environment are not a defect and cannot be controlled. We cannot make any guarantee against movement of natural wood cladding in any direction.

Rainscreen / Ventilated Installation

We strongly advise that all our exterior cladding products be installed over a rainscreen, which provides an air space between the exterior sheathing and the back face of the wood cladding. Using a properly assembled rainscreen promotes the circulation of air and moisture, reduces the potential for excessive expansion, and increases the longevity of any natural wood cladding product. There are a variety of pre-made rainscreen products available, in addition to systems using conventional wood furring strips. If wood furring strips are selected, conventional 1x SPF can work in more moderate environments, however we recommend Cedar or pressure-treated for overall longevity.

Please note, if installing Accoya cladding over pressure-treated lumber, butyl flashing tape or a similar barrier must be used between the furring strips and the cladding to avoid visible discoloration.

The following pages show several proven ventilated cladding installation options which may be applicable to your project.

WE RECOMMEND

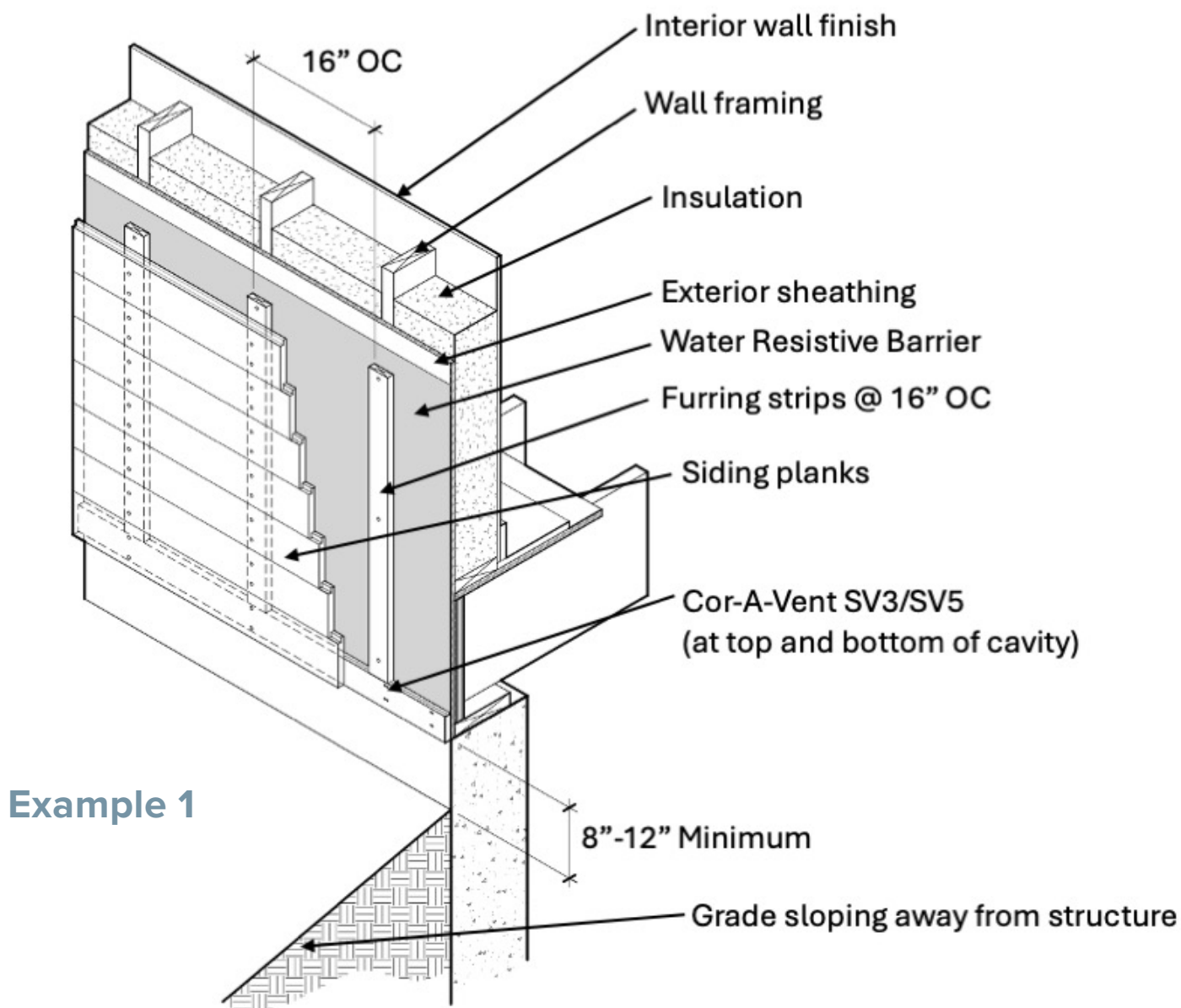
STRONGLY

That all our exterior cladding products be installed over a rainscreen

Exterior Rainscreen Installation—Example 1

This example shows horizontal siding face-nailed to 1x furring strips, which are nailed through the sheathing and weather barrier into the wall framing. Each cavity between the furring strips and flashing are vented at the top and bottom using [Coravent](#) which also helps prevent insects from getting into the cavity. Flashing should be used around window and door openings, and may be added at the bottom of the exterior wall assembly.

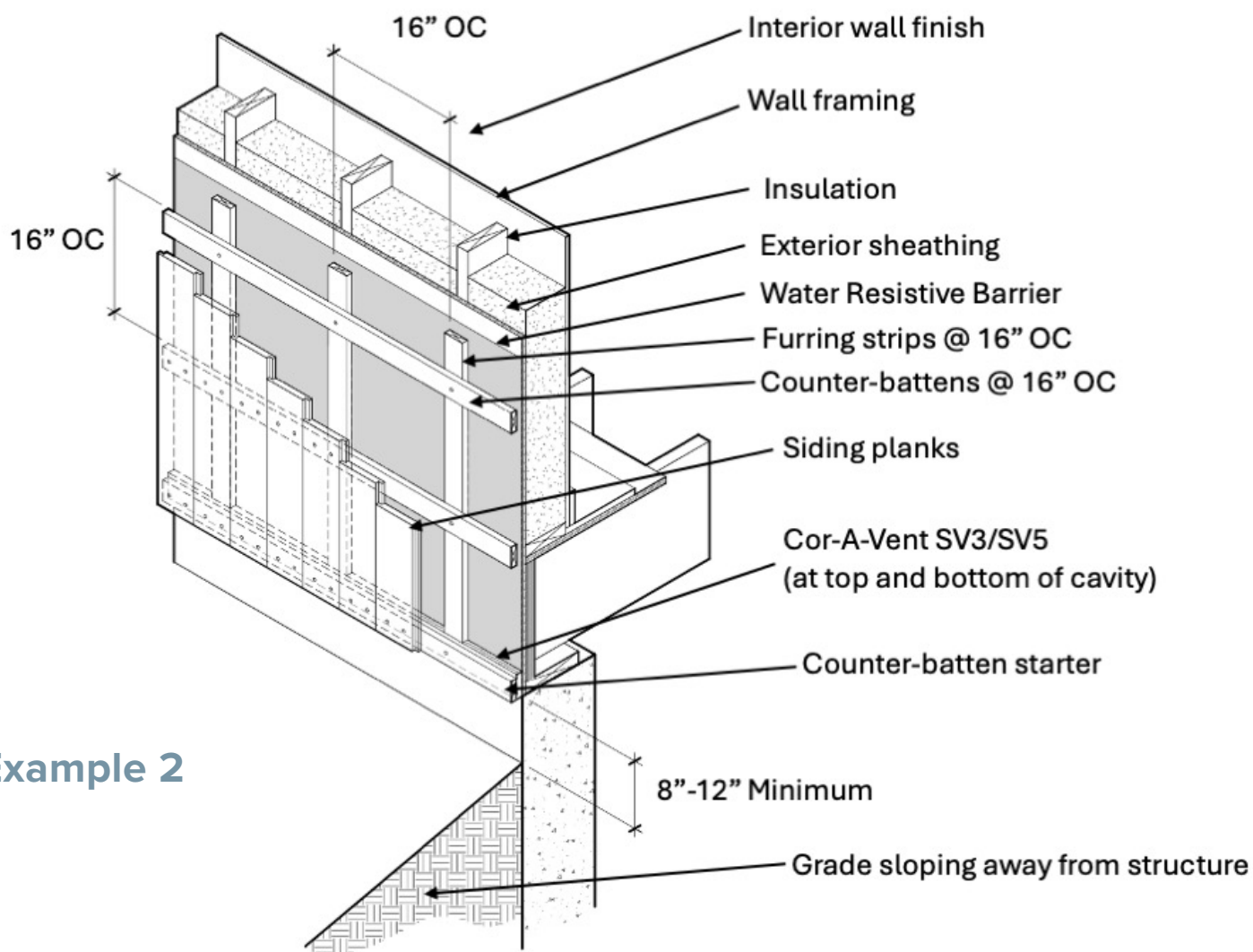
Consult with your architect, general contractor, or installer for details specific to your project.



Exterior Rainscreen Installation—Example 2

This example shows vertical siding which is face-nailed over a doubled 1x furring strip “lattice”. After the vertical strips are nailed through the sheathing and weather barrier into the wall framing at 16" on center, the horizontal strips are nailed into the vertical strips at the same interval, and then the cladding is face-nailed into the horizontal strips. This example also uses [Coravent](#) at the top and bottom. Flashing should be used around window and door openings, and may be added at the bottom of the exterior wall assembly.

Note that some installations may benefit from the use of 2x as the horizontal strips. Consult with your architect, general contractor, or installer for details specific to your project.

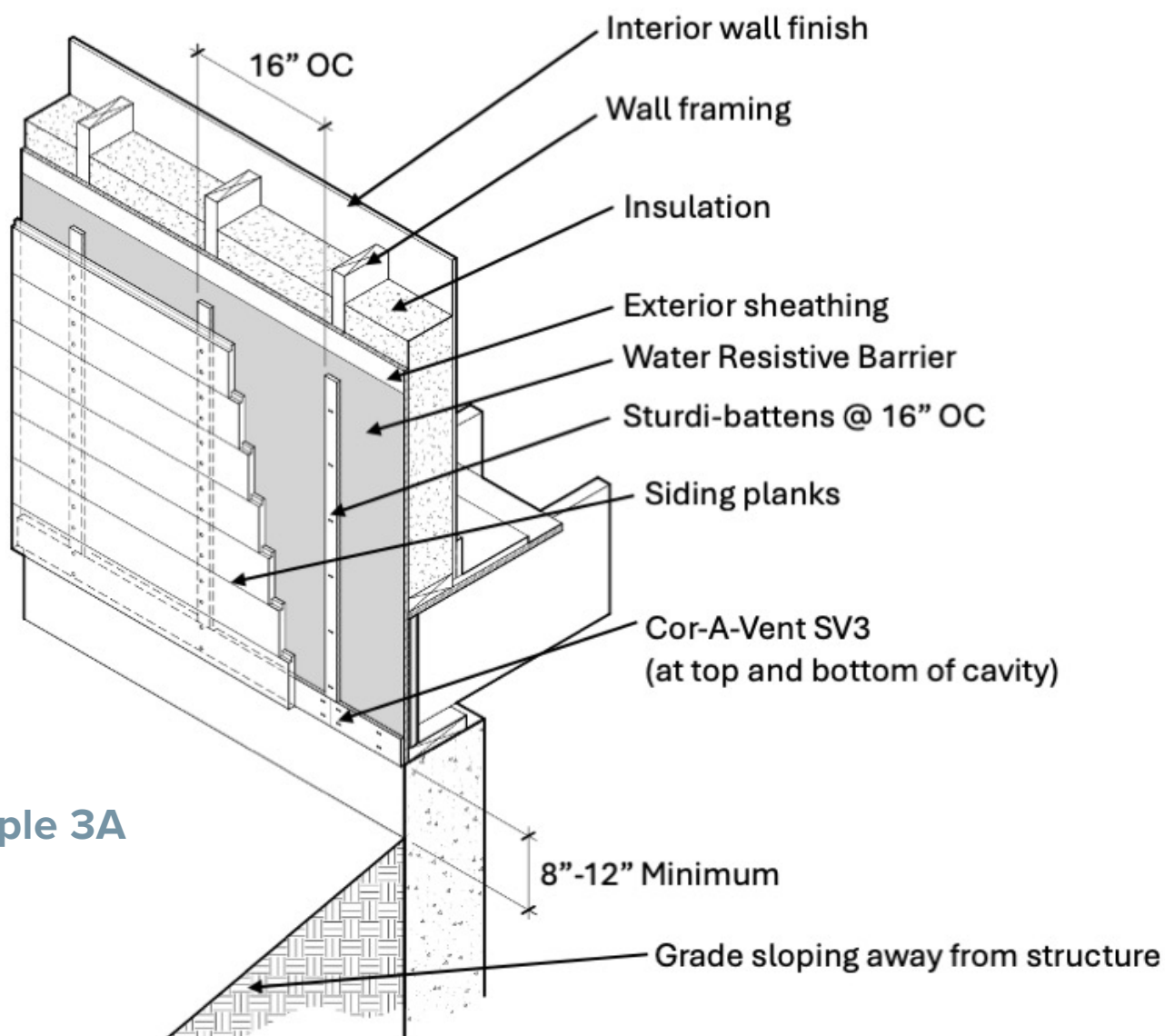


Example 2

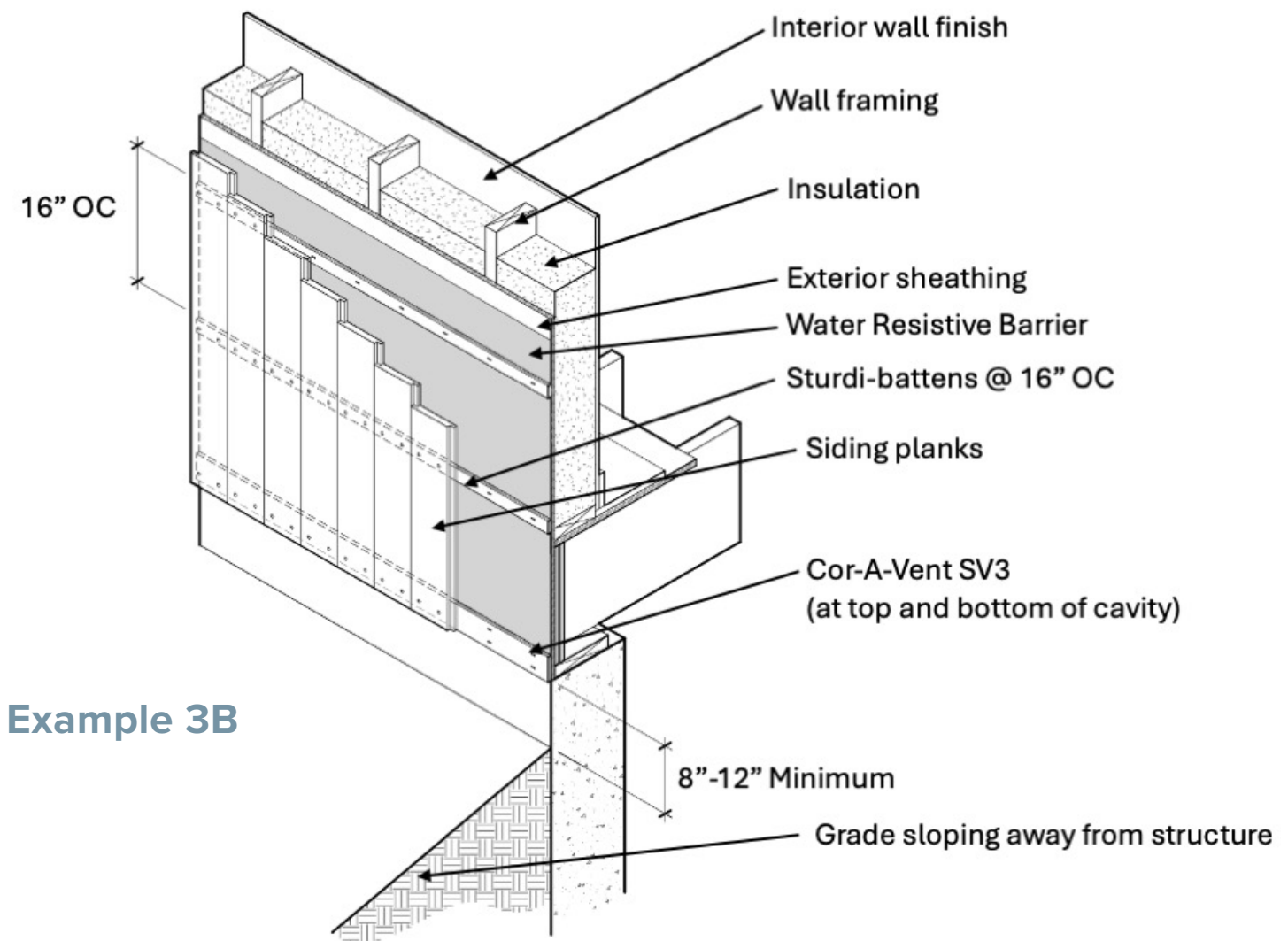
Exterior Rainscreen Installation—Example 3

These examples show horizontal (3A) and vertical (3B) siding which is face-nailed over [Coravent's Sturdi-batten](#) plastic furring strips. Because these strips are corrugated, air and moisture can move behind the siding in all directions without increasing the thickness of the wall system. [Coravent](#) is again installed at the top and bottom. Flashing should be used around window and door openings, and may be added at the bottom of the exterior wall assembly.

Refer to Coravent installation guide for additional information, and consult with your architect, general contractor, or installer for details specific to your project.



Example 3A



Installation Over Mesh Products (Not Recommended)

Pioneer Millworks recommends rigid furring strips in all rainscreen installations. Mesh products such as Cedar Breather, DrainVent and similar materials can compress during installation and result in uneven appearance to the exterior siding. In addition, the minimal air gap behind the siding is not typically large enough for proper airflow behind our solid wood siding.

Installation Over Non-nailable Substrates

Numerous other standard and custom-designed subframe systems exist which allow for various types of insulation to be used on the exterior of a structure. Regardless of the design of each system, it is important to maintain subframe supports for the siding at regular intervals, with the siding attached to the subframe through the face of the siding planks. Installation of clip systems/profiles should follow the recommendations of the manufacture.

Nailing Patterns

As shown in the previous diagrams, Pioneer Millworks recommends two nails through the face of each plank at each furring strip, approximately 1" inward from each edge and no less than 1 ½" from the end of each plank. If using screws on Accoya, pre-drill a minimum of 5/8" from each edge, and no less than 2" from the ends of the plank. ABODO should be fastened similarly, though pre-drilling may not be required.

Plank Spacing

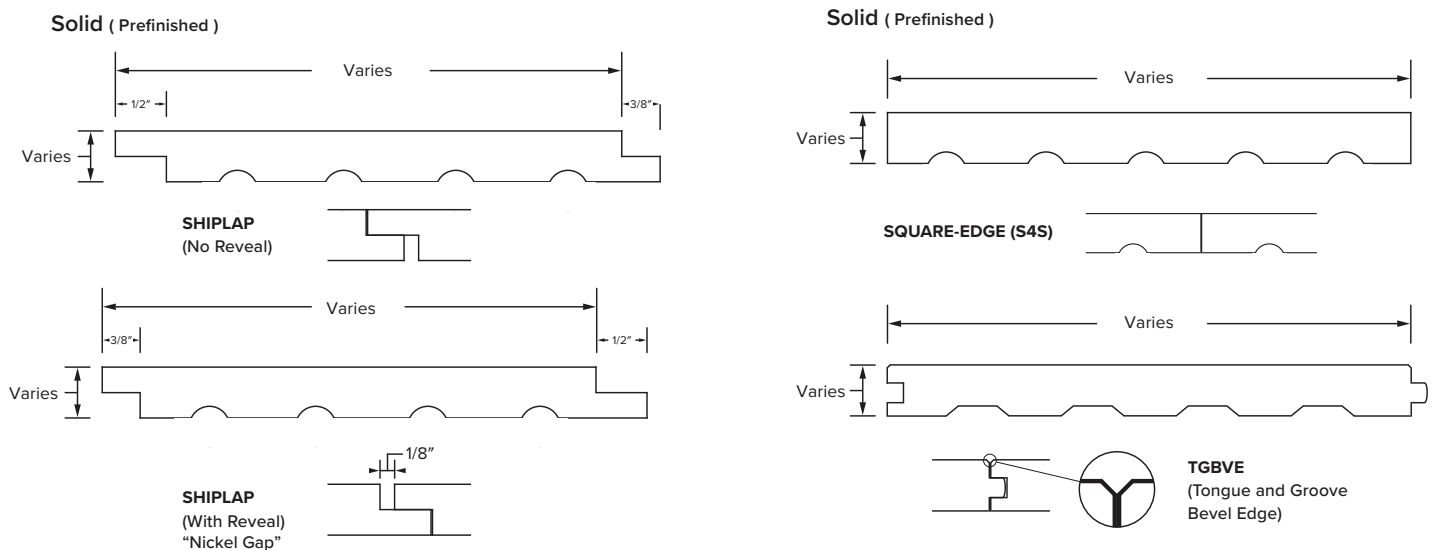
Pioneer Millworks shiplap is available in a flush profile, or a "nickel-gap" profile, however there is no pre-set space between the planks. We advise adding a space of approx. 1/16" between each plank edge, allowing the planks to expand or contract due to changes in the installed environment.

Where the ends of two planks meet, ensure the ends will land on a furring strip and provide a 1/16" gap with an angled weather cut, applying appropriate end-sealer or finish to the cut area. For vertical cladding installations, be sure to orient the cut such that the angle is pointing down and away from the structure. Provide a 1/4" minimum space between the end of a plank and any other element of the structure such as windows and doors.

Milling Patterns

Our standard profile for all Fir, Larch, Accoya, and ABODO, cladding products is a shiplap, with or without a nickel gap. This profile works well in both vertical and horizontal installations, and in a variety of climates. The below drawings show our typical profiles, with the thickness and width varying by product.

Standard reclaimed & weathered siding products are created with ripped edges only, and a variable thickness. Please refer to your proposal or ask your salesperson for details.



The exterior T&G profile shown is intended for soffit and ceiling installations only. T&G is not intended to be used as an exterior cladding profile and is not available in any Shou Sugi Ban finish.

S4S materials can be ordered for trim, or for open slat cladding installations: note that there is no relief cut on the back of these materials.

Trim Details

Each project has its own unique architectural design, therefore we do not provide specific trim details drawings. We recommend always leaving appropriate space in trim work for expansion, contraction, and drainage. Unprotected miter cuts in Larch and Douglas Fir cladding are not recommended as they can lead to extreme movement in the cut planks. For a clean, modern look, extruded aluminum shapes may be used as part of trim assemblies to capture edges and ends at corners and around windows and doors. These components are available from multiple manufacturers in a variety of dimensions.

MAINTAINING YOUR PRE-FINISHED CLADDING

All Pioneer Millworks Larch, Fir, Accoya and ABODO cladding is finished with two coats of water-based sealer on the exposed face. Non-charred cladding is finished with a balance coat on the back face. Shou Sugi Ban cladding is charred for balance on the back face, but does not have a finish coat applied. Our reclaimed/weathered cladding has no finish applied and **we do not recommend** adding any finish to reclaimed/weathered materials after installation. When properly installed and maintained, your exterior cladding will last for generations.

- Regularly check your cladding for loose nails and use a nail set to pound them back
- Be sure to keep the lower portion of your cladding especially clean from any dirt or debris that has splashed onto the planks
- Protect the surface from contact with ladders, trees & vegetation, or other objects which might scrape or damage the cladding
- **NEVER USE A PRESSURE WASHER ON ANY WOOD CLADDING PRODUCT**

However, if you wish to maintain the initial color to the greatest extent possible, note that the color of any natural wood product will fade, and textures will evolve when continuously exposed to the elements.

- Keep it clean. Rinse the siding, then use a mild detergent in a sprayer nozzle (NOT A PRESSURE WASHER) to loosen surface dirt, and then rinse clean. You can also use Vermont Natural Coatings multi-surface cleaner: www.eco-buildingproducts.com/products/multi-surface-cleaner
- Re-apply finish as needed and as directed by the finish manufacturer, typically every 3-5 years on average, keeping in mind that the natural aging and oxidation of the wood and the finish may result in a difference in color when new finish is applied over the old finish.
- Note that each side of a structure may age differently depending on exposure to weather and the elements. This may require more frequent maintenance using different finish tones to preserve the same color.

If you want to let the surface weather naturally or have purchased one of our reclaimed/weathered siding options, you have the option of letting the progression of age take over as a “living finish”, typically without any additional surface maintenance.



NEVER

Use a pressure washer on any wood cladding product.

Additional Information for Shou Sugi Ban

Our Shou Sugi Ban cladding is created by carefully burning the exposed surface of the boards to create stunning patterns and textures. Our Deep Char products retain the fully burned surface, while the balance of our Shou Sugi Ban products are brushed after burning, creating a pronounced raised-grain effect. All of our Shou Sugi Ban cladding is finished with two coats of sealer on the exposed face. The back face is unfinished and lightly burned for balance. This finishing process results in an exposed surface that is remarkably resilient when exposed to the elements, yet still requires careful handling to preserve the finish during installation. Wear gloves when working with these materials and refer to previous guidance for handling and installation. Following installation, it may be beneficial to **gently** rinse the cladding with water, or carefully wipe down areas around doors with a damp cloth or sponge.

There will still be loose soot on the edges and back of all Shou Sugi Ban planks, and the exposed face of any Deep Char cladding is likely to shed soot for some time after installation. Please consider this when selecting adjacent materials, as any runoff from precipitation could result in staining.

While our Deep Char product has two coats of black sealer on the exposed face, it is still likely that at some point you may observe blemishes where the outer char layer and finish flake off. This can occur due to improper handling or installation, and over time as a simple result of the natural aging progression. The evolution of this surface and any flaking is not a failure of the material or finish. If desired, these blemishes can be easily remedied by touching up the surface with the appropriate finish.



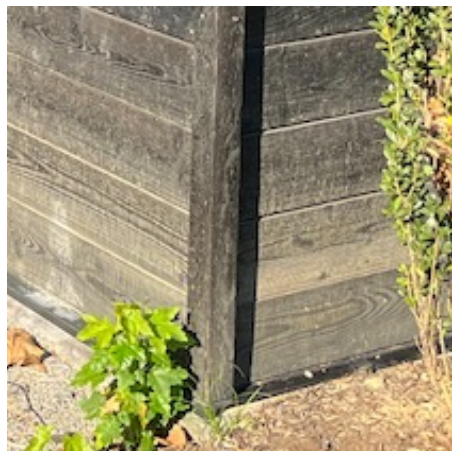
CAUTION

Over-driving fasteners and aggressive material handling during installation will result in a scarred surface where the char layer comes off, revealing the lighter wood underneath.

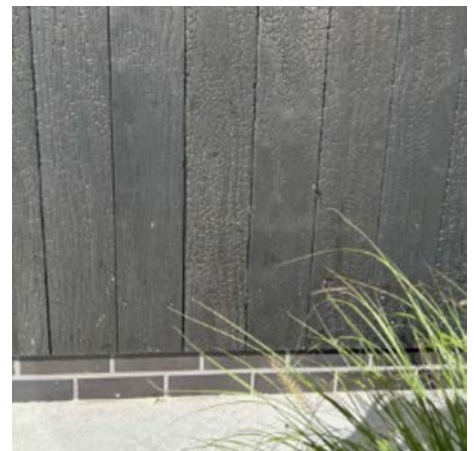
THE FOLLOWING EXAMPLES ARE **NOT** DEFECTS IN THE MATERIALS OR FINISH.



Bright wood exposed due to over-driving of fasteners. Shown: Larch Deep Char.



Cladding installed too close to ground level; dirt and splashing of water fading the color. Shown: Larch Carbon.



Occasional flaking of finish due to natural aging, or handling during installation. Shown: Accoya Deep Char

Additional Information for Reclaimed & Weathered Cladding

Pioneer Millworks offers numerous reclaimed and weathered cladding options which celebrate the original surface patina of weather and age. The variations in texture, tone, character, and dimension are all part of the story this material brings to your project, and this character also provides a virtually maintenance-free, living finish. We suggest a higher minimum waste percentage of 20%-25% to provide flexibility in working with this material, especially in products where there are variations in thickness and width, or where the need for visual refinement may come up during installation.

Refer to previous guidance in this document regarding installation of these cladding options. Due to the variations in species and width in some products, it is especially important to provide ample expansion space at windows and doors.

The colors and textures seen in these products are 100% natural. No finish is applied by Pioneer Millworks as a standard part of any reclaimed or weathered cladding product, therefore it is not possible to select specific colors for any order.

Signs of previous use in any reclaimed or weathered material may include, but are not limited to: cracks & checks, holes from fasteners, ferrous staining, post/framing shadows, insect marks, chipped knots which may be loose or missing, original end conditions, and organic plant matter including lichen or moss.

A layer of 15# roofing felt may be placed over the rainscreen/furring strips before installing reclaimed/weathered cladding. This will provide a black background behind any open defects or knots.

Our standard profile for all reclaimed and weathered cladding products is “R2E”, meaning both edges of each plank are ripped straight, and the thickness is left to be variable as noted on the product specification sheet. If these materials are ordered with any milling to thickness or a specific profile, there will be a higher number of visible defects, most importantly missing or chipped knots, even if the order is placed for specific dimensions and lengths.

RECOMMENDATION

**Order a minimum of
20-25% overage for
RECLAIMED/WEATHERED
exterior cladding
installations.**

Warranty

Refer to Pioneer Millworks warranty at www.pioneermillworks.com/warranty

Accoya carries a 50 year warranty on properly installed materials. Please refer to:
www.accoya.com/app/uploads/2021/10/Accoya-wood-warranty-US-and-Canada.pdf

Abodo carries a 15 year warranty on properly installed materials. Please refer to:
www.abodo.co.nz/uploads/resource/Built-to-Last-Warranty-15yrs-Vulcan-Abodo-Wood.pdf

No warranty of any kind is made regarding the longevity, durability, or color of any finish on our cladding products

Pioneer Millworks is not responsible for any movement (expansion, contraction, cupping, crowning, bowing, twisting, checking, etc) which may occur following production at our facility, in storage prior to/following shipment or delivery for any length of time, while in transit, or on the jobsite before, during, and after installation.
All movement in wood is a natural reaction by the product to the surrounding environment and is not able to be controlled through any manufacturing process.

These guidelines are provided as a reference for best practices. The purchaser is ultimately responsible for the proper selection and installation of the product and associated fasteners, as well as the selection and installation of all other components of the structure. All products must be installed in accordance with local building codes and regulations; questions about specific local codes must be directed to your local code enforcement official. Pioneer Millworks recommends installation by an experienced and qualified professional contractor. Pioneer Millworks accepts no responsibility for any product failure due to improper jobsite conditions, installation, or maintenance.